

**Project 2090 - Final**

**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Establishment of permit(s) by rule for the construction and operation of small  
wind energy projects**

CHAPTER 40

SMALL RENEWABLE ENERGY PROJECTS (WIND) PERMIT BY RULE

Part I

Definitions and Applicability

**9VAC15-40-10. Definitions.**

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

"Applicant" means the owner or operator who submits an application to the department for a permit by rule pursuant to this chapter.

"Coastal Avian Protection Zones" or "CAPZ" means the areas designated on the map of "Coastal Avian Protection Zones" generated on the department's Coastal GEMS geospatial data system (9VAC15-40-120 C 1).

"Department" means the Department of Environmental Quality, its director, or the director's designee.

"DCR" means the Department of Conservation and Recreation.

"DGIF" means the Department of Game and Inland Fisheries.

"Disturbance zone" means the area within the site directly impacted by construction and operation of the wind energy project, and within 100 feet of the boundary of the directly impacted area.

"Ecological core" means an area of nonfragmented forest, marsh, dune, or beach of ecological importance that is at least 100 acres in size and identified in DCR's Natural Landscape Assessment web-based application (9VAC15-40-120 C 2).

"Historic resource" means any prehistoric or historic district, site, building, structure, object, or cultural landscape that is included or meets the criteria necessary for inclusion in the Virginia Landmarks Register pursuant to the authorities of § 10.1-2205 of the Code of Virginia and in accordance with 17VAC5-30-40 through 17VAC5-30-70.

"Important Bird Areas" means the designation of discrete sites by the National Audubon Society as having local, regional, continental or global importance for birds because they support significant numbers of one or more high priority avian species (e.g., T&E, SGCN) during the breeding, wintering, or migration seasons.

"Interconnection point" means the point or points where the wind energy project connects to a project substation for transmission to the electrical grid.

"Invasive plant species" means non-native plant species that cause, or are likely to cause, economic or ecological harm or harm to human health as established by Presidential Executive Order 13112 (64 FR 6183, February 3, 1999) and contained on DCR's Invasive Alien Plant Species of Virginia (9VAC15-40-120 B 3).

"Migratory corridors" means major travel routes used by significant numbers of birds during biannual migrations between breeding and wintering grounds.

"Migratory staging areas" means those sites along migratory corridors where significant numbers of birds stop to feed and rest during biannual migrations between breeding and wintering grounds that are essential to successful migration.

"Natural heritage resource" means the habitat of rare, threatened, or endangered plant and animal species, rare or state significant natural communities or geologic sites, and similar features of scientific interest benefiting the welfare of the citizens of the Commonwealth.

"Nearshore waters" means all tidal waters within the Commonwealth of Virginia and seaward of the mean low-water shoreline to three nautical miles offshore in the Atlantic Ocean.

"Operator" means the person responsible for the overall operation and management of a wind energy project.

"Other avian mitigation factors" means Important Bird Areas, migratory corridors, migratory staging areas, and wintering areas within the Coastal Avian Protection Zones.

"Owner" means the person who owns all or a portion of a wind energy project.

"Permit by rule" means provisions of the regulations stating that a project or activity is deemed to have a permit if it meets the requirements of the provision.

"Person" means any individual, partnership, firm, association, joint venture, public or private corporation, trust, estate, commission, board, public or private institution, utility, cooperative, county, city, town, or other political subdivision of the Commonwealth, any interstate body, or any other legal entity.

"Phase of a project" means one continuous period of construction, startup, and testing activity of the wind energy project. A phase is deemed complete when 90 calendar days have elapsed since the last previous wind turbine has been placed in service, except when a delay has been caused by a significant force majeure event, in which case a phase is deemed complete when 180 calendar days have elapsed since the last previous wind turbine has been placed in service.

"Post-construction" means any time after the last turbine on the wind energy project or phase of that project has been placed in service.

"Pre-construction" means any time prior to commencing land-clearing operations necessary for the installation of energy-generating structures at the small wind energy project.

"Rated capacity" means the maximum capacity of a wind energy project based on the sum total of each turbine's nameplate capacity.

"SGCN" or "species of greatest conservation need" means any vertebrate species so designated by DGIF as Tier 1 or Tier 2 in the Virginia Wildlife Action Plan (9VAC15-40-120 B 6).

"Site" means the area containing a wind energy project that is under common ownership or operating control. Electrical infrastructure and other appurtenant structures up to the interconnection point shall be considered to be within the site.

"Small renewable energy project" means (i) an electrical generation facility with a rated capacity not exceeding 100 megawatts that generates electricity only from sunlight, wind, falling water, wave motion, tides, or geothermal power, or (ii) an electrical generation facility with a rated capacity not exceeding 20 megawatts that generates electricity only from biomass, energy from waste, or municipal solid waste.

"Small wind energy project," "wind energy project," or "project" means a small renewable energy project that (i) generates electricity from wind, whose main purpose is to supply electricity, consisting of one or more wind turbines and other accessory structures and buildings, including substations, post-construction meteorological towers, electrical infrastructure, and other appurtenant structures and facilities within the

boundaries of the site; and (ii) is designed for, or capable of, operation at a rated capacity equal to or less than 100 megawatts. Two or more wind energy projects otherwise spatially separated but under common ownership or operational control, which are connected to the electrical grid under a single interconnection agreement, shall be considered a single wind energy project. Nothing in this definition shall imply that a permit by rule is required for the construction of meteorological towers to determine the appropriateness of a site for the development of a wind energy project.

"State-owned submerged lands" means lands that lie seaward of the mean low-water mark in tidal waters or that have an elevation below the ordinary mean high-water elevation in nontidal areas that are considered property of the Commonwealth pursuant to § 28.2-1200 of the Code of Virginia.

"T&E," "state threatened or endangered species," or "state-listed species" means any wildlife species designated as a Virginia endangered or threatened species by DGIF pursuant to the § 29.1-563-570 of the Code of Virginia and 4VAC15-20-130.

"VLR" means the Virginia Landmarks Register (9VAC15-40-120 B 1).

