

AGENCY OF NATURAL RESOURCES PERMITTING ENERGY GENERATION PROJECTS

The requirement for an Agency of Natural Resources (ANR) permit is determined by the physical and operational attributes of the project. Permitting requirements depend on such factors as; whether operations project include the ongoing treatment of wastes or entails emissions or effluent discharges to the environment; the location of the project, its relationship to the broader landscape, and its impact on natural resources; and whether the project entails facilities for employees.

The generation project may trigger the following ANR permit or approval requirements:

- A Stormwater construction permit
- A Stormwater operational permit
- A Multi-sector general permit
- A wetlands permit
- A stream alteration permit
- A 401 Water quality certification
- A wastewater disposal and or water supply permit
- A direct discharge permit
- An air pollution control permit
- An endangered species takings permit

Stormwater - Stormwater Permits will be required for the construction of a new generation facility, the reconstruction and/or expansion of a facility, the operation of a generation facility which discharges stormwater to state waters and discharges of stormwater from industrial facilities.

- A **Stormwater construction permit** is required for the construction of any project with earth disturbance of 1 or more acres.
 - General permit 3-9020. Relevant factors in assessing whether the applicant is entitled to general permit coverage include; area of disturbance, whether there is a discharge to impaired waters, whether the project will have exposed soil for more than 14 days without final or temporary stabilization, whether the project discharges to a surface water with a minimum fifty foot buffer, soil type and slope.
 - After 10 days public notice and opportunity for a public informational hearing, the agency issues a decision on the permit and a response summary to public comments.
 - The project must comply with either the Low Risk Site Handbook or the Vermont Erosion Prevention and Sediment Control Field Guide and Vermont Standards and Specifications for Erosion Prevention and Sediment Control, as determined by the agency.
 - Individual Permit – all other sites.
 - After 30 days public notice and opportunity for a public informational hearing, the agency issues a decision on the permit and a response summary to public comments.
 - The agency looks to the Vermont Erosion Prevention and Sediment Control Field Guide and Vermont Standards and Specifications for Erosion Prevention and Sediment Control when evaluating individual construction stormwater plans. .

- The ANR website for stormwater construction permits is:
http://www.vtwaterquality.org/stormwater/htm/sw_cgp.htm
- A **Stormwater operational permit** is required for the operation of the stormwater infrastructure of any project with greater than 1 acre of new or redeveloped impervious surface.
 - General Permit 3-9015 - New development and redevelopment discharges to waters that are not principally impaired by stormwater.
 - After 10 days public notice and opportunity for a public informational hearing, the agency issues a decision on the permit and a response summary to public comments.
 - The project must comply with the Vermont Stormwater Management and the Vermont Stormwater Management Rules.
 - Individual Permit – all other projects
 - After 30 days public notice and opportunity for a public informational hearing, the agency issues a decision on the permit and a response summary to public comments.
 - The ANR website for state operational stormwater permits is:
http://www.vtwaterquality.org/stormwater/htm/sw_appsformswkshts.htm
- A **Multi-Sector General Permit** is required for new and existing discharges of stormwater from industrial facilities, applicable to steam generation facilities. To date, Entergy Nuclear Vermont Yankee is the only generation facility with this permit.
 - After 30 days public notice and opportunity for a public informational hearing, the agency issues a decision on the permit and a response summary to public comments.
 - The ANR website for the MSGP is
http://www.vtwaterquality.org/stormwater/htm/sw_msgp.htm

Relevant statutes and regulations

- 10 VSA §§1258 and 1264
- Vermont Stormwater Management Manual
http://www.vtwaterquality.org/stormwater/docs/sw_manual-vol1.pdf
http://www.anr.state.vt.us/dec/waterq/stormwater/docs/sw_manual-vol2.pdf
- Vermont Stormwater Management Rules
http://www.vtwaterquality.org/stormwater/docs/sw_rule-unimpaired.pdf

Wetlands – A permit is required for any activity within a Class I or Class II wetland or the wetland buffer zone which is not an allowed use.

- The [Vermont Significant Wetlands Inventory \(VSWI\) maps](#) show an approximate location of many significant wetlands. Significant wetlands are protected under Vermont law. A wetland is significant if it serves the following functions: water storage for flood and storm runoff; surface and ground water protection; rare, threatened, and endangered species and fish or wildlife habitat; exemplary wetland natural community; education and research; recreational value and economic benefits; open space and aesthetics; and erosion control.
- Allowed uses include the following as long as the activity complies with enumerated standards: Silvicultural and agricultural activities; the operation of existing hydroelectric facilities; routine repair and maintenance of utility infrastructure and corridors; many outdoor recreational activities; research and educational activities; maintenance, reconstruction, or routine repair of pre-existing structures and facilities; emergency repair; maintenance; wildlife or fisheries management; control of non-native species of nuisance plants and cleanup of spills of hazardous materials.

