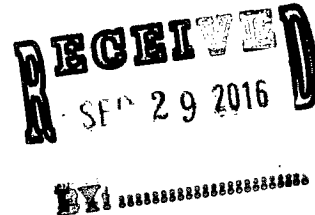


Administrative Procedures – Final Proposed Rule Coversheet**Instructions:**

In accordance with Title 3 Chapter 25 of the Vermont Statutes Annotated and the “Rule on Rulemaking” adopted by the Office of the Secretary of State, this final proposed filing will be considered complete upon the submission and acceptance of the following components to the Office of the Secretary of State and to the Legislative Committee on Administrative Rules:

- Final Proposed Rule Coversheet
- Adopting Page
- Economic Impact Statement
- Public Input Statement
- Scientific Information Statement (if applicable)
- Incorporated by Reference Statement (if applicable)
- Clean text of the rule (Amended text without annotation)
- Annotated text (Clearly marking changes from previous rule)
- Copy of ICAR acceptance e-mail
- A copy of comments received during the Public Notice and Comment Period.
- Responsiveness Summary (detailing agency’s decisions to reject or adopt suggested changes received as public comment).



All forms submitted to the Office of the Secretary of State, requiring a signature shall be hand signed original signatures of the appropriate adopting authority or authorized person, and all filings are to be submitted, no later than 3:30 pm on the last scheduled day of the work week.

Certification Statement: As the adopting Authority of this rule (see 3 V.S.A. § 801 (b) (11) for a definition), I approve the contents of this filing entitled:

Rule Title: Vermont Water Quality Standards

Deb Markowitz, on 9-29-16
(signature) (date)

Printed Name and Title:

Deb Markowitz, Secretary
Agency of Natural Resources

RECEIVED BY: _____

- ☐ Final Proposed Rule Coversheet
- ☐ Adopting Page
- ☐ Economic Impact Statement
- ☐ Public Input Statement
- ☐ Scientific Information Statement (if applicable)
- ☐ Incorporated by Reference Statement (if applicable)
- ☐ Clean text of the rule (Amended text without annotation)
- ☐ Annotated text (Clearly marking changes from previous rule)
- ☐ ICAR Approval received by E-mail.
- ☐ Copy of Comments
- ☐ Responsiveness Summary

1. TITLE OF RULE FILING:

Vermont Water Quality Standards

2. PROPOSED NUMBER ASSIGNED BY THE SECRETARY OF STATE

16P-030

3. ADOPTING AGENCY:

Agency of Natural Resources

4. PRIMARY CONTACT PERSON:

(A PERSON WHO IS ABLE TO ANSWER QUESTIONS ABOUT THE CONTENT OF THE RULE).

Name: Neil Kamman, Manager, Monitoring, Assessment and Planning Program

Agency: Agency of Natural Resources

Mailing Address: 1 National Life Dr., Main 2, Montpelier, VT 05620-3522

Telephone: 802 490 - 6137 Fax: 802 828 - 1544

E-Mail: neil.kamman@vermont.gov

Web URL *(WHERE THE RULE WILL BE POSTED)*:<http://dec.vermont.gov/watershed/laws>

5. SECONDARY CONTACT PERSON:

(A SPECIFIC PERSON FROM WHOM COPIES OF FILINGS MAY BE REQUESTED OR WHO MAY ANSWER QUESTIONS ABOUT FORMS SUBMITTED FOR FILING IF DIFFERENT FROM THE PRIMARY CONTACT PERSON).

Name: Elizabeth Schilling, Esq.

Agency: Agency of Natural Resources

Mailing Address: 1 National Life Dr., Davis 2, Montpelier, VT 05620-3522

Telephone: 802 490 - 6102 Fax: 802 828 - 1544

E-Mail: elizabeth.schilling@vermont.gov

6. RECORDS EXEMPTION INCLUDED WITHIN RULE:

(DOES THE RULE CONTAIN ANY PROVISION DESIGNATING INFORMATION AS CONFIDENTIAL; LIMITING ITS PUBLIC RELEASE; OR OTHERWISE EXEMPTING IT FROM INSPECTION AND COPYING?) No

IF YES, CITE THE STATUTORY AUTHORITY FOR THE EXEMPTION:

PLEASE SUMMARIZE THE REASON FOR THE EXEMPTION:

7. LEGAL AUTHORITY / ENABLING LEGISLATION:

(THE SPECIFIC STATUTORY OR LEGAL CITATION FROM SESSION LAW INDICATING WHO THE ADOPTING ENTITY IS AND THUS WHO THE SIGNATORY SHOULD BE. THIS SHOULD BE A SPECIFIC CITATION NOT A CHAPTER CITATION).

10 V.S.A. §§ 1251(a) and 1252(e)

8. THE FILING HAS CHANGED SINCE THE FILING OF THE PROPOSED RULE.
9. THE AGENCY HAS INCLUDED WITH THIS FILING A LETTER EXPLAINING IN DETAIL WHAT CHANGES WERE MADE, CITING CHAPTER AND SECTION WHERE APPLICABLE.
10. SUBSTANTIAL ARGUMENTS AND CONSIDERATIONS WERE RAISED FOR OR AGAINST THE ORIGINAL PROPOSAL.
11. THE AGENCY HAS INCLUDED COPIES OF ALL WRITTEN SUBMISSIONS AND SYNOPSES OF ORAL COMMENTS RECEIVED.
12. THE AGENCY HAS INCLUDED A LETTER EXPLAINING IN DETAIL THE REASONS FOR THE AGENCY'S DECISION TO REJECT OR ADOPT THEM.
13. **CONCISE SUMMARY (150 WORDS OR LESS):**

The Vermont Water Quality Standards (VWQS) are being amended to reflect amendments to 10 V.S.A. §§ 1252 and 1253, enacted under Act 79 of 2016; updates to federal requirements; and updates to state policy concerning the management of rivers under Act 110 of 2010 and Act 138 of 2012. The changes to the Rule include:

1. Pursuant to Act 79, addition of Class B(1) criteria and reorganization of water quality criteria to allow for designating individual uses in a single water as different classes;
2. Incorporation of the concept of dynamic stream equilibrium;
3. Improved water temperature criteria;
4. Incorporation of previously-authorized biological assessment procedures;
5. Updates to toxic chemical criteria consistent with EPA criteria and regulations;
6. Reclassification of specific uses of certain surface waters to Class A(1);
7. Updates to the Antidegradation Policy consistent with federal regulations; and

8. Updates to formatting, style, and grammar consistent with Department drafting conventions.

14. EXPLANATION OF WHY THE RULE IS NECESSARY:

Federal law, including 33 U.S.C. § 1313 and 40 C.F.R. § 131.6, and the state Water Pollution Control Chapter, specifically 10 V.S.A. §§ 1250-1252, require the State to adopt water quality standards. The VWQS satisfy these requirements. Pursuant to 33 U.S.C. § 1313 and 40 C.F.R. § 131.20, the State must conduct triennial reviews of the VWQS. The purpose of the triennial review is for the State to update its water quality standards, as appropriate, consistent with new information and federally promulgated standards and regulations. This revision to the VWQS satisfies the triennial review requirement, while also updating the Rule consistent with state law, including 10 V.S.A. §§ 1252 and 1253, as amended by Act 79 of 2016.

To further explain the restructuring authorized by Act 79, the Agency provides the following background. Prior to Act 79, waters were classified as Class A(1), A(2), or B for all designated uses (i.e. swimming, fishing, aquatic biota, etc.). This change in statute establishes a new Class B(1) that is intermediary in quality between the old Class B and A waters, and also now allows for individual uses of a water to be reclassified to a higher level than Class B(2) (Class B(2) is the old Class B). As such, a surface water may be Class B(2) for most uses, but may be designated as B(1) for one specific use, where that use demonstrably and consistently attains the higher B(1) criteria. The criteria for Class B(2) remain the same as those previously promulgated in the existing rule for Class B. The Class B(1) criteria recognize that certain waters may be attaining a higher level of use and water quality than Class B(2), and that level of quality should be protected and maintained at that level.

15. LIST OF PEOPLE, ENTERPRISES AND GOVERNMENT ENTITIES AFFECTED BY THIS RULE:

State and federal agencies and departments, particularly the Agency of Natural Resources; the Vermont Agency of Agriculture, Food & Markets; the

Vermont Agency of Transportation; and the Vermont Agency of Human Services, Department of Health. These agencies and departments work in partnership to implement the VWQS.

Municipalities with permits requiring compliance with the VWQS.

Private enterprises, businesses, and individual citizens whose operations, development, or land-use activities require a permit to ensure compliance with the VWQS.

16. BRIEF SUMMARY OF ECONOMIC IMPACT(150 WORDS OR LESS):

1. The addition of Class B(1) may have future positive economic impacts because it will ensure uses meeting those criteria are protected to maintain that higher quality.
2. The amendment of the Rule consistent with Acts 110/138 is expected to have negligible economic impacts because it simply incorporates existing state flood resiliency policy.
3. The changes to the temperature standard may have impacts on dischargers to cold water fish habitat designated as Class A(1) or B(1) for fishing if they have to implement practices to maintain water quality.
4. EPA may not consider economic impacts when updating human health criteria. The State may consider the economic impacts of the criteria through permitting decisions.
5. The reclassification of certain waters in the Green Mountain National Forest to Class A(1) may have positive economic impacts by further protecting those ecological waters.
6. The amendments to the Antidegradation Policy are intended to provide clarity not economic effects.

17. A HEARING WAS HELD.

18. HEARING INFORMATION

(THE FIRST HEARING SHALL BE NO SOONER THAN 30 DAYS FOLLOWING THE POSTING OF NOTICES ONLINE).

IF THIS FORM IS INSUFFICIENT TO LIST THE INFORMATION FOR EACH HEARING PLEASE ATTACH A SEPARATE SHEET TO COMPLETE THE HEARING INFORMATION.

Date: 8/22/2016

Time: 09:00 AM

Street Address: Pavilion Auditorium, 109 State Street,
Montpelier, VT

Zip Code: 05609

Date: 8/22/2016

Time: 05:30 PM

Street Address: Chittenden County Regional Planning
Commission, Main Conference Room, 110 West Canal
Street, Suite 202, Winooski, VT

Zip Code: 05404

Date: 8/24/2016

Time: 05:00 PM

Street Address: Arlington Free Library, 528 E. Arlington
Rd., Arlington VT

Zip Code: 05250

Date: 8/31/2016

Time: 01:00 PM

Street Address: Londonderry Town Offices, 100 Old School
Rd., South Londonderry, VT

Zip Code: 05155

Date:

Time: AM

Street Address:

Zip Code:

Date:

Time: AM

Street Address:

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Zip Code:

19. DEADLINE FOR COMMENT (NO EARLIER THAN 7 DAYS FOLLOWING LAST HEARING):

9/7/2016

20. KEYWORDS (PLEASE PROVIDE AT LEAST 3 KEYWORDS OR PHRASES TO AID IN THE SEARCHABILITY OF THE RULE NOTICE ONLINE).

Water Quality Standards

VWQS

antidegradation

toxics

water quality classification

water pollution



AGENCY OF NATURAL RESOURCES

State of Vermont
Department of Environmental Conservation
Office of General Counsel
1 National Life Drive – Davis 2
Montpelier, VT 05620-3802
(802) 490-6102
elizabeth.schilling@vermont.gov

September 29, 2016

RE: Changes to the Vermont Water Quality Standards

Dear Representative French and Members of the Committee,

The Agency has made the following changes to the Vermont Water Quality Standards in response to public comments and based upon the Agency's final review of the Rule. The "Summary of Public Comments and Responses" included with this rulemaking package further explains the reasons for these changes.