"VLR-eligible" means those historic resources that meet the criteria necessary for inclusion on the VLR pursuant to 17VAC5-30-40 through 17VAC5-30-70 but are not listed in VLR.

"VLR-listed" means those historic resources that have been listed in the VLR in accordance with the criteria of 17VAC5-30-40 through 17VAC5-30-70.

"VMRC" means the Virginia Marine Resources Commission.

"Wildlife" means wild animals; except, however, that T&E insect species shall only be addressed as part of natural heritage resources and shall not be considered T&E wildlife.

"Wintering areas" means those sites where a significant portion of the rangewide population of one or more avian species overwinter annually.

#### **9VAC15-40-20. Authority and applicability.**

This regulation is issued under authority of Article 5 (§ 10.1-1197.5 et seq.) of Chapter 11.1 of Title 10.1 of the Code of Virginia. The regulation contains requirements for wind-powered electric generation projects consisting of wind turbines and associated facilities with a single interconnection to the electrical grid that are designed for, or capable of, operation at a rated capacity equal to or less than 100 megawatts. The department has determined that a permit by rule is required for small wind energy projects with a rated capacity greater than 5 megawatts and this regulation contains the permit by rule provisions for these projects in Part II (9VAC15-40-30 et seq.) of this chapter. The department has also determined that a permit by rule is not required for small wind energy projects with a rated capacity of 5 megawatts or less and this regulation contains notification and other provisions for these projects in Part III (9VAC15-40-130) of this chapter.

### Part II

#### Permit by Rule Provisions

#### **9VAC15-40-30. Application for permit by rule for wind energy projects.**

A. The owner or operator of a small wind energy project with a rated capacity greater than 5 megawatts shall submit to the department a complete application, in which he satisfactorily accomplishes all of the following:

1. In accordance with § 10.1-1197.6 B 1 of the Code of Virginia, and as early in the project development process as practicable, furnishes to the department a

notice of intent, to be published in the Virginia Register, that he intends to submit the necessary documentation for a permit by rule for a small renewable energy project;

2. In accordance with § 10.1-1197.6 B 2 of the Code of Virginia, furnishes to the department a certification by the governing body of the locality or localities wherein the small renewable energy project will be located that the project complies with all applicable land use ordinances;

3. In accordance with § 10.1-1197.6 B 3 of the Code of Virginia, furnishes to the department copies of all interconnection studies undertaken by the regional transmission organization or transmission owner, or both, on behalf of the small renewable energy project;

4. In accordance with § 10.1-1197.6 B 4 of the Code of Virginia, furnishes to the department a copy of the final interconnection agreement between the small renewable energy project and the regional transmission organization or transmission owner indicating that the connection of the small renewable energy project will not cause a reliability problem for the system. If the final agreement is not available, the most recent interconnection study shall be sufficient for the purposes of this section. When a final interconnection agreement is complete, it shall be provided to the department. The department shall forward a copy of the agreement or study to the State Corporation Commission;

5. In accordance with § 10.1-1197.6 B 5 of the Code of Virginia, furnishes to the department a certification signed by a professional engineer licensed in Virginia that the maximum generation capacity of the small wind energy project, as designed, does not exceed 100 megawatts;

6. In accordance with § 10.1-1197.6 B 6 of the Code of Virginia, furnishes to the department an analysis of potential environmental impacts of the small renewable energy project's operations on attainment of national ambient air quality standards;

7. In accordance with § 10.1-1197.6 B 7 of the Code of Virginia, furnishes to the department, where relevant, an analysis of the beneficial and adverse impacts of the proposed project on natural resources. The owner or operator shall perform the analyses prescribed in 9VAC15-40-40. For wildlife, that analysis shall be based on information on the presence, activity, and migratory behavior of wildlife to be collected at the site for a period of time dictated by the site conditions and biology of the wildlife being studied, not exceeding 12 months;

8. In accordance with § 10.1-1197.6 B 8 of the Code of Virginia, furnishes to the department a mitigation plan pursuant to 9VAC15-40-60 that details reasonable actions to be taken by the owner or operator to avoid, minimize, or otherwise mitigate such impacts, and to measure the efficacy of those actions; provided, however, that the provisions of 9VAC15-40-30 A 8 shall only be required if the department determines, pursuant to 9VAC15-40-50, that the information collected pursuant to § 10.1-1197.6 B 7 of the Code of Virginia and 9VAC15-40-40 indicates that significant adverse impacts to wildlife or historic resources are likely. The mitigation plan shall be an addendum to the operating plan of the wind energy project, and the owner or operator shall implement the mitigation plan as deemed complete and adequate by the department. The mitigation plan shall be an enforceable part of the permit by rule;

9. In accordance with § 10.1-1197.6 B 9 of the Code of Virginia, furnishes to the department a certification signed by a professional engineer licensed in Virginia that the project is designed in accordance with 9VAC15-40-80;
10. In accordance with § 10.1-1197.6 B 10 of the Code of Virginia, furnishes to the department an operating plan that includes a description of how the project will be operated in compliance with its mitigation plan, if such a mitigation plan is required pursuant to 9VAC15-40-50;
11. In accordance with § 10.1-1197.6 B 11 of the Code of Virginia, furnishes to the department a detailed site plan meeting the requirements of 9VAC15-40-70;
12. In accordance with § 10.1-1197.6 B 12 of the Code of Virginia, furnishes to the department a certification signed by the applicant that the small wind energy project has applied for or obtained all necessary environmental permits;
13. Prior to authorization of the project and in accordance with §§ 10.1-1197.6 B 13 and 10.1-1197.6 B 14 of the Code of Virginia, conducts a 30-day public review and comment period and holds a public meeting pursuant to 9VAC15-40-90. The public meeting shall be held in the locality or, if the project is located in more than one locality, in a place proximate to the location of the proposed project; however, for projects located in nearshore waters or on state-owned submerged lands, the meeting shall be held in the locality that is the closest distance from the approximate center of the project's disturbance zone. Following the public meeting and public comment period, the applicant shall prepare a report summarizing the issues raised by the public and include any written comments received and the applicant's response to those comments. The report shall be provided to the department as part of this application; and
14. In accordance with 9VAC15-40-110, furnishes to the department the appropriate fee.