- General permit coverage is available if the project meets area of disturbance thresholds listed for each category of wetland and activity.

Wetland or Buffer Type	Linear Projects – Total Area Impacted	Non-Linear Projects – Total Area Impacted
Managed Areas	<3000 square feet	<1000 square feet
Natural Areas	<1500 square feet	<500 square feet
Surface Water Margins	<150 square feet – included in above totals	<150 square feet – included in above totals

- After 10 days public notice and opportunity for a public informational hearing, the agency issues a decision on the permit and a response summary to public comments.
- Individual Permit – all other sites.
 - After 15 days public notice and opportunity for a public informational hearing, the agency issues a decision on the permit and a response summary to public comments.
- If the proposed activity cannot be located on another site owned or controlled by the applicant or reasonably available, all practicable measure must be taken to avoid adverse effect on any protected function of a wetland. If avoidance of adverse effects cannot be achieved, compensation may be necessary.
- The ANR website for wetlands is http://www.vtwaterquality.org/permits/htm/pm_cud.htm

Relevant statute and regulations

- 10 VSA Chapter 37
- Vermont Wetland Rules
<http://www.nrb.state.vt.us/wrp/rulemaking/wetlands2010/filedruledocs/VWR%207-16-10.pdf>

A **Stream Alteration Permit** is required for the movement, excavation, or placement of fill involving 10 or more cubic yards annually in any perennial stream.

- General permit coverage is available for projects that meet explicit definitions and standards including: municipal dry hydrants; repair or replacement of existing bridges; new private temporary or permanent stream crossing structures of any type or replacement of existing culverts that meet applicable (span, elevation, no obstruction of aquatic passage); projects fully or partially funded through FEMA Public Assistance, Hazard Mitigation Assistance, USDA Emergency Watershed Protection, or Better Back Roads programs; at-grade fords provided; and the maintenance of existing channelized perennial streams less than 0.5 square miles of watershed size.
 - After 10 days notice to adjoining land owners, local and regional planning commissions and the municipality, the agency issues a decision on the permit.
- Individual Stream Alteration Permits are required for all other projects.
 - The applicant must provide notice of the application to adjoining landowners and the municipality.
- Exempt Activities include emergency protective measures, removal of up to 50 cubic yards of gravel per year if used on the riparian owner's property; dam related projects; VTrans transportation

infrastructure projects subject to 19 VSA Section 10(12); hand panning; and accepted agricultural or silvicultural practices.

- The ANR website for stream alteration is http://www.vtwaterquality.org/permits/htm/pm_streamalt.htm

Relevant Statute

- 10 VSA Chapter 41

A **401 Certification** is required for any project which triggers a federal permit or license. Examples include the ENVY which requires a license from the Nuclear Regulatory Commission and any project which requires a permit from the Army Corp of Engineers for dredging the or placement of fill in federally protected waters or wetlands. Hydroelectric projects which are subject to FERC licensing and relicensing require a 401

- Section 401 of the federal Clean Water Act requires that an applicant for a federal license or permit apply to the state for a certification that any discharges from the facility will comply with the CWA, including the Vermont water quality standards. The project must meet numeric water quality criteria, such as, turbidity, temperature and dissolved oxygen. In addition, the project must meet narrative standards such as, anti-degradation requirements and projects must fully support existing and designated uses. For example, under the VWQS, the majority of waters in Vermont are Class B waters and the following are designated uses in Class B waters:

- Aquatic Biota, Wildlife, and Aquatic Habitat
- Aesthetics
- Public water supply
- Irrigation of crops and other agricultural uses
- Swimming and other primary contact recreation
- Boating, fishing and other recreational uses

Uses are affected by flow and determining whether a project fully supports existing and designated uses generally requires ANR to engage in a site specific analysis.

- After 30 days public notice and opportunity for a public informational hearing, the agency issues a decision on the 401 certification application.
- ANR website regarding 401 certifications http://www.vtwaterquality.org/permits/htm/pm_401.htm

Relevant Statute and regulations

- 10 VSA Chapter 41
- Vermont Water Quality Standards <http://www.nrb.state.vt.us/wrp/publications/wqs.pdf>

A **wastewater disposal and water supply permit** may be required by ANR depending on whether the project entails facilities which require potable water and sewage treatment (typically for generation facilities which have on site employees).