§ 29A-102 Definitions. The Agency made minor clarifying edits to the new definitions of "equilibrium condition," "flow characteristics," "physical habitat structure," and "stream processes." The definitions were added for purposes of applying the aquatic habitat criteria for rivers and streams and are consistent with definitions and terminology used in state statute, the Stream Alteration Rule, and the Agency's Stream Geomorphic Assessment and habitat assessment procedures and protocols. For in-line changes, see the "Summary of Public Comments and Responses," Comment 16, "Changes to proposed VWQS."

Additionally, in response to comment, the Agency made minor changes to definitions (31) and (35), consistent with Legislative Council and Agency drafting conventions. Where the phrase "including, but not limited to" was used in those definitions, the clause "but not limited to" was removed because it is excess language that is unnecessary.

§ 29A-103(e)(4) Tactical Basin Planning. The Agency made a clarifying edit, consistent with state statute, to this subdivision governing tactical basin planning; a "should" was changed to a "shall," and a clause was added to make it explicit that any recommendations for Outstanding Resource Waters be included in tactical basin plans. For specific in-line changes, see "Summary of Public Comments and Responses," Comment 20, "Changes to proposed VWQS."

§ 29A-104(d) Classification of Water Uses. The Agency made clarifying edits to this new subsection, which lists the designated uses protected by the Vermont Water Quality Standards. An edit was made to clarify that the Standards protect aquatic biota and wildlife that *may* use the waters in the future, but aren't currently present (for example, in the case of an impaired water). Additionally, for the uses of waters for boating and fishing, rather than saying "boating and *other* recreational uses" and "fishing and *other* recreational uses," the word "other" was replaced with "related" in order to more clearly state the uses being protected. For the in-line changes, see "Summary of Public Comments and Responses," Comments 7 and 13, "Changes to proposed VWQS."



§ 29A-105(c) Antidegradation Policy, Protection and Maintenance of High Quality Waters. As part of this rulemaking, the Agency has proposed updates to the Antidegradation Policy to more closely align the state policy with the federal policy. Many commenters expressed concern about one particular clause that was added to the state policy from the federal policy, the clause “in the area in which the waters are located.” Commenters were concerned the clause would weaken the State’s policy. In response to the extensive public comments voicing concern over this clause, the Agency has removed this clause from the Antidegradation Policy. Therefore, now, prior to allowing a limited lowering of water quality, the Secretary must find that “after an analysis of alternatives, allowing lower water quality is necessary to prevent substantial adverse economic or social impacts on the people of the State ~~in the areas in which the waters are located.~~”

Additionally, in 2015, federal Antidegradation Policy requirements were updated to require alternative analyses prior to allowing a limited lowering of water quality. In this rulemaking, the Agency added the alternative analysis requirements and now proposes additional clarifying edits, consistent with federal regulations. Under § 29A-105(c)(3), an applicant must evaluate alternatives and must select a “practicable” alternative, if one is identified. “Practicable” is defined in federal regulation, but this definition was inadvertently omitted from the proposed updates to the Vermont Water Quality Standards, so the Agency has proposed adding the federal definition to the end of the subdivision, as follows, “For purposes of this section, “practicable” means technologically possible, able to be put into practice, and economically viable.” For the in-line changes, see “Summary of Public Comments and Responses,” Comment 11(2), “Changes to proposed VWQS.”

§ 29A-105(d) Protection of Outstanding Resource Waters; Appendix H. The Agency has added Appendix H to the Vermont Water Quality Standards to list waters that have been previously designated as Outstanding Resource Waters (ORWs) and for purposes of designating other waters in the future. Therefore, the Agency has added a cross reference to the new Appendix in this subsection about ORWs stating, “Outstanding Resource Waters are listed in Appendix H of these rules.” For the in-line changes, see “Summary of Public Comments and Responses,” Comment 21, “Change to proposed VWQS.”

§ 29A-203(a)(2) Nonpoint Source Pollution Policy. To ensure consistency with Act 64 of 2015, the Agency has made a minor edit to the policy statement regarding nonpoint source pollution, as follows, “In implementing subdivision (a)(1) of this subsection, the Secretary and the Secretary of the Agency of Agriculture, Food and Markets are encouraged to exercise the full range of discretion authorized by the Act and 6 V.S.A. Chapter 215 and to manage discharges of nonpoint source waste in as a practical and cost-effective a manner as possible, consistent with the provisions of these rules.”

§ 29A-305(a) Numeric Biological Indices and Aquatic Habitat Assessments. The Agency mistakenly deleted the phrase “and aquatic habitat uses” from this subsection regarding and is adding it back. For the in-line changes, see “Summary of Public Comments and Responses,” Comment 27, “Change to proposed VWQS.”

§ 29A-306(b) Aquatic Habitat. In response to comment, the Agency has made clarifying edits to the aquatic habitat criteria for rivers and streams. Through this rulemaking, the Agency had no intent of changing the aquatic habitat criteria for rivers and streams, but some commenters expressed concerns over the proposed language. Therefore, the Agency has made changes to this subsection to more closely align it with the language in the existing VWQS and to help more clearly distinguish criteria among the different classes of waters. For specific in-line changes, see “Summary of Public Comments and Responses,” Comment 17, “Changes proposed to VWQS.”

Appendix F. Water Quality Classifications. The Agency made updates to the descriptions of drinking water sources as recommended by Vermont Rural Water, in consultation with the Drinking Water and Groundwater Protection Division of the Department of Environmental Conservation. The updates are merely for purposes of accurately and factually describing these drinking water sources and include no changes to the classifications of these waters.

In addition, in response to comment, the Agency is changing the boating use classification of Bingo Brook from Class B(2) to Class A(1) to more accurately reflect the boating use in this water.

Please let me know if you have any questions about the foregoing changes.

Sincerely,

A handwritten signature in black ink, appearing to read 'Elizabeth Schilling', with a long, sweeping horizontal line extending to the right.