B. Within 90 days of receiving all of the required documents and fees listed in subsection A of this section, the department shall determine, after consultation with other agencies in the Secretariat of Natural Resources, whether the application is complete and whether it adequately meets the requirements of this chapter, pursuant to § 10.1-1197.7 A of the Code of Virginia.

1. If the department determines that the application meets the requirements of this chapter, then the department shall notify the applicant in writing that he is authorized to construct and operate a small wind energy project pursuant to this chapter.
2. If the department determines that the application does not meet the requirements of this chapter, then the department shall notify the applicant in writing and specify the deficiencies.
3. If the applicant chooses to correct deficiencies in a previously submitted application, the department shall follow the procedures of this subsection and notify the applicant whether the revised application meets the requirements of this chapter within 60 days of receiving the revised application.
4. Any case decision by the department pursuant to this subsection shall be subject to the process and appeal provisions of the Administrative Process Act (§ 2.2-4000 et seq. of the Code of Virginia).

**9VAC15-40-40. Analysis of the beneficial and adverse impacts on natural resources.**

A. Analyses of wildlife. To fulfill the requirements of § 10.1-1197.6 B 7 of the Code of Virginia, the applicant shall conduct pre-construction wildlife analyses. The analyses of wildlife shall include the following:

1. Desktop surveys and maps. The applicant shall obtain a wildlife report and map generated from DGIF's Virginia Fish and Wildlife Information Service web-based application (9VAC15-40-120 C 3) or from a data and mapping system including the most recent data available from DGIF's subscriber-based Wildlife Environmental Review Map Service of the following: (i) known wildlife species and habitat features on the site or within two miles of the boundary of the site; (ii) known bat hibernacula on the site or within five miles of the boundary of the site; and (iii) known maternity and bachelor bat colonies on the site or within 12 miles of the boundary of the site and (iv) known or potential sea turtle nesting beaches located within one mile of the disturbance zone.

2. Breeding bird surveys. If the desktop analyses prescribed in subdivision 1 of this subsection indicate the presence of or habitat for a state-listed T&E bird species or a Tier 1 or Tier 2 bird SGCN within the disturbance zone, then the applicant shall conduct a breeding bird survey to identify state T&E bird species and Tier 1 and Tier 2 bird SGCN occurring within the disturbance zone during the species' annual breeding season.

3. Field survey of nonavian resources. If the desktop analyses prescribed in subdivision 1 of this subsection indicate the presence of or habitat for a Tier 1 or Tier 2 vertebrate SGCN, other than a bird, within the disturbance zone, then the applicant shall conduct field surveys of suitable habitats for that species within the disturbance zone to determine the species' occurrence and relative distribution within the disturbance zone.

4. Raptor migration surveys. The applicant shall conduct one year of raptor migration surveys, in both the spring and fall seasons, to determine the relative abundance of migrant raptors moving through the general vicinity of the disturbance zone.

5. Map and field studies for avian resources in Coastal Avian Protection Zones (CAPZ).

a. The applicant shall consult the "Coastal Avian Protection Zones" map generated on the department's Coastal GEMS geospatial data system (9VAC15-40-120 C 1) and determine whether the proposed wind energy project site will be located in part or in whole within one or more CAPZ.

b. When a proposed wind energy project site will be located in part or in whole within one or more Coastal Avian Protection Zones, then the applicant shall perform avian field studies, or shall rely on existing scientific analysis as reflected on the CAPZ map, for each zone where the project is located, as follows:

(1) Zone 1: Nearshore waters extending 1 - 4.83 km (0.62 - 3 mi) from Virginia's ocean-facing shoreline, excluding the mouth of the Chesapeake Bay. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (migratory Piping Plovers, Wilson's Plovers, Peregrine Falcons, Gull-billed Terns, and Roseate Terns); hemispherically important migratory corridor for shorebirds, seabirds and waterfowl; and hemispherically important migratory staging area and wintering area for

seabirds and waterfowl. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources, or rely on existing scientific analysis as reflected on the CAPZ map.

(2) Zone 2: Nearshore waters that extend from Virginia's ocean-facing shoreline out to 1 km (0.62 mi), excluding the mouth of the Chesapeake Bay. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (migratory and breeding Piping Plovers, Wilson's Plovers, Peregrine Falcons and Gull-billed Terns, and migratory Roseate Terns) and hemispherically important migratory corridor, migratory staging area, and wintering area for shorebirds, seabirds and waterfowl. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources or rely on existing scientific analysis as reflected on the CAPZ map.

(3) Zone 3: Barrier island/seaside lagoon system, including a 100 m (328 ft) offshore buffer. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (breeding and migratory Piping Plovers, Wilson's Plovers, Gull-billed Terns, Peregrine Falcons and Bald Eagles) and hemispherically important staging area and wintering area for shorebirds, seabirds, and waterfowl. The applicant shall either perform avian field studies regarding the actual or likely occurrences of these resources or rely on existing scientific analysis as reflected on the CAPZ map.

(4) Zone 4: Southern end of the Delmarva Peninsula (mainland only), including a 10 km long (6.21 mi) strip along the western (bayside) fringe of the peninsula that extends from Wise Point to (and including) Savage Neck. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (migratory Peregrine Falcons and breeding and migratory Bald Eagles), the designation as an Important Bird Area, and hemispherically important migratory staging area for passerines and other landbirds. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources or rely on existing scientific analysis as reflected on the CAPZ map.

(5) Zone 5: Delmarva Peninsula, excluding zones 3 and 4. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (breeding Bald Eagles) and regionally to hemispherically important fall migratory staging area for landbirds. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources or rely on existing scientific analysis as reflected on the CAPZ map.

