

TO: Norwich Selectboard; Neil Fulton, Norwich Town Manager  
FROM: Nate Stearns, Esq.  
RE: Norwich Pool Dam, Stream Alteration Permit Application post mortem  
DATE: January 20, 2016

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This memorandum was prepared in response to a memorandum submitted to the Norwich Selectboard by Mary Layton, dated November 23, 2015, in which Ms. Layton states that she sees the application for a stream alteration permit as a “colossal failure” and asks for an explanation of the application process.

The Town of Norwich (“Norwich”) engaged me to assist in the preparation of an application for a Stream Alteration permit pursuant to 10 V.S.A. § 1023 for the reconstruction of the Norwich pool dam. I began working on the project in February 2015. At the time I joined the project team, Norwich had already decided to seek permits to rebuild the dam and had assembled a team including the engineering firm of Dubois and King and the environmental consulting firm Aquatec. Dubois and King had prepared draft engineering plans, and Aquatec had completed some investigation of the potential impact of the rebuilt dam on fish life and wildlife. The project team had been in discussions with the Vermont Agency of Natural Resources (“ANR”) for over a year, and had received two rounds of feedback from ANR in the form of letters dated June 3, 2014, and December 12, 2014 (copies attached).

The initial feedback from ANR in its June 3, 2014, letter was somewhat positive. In that letter, ANR stated that ANR “has preliminarily found that your project meets the criteria of 10 V.S.A. § 1023(a)(1), (3), and (4).” That letter also indicated, however, that ANR had concerns about the project’s impact on fish life and wildlife under 10 V.S.A. 1023(a)(2).

Notwithstanding some initially encouraging feedback, Neil Fulton and the project team expressed concerns throughout the process that given statements by ANR employees that their personal beliefs predisposed them to disfavor any dams a permit denial was likely. Accordingly, the project team designed a project and prepared an application that they believed satisfied the statutory and regulatory requirements and also addressed the specific feedback received from ANR staff in the ANR letters and during in-person meetings. To address the applicable criteria and ANR feedback, the project team designed a unique structure that included a 24 foot removable stop log structure that would only be closed for 10 weeks of the year, and detailed procedures to minimize environmental impacts. The project was also designed in accordance with national dam safety standards, and was engineered to withstand a 500 year flood event.

The statutory criteria for a stream alteration permit are set forth in 10 V.S.A. § 1023(a), which provides as follows:

Upon receipt of an application, the Secretary shall cause an investigation of the proposed change to be made. Prior to making a decision, a written report shall be made by the Secretary concerning the effect of the proposed change on the watercourse. The permit shall be granted, subject to such conditions determined to be warranted, if it appears that the change:

- (1) will not adversely affect the public safety by increasing flood or fluvial erosion hazards;
- (2) will not significantly damage fish life or wildlife;
- (3) will not significantly damage the rights of riparian owners; and
- (4) in case of any waters designated by the Secretary as outstanding resource waters, will not adversely affect the values sought to be protected by designation.

ANR has implemented regulations that govern the review of stream alteration permit applications, at Vermont Environmental Rule 27, Vermont Stream Alteration Rule, and the Vermont Supreme Court case of *In re Town of Groton*, 172 Vt. 578 (2001) further discusses the proper application of the statutory standards. The ANR regulations provide, in relevant part, as follows:

Subchapter 4 – Investigation; Standards for the Issuance of Stream Alteration Permits and Authorization for Stream Alterations under a General Permit that Do Not Qualify as Protective Measures Necessary to Address Next-Flood Threats or Emergencies

§27-401 Investigation

- (a) Upon receipt of an application for a stream alteration permit or a report of a proposed stream alteration requiring the Secretary's authorization, the Secretary shall investigate the proposed stream alteration to determine whether it complies with this Rule and applicable statutes (10 V.S.A. § 1023(a)).
- (b) The Secretary shall issue a written decision on proposed stream alterations that addresses the effect of the proposal on the watercourse (10 V.S.A. § 1023(a)).

§27-402 Standards for the Issuance of Stream Alteration Permits and Authorization for Stream Alterations under a General Permit that Do Not Qualify as Protective Measures Necessary to Address Next-Flood Threats or Emergencies

(a) As provided by 10 V.S.A. § 1023(a), an individual stream alteration permit or authorization under a stream alteration general permit shall be granted, subject to such conditions determined to be warranted by the Secretary, if the Secretary concludes that the change:

1. Will not adversely affect the public safety by increasing flood or fluvial erosion hazards;
2. Will not significantly damage fish life or wildlife;
3. Will not significantly damage the rights of riparian owners; and
4. In the case of any waters designated as outstanding resource waters under 10 V.S.A. § 1424a, will not adversely affect the values sought to be protected by the designation.

(b) In determining whether or not a proposed activity meets the criteria for permit issuance in 10 V.S.A. § 1023(a), the Secretary shall apply the following performance standards:

1. Equilibrium Standard a. An activity shall not change the physical integrity of the stream in a manner that departs from, further departs from, or impedes the attainment of the channel width, depth, meander pattern, and longitudinal slope associated with the stream processes and equilibrium conditions as they occur naturally in a given reach of stream. b. The equilibrium standard is met when it can be shown that, following the stream alteration, the water flow, sediment, and woody debris produced by the watershed will be transported by the stream channel in such a manner that the stream maintains its dimension, general pattern, and slope with no unnatural aggrading (raising) or degrading (lowering) of the channel bed elevation along the longitudinal stream bed profile.