Elizabeth Schilling, Associate General Counsel
Department of Environmental Conservation

Administrative Procedures – Adopting Page

Instructions:

This form must be completed for each filing made during the rulemaking process:

- Proposed Rule Filing
- Final Proposed Filing
- Adopted Rule Filing
- Emergency Rule Filing

Note: To satisfy the requirement for an annotated text, an agency must submit the entire rule in annotated form with proposed and final proposed filings. Filing an annotated paragraph or page of a larger rule is not sufficient. Annotation must clearly show the changes to the rule.

When possible the agency shall file the annotated text, using the appropriate page or pages from the Code of Vermont Rules as a basis for the annotated version. New rules need not be accompanied by an annotated text.

1. TITLE OF RULE FILING:

Vermont Water Quality Standards

2. ADOPTING AGENCY:

Agency of Natural Resources

3. AGENCY REFERENCE NUMBER, IF ANY:

4. TYPE OF FILING (*PLEASE CHOOSE THE TYPE OF FILING FROM THE DROPDOWN MENU BASED ON THE DEFINITIONS PROVIDED BELOW*):

- **AMENDMENT** - Any change to an already existing rule, even if it is a complete rewrite of the rule, it is considered an amendment as long as the rule is replaced with other text.
- **NEW RULE** - A rule that did not previously exist even under a different name.
- **REPEAL** - The removal of a rule in its entirety, without replacing it with other text.

This filing is **AN AMENDMENT OF AN EXISTING RULE**

5. LAST ADOPTED (*PLEASE PROVIDE THE SOS LOG#, TITLE AND LAST DATE OF ADOPTION FOR THE EXISTING RULE*):

14-035, Vermont Water Quality Standards, October 30, 2014.

INTERAGENCY COMMITTEE ON ADMINISTRATIVE RULES

To: Louise Corliss, SOS
Chris Winters, SOS
Charlene Dindo, LCAR
ICAR Members

Date: July 12, 2016

Proposed Rule: Vermont Water Quality Standards
(Agency of Natural Resources)

The following official action was taken at the July 11, 2016 meeting of ICAR.

Present: Chair Michael Clasen, Diane Bothfeld, Steve Knudson, Clare O'Shaughnessy,
Dirk Anderson, John Kessler and David Englander for Allan Sullivan

Absent: Jenn Duggan – voted electronically
Scott Bascom

Abstain: Jenn Duggan

☐ The Committee has no objection to the proposed rule being filed with the Secretary of State.

☒ The Committee approves the rule with the following recommendations.

1. Add designation letter if to be signed by Deputy Secretary.
2. Overall – Suggest explaining the rule similar to the oral overview presentation to ICAR.
3. Coversheet #7, No. 1: Change “water” to “waterbody” if applicable.
4. Coversheet #10, No. 3: Provide an example of the range of cost.
5. Coversheet #12: Add name of towns to locations listed.
6. Coversheet #14: Add air pollution and water pollution to list.

☐ The Committee opposes filing of the proposed rule.

cc: Neil Kamman
Elizabeth Schilling

Administrative Procedures – Economic Impact Statement

Instructions:

In completing the economic impact statement, an agency analyzes and evaluates the anticipated costs and benefits to be expected from adoption of the rule. This form must be completed for the following filings made during the rulemaking process:

- Proposed Rule Filing
- Final Proposed Filing
- Adopted Rule Filing
- Emergency Rule Filing


Rules affecting or regulating public education and public schools must include cost implications to local school districts and taxpayers in the impact statement (see 3 V.S.A. § 832b for details).

The economic impact statement also contains a section relating to the impact of the rule on greenhouse gases. Agencies are required to explain how the rule has been crafted to reduce the extent to which greenhouse gases are emitted (see 3 V.S.A. § 838(c)(4) for details).

All forms requiring a signature shall be original signatures of the appropriate adopting authority or authorized person.

Certification Statement: As the adopting Authority of this rule (see 3 V.S.A. § 801 (b) (11) for a definition), I conclude that this rule is the most appropriate method of achieving the regulatory purpose. In support of this conclusion I have attached all findings required by 3 V.S.A. §§ 832a, 832b, and 838(c) for the filing of the rule entitled:

Rule Title: Vermont Water Quality Standards

 , on 9-29-16
(signature) (date)

Printed Name and Title:

Deb Markowitz, Secretary
Agency of Natural Resources

BE AS SPECIFIC AS POSSIBLE IN THE COMPLETION OF THIS FORM, GIVING FULL INFORMATION ON YOUR ASSUMPTIONS, DATABASES, AND ATTEMPTS TO GATHER OTHER INFORMATION ON THE NATURE OF THE COSTS AND BENEFITS INVOLVED. COSTS AND BENEFITS CAN INCLUDE ANY TANGIBLE OR INTANGIBLE ENTITIES OR FORCES WHICH WILL MAKE AN IMPACT ON LIFE WITHOUT THIS RULE.

1. TITLE OF RULE FILING:

Vermont Water Quality Standards

2. ADOPTING AGENCY:

Agency of Natural Resources

3. CATEGORY OF AFFECTED PARTIES:

LIST CATEGORIES OF PEOPLE, ENTERPRISES, AND GOVERNMENTAL ENTITIES POTENTIALLY AFFECTED BY THE ADOPTION OF THIS RULE AND THE ESTIMATED COSTS AND BENEFITS ANTICIPATED:

1. There is no economic impact associated with the restructuring of the Rule to add Class B(1) and reorganization of the water quality criteria to allow for designating individual uses in a single water as different classes. No uses of any waters are proposed for reclassification to Class B(1) as part of this rulemaking. In future amendments to the Rule, individual designated uses for specific surface waters will likely be proposed for reclassification to Class B(1). When certain uses are reclassified, there may be site-specific impacts to developers or project proponents associated with installing water quality protection practices designed to protect the uses at the higher classification. However, the restructuring simply paves the way for these reclassifications to be proposed in the future.

2. The incorporation of the stream equilibrium standard in the VWQS aligns the State's policies of dynamic stream equilibrium expressed in Acts 110 and 138 and the Stream Alteration Rule with the goals of protecting and maintaining state water quality. The economic impacts of this policy were already evaluated through adoption of the Stream Alteration Rule. Aligning the VWQS with these existing laws is expected to have

negligible economic impacts, but the overall policy will have positive economic impacts by improving the State's flood resiliency.