(6) Zone 6: Southern end and mouth of the Chesapeake Bay, including the waters off of the western shore of the Delmarva Peninsula that extend from Wise Point north to the mouth of Craddock Creek. In this zone, the relevant avian species and other avian mitigation factors are: migratory staging area and wintering area for seabirds and waterfowl that may be of hemispheric importance. The applicant shall conduct aerial transect surveys for waterfowl and seabirds during the fall migration, spring migration, and wintering seasons to determine the distribution, density, and relative abundance of these species within this zone throughout the nonbreeding season.

(7) Zone 7: Lower portions of the James, York, and Rappahannock Rivers and small tributaries along the south side of the lower Potomac River. In this zone, relevant avian species and other avian mitigation factors are: T&E

species (breeding Bald Eagles), regionally important fall migratory staging areas and wintering areas for waterfowl, and spring migratory staging areas of unknown significance. The applicant shall conduct aerial transect surveys for waterfowl during the spring migration season to determine the distribution, density, and relative abundance of these species within this zone during the spring season. The applicant shall either perform avian field studies regarding the actual or likely occurrences of breeding Bald Eagles and waterfowl during the fall and winter seasons or rely on existing scientific analysis as reflected on the CAPZ map.

(8) Zone 8: Western portions of the Chesapeake Bay. In this zone, the relevant avian species and other avian mitigation factors are: migratory staging area and wintering area for seabirds and waterfowl of unknown significance. The applicant shall conduct aerial transect surveys for waterfowl and seabirds in the fall migration, spring migration, and wintering seasons to determine the distribution, density, and relative abundance of these species within this zone throughout the nonbreeding season.

(9) Zone 9: Virginia's northeast sector of the Chesapeake Bay, including all nearshore waters, marshes, and islands within Tangier and Pocomoke Sounds and all islands and marshes located along the western fringe of the Delmarva Peninsula from Craddock Creek north to the Virginia/Maryland border. This zone is recognized as a migratory staging area and wintering area for seabirds and waterfowl of unknown significance. The applicant shall conduct aerial transect surveys for waterfowl and seabirds during the fall migration, spring migration, and wintering seasons to determine the distribution, density, and relative abundance of these species within this zone throughout the nonbreeding season. In this zone, additional relevant avian species and other avian mitigation factors are: T&E species (breeding Bald Eagles and Peregrine Falcons) and the designation as an Important Bird Area. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these additional resources or rely on existing scientific analysis as reflected on the CAPZ map.

(10) Zone 10: Upper reaches of the James, Rappahannock, and Potomac Rivers. In this zone the relevant avian species and other avian mitigation factors are T&E species (breeding Bald Eagles and continentally important Bald Eagle concentration areas), the designation as Important Bird Areas, and locally to continentally important waterfowl wintering areas. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources or rely on existing scientific analysis as reflected on the CAPZ map.

(11) Zone 11: Lower reaches of the Mattaponi and Pamunkey tributaries. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (breeding Bald Eagles) and the designation as an Important Bird Area. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources or rely on existing scientific analysis as reflected on the CAPZ map.

(12) Zone 12: Outer fringes of the lower, middle, and northern peninsulas. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (breeding Bald Eagles). The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources or rely on existing scientific analysis as reflected on the CAPZ map.

(13) Zone 13: Interior portions of the lower, middle, and northern peninsulas. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (breeding Bald Eagles, for which little information currently exists in this zone). The applicant shall perform ground surveys for breeding Bald Eagles to determine distribution and abundance of Bald Eagle nests within the disturbance zone and within .25 mile of the perimeter of the disturbance zone.

(14) Zone 14: Back Bay and surrounding private lands. In this zone, the relevant avian species and other avian mitigation factors are: T&E species (breeding Bald Eagles), the designation as Important Bird Area, and locally to continentally important migratory staging area and wintering area for waterfowl. The applicant shall either perform avian field studies regarding the actual or likely occurrence of these resources, or rely on existing scientific analysis as reflected on the CAPZ map.

6. Bat acoustic surveys. The applicant shall conduct bat acoustic surveys to determine the presence of and level of bat activity and use within the disturbance zone.

7. Mist-netting or harp-trapping surveys. If the applicant identifies potential for T&E bat species to occur within the disturbance zone, the applicant shall conduct a season-appropriate mist-netting survey or harp-trapping survey or both.

8. Wildlife report. The applicant shall provide to the department a report summarizing the relevant findings of the desktop and field surveys conducted pursuant to subdivisions 1 through 7 of this subsection, along with all data and supporting documents. The applicant shall assess and describe the expected beneficial and adverse impacts, if any, of the proposed project on wildlife resources identified in subdivisions 1 through 7 of this subsection.

B. Analyses of historic resources. To fulfill the requirements of § 10.1-1197.6 B 7 of the Code of Virginia, the applicant shall also conduct a pre-construction historic resources analysis. The analysis shall be conducted by a qualified professional meeting the professional qualification standards of the Secretary of the Interior's Standards for Archeology and Historic Preservation (9VAC15-40-120 B 2) in the appropriate discipline. The analysis shall include each of the following:

1. Compilation of known historic resources. The applicant shall gather information on known historic resources within the disturbance zone and within five miles of the disturbance zone boundary and present this information on the context map referenced in 9VAC15-40-70 B, or as an overlay to this context map, as well as in tabular format.

2. Architectural survey. The applicant shall conduct a field survey of all architectural resources, including cultural landscapes, 50 years of age or older within the disturbance zone and within 1.5 miles of the disturbance zone boundary and evaluate the eligibility of any identified resource for listing in the VLR; however, for wind energy projects located in nearshore waters, this field study shall include all architectural resources 50 years of age or older within five miles of the disturbance zone boundary, but shall not extend more than 1.5 miles inland from the mean low water mark.

3. Archaeological survey. The applicant shall conduct an archaeological field survey of the disturbance zone and evaluate the eligibility of any identified archaeological site for listing in the VLR; however, the requirements of this subdivision shall not apply to any portion of the disturbance zone located on

state-owned submerged lands that are subject to VMRC permitting pursuant to Title 28.2 of the Code of Virginia.

