

AGENCY OF NATURAL RESOURCES  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
WASTEWATER MANAGEMENT DIVISION  
103 SOUTH MAIN STREET  
WATERBURY, VERMONT 05671-0405

FACT SHEET

June 2010

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

FILE NO.: 13-10  
PROJECT ID NO.: NS09-0110  
NPDES NO: VT0001368  
PERMIT NO.: 3-1529

NAME AND ADDRESS OF APPLICANT:

David Chaves Excavating, Inc.  
PO Box 70  
Londonderry, VT 05148

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Chaves Quarry  
7500 Route 100  
Londonderry, Vermont

RECEIVING WATERS AND CLASSIFICATION: Unnamed tributary of the West River: Class B. Class B waters are suitable for bathing and recreation; irrigation and agricultural uses; good fish habitat; good aesthetic value; acceptable of public water supply with filtration and disinfection.

I. Proposed Action, Type of Facility, and Discharge Location

The above named applicant has applied to the Vermont Department of Environmental Conservation for a permit to discharge into the designated receiving waters. The proposed facility will be engaged in quarrying operations.

The complete application, draft permit, and other information are on file and may be inspected at the VTDEC, Wastewater Management Division, Waterbury Office. Copies will be made at a cost based on the previous Secretary of State Official Fee Schedule for Copying Public Records from 8:00 am to 4:30 pm, Monday through Friday.

II. Description of Discharge

This permit authorizes the discharge of 1.175 MGD, monthly average, and 1.440 MGD during the spring dewatering season and a discharge of 0.104 MGD, monthly average, during the operational season to an unnamed tributary of the West River of treated mined dewatering water and process wastewater from the Chaves Quarry. A quantitative description of the discharge in terms of significant effluent parameters is presented in section IV. below.

III. Limitations and Conditions

The effluent limitations of the permit, the monitoring requirements, and any implementation schedule (if required), may be found on the following pages of the permit:

Effluent Limitations: Page 2  
Monitoring Requirements: Page 2 and 3

IV. Permit Basis and Explanation of Effluent Limitation Derivation

**History & Summary**

David Chaves Excavating Inc. currently owns and operates a quarry located at 7500 Route 100, Londonderry, VT. The quarry produces sand, aggregate and crushed stone used by the local municipalities in road construction projects and road maintenance. Any runoff generated during current operations can be managed via infiltrating the runoff into the quarry floor.

Due to the increased demand for material, David Chaves Excavating, Inc. is proposing to expand the quarry. Due to the increased size of the quarry the volume of process wastewater and dewatering water will drastically increase and it will no longer be feasible to dispose of this wastewater via infiltration.

To manage this wastewater, David Chaves Excavating, Inc. is proposing to treat and discharge this wastewater to an unnamed tributary of the West River. Specifically the quarry floor will be graded such that the dewatering water and process wastewater from the crusher and dust control will be directed to a sump. The wastewater will be pumped from the sump to a detention basin system for treatment. The treated wastewater will then be discharged via a restricting outlet structure and enter an unnamed tributary of the West River.

A crusher will be used at the quarry. The crushing process will use wastewater during operations. Wastewater will be extracted from the sump for use in the crusher and the site is graded to direct the wastewater generated during the crushing operation back into the quarry for recycling or treatment.

**Effluent Limitations**

**Flow**

Based on the seasonal operations of the quarry, the permit contains flow limitations to reflect the minimal operations of the quarry during the winter. Specifically a significant amount of water will accumulate in the quarry and it will be necessary to remove this water each spring before normal quarry operations can resume. Therefore the draft permit contains "Spring Dewatering" effluent limitations of 1.175 MGD, monthly average, and 1.440 MGD, daily maximum. These limitations are based on the information contained in the discharge permit application.

After the "spring dewatering period", discharges from the quarry occur as necessary during the operational season to manage any runoff that has collected in the quarry or any process wastewater that has been generated during quarrying operations. The draft permit contains an effluent limitation of 0.104 MGD, monthly average, during the operational seasons. This limitation is based on the information contained in the discharge permit application.

