



**ANR permits  
applicable to  
new Energy  
Generation  
Projects**

# Overview

In addition to the Natural Resource evaluation conducted by the Public Service Board, a project may also be subject to the independent and concurrent review of its project by the Agency of Natural Resources

# Permit Areas:

- Stormwater Discharges
- Wetlands Impacts
- Stream Alteration
- 401 Water Quality Certification
- Direct Discharge
- Water Supply and Wastewater Disposal
- Air Pollution Control
- Endangered Species Taking

# Stormwater

Stormwater is rain or snowmelt that runs off surfaces, like rooftops, paved roads, and parking lots.

“Stormwater runoff” means precipitation and snowmelt that does not infiltrate into the soil, including material dissolved or suspended in it, but does not include the discharges from undisturbed natural terrain or wastes from combined sewer overflows.

Environmental Protection Rules, § 18-201(a) (23)

# Stormwater

Why is Stormwater regulated?

- Stormwater can discharge into waters of the state.
- Stormwater management is necessary to reduce channel instability, pollution, sedimentation, and local flooding, all of which have adverse impacts on the surface water and land resources of the State. Stormwater management is also necessary to protect groundwater.

Environmental Protection Rule, §18-101

# Stormwater

Because it is a precipitation driven discharge, stormwater management is a BMP based program.

Stormwater is influenced by precipitation and variations in the antecedent conditions of a site. Stormwater is managed through the use of best management practices (BMPs) designed to prevent erosion and control the movement of sediment.

# Stormwater

In 10 V.S.A. § 1264 (b), the Vermont Legislature directed ANR to recognize this difference in the development of a stormwater management plan that

*shall recognize that the runoff of stormwater is different from the discharge of sanitary and industrial wastes because of the influence of natural events of stormwater runoff, the variations in characteristics of those runoffs, and the increased stream flows and natural degradation of the receiving water quality at the time of discharge.*

# Stormwater

ANR's role in stormwater management.

The Stormwater Management Program provides regulatory oversight and technical assistance to ensure proper design and construction of stormwater treatment and control practices as well as construction-related erosion prevention and sediment control practices, necessary to minimize the adverse impacts of stormwater runoff to surface waters throughout Vermont.

# Stormwater

## Stormwater Permits required for:

- The construction of a new generation facility, the reconstruction or expansion of a facility (NPDES construction permit),
- The operation of a generation facility which discharges stormwater to state waters (operational permit); and
- Discharges of stormwater from industrial facilities (Multi-Sector General Permit)

# Stormwater

National Pollution Discharge Elimination (System NPDES)  
construction permit

NPDES is a federal permit program; EPA has delegated this program to the State of Vermont, ANR/DEC

- A NPDES construction permit is required for the construction of any project with earth disturbance of 1 or more acres
- Required before commencement of construction, earth disturbance, tree clearing that involves stubbing and grubbing
- Temporary permit terminated upon completion of the project and stabilization of the site
- The Agency regulates stormwater discharges from construction sites through authorization under a the General Permit 3-9020, or through an individual permit

# Stormwater

## General Permit 3-9020

- 10 day comment period
- Standard terms and conditions applied to all projects
- Depending on the project site, size, and erosion risk factors, BMPS derived from Low Risk Site Handbook, Vermont Erosion Prevention and Sediment Control Field Guide, or Vermont Standards and Specifications
- Example, Georgia Mountain Community Wind Project, Docket No. 7508

# Stormwater

- As part of the application process, a project must complete a risk assessment which evaluates the project based on a number of factors including, area of disturbance, stabilization schedule, soil type and slope, and the use buffers.
- The results of the assessment determines whether the project qualifies for coverage under the General Permit 3-9020 or requires an Individual Permit.

# Stormwater

## Individual Permit

- 30 day comment period
- Interested parties may request a public hearing
- Project specific terms and conditions
- Erosion Prevention and Sediment Control Plan specifically tailored to site and site conditions
- Additional project oversight by an EPSC Specialist
- EPSC reporting to ANR
- Preconstruction meeting on site
- BMPS applied on project site include those from Vermont Standards and Specifications AND others approved by Agency
- Examples: Kingdom Community Wind, Lowell Vermont, Docket No. 7628; UPC Vermont Wind (Sheffield Wind Project), Docket No. 7156

# Stormwater

## Operational Permit

- State based permit program
- Designed to manage and treat stormwater runoff from impervious surfaces (1 acre or more) such as roadways, driveways and rooftops, prior to discharging to waters of the state
- Stormwater runoff is managed and treated according to the standards established in the Vermont Stormwater Management Manual (VSMM)
- An “operational” permit authorization is required for the duration of the impervious surface, requiring treatment of the stormwater runoff from the stormwater surface for as long as the surface remains

# Stormwater

- The Vermont Stormwater Management Manual
  - ANR charged by Legislature to create Manual
  - The Manual established five treatment standards for the control of both water quality and quantity
    - Water quality – capture annual storm events and removal of post development sediment and phosphorus
    - Channel protection- protect stream channels through extended detention
    - Groundwater recharge- maintain existing water quality elevations
    - Overbank flood protection – control for the 10 year, 24 hour storm event
    - Extreme flood protection - control for the 100 year, 24 hour storm event
  - Stormwater management design that incorporates the treatment standards anticipates and manages for a range of storm events and protects the water quality of the receiving streams

# Stormwater

ANR regulates operational stormwater discharges through

- Authorization under General Permit 3-9015
  - 10 day comment period
  - Opportunity for a public informational hearing
  - Examples: Georgia Mountain Community Wind, Sheffield
- Individual Permits
  - 30 day public comment period
  - Opportunity for public hearing
  - Project specific terms and conditions
  - Example: Kingdom Community Wind

The ANR website for state operational stormwater permits is:

[http://www.vtwaterquality.org/stormwater/htm/sw\\_appsformswhs.htm](http://www.vtwaterquality.org/stormwater/htm/sw_appsformswhs.htm)

# Stormwater

## ***Multi-Sector General Permit***

Required for new and existing discharges of stormwater from industrial facilities, applicable to steam generation facilities.