4. Historic resources report. The applicant shall provide to the department a report presenting the findings of the studies and analyses conducted pursuant to subdivisions 1 through 3 of this subsection along with all data and supporting documents. The applicant shall assess and describe the expected beneficial and adverse impacts, if any, of the proposed project on historic resources identified in subdivisions 1, 2, and 3 of this subsection.

C. Analyses of other natural resources. To fulfill the requirements of § 10.1-1197.6 B 7 of the Code of Virginia, the applicant shall also conduct pre-construction analyses of the impact of the proposed project on other natural resources, which have not been addressed pursuant to subsection A or B of this section, and as are specified in subdivisions 1 and 2 of this subsection. The analyses shall include:

1. Natural heritage resources. An analysis of the impact of the project on natural heritage resources, which shall include the following:

a. A desktop survey of natural heritage resources within the site and within two miles of the boundary of the site.

b. Field surveys within the disturbance zone mapping: (i) the ecological community groups as classified in accordance with DCR's The Natural Communities of Virginia, Classification of Ecological Community Groups (9VAC15-40-120 B 4); (ii) natural heritage resources to include species and community identification, location, age, size, spatial distribution, and evidence of reproduction; (iii) caves; (iv) mines; (v) rock outcrops; (vi) cliffs; (vii) wetlands; and (viii) invasive plant species.

2. Scenic resources. An analysis of the impact of the project on scenic resources, as follows:

a. Pursuant to 9VAC15-40-70, for the area within the site and within five miles of the boundary of the site, a viewshed analysis of the impact of the proposed project on existing federally designated or state-designated scenic resources, including national parks, national forest-designated scenic areas, state parks, state natural area preserves, national scenic trails, national or state-designated scenic roads, national or state-designated scenic rivers, and those resources identified as potential candidates for such designation in DCR's Virginia Outdoors Plan (9VAC15-40-120 B 5).

b. The applicant shall conduct these analyses and shall show the potential impact of the proposed project on the viewshed from such identified resources, where applicable.

3. Other natural resources report. The applicant shall provide to the department a report, including maps, documenting the results of the analyses conducted pursuant to subdivisions 1 and 2 of this subsection. The applicant shall assess and describe the expected beneficial and adverse impacts, if any, of the proposed project on natural resources identified in subdivisions 1 and 2 of this subsection.

**9VAC15-40-50. Determination of likely significant adverse impacts.**

A. The department shall find that significant adverse impacts to wildlife are likely whenever the wildlife analyses prescribed in 9VAC15-40-40 A document that either of the following conditions exists:

1. Bats have been detected, or a hibernaculum exists, within the disturbance zone.
2. State-listed T&E wildlife are found to occur within the disturbance zone; or the disturbance zone is located on or within one mile of a known or potential sea turtle nesting beach.
3. Within the Coastal Avian Protection Zones, the applicant's field studies indicate that significant adverse impacts to avian resources are likely, or the applicant stipulates that existing scientific analysis, as reflected on the CAPZ map, supports a conclusion that significant adverse impacts to avian resources are likely.

B. The department shall find that significant adverse impacts to historic resources are likely whenever the historic resources analyses prescribed by 9VAC15-40-40 B indicate that the proposed project is likely to diminish significantly any aspect of a historic resource's integrity.

**9VAC15-40-60. Mitigation plan.**

A. If the department determines that significant adverse impacts to wildlife or historic resources or both are likely, then the applicant shall prepare a mitigation plan. The mitigation plan shall include a description of the affected wildlife or historic resources, or both, and the impact to be mitigated; a description of actions that will be taken to avoid the stated impact; and a plan for implementation. If the impact cannot reasonably be avoided, the plan shall include a description of actions that will be taken to minimize the stated impact and a plan for implementation. If neither avoidance nor minimization is reasonably practicable, the plan shall include a description of other measures that may be taken to offset the stated impact; and a plan for implementation.

B. Mitigation measures for significant adverse impacts to wildlife shall include:

1. For state-listed T&E wildlife, the applicant shall take all reasonable measures to avoid significant adverse impacts, or shall demonstrate in the mitigation plan what significant adverse impacts cannot practicably be avoided and why additional proposed actions are reasonable. These additional proposed actions may include best practices to avoid, minimize, or offset adverse impacts to resources analyzed pursuant to 9VAC15-40-40 A or 9VAC15-40-40 C 1.
2. For proposed projects where the disturbance zone is located on or within one mile of a known or potential sea turtle nesting beach, the applicant shall take all reasonable measures to avoid significant adverse impacts, or shall demonstrate in the mitigation plan what significant adverse impacts cannot practicably be avoided and why additional proposed mitigation actions are reasonable. Mitigation measures shall include the following:
  - a. Avoiding construction within likely sea turtle crawl or nesting habitats during the turtle nesting and hatching season (May 20 - October 31). If avoiding construction during this period is not possible, then conducting daily crawl surveys of the disturbance zone (May 20 - August 31) and one mile beyond the northern and southern reaches of the disturbance zone (hereinafter "sea turtle nest survey zone") between sunrise and 9 a.m. by qualified individuals who have the ability to distinguish accurately between nesting and non-nesting emergences.
  - b. If construction is scheduled during the nesting season, then including measures to protect nests and hatchlings found within the sea turtle nest survey zone.