3. The changes to the temperature standard may have impacts on dischargers to cold water fish habitat designated as Class A(1) or B(1) for fishing if they have to implement practices to maintain water quality. Examples of such practices include: underground stormwater detention, green stormwater infrastructure, and maintenance of stream buffers.

4. There is no economic impact associated with the incorporation of previously-authorized biological assessment procedures into the VWQS. Incorporation of these existing procedures and metrics will merely lend greater transparency and predictability to the process the State uses to assess surface water compliance with the criteria for protection of aquatic life.

5. The updates to toxic chemical criteria consistent with EPA criteria are required by federal regulation. The impacts of these criteria will be limited to the small number of wastewater treatment facilities and industrial dischargers that discharge one or more of these specific chemicals and that may need to implement additional measures under their next discharge permit to meet the revised standards.

6. The reclassification of specific uses of certain surface waters in the Green Mountain National Forest to Class A(1) will help to further protect these ecological waters and thus will provide some economic benefit by further ensuring the quality of these waters. Certain stakeholders, notably in the forest products industry, may express concern over the need to put in place practices intended to maintain Class A(1)-level water quality. However, US Forest Service requirements for harvesting on Federal lands are robust

and are already required for all harvests conducted privately or by US Forest Service personnel.

7. The updates to the Antidegradation Policy consistent with federal regulations will have negligible economic impacts. Under both the existing and proposed Rule if an activity will cause a limited lowering of water quality, the project proponent must conduct a socio-economic justification to justify the limited lowering and in no case may an activity result in a water quality impairment.

4. IMPACT ON SCHOOLS:

INDICATE ANY IMPACT THAT THE RULE WILL HAVE ON PUBLIC EDUCATION, PUBLIC SCHOOLS, LOCAL SCHOOL DISTRICTS AND/OR TAXPAYERS:

None.

5. COMPARISON:

COMPARE THE ECONOMIC IMPACT OF THE RULE WITH THE ECONOMIC IMPACT OF OTHER ALTERNATIVES TO THE RULE, INCLUDING NO RULE ON THE SUBJECT OR A RULE HAVING SEPARATE REQUIREMENTS FOR SMALL BUSINESS:

In terms of comparison to a "no amendment" alternative, the minimal economic impacts described above would be eliminated should these amendments not go forward, but at the expense of water quality.

6. FLEXIBILITY STATEMENT:

COMPARE THE BURDEN IMPOSED ON SMALL BUSINESS BY COMPLIANCE WITH THE RULE TO THE BURDEN WHICH WOULD BE IMPOSED BY ALTERNATIVES CONSIDERED IN 3 V.S.A. § 832a:

No alternatives were examined conferring separate requirements on small business because EPA would not approve separate requirements, and, pursuant to the federal Clean Water Act, EPA has the ultimate approval authority over state water quality standards once they have been approved through the state's rulemaking process. In terms of comparison to a "no amendment" alternative, the economic impacts described above would be eliminated should these amendments not go forward, but at the expense of water quality and at the risk of EPA promulgating standards for the State.

7. GREENHOUSE GAS IMPACT: *EXPLAIN HOW THE RULE WAS CRAFTED TO REDUCE THE EXTENT TO WHICH GREENHOUSE GASES ARE EMITTED, EITHER DIRECTLY OR INDIRECTLY, FROM THE FOLLOWING SECTORS OF ACTIVITIES:*

a. TRANSPORTATION —

IMPACTS BASED ON THE TRANSPORTATION OF PEOPLE OR PRODUCTS (e.g., “THE RULE HAS PROVISIONS FOR CONFERENCE CALLS INSTEAD OF TRAVEL TO MEETINGS” OR “LOCAL PRODUCTS ARE PREFERENTIALLY PURCHASED TO REDUCE SHIPPING DISTANCE.”):

None.

b. LAND USE AND DEVELOPMENT —

IMPACTS BASED ON LAND USE AND DEVELOPMENT, FORESTRY, AGRICULTURE ETC. (e.g., “THE RULE WILL RESULT IN ENHANCED, HIGHER DENSITY DOWNTOWN DEVELOPMENT.” OR “THE RULE MAINTAINS OPEN SPACE, FORESTED LAND AND /OR AGRICULTURAL LAND.”):

None.

c. BUILDING INFRASTRUCTURE —

IMPACTS BASED ON THE HEATING, COOLING AND ELECTRICITY CONSUMPTION NEEDS (e.g., “THE RULE PROMOTES WEATHERIZATION TO REDUCE BUILDING HEATING AND COOLING DEMANDS.” OR “THE PURCHASE AND USE OF EFFICIENT ENERGY STAR APPLIANCES IS REQUIRED TO REDUCE ELECTRICITY CONSUMPTION.”):

None.

d. WASTE GENERATION / REDUCTION —

IMPACTS BASED ON THE GENERATION OF WASTE OR THE REDUCTION, REUSE, AND RECYCLING OPPORTUNITIES AVAILABLE (e.g., “THE RULE WILL RESULT IN REUSE OF PACKING MATERIALS.” OR “AS A RESULT OF THE RULE, FOOD AND OTHER ORGANIC WASTE WILL BE COMPOSTED OR DIVERTED TO A ‘METHANE TO ENERGY PROJECT’.”):

None.

e. OTHER —

IMPACTS BASED ON OTHER CRITERIA NOT PREVIOUSLY LISTED:

None.

Administrative Procedures – Public Input Statement

Instructions:

In completing the public input statement, an agency describes what it did do, or will do to maximize the involvement of the public in the development of the rule. This form must be completed for the following filings made during the rulemaking process:

- Proposed Rule Filing
- Final Proposed Filing
- Adopted Rule Filing
- Emergency Rule Filing

1. TITLE OF RULE FILING:

Vermont Water Quality Standards

2. ADOPTING AGENCY:

Agency of Natural Resources

3. PLEASE LIST THE STEPS THAT HAVE BEEN OR WILL BE TAKEN TO MAXIMIZE PUBLIC INVOLVEMENT IN THE DEVELOPMENT OF THE PROPOSED RULE:

1. During the process for development and passage of Act 79 of 2016, and prior to drafting the proposed amendments, ANR staff conducted targeted outreach to key stakeholders with specific interest in the VWQS. Stakeholders are listed in number 4, below.