2. Connectivity Standard a. An activity shall not change physical stream forms or alter local channel hydraulics, natural streambank stability, or floodplain connectivity in a manner such that changes in the erosion or deposition of instream materials results in localized changes to or disconnects within the horizontal alignment of streambanks or the vertical profile of the streambed. A person shall not, unless authorized by the Secretary, change the course, current, or cross-section of a watercourse so as to create a physical obstruction or velocity barrier to the movement of aquatic organisms or change the vertical stream bed profile in a manner that impedes the movement of aquatic organisms.

c. A person shall not establish, construct, or maintain a berm in a flood hazard area or river corridor, as defined in this Rule, unless authorized as an emergency protective measure as prescribed in Subchapter 7 of this Rule.

To the extent ANR determines that a permit application does not provide sufficient information to make a decision on issuance or denial of a permit, ANR's Regulations provide as follows:

The Secretary may require an applicant to submit additional information that the Secretary considers necessary in order to make a decision on the issuance or denial of an individual permit. The Secretary may deny the individual permit if the requested information is not provided within 60 days of the Secretary's request."

In addition to the Stream Alteration Regulations, ANR is also required to manage all waters in Vermont to attain the Vermont Water Quality Standards ("VWQS"), which set forth specific criteria that must be met for any project that requires a stream alteration permit. The VWQS standards applicable to the project include, among others, standards related to Temperature, Hydrology (flow requirements), and Biological criteria.

Norwich's application provided information that addressed the statutory and regulatory criteria, including the Stream Alteration Regulations and the VWQS. To address the possibility that ANR nevertheless deemed the application lacking of sufficient information, Norwich's application cover letter stated "[p]lease let me know as soon as possible if you require any additional information to process the Application." In telephone conversations with ANR staff, Neil Fulton reiterated the request that ANR ask for additional information prior to issuing a

permit denial. Rather than ask for additional information, however, ANR simply denied the permit.

ANR did offer Norwich the ability to submit additional information, but it came with ANR's denial. The denial started the 30 day appeal clock running, and essentially turned a blind eye to ANR's regulations that allow them to ask for additional information prior to denial and allow 60 days to submit that information. ANR's denial also ignored Norwich's requests that ANR seek additional information rather than deny the permit. ANR's denial letter also ignored much of the information contained in Norwich's application. Examples of ANR's willful disregard of the content in the permit application include the following:

1. Hydrology: The application included a calculation of minimum required base flows (or conservation flows) and included a procedure to ensure that base flows would be maintained. ANR's denial letter stated, without any analysis, that "the application fails to demonstrate that conservation flows will be maintained at all times during the summer period."

The application also included detailed procedures for filling and draining the pool, including procedures to prevent fish stranding and mortality. ANR's denial letter stated, without any analysis, that "the proposed operation of the project during fill and draining activities, fails to demonstrate that substantial aquatic habitats will not be dewatered resulting in the likelihood of stranding and associated mortality of aquatic species."

2. Temperature: The application included temperature data collected by Aquatec at the site of the old Fire District Dam on Charles Brown Brook. The application also included a detailed hydraulic analysis of the temperature impact of the pool on the water in Charles Brown Brook. Based on this information, the application concluded that the project would meet the criteria for Temperature impact in the VWQS. Notwithstanding this analysis, ANR stated that "the Applicant's temperature modeling is inconsistent with empirical studies of similar situations in Vermont and elsewhere." ANR's did not support its assertion with a citation of any such studies. Important in understanding the lack of analysis in ANR's response, it is our understanding that ANR disregard the hydraulic calculations of the project team's licensed professional engineers, even though no licensed engineers reviewed the application on behalf of ANR.

In addition, ANR further supported its denial by reference to standardless criteria that are not included in the statutory or regulatory requirements. Because these criteria are un-written and have no standards, it would have been difficult and inordinately expensive for Norwich to anticipate and address every non-regulatory issue that ANR might ultimately cite as a basis for denial. A review of ANR's stated reasons for denials on these standardless and non-regulatory

criteria demonstrates that in denying the permit ANR completely discounted the evidence presented by the project team, without citing any support for ANR's positions.

1. Aquatic Organism Passage: The town discussed aquatic organism passage at length with ANR in the pre-application stage. ANR expressed concerns that a fish ladder would cause more harm than good by discharging warmer surface water and raising the downstream temperature. Norwich's fish biologist reviewed fish census data from Charles Brown Brook as well as published studies of fish migration patterns, and concluded that given the size of fish present in CBB the project without a fish ladder would not significantly damage fish life because studies have demonstrated that fish of the size present in CBB do not move more than 67m during summer months.

ANR stated that the conclusion of Norwich's biologist was contrary to un-named and un-cited empirical studies (even though Norwich's biologist cited the studies he relied on), but ANR did not offer any analysis of whether their interpretation would result in significant damage to fish life.

2. Loss/Degradation of Riverine Habitat: ANR cited numerous possible impacts of the dam, but never tied their analysis to the actual statutory and regulatory criteria that asks whether the project will "significantly damage fish life or wildlife." (Emphasis added). ANR's analysis cited conditions within the 340 foot long impoundment area, but ignored the question of whether those impacts would cause significant damage to the ecosystem overall. This was a key element of the *Groton* decision, which discussed the fact that the impact of that dam would cause a significant impact on the entire Wells River.

In summary, and in hindsight, Norwich presented an application that addressed the statutory and regulatory criteria. Unfortunately, ANR, in exercising the discretion to which it was legally entitled to exercise, denied the application. ANR did not agree with the information presented in the application and did not grant the permit. A review of the denial letter demonstrates that ANR did not fully support its reasons for denial, but there is no support to suggest that the project team breached any standards or prepared a patently inadequate application.