- Entergy Nuclear Vermont Yankee, Ryegate Power Station, and the McNeil Generating Station have this permit.

The ANR website for the MSGP is

[http://www.vtwaterquality.org/stormwater/htm/sw\\_msgp.htm](http://www.vtwaterquality.org/stormwater/htm/sw_msgp.htm)

# Wetlands

A Vermont Wetlands Permit is required for any activity within a significant wetland or wetland buffer that is not an allowed use

- A wetland is significant if it serves any of 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
- The [Vermont Significant Wetlands Inventory \(VSWI\) maps](#) show an approximate location of many significant wetlands
- Additional significant wetlands may be delineated on-site.

# Wetlands

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.

# Wetlands

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

<b>Wetland or Buffer Type</b>	<b>Linear Projects – Total Area Impacted</b>	<b>Non-Linear Projects – Total Area Impacted</b>
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.

# Wetlands

An Individual Permit is required for 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.

# Stream Alteration Permit

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.
  - General permit coverage includes both non-reporting and reporting activities
- Individual Stream Alteration Permits are required for all other projects.
- After 10 days notice to adjoining land owners, local and regional planning commissions and the municipality, the agency issues a decision on the permit.

# Stream Alteration Permit

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 infrastructure projects subject to 19 VSA Sec10(12);
- hand panning; and
- accepted agricultural or silvicultural practices.

# Stream Alteration Permit

The ANR website for stream alteration is

[http://www.vtwaterquality.org/permits/html/pm\\_streamalt.  
htm](http://www.vtwaterquality.org/permits/html/pm_streamalt.htm)

Relevant Statute

- 10 VSA Chapter 41

# 401 Certification

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 Clean Water Act.

Projects requiring 401 Certification include:

- ENVY which requires a license from the Nuclear Regulatory Commission.
- Kingdom Community Wind which required a permit from the Army Corp of Engineers for placement of fill in federally protected waters or wetlands.
- Hydroelectric projects which are subject to FERC licensing and relicensing require a 401.

# 401 Certification

To qualify for 401 Certification in Vermont:

- The project must meet the Vermont Water Quality Standards (VWQS), which include 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.

# 401 Certification

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

# 401 Certification

- 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, which may include pre and post construction water quality monitoring.
- After 30 days public notice and opportunity for a public informational hearing, the agency issues a decision on the 401 certification application.

# 401 Certification

ANR website regarding 401 certifications

[http://www.vtwaterquality.org/permits/html/pm\\_401.htm](http://www.vtwaterquality.org/permits/html/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>

# Direct Discharge NPDES permit

- Required if the project involves the discharge of pollutants to state waters. For Electric Generation projects, the discharge typically involves the withdrawal of surface water for cooling purposes and the subsequent discharge of heated waters and other pollutants to surface waters.
- Examples are Ryegate and ENVY.
- The discharge must meet the applicable federal CWA and state technology and water quality based requirements such as the Vermont 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.

# Wastewater Disposal and Water Supply Permit

A 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 employees).

Note that larger water supply and wastewater disposal systems may require a Public Water Supply permit and an Indirect Discharge permit.

# Wastewater Disposal and Water Supply 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>

# Air Pollution Control Permits

An Air Pollution Control Permit to Construct and Operate 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.

# Air Pollution Control Permits

- A permit is also 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.

# Air Pollution Control Permits

ANR Air pollution website

<http://www.anr.state.vt.us/air/Permitting/html/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>

# Threatened and Endangered Species Taking Permit

Threatened and Endangered species are protected under Vermont law; however, the ANR Secretary may permit the taking of these species for the following purposes:

- Scientific purposes
- To enhance the propagation or survival of the species
- Zoological exhibition
- Educational purposes
- Economic hardship

# Threatened and Endangered Species Taking Permit

- Prior to issuing a permit, the Secretary obtains advice from the Endangered Species Committee.
- Fees may be charged to a person applying to take a threatened or endangered species.

# Threatened and Endangered Species Taking Permit

- A takings permit may be required if protected plants or animals, including aquatic animals such as mussels, are impacted from the construction or operation of a generation facility.
- Large scale wind power facilities may require a takings permit due to impacts to listed bat species, including Little Brown Bat (*Myotis lucifugus*), Northern Long-eared Bat (*Myotis septentrionalis*), Eastern Small-footed Bat (*Myotis leibii*), Tri-colored Bat (*Perimyotis subflavus*).

# Threatened and Endangered Species Taking Permit

ANR website regarding endangered species

- [http://www.vtfishandwildlife.com/wildlife\\_nongame.cfm](http://www.vtfishandwildlife.com/wildlife_nongame.cfm)

Relevant Statute

- 10 VSA Chapter 123

# Additional Considerations:

- Blasting for site preparation
- Storage of hazardous materials
- Re-development of contaminated sites
- Disposal of sludge