2. Several pre-rulemaking public outreach meetings as well as individual stakeholder meetings were held by the Department between January, 2016 and submitting the VWQS for rulemaking.

3. A pre-rulemaking draft was circulated and posted online for review following a large public meeting that was held May 23, 2016.

4. Four public meetings were held during the public comment period in August 2016. One was held in Montpelier, another was held in Winooski, a third in Arlington, and the final in Londonderry. The latter two meetings were held in southern Vermont, in the area in which surface water reclassifications are proposed, pursuant to 10 V.S.A. § 1253(c).

5. The Regional Planning Commissions hosted a series of informational meetings during June and July to support

"Clean Water Conversations" with the Agency. The proposed VWQS amendments were discussed as part of this series of meetings. Questions were addressed, but formal comments were not taken at these meetings.

4. BEYOND GENERAL ADVERTISEMENTS, PLEASE LIST THE PEOPLE AND ORGANIZATIONS THAT HAVE BEEN OR WILL BE INVOLVED IN THE DEVELOPMENT OF THE PROPOSED RULE:

The following individuals and organizations were made aware of and offered the opportunity to comment upon the pre-rulemaking draft and many provided comments during the public comment period.

Legislators: Rep. David Deen and members of the House Committee on Fish, Wildlife and Water Resources; and Sen. Mark MacDonald and members of the Senate Committee on Natural Resources and Energy.

State Agencies: Vermont Agency of Transportation; Vermont Agency of Agriculture, Food and Markets; Vermont Department of Health; Vermont Department of Fish and Wildlife; and Vermont Department of Forests, Parks and Recreation.

Federal Agencies: United States Department of Agriculture-US Forest Service; and United States Environmental Protection Agency.

Regional Agencies: All Vermont Regional Planning Commissions.

Non-governmental Organizations: Vermont Natural Resources Council; Conservation Law Foundation; Lake Champlain International; and Watersheds United Vermont, which provides representation to dozens of smaller watershed groups and associations.

Businesses, or Business representatives: Green Mountain Power; Burlington Electric Department; Independent Hydro Owners of Vermont; KSE Partners; and MMR, LLC.

Administrative Procedures – Scientific Information Statement

Instructions:

In completing the Scientific Information Statement, an agency shall provide a brief summary of the scientific information including reference to any scientific studies upon which the proposed rule is based, for the purpose of validity.

This form is only required when a rule relies on scientific information for its validity.

1. TITLE OF RULE FILING:

Vermont Water Quality Standards

2. ADOPTING AGENCY:

Agency of Natural Resources

3. BRIEF EXPLANATION OF SCIENTIFIC INFORMATION:

The Vermont Water Quality Standards consist of a collection of policy statements, narrative or numeric criteria, and water quality classifications for individual surface waters. The criteria are developed from scientific studies. The Final Proposed Rule Cover Sheet describes the proposed rule amendments. Of these, five of the amendments are based upon scientific studies and principles, references for which may be found in number 4, below. They are:

1. Incorporation of the concept of dynamic stream equilibrium;
2. Improved water temperature criteria;
3. Incorporation of previously-authorized biological assessment procedures;
4. Updates to toxic chemical criteria; and
5. Reclassification of certain Vermont surface waters in the Green Mountain National Forest to Class A(1).

4. CITATION OF SOURCE DOCUMENTATION OF SCIENTIFIC INFORMATION:

1. Dynamic Stream Equilibrium. Please see the Vermont Surface Water Management Strategy, Chapters One (Introduction) and Two (Channel Erosion; Encroachment; Flow Alteration), at:
<http://dec.vermont.gov/watershed/map/strategy>

http://dec.vermont.gov/sites/dec/files/documents/WSMD_s wms_Chapter_1_Introduction_V8.pdf

http://dec.vermont.gov/sites/dec/files/documents/WSMD_s wms_StressorPlan_Channel%20Erosion_Web_V3.pdf

http://dec.vermont.gov/sites/dec/files/documents/WSMD_s wms_StressorPlan_FlowAlt_V4.pdf

http://dec.vermont.gov/sites/dec/files/documents/WSMD_s wms_StressorPlan_Encroachment_V4.pdf.

2. Improved Temperature Criteria. The proposed criteria for surface waters designated as Class B(1) for fishing were identified based upon a robust analysis of long-term temperature records maintained by the Vermont Department of Fish and Wildlife. That analysis is available upon request from the Agency of Natural Resources.

3. The proposed biological assessment appendix summarizes a long-standing technical guidance published by the Agency of Natural Resources in 2004, which was peer-reviewed by EPA. The EPA review is available upon request from the Agency of Natural Resources. The full scientific analysis from which the proposed appendix comes may be found in these three documents:

http://dec.vermont.gov/sites/dec/files/wsm/Laws-Regulations-Rules/bs_wadeablestream1a.pdf

http://dec.vermont.gov/sites/dec/files/wsm/Laws-Regulations-Rules/bs_wadeablestream1b.pdf

http://dec.vermont.gov/sites/dec/files/wsm/Laws-Regulations-Rules/bs_wadeablestream2.pdf

4. For the technical revisions to toxic substances criteria contained within Appendix C of the VWQS, EPA maintains a comprehensive website documenting and referencing the scientific studies that support all the toxic substances criteria promulgated under Section 304 of the federal Clean Water Act. Individual water quality criteria recommendations are maintained by EPA in the National Recommended Water Quality Criteria compendium, presented online at:

<http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm>.

Specific criteria for aquatic life are developed in accordance with EPA, 1985, Guidelines for Deriving Numerical National Water Quality Criteria for the Protection Of Aquatic Organisms and Their Uses. EPA-PB85-227049. Washington, D.C.