- A waste water disposal and water supply permit is required for the subdivision of land, the construction, modification or change in use of a building or structure, and the construction, modification, replacement and operation of potable water supplies and wastewater disposal systems. The permit regulates soil-based disposal systems with design flows of less than 6500 gallons per day and sewerage connections of any size. It also applies to potable water supplies that are not subject to regulation under the Vermont Water Supply Rule as public water supplies (any system that provides drinking water to at least twenty five (25) individuals daily for at least sixty days of the year).

- Notice to municipalities. An adjoining landowner must be notified if the isolation distance associated with the project is located on the adjoining property.
- Note that larger water supply and wastewater disposal systems may require a Public Water Supply permit and an Indirect Discharge permit.
- ANR wastewater disposal and water supply website for small scale systems
<http://www.anr.state.vt.us/dec/ww/EngServ.htm>

Relevant Statute and regulations

- 10 VSA Chapter 64
- Wastewater System and Potable Water Supply Rules

<http://www.anr.state.vt.us/dec/ww/Rules/OS/2007/FinalWSPWSRuleEffective20070929.pdf>

A **direct discharge** (National Pollutant Discharge Elimination System (NPDES) permit will be required if the project involves the discharge of pollutants to state waters. For generation projects, this typically involves the withdrawal of surface water for cooling purposes and the subsequent discharge of heated waters and or other effluents and pollutants. Ryegate and ENVY are examples of facilities which have this permit.

- A NPDES permit is required for any discharge to state waters. The discharge must meet the applicable federal CWA and state requirements. The project must meet technology based and water quality based numeric and narrative water quality standards.
 - After 30 days public notice and opportunity for a public informational hearing, the agency issues a permit decision and a response summary.
- ANR direct discharge website <http://www.vtwaterquality.org/wastewater.htm>

Relevant Statute and regulations

- 10 VSA Chapter 47
- Vermont Water Quality Standards <http://www.nrb.state.vt.us/wrp/publications/wqs.pdf>

An **Air Pollution Control Permit to Construct and Permit to Operate** is required for electrical power generation facilities which are air contaminant sources. Note that these permits are combined into one permit.

- An Air Pollution Control Permit to Construct may be required prior to commencing construction of the facility. Fuel burning boilers with steam driven electric generators such as wood fired power plants require a permit (McNeil, Ryegate, and North Springfield Sustainable Energy Project). Coal, oil or natural gas fired boiler steam generators also require a permit although none currently exist in Vermont. A permit is required for gas turbines which burn fuel with the exhaust gases to drive the electric turbine (simple cycle) as well as simple cycle combined with a heat recovery steam turbine (combined cycle). Vermont currently has several simple cycle gas turbines, fired either with fuel oil or natural gas, used for peak power such as two utility scale Green Mountain Power facilities.
 - After 30 days public notice and opportunity for a public informational hearing, the agency issues a permit decision and a response summary.
- ANR does not require permits for emergency diesel generators provided they meet the regulatory minimum emission standards and are limited to emergency operation. In addition, no permit is required for Cow Power projects that comply with specific standard requirements. Wind turbines and solar arrays are two types of electric generating facilities that do not result in ongoing air pollution emissions and do not require permits.
 - ANR Air pollution website <http://www.anr.state.vt.us/air/Permitting/htm/ConstructPermits.htm>

Relevant Statute and regulations

- 10 VSA Chapter 23
- Vermont Air Pollution Control Regulations <http://www.anr.state.vt.us/air/docs/APCR%202011.pdf>

Other Potential Issues include:

- Blasting for site preparation
- Storage of Hazardous materials or waste on site (fuel for engines or solvents for cleaning equipment for example) Depending on the volume and nature of the material, the Vermont Hazardous waste management regulations may be applicable
 - <http://www.anr.state.vt.us/dec/wastediv/rcra/rcrahome.htm>
- Some project sites are contaminated prior to project development and are required to comply with sites management, monitoring and clean up requirements.
 - http://www.anr.state.vt.us/dec/wastediv/sms/sites_management_section.htm

Disposal of sludge by land fill or incineration may be required for certain Methane digester by products <http://www.vtwaterquality.org/ww/htm/residuals.htm>

Relevant regulations

- Vermont Solid Waste Management Regulations <http://www.anr.state.vt.us/dec/wastediv/solid/documents/SWRule.final.pdf>

An ***endangered species taking*** is prohibited unless authorized by the ANR Secretary with the advice of the endangered species committee.

- ANR website regarding endangered species http://www.vtfishandwildlife.com/wildlife_nongame.cfm

10 VSA Chapter 123