- c. Minimizing nighttime construction during the nesting season and designing project lighting during the construction and operational phases to minimize impacts on nesting sea turtles and hatchlings,
3. For avian resources within any of the Coastal Avian Protection Zones that are referenced in 9VAC15-40-40 A 5, the applicant shall take all reasonable measures to avoid significant adverse impacts, or shall demonstrate in the mitigation plan what significant adverse impacts cannot be practicably be avoided and why additional proposed mitigation actions are reasonable.
4. For bats, the mitigation plan shall include measures to curtail operation of wind turbines on low wind speed nights when bats are likely to be active within the disturbance zone and to monitor the efficacy of these measures; however, the combined cost of mitigation and post-construction monitoring, in each year after year one, shall not exceed 120 hours of curtailment per year per turbine, averaged. The combined cost of mitigation shall consist of lost revenue from curtailment of wind turbines, including lost production tax credits.
5. Post-construction monitoring shall be designed to achieve the following:
  - a. Estimate the level of avian and bat fatalities associated with the wind energy project, accounting for scavenger removal and searcher efficiency; however, estimates of avian and bat fatalities shall not be required for areas seaward of the mean low-water shoreline.
  - b. Investigate the correlation of bat fatalities with project operational protocols, weather-related variables, and the effectiveness of operational adjustments to reduce impacts.
6. Post-construction wildlife mitigation and management shall include the following:
  - a. Post-construction mitigation. After completing the initial one year of post-construction monitoring, the owner or operator shall submit the first year's monitoring data and a revised mitigation plan detailing the monitoring and mitigation actions expected to be implemented for the remainder of the project's operating life. Such mitigation actions shall be designed to address the impacts revealed by the initial year of post-construction monitoring. One year after the revised mitigation plan is submitted, and annually thereafter, the owner or operator shall submit a report consisting of the results of ongoing monitoring, including data and supporting documents, an explanation of how the mitigation measures reflect results indicated by the monitoring data, and documentation showing expenditures and lost revenues attributable to curtailment, other mitigation actions, and monitoring.
  - b. Amendment of mitigation plan. After three years of post-construction mitigation efforts, the owner or operator of the project may initiate a consultation with the department to propose amendments to the mitigation plan. The owner or operator shall submit any proposed amendments of the mitigation plan to the department. The department may approve the proposed amendments if the department determines that the proposed amendments will avoid or minimize adverse impacts to a demonstrably equal or greater extent as the mitigation measures being implemented at that time. Alternatively, the department may approve the proposed amendments to the mitigation plan if the owner or operator demonstrates that the mitigation measures being implemented at that time are not effectively avoiding or minimizing adverse impacts, in which case the owner or operator may

propose and the department may approve ways of offsetting ongoing adverse impacts, such as funding research or preserving habitats.

C. Mitigation measures for significant adverse impacts to historic resources shall include:

1. Significant adverse impacts to VLR-eligible or VLR-listed architectural resources shall be minimized, to the extent practicable, through design of the wind energy project or the installation of vegetative or other screening.
2. If significant adverse impacts to VLR-eligible or VLR-listed architectural resources cannot be avoided or minimized such that impacts are no longer significantly adverse, then the applicant shall develop a reasonable and proportionate mitigation plan that offsets the significantly adverse impacts and has a demonstrable public benefit and benefit for the affected or similar resource.
3. If any identified VLR-eligible or VLR-listed archaeological site can not be avoided or minimized to such a degree as to avoid a significant adverse impact, significant adverse impacts of the project will be mitigated through archaeological data recovery.

**9VAC15-40-70. Site plan and context map requirements.**

A. The applicant shall submit a site plan that includes maps showing the physical features, topography, and land cover of the area within the site, both before and after construction of the proposed project. The site plan shall be submitted at a scale sufficient to show, and shall include, the following: (i) the boundaries of the site; (ii) the location, height, and dimensions of all existing and proposed wind turbines, other structures, fencing, and other infrastructure; (iii) the location, grades, and dimensions of all temporary and permanent on-site and access roads from the nearest county or state maintained road; and (iv) water bodies, waterways, wetlands, and drainage channels. For any part of a site that is located in nearshore waters, the site plan shall also include bathymetry; the location and depth of underground cables, transmission lines, and pipelines; navigational channels; and beaches, marshes, and other emergent terrestrial features.

B. The applicant shall submit a context map including the area encompassed by the site and within five miles of the site boundary. The context map shall show state and federal resource lands and other protected areas, Coastal Avian Protection Zones, historic resources, state roads, waterways, locality boundaries, forests, open spaces, and transmission and substation infrastructure. If any part of a site is located in nearshore waters, the context map shall also include bathymetry; navigational channels; commercially licensed fixed fishing devices; permitted aquaculture operations; shellfish leases; public shellfish grounds; artificial reefs; and submerged aquatic vegetation.

**9VAC15-40-80. Small wind energy project design standards.**

The design and installation of the small wind energy project shall incorporate any requirements of the mitigation plan that pertain to design and installation, if a mitigation plan is required pursuant to 9VAC15-40-50.

**9VAC15-40-90. Public participation.**

A. Before the initiation of any construction at the small wind energy project, the applicant shall comply with this section. The owner or operator shall first publish a notice once a week for two consecutive weeks in a major local newspaper of general circulation informing the public that he intends to construct and operate a project eligible for a permit by rule. No later than the date of newspaper publication of the initial notice, the owner or operator shall submit to the department a copy of the notice along with

electronic copies of all documents that the applicant plans to submit in support of the application. The notice shall include:

1. A brief description of the proposed project and its location, including the approximate dimensions of the site, approximate number of turbines, and approximate maximum blade-tip height;
2. A statement that the purpose of the public participation is to acquaint the public with the technical aspects of the proposed project and how the standards and the requirements of this chapter will be met, to identify issues of concern, to facilitate communication, and to establish a dialogue between the owner or operator and persons who may be affected by the project;
3. Announcement of a 30-day comment period in accordance with subsection C of this section, and the name, telephone number, address, and email address of the applicant who can be contacted by the interested persons to answer questions or to whom comments shall be sent;
4. Announcement of the date, time, and place for a public meeting held in accordance with subsection D of this section; and
5. Location where copies of the documentation to be submitted to the department in support of the permit by rule application will be available for inspection.

B. The owner or operator shall place a copy of the documentation in a location accessible to the public during business hours for the duration of the 30-day comment period in the vicinity of the proposed project.

C. The public shall be provided at least 30 days to comment on the technical and the regulatory aspects of the proposal. The comment period shall begin no sooner than 15 days after the applicant initially publishes the notice in the local newspaper.

D. The applicant shall hold a public meeting not earlier than 15 days after the beginning of the 30-day public comment period and no later than seven days before the close of the 30-day comment period. The meeting shall be held in the locality or, if the project is located in more than one locality, in a place proximate to the location of the proposed project; however, for projects located in nearshore waters or on state-owned submerged lands, the meeting shall be held in the locality that is the closest distance from the approximate center of the project's disturbance zone.