**Turbidity**

The permit contains a turbidity limitation of 10 NTU, annual average, during dry weather conditions. This limitation is based on Section 3-04.B of the Vermont Water Quality Standards effective January 1, 2008. During the spring dewatering period, turbidity sampling is required twice per month. During normal quarrying operations, turbidity sampling is required once per month.

**Total Suspended Solids (TSS)**

The permit contains a monitoring requirement for Total Suspended Solids. During the spring dewatering period, TSS sampling is required twice per month. During normal quarrying operations, TSS sampling is required once per month.

**pH**

The permit contains a pH limitation of 6.5 to 8.5 SU. This limitation is based on Section 3-01.B.9 of the Vermont Water Quality Standards effective January 1, 2008. pH sampling is required twice per month during the spring dewatering period and once per month during normal quarrying operations.

**Seasonal Operations**

Condition I.A.2.a requires the permittee to provide written notice to the Agency prior to starting quarrying operations in the spring.

Condition I.A.2.b requires the permittee to note the dates of spring dewatering on the discharge monitoring report.

Condition I.A.2.c requires the permittee to provide written notice to the Agency of the seasonal shut down of the quarrying operation

**Total Metals Analyses**

Concentrations of heavy metals have been detected with some mineral formations in the state. Therefore the permit requires that this discharge be sampled for the following total metals: antimony, arsenic, cadmium, chromium, copper, iron, lead, nickel, selenium, silver, and zinc. Sampling for these metals is required within 180 days after commencing this discharge and based upon the results of these analyses or any other similar analyses conducted on this discharge, the permit may be amended to require additional analyses or establish specific effluent limitations.

**Perchlorate**

The draft permit contains a monitoring requirement for perchlorate. Perchlorate is present in some types of explosives used in the mining and quarrying industry and has been detected in the discharges from other quarries. Therefore perchlorate monitoring is being required. Specifically, perchlorate sampling is required once during the period of May through September 2014 to ensure that data is available for the permit renewal application.

**Special Conditions**

Condition I.A.4.a requires that water recycling/reuse be maximized to reduce the volume of water discharged.

Condition I.A.4.b requires that the pump intake be sufficiently above the top layer of any settled material in the quarry sump to prevent the pumping of solids to the settling basins.

Condition I.A.4.c requires that the accumulated solids in the detention basin be measure twice per year and the results reported on the WR-43 Discharge Monitoring Report.

Condition I.A.4.d requires that the accumulated solids in the detention basin be removed with the depth of the accumulated solids reaches the 1.0 foot level and the dates of solids removal be reported on the WR-43 Discharge Monitoring Report.

Condition I.A.4.e requires that any material removed from the sumps or settling basin be disposed of in accordance with applicable state and federal regulations.

Condition I.A.4.f requires that the area downgradient of the outfall be regularly inspected for signs of erosion and prompt action taken to correct any erosion resulting from the discharge.

Condition I.A.4.g requires that a spill prevention and control plan be implemented to prevent any fuel, chemical spills, or leaks from entering the wastewater treatment system.

V. Antidegradation Policy and Discharge Policy

Section 1-03.B.1 of the Vermont Water Quality Standards requires that the existing uses of the receiving waters be protected and maintained and the Secretary must consider the following factors in making a determination:

- a. Aquatic biota and wildlife that utilize or are present in the waters;
- b. Habitat that supports existing aquatic biota, wildlife and plant life;
- c. The use of the waters for recreation or fishing;
- d. The use of the water for water supply, or commercial activity that directly depends on the preservation of an existing high level of water quality; and
- e. with regards to the factors considered under (a) and (b) above, the evidence of the uses ecological significance in the functioning of the ecosystems or evidence of the use's rarity.

These factors have been considered in conjunction with this discharge and it has been determined that the existing uses of the receiving water will be maintained.

Section 1-03.C.2 of the Vermont Water Quality Standards requires that higher quality water be protected and the risk minimized to existing and designated uses. In addition a limited reduction in the existing higher quality of the waters may only be allowed if:

- a. the adverse economic and social impacts on the people of the state from maintaining the higher quality waters would be substantial and widespread;
- b. these adverse impacts would exceed the environmental, economic, social, and other benefits of maintaining the higher water quality; and
- c. there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources, and all cost effective and reasonable accepted agricultural practices

and best management practices, as appropriate for nonpoint source control, consistent with state law.