Criteria for the protection of human health are developed in accordance with EPA, 2000, Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health. EPA-822-B-00-004. Washington, D.C.

5. For the justifications for the reclassifications see "Reclassification of Certain Vermont Surface Waters in the Green Mountain National Forest to Class A(1) Pursuant to the Vermont Water Quality Standards," available at:

http://dec.vermont.gov/sites/dec/files/wsm/Laws-Regulations-Rules/2016-06-13FinalUSFS_A1Proposal.pdf

5. INSTRUCTIONS ON HOW TO OBTAIN COPIES OF THE SOURCE DOCUMENTS OF THE SCIENTIFIC INFORMATION FROM THE AGENCY OR OTHER PUBLISHING ENTITY:

The Agency of Natural Resources has posted links to scientific documentation on various pages of the Watershed Management Division website as noted above. The documents are also available to the public for review at the Agency's Watershed Management Division offices in Montpelier, VT, or by request.

Water Quality Standards Amendments

Summary of Public Comments and Responses

The Department of Environmental Conservation held a public comment period from July 20, 2016 through September 7, 2016 on the proposed amendments and updates to the Vermont Water Quality Standards (VWQS). During that time, the Department hosted four public meetings on the proposed rule amendments, one each in Washington, Chittenden, Bennington, and Windham Counties. The Department received comments¹ from the following organizations:

- American Whitewater
- Connecticut River Watershed Council (CRWC) (two sets of written comments)
- Conservation Law Foundation (CLF)
- Lake Champlain International (LCI)
- Mac Lean, Meehan & Rice (MMR)
- Trout Unlimited
- Two Rivers Ottauquechee Commission (TRORC) (two sets of written comments)
- Vanasse Hangen Brustlin, Inc. (VHB)
- Vermont Conversation Voters
- Environmental and Natural Resources Law Clinic at Vermont Law School (ENRLC)
- Vermont Natural Resources Council (VNRC)
- Vermont Rural Water Association
- Windham Regional Commission

In this document, comments of alike nature from multiple commenters are presented in a summarized form.

1. Commenter: American Whitewater

The reclassification proposal for Bingo Brook to Class A(1) for aquatic life, aquatic habitat, and swimming does not recognize the existing high quality whitewater boating that exists in this stream. The streams gradient and natural flow characteristics are such that it is a very well used paddling stream during high water periods. The use as such is documented by the American Whitewater Inventory that is maintained by American Whitewater. The proposed stream should also be designated for whitewater boating as well.

American Whitewater is concerned that management activities, specifically “chop and drop” habitat restoration actions that occur in Bingo Brook may hamper whitewater boating activities by introducing physical hazards. As such, should the stream be designated as Class A1 for boating use, USFS’ management of these waters should simultaneously manage the stream in its natural condition, while avoiding management actions that may hamper recreational boating use.

Response: The Department has reviewed the information contained in the American Whitewater Inventory for Bingo Brook. Bingo Brook is indeed identified as a Class III-IV paddling reach at normal

¹ In this responsiveness summary, verbal comments have been addressed. However, questions posed by participants during the meetings for the purpose of obtaining clarification were addressed on-the-spot and are not included.

flows. The Vermont Paddlers Club website's trip reports reveal a low level of usage, but expressions of high quality features, including "beautiful green water" and "ledge drops."

The designation of recreational boating use from Class B(2) to Class A(1) will change the management objectives to "achieve and maintain excellent quality boating as compatible with the natural condition," and the criteria to "boating the full extent naturally feasible without degradation due to artificial flow and water level management or artificial physical impediments." Insofar as these objectives and criteria are aligned with the objectives and criteria for the proposed designations of Class A(1) aquatic biota, aquatic habitat, and fishing, and after consultation with USFS, the Department finds no reason to object to the proposal.

The Department notes that "chop and drop," an approach to introduce large natural wood in streams, is undertaken to restore the natural condition of streams for habitat and ecological processes. In Bingo Brook, "chop and drop" largely occurs upstream of the areas that are reasonably boatable, however, there may be opportunities for this type of restoration downstream, and in other areas of the USFS, a topic USFS and the Commenter have discussed. Since the activities are intended to restore the natural condition of streams, the Department does not view USFS' management activities as conflicting with the objective of excellent quality boating as compatible with the natural condition. Further, the Department clarifies that while the predominant form of boating on Bingo Brook appears to be whitewater paddling, the designation as Class A(1) is for boating generally, and not whitewater paddling specifically.

Change to proposed VWQS: The designated use of boating in Bingo Brook has been added to the list of proposed reclassifications from Class B(2) to Class A(1) in Appendix F of the VWQS.

2. Commenter: Windham Regional Commission

Styles Brook Reservoir is inaccurately characterized in Appendix F. It is no longer used by Stratton Mountain.

Response: The Department notes this inaccuracy. Please see the response to comment immediately below filed by Vermont Rural Water Association.

3. Commenter: Vermont Rural Water Association

Thank you for giving us the opportunity to provide comments on the Proposed Vermont Water Quality Standards (7/11/16 version). On behalf of the Vermont Rural Water Association, we would like to submit edits and suggestions exclusively regarding the Water Quality Classifications in Appendix F.

Our comments on Class A2 Waters were generated in consultation with the Drinking Water and Groundwater Protection Division and public drinking water system personnel. Please see the markup on the attached Word Document for details.

Response: The Department has reviewed the proposed edits to the descriptions of public water source surface waters in Appendix F of the VWQS, and finds that these descriptions improve upon the accuracy and descriptions of these surface waters.

Changes to proposed VWQS: The proposed edits have been incorporated into Appendix F of the VWQS.

4. Commenter: Connecticut River Watershed Council

In 29A-203 (2), the clause “in as cost-effective manner as possible” should be stricken as Act 64 of 2015 eliminated the consideration of cost in determining appropriate best management practices.