E. For purposes of this chapter, the applicant and any interested party who submits written comments on the proposal to the applicant during the public comment period or who signs in and provides oral comments at the public meeting shall be deemed to have participated in the proceeding for a permit by rule under this chapter and pursuant to § 10.1-1197.7 B of the Code of Virginia.

**9VAC15-40-100. Change of ownership, project modifications, termination.**

A. Change of ownership. A permit by rule may be transferred to a new owner or operator if:

1. The current owner or operator notifies the department at least 30 days in advance of the transfer date by submittal of a notice per subdivision 2 of this subsection;
2. The notice shall include a written agreement between the existing and new owner or operator containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

3. The transfer of the permit by rule to the new owner or operator shall be effective on the date specified in the agreement described in subdivision 2 of this subsection.

B. Project modifications. Provided project modifications are in accordance with the requirements of this permit by rule and do not increase the rated capacity of the small wind energy project, the owner or operator of a project authorized under a permit by rule may modify its design or operation or both by furnishing to the department new certificates prepared by a professional engineer, new documentation required under 9VAC15-40-30, and the appropriate fee in accordance with 9VAC15-40-110. The department shall review the received modification submittal in accordance with the provisions of subsection B of 9VAC15-40-30.

C. Permit by rule termination. The department may terminate the permit by rule whenever the department finds that:

1. The applicant has knowingly or willfully misrepresented or failed to disclose a material fact in any report or certification required under this chapter; or
2. After the department has taken enforcement actions pursuant to 9VAC15-40-140, the owner or operator persistently operates the project in significant violation of the project's mitigation plan.

Prior to terminating a permit by rule pursuant to subdivision 1 or 2 of this subsection, the department shall hold an informal fact-finding proceeding pursuant to § 2.2-4019 of the Virginia Administrative Process Act in order to assess whether to continue with termination of the permit by rule or to issue any other appropriate order. If the department determines that it should continue with the termination of the permit by rule, the department shall hold a formal hearing pursuant to § 2.2-4020 of the Virginia Administrative Process Act. Notice of the formal hearing shall be delivered to the owner or operator. Any owner or operator whose permit by rule is terminated by the department shall cease operating his small wind energy project.

**9VAC15-40-110. Fees.**

A. Purpose. The purpose of this section is to establish schedules and procedures pertaining to the payment and collection of fees from any applicant seeking a new permit by rule or a modification to an existing permit by rule for a small wind energy project.

B. Permit fee payment and deposit. Fees for permit by rule applications or modifications shall be paid by the applicant as follows:

1. Due date. All permit application fees or modification fees are due on submittal day of the application or modification package.
2. Method of payment. Fees shall be paid by check, draft, or postal money order made payable to "Treasurer of Virginia/DEQ" and shall be sent to the Department of Environmental Quality, Receipts Control, P.O. Box 10150, Richmond, VA 23240.
3. Incomplete payments. All incomplete payments shall be deemed nonpayments.
4. Late payment. No application or modification submittal will be deemed complete until the department receives proper payment.

C. Fee schedules. Each application for a permit by rule and each application for a modification of a permit by rule is a separate action and shall be assessed a separate fee. The amount of the permit application fee is based on the costs associated with the permitting program required by this chapter. The fee schedules are shown in the following table:

Type of Action	Fee
Permit by rule application (including first three years of operation)	\$16,000
Permit by rule modification (after first three years of operation)	\$5,000

D. Use of fees. Fees are assessed for the purpose of defraying the department's costs of administering and enforcing the provisions of this chapter including, but not limited to, permit by rule processing, permit by rule modification processing, and inspection and monitoring of small wind energy projects to ensure compliance with this chapter. Fees collected pursuant to this section shall be used for the administrative and enforcement purposes specified in this section and in § 10.1-1197.6 E of the Code of Virginia.

E. Fund. The fees, received by the department in accordance with this chapter, shall be deposited in the Small Renewable Energy Project Fee Fund.

F. Periodic review of fees. Beginning July 1, 2012, and periodically thereafter, the department shall review the schedule of fees established pursuant to this section to ensure that the total fees collected are sufficient to cover 100% of the department's direct costs associated with use of the fees.

**9VAC15-40-120. Internet accessible resources.**

A. This chapter refers to resources to be used by applicants in gathering information to be submitted to the department. These resources are available through the Internet; therefore, in order to assist the applicants, the uniform resource locator or Internet address is provided for each of the references listed in this section.

B. Internet available resources.

1. The Virginia Landmarks Register, Virginia Department of Historic Resources, 2801 Kensington Avenue, Richmond, Virginia. Available at the following Internet address: <http://www.dhr.virginia.gov/register/register.htm>.
2. Professional Qualifications Standards, the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, as amended and annotated (48 FR 44716-740, September 29, 1983), National Parks Service, Washington, DC. Available at the following Internet address: [http://www.nps.gov/history/local-law/arch\\_stnds\\_9.htm](http://www.nps.gov/history/local-law/arch_stnds_9.htm).
3. Invasive alien plant species of Virginia, Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, Virginia. Available at the following Internet address: [http://www.dcr.virginia.gov/natural\\_heritage/invspinfo.shtml](http://www.dcr.virginia.gov/natural_heritage/invspinfo.shtml).
4. The Natural Communities of Virginia, Classification of Ecological Community Groups, Second Approximation, Version 2.3, 2010, Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, VA. Available at the following Internet address: [http://www.dcr.virginia.gov/natural\\_heritage/ncintro.shtml](http://www.dcr.virginia.gov/natural_heritage/ncintro.shtml).
5. Virginia Outdoors Plan, 2007, Virginia Department of Conservation and Recreation, Richmond, Virginia. Available at the following Internet address: [http://www.dcr.virginia.gov/recreational\\_planning/vop.shtml](http://www.dcr.virginia.gov/recreational_planning/vop.shtml).
6. Virginia's Comprehensive Wildlife Conservation Strategy, 2005 (referred to as the Virginia Wildlife Action Plan), Virginia Department of Game and Inland

Fisheries, 4010 West Broad Street, Richmond, Virginia. Available at the following Internet address: <http://www.bewildvirginia.org/wildlifeplan/>.