With respect to these requirements, this quarry provides material to local municipalities for road construction and maintenance, including winter maintenance, which provides safe travel to the citizens of Vermont. Therefore the requirements of a. and b. above have been met. With respect to c. above, the effluent limitations are water quality based which is the highest regulatory requirement for this discharge.

Per Section 1-04.A of the Vermont Water Quality Standards, new discharges of wastes may be allowed only when all the following criteria are met:

1. The proposed discharge is in conformance with all applicable provisions of these rules including classification of the receiving waters adopted by the Board as set forth in Chapter 4 of these rules.
2. There is neither an alternative method of waste disposal, nor an alternative location for waste disposal, that would have a lesser impact on water quality including the quality of groundwater, or if there is such an alternative method or location, it would clearly unreasonable to require its use.
3. The design and operation of any waste treatment or disposal facility is adequate and sufficiently reliable to ensure the full support of uses and to ensure compliance with these rules and with all applicable state and federal treatment requirements and effluent limitations.
4. Except as provided for in 10 V.S.A. 1259(d) and (f), the discharge of wastes other than nonpolluting wastes and stormwater is prohibited in Class A waters regardless of the degree of treatment provided.
5. Except as provided for in 10 V.S.A. 1259, the discharge of wastes that, prior to treatment, contained organisms pathogenic to human beings is prohibited.
6. The receiving waters will have sufficient assimilative capacity to accommodate the proposed discharge.
7. Assimilative capacity has been allocated to the proposed discharge consistent with the classification set forth in Chapter 4 of these rules.
8. The discharge of wastes to the thermocline or hypolimnion of any lake in manner that may prevent full support of uses is prohibited.
9. The discharge of sewage into Class B waters shall not pose more than a negligible risk public health. Compliance with this criterion shall include as assessment of both the level and reliability of treatment achieved and the impact of the discharge on the water quality of the receiving waters.

The Agency finds that these criteria have been met. Specifically,

1. The discharge conforms with the classification of the receiving water.
2. Since infiltration is no longer feasible, the only alternative is to discharge the wastewater.
3. Based on the current design criteria, the treatment system is adequate and sufficiently reliable to meet the effluent limitations.
4. The discharge is not to a Class A water.
5. The discharge, prior to treatment, does not contain organisms pathogenic to humans.
6. Adequate assimilative capacity exists to accommodate this discharge.

7. See 6 above.
8. The receiving water is not a lake.
9. The discharge does not contain sewage.

VI. Procedures for Formulation of Final Determinations

The public comment period for receiving comments on this draft permit is from May 17, 2010 through June 16, 2010. During this time interested persons may submit their written views on the draft permit. All written comments will be retained by the Department and considered in the formulation of the final determination to issue, deny or modify the draft permit. The period of comment may be extended at the discretion of the Department.

Written comments should be sent to:

Vermont Agency of Natural Resources  
Department of Environmental Conservation  
Wastewater Management Division - Sewing Building  
103 South Main Street  
Waterbury, VT 05671-0405

Comments may also be faxed to: 802-241-2596.

Any interested person or groups of persons may request or petition for a public hearing with respect to this draft permit. Any such request or petition for a public hearing shall be filed within the public comment period described above and shall indicate the interest of the party filing such request and the reasons why a hearing is warranted.

The Department will hold a hearing if there is significant public interest in holding such a hearing.

Any public hearing brought in response to such a request or petition will be held in the geographical area of the draft discharge or other appropriate area, at the discretion of the Department and may, as appropriate, consider related groups of draft permits. Any person may submit oral or written statements and data concerning the draft permit at the public hearing. The Department may establish reasonable limits on the time allowed for oral statements and may require the submission of statements in writing. All statements, comments, and data presented at the public hearing will be retained by the Department and considered in the formulation of the final determination to issue, deny, or modify the draft permit.