C. Internet applications.

1. Coastal GEMS application, 2010, Virginia Department of Environmental Quality. Available at the following Internet address: <http://www.deq.virginia.gov/coastal/coastalgems.html>.

NOTE: This website is maintained by the department. Assistance and information may be obtained by contacting Virginia Coastal Zone Management Program, Virginia Department of Environmental Quality, 629 E. Main Street, Richmond, Virginia 23219, (804) 698-4000.

2. Natural Landscape Assessment, 2010, Virginia Department of Conservation and Recreation. Available at the following Internet address: for detailed information on ecological cores go to [http://www.dcr.virginia.gov/natural\\_heritage/vclnavnla.shtm](http://www.dcr.virginia.gov/natural_heritage/vclnavnla.shtm). Land maps may be viewed at DCR's Land Conservation Data Explorer Geographic Information System website at <http://www.vaconservedlands.org/gis.aspx>.

NOTE: The website is maintained by DCR. Actual shapefiles and metadata are available for free by contacting a DCR staff person at [vaconslands@dcr.virginia.gov](mailto:vaconslands@dcr.virginia.gov) or DCR, Division of Natural Heritage, 217 Governor Street, Richmond, Virginia 23219, (804) 786-7951.

3. Virginia Fish and Wildlife Information Service, 2010, Virginia Department of Game and Inland Fisheries. Available at the following Internet address: <http://www.vafwis.org/fwis/>.

NOTE: This website is maintained by DGIF and is accessible to the public as "visitors" or to registered subscribers. Registration, however, is required for access to resource-specific or species-specific locational data and records. Assistance and information may be obtained by contacting DGIF, Fish and Wildlife Information Service, 4010 West Broad Street, Richmond, Virginia 23230, (804) 367-6913.

### Part III

#### Notification and Other Provisions for Projects of 5 Megawatts or Less

##### **9VAC15-40-130. Small wind energy projects of 5 megawatts or less.**

A. The owner or operator of a small wind energy project with a rated capacity equal to or less than 500 kilowatts is not required to submit any notification or certification to the department.

B. The owner or operator of a small wind energy project with a rated capacity greater than 500 kilowatts and equal to or less than 5 megawatts shall :

1. Notify the department by submitting a certification by the governing body of the locality or localities wherein the project will be located that the project complies with all applicable land use ordinances and applicable local government requirements; and

2. For projects located in part or in whole within zones 1, 2, 3, 4, 5, 10, 11, 12, or 14 on the Coastal Avian Protection Zones (CAPZ) map, contribute \$1,000 per megawatt of rated capacity, or partial megawatt thereof, to a fund designated by the department in support of scientific research investigating the impacts of projects in CAPZ on avian resources.

Part IV  
Enforcement

**9VAC15-40-140. Enforcement.**

The department may enforce the provisions of this chapter and any permits by rule authorized under this chapter in accordance with §§ 10.1-1197.9, 10.1-1197.10, and 10.1-1197.11 of the Code of Virginia. In so doing, the department may:

1. Issue directives in accordance with the law;
2. Issue special orders in accordance with the law;
3. Issue emergency special orders in accordance with the law;
4. Seek injunction, mandamus or other appropriate remedy as authorized by the law;
5. Seek civil penalties under the law; or
6. Seek remedies under the law, or under other laws including the common law.

DOCUMENTS INCORPORATED BY REFERENCE (9VAC15-40)

The Natural Communities of Virginia, Classification of Ecological Community Groups, Second Approximation (Version 2.3), 2010, Virginia Department of Conservation and Recreation, Division of Natural Heritage, Richmond, Virginia.

[Virginia Outdoors Plan, 2007, Virginia Department of Conservation and Recreation, Richmond, Virginia.](#)

[Virginia's Comprehensive Wildlife Conservation Strategy, 2005, Virginia Department of Game and Inland Fisheries, Richmond, Virginia.](#)

[Chapter 1: Introduction.](#)

[Chapter 2: Methods.](#)

[Chapter 3: Statewide Overview.](#)

[Chapter 4: Virginia's Mid-Atlantic Coastal Plain.](#)

[Chapter 5: Virginia's Southern Appalachian Piedmont.](#)

[Chapter 6: Virginia's Blue Ridge Mountains.](#)

[Chapter 7: Virginia's Northern Ridge and Valley.](#)

[Chapter 8: Virginia's Northern Cumberland Mountains.](#)

[Chapter 9: Virginia's Southern Cumberland Mountains.](#)

[Chapter 10: Conclusions.](#)

[Glossary.](#)

[Appendix A: The Species of Greatest Conservation Need.](#)

[Appendix B: Species of Greatest Conservation Need with No Known Ecoregional Associations.](#)

[Appendix C: Terrestrial Species with No Landcover Associations.](#)

[Appendix D: Potential Habitat Mapping for Terrestrial & Aquatic Tier I Species.](#)

[Appendix E: List of Tier I Species and Reviewers.](#)

[Appendix F: Complete list of Stress/Source Combinations Identified by the Taxonomic Advisory Committees.](#)

[Appendix G: Habitat Grouping Used by TACs in Assessment of Threats, Conservation Actions, and Research/Monitoring Needs.](#)

[Appendix H: Threats to Virginia's Species of Greatest Conservation Need.](#)

[Appendix I: Conservation Actions Identified by the Taxonomic Advisory Committees.](#)

[Appendix J: Research and Monitoring Needs Identified by the Taxonomic Advisory Committees.](#)

[Appendix K: Landcover Classes.](#)

[Appendix L: Summaries of Community Meetings Facilitated by VCU's Center for Public Policy.](#)

[Appendix M: Recommendations for Education and Outreach Actions.](#)

[Appendix N: DEQ Impaired Waters Map.](#)

[Appendix O: Reference Maps.](#)

[Appendix P: Public Comments.](#)