Response: Act 64 did not eliminate the consideration of costs, rather under, 6 V.S.A. Chapter 215 it states, “RAPs shall be designed to protect water quality and shall be *practical and cost-effective to implement*, as determined by the Secretary,” and “BMPs shall be *practical and cost-effective to implement*, as determined by the Secretary.” Rather than striking the language, as requested, which would be inconsistent with statute, the Department proposes the following change to ensure consistency with state statute.

Changes to proposed VWQS: The Department proposes the following edit to § 29A-203(a)(2)

(2) In implementing subdivision (a)(1) of this subsection, the Secretary and the Secretary of the Agency of Agriculture, Food and Markets are encouraged to exercise the full range of discretion authorized by the Act and 6 V.S.A. Chapter 215 and to manage discharges of nonpoint source waste in as a practical and cost-effective a manner ~~as possible~~, consistent with the provisions of these rules.

5. Commenter: Connecticut River Watershed Council

In the definitions (31) and (35) remove “but not limited to.” Definition (49) refers to class B waters, if that means both B1 and B2 it should say so. This use of B not B1 and B2 occurs in several sections of the rule so however this reference is intended, its use should be consistent throughout the rule. CRWC feels the agency should delineate B1 and B2 in all cases where B is now used. § 29A-203 Nonpoint Source Pollution, Policy, remove the “but not limited to...”

Response: The Department agrees. “Including” means “including, but not limited to,” therefore, making this change is consistent with proper statutory and rule drafting conventions. Additionally, stating Class B(1) and B(2) when referring to all “Class B” waters provides for clarity and consistency throughout the VWQS. The Department has also made the same updated all references to “Class A” waters to state Class A(1) and A(2).

Changes to proposed VWQS: The proposed edits have been incorporated into the final proposed rule for adoption.

6. Commenter: Connecticut River Watershed Council

§ 29A-101 Applicability

- (a) CRWC feels it is important that the agency make it clear that this language does not limit in any way the aspirational aspect of the WQS and does not limit the attainment requirement for all uses to their highest level.
- (b) CRWC understands that the federal law has exemptions relative to the definition of “waters” but that need not necessarily apply to Vermont waters since Vermont may have stricter standards and broader definitions than the federal. This language should not limit Vermont in recognizing wetlands that the federal government does not. Vermont could, and we feel should recognize detached waters and intermittent streams as waters of Vermont.”

Response: The Applicability Section largely maintains the existing language. The limited changes that are proposed include updates to style and grammar, updates consistent with Act 79 of 2016, and an update to ensure that there is no confusion that the VWQS apply to all “waters” of the State, not just “waters of the United States.” “Waters” of the State, as defined in state statute and rule, include “all rivers, streams, creeks, brooks, reservoirs, ponds, lakes, springs and all bodies of surface waters, artificial or natural, which are contained within, flow through, or border upon the State or any portion of it.” Additionally, to clarify, the edits to the VWQS do not impact the Vermont Wetland Rules.

7. Commenter: Connecticut River Watershed Council

§ 29A-104 Classification of Water Uses (d) This subsection enumerating the designated uses does not incorporate the aspirational nature of the designated uses of the WQS. The language states the use in the active present tense. As an example (1) says, “that utilize or are present in the waters”;

CRWC feels that the statement should say, “that do, or may, utilize or have been present in the waters.” CRWC feels that because an aquatic species is absent does not mean that it was never present or in fact would be present except for natural or human intervention. Without regulatory recognition, here of the potential for our waters, we are not meeting the “protect, enhance, and restore” standard of the federal Clean Water Act and our own standard of “protect, maintain, and improve water quality.”

Response: The comment raises a valid point. Chapter 10 V.S.A. § 1252(a) states that Class B(2) waters are suitable for aquatic biota and habitat, among other uses. The draft statement “aquatic biota that utilize or are present in waters” implies that the biota presently utilize waters, or presently exist. In the context of impaired waters, those aquatic biota may not exist, however it is clearly the intent of the Legislature and the Agency to ensure that aquatic biota and wildlife are fully supported. As such, a minor modification to the language is warranted to cover aquatic biota that currently are present in the waters and aquatic biota that *may* utilize the waters at some point in the future, but for one reason or another are not currently present.

Change to proposed VWQS: The proposed language has been modified in §29A-104(d)(1) to read as follows: “Aquatic biota or wildlife that may utilize or are present in the waters.”

8. Commenter: Connecticut River Watershed Council

§ 29A-106 Discharge Policy (a) Discharge Criteria, (2) The rule should either define or replace the word unreasonable with a less subjective word, (9) The rule should either define or replace the word negligible with a less subjective word.

Response: As a part of this rulemaking, the Department did not propose any substantive updates to the existing Discharge Policy. Having not warned any substantive changes or additions to this section and having implemented the existing Discharge Policy for a long time, the Department does not think it appropriate or see a need to modify the foregoing terms in the Discharge Policy.

9. Commenter: Connecticut River Watershed Council

§ 29A-302 Criteria Applicable to Waters Based upon Fish Habitat Designation, Use Classification, or Type of Body of Water

(1) Temperature

CRWC remains concerned that the thermal variance language is not protective enough of Vermont waters. We would like to suggest that DEC add two new subsections after the existing 3 subsections. The existing language says,

§ 29A-302 (D) Assimilation of Thermal Wastes. The Secretary may, by permit condition, specify temperature limits that exceed the values specified above in order to authorize discharges of thermal wastes when it is shown that: The discharge will comply with all other applicable provisions of these rules; A mixing zone of 200 feet in length is not adequate to provide for assimilation of the thermal waste; After taking into account the interaction of thermal effects and other wastes, that change or rate of change in temperature will not result in thermal shock or prevent the full support of uses of the receiving waters;

CRWC would add the following language:

(4) The owner or operator of any source seeking a thermal variance, can demonstrate that any effluent limitation proposed for the control of the thermal component of any discharge from such source requires thermal effluent limitations more stringent than necessary to assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the body of water into which the discharge is to be made, and;

(5) Any permit conditions with respect to the thermal component of the discharge (taking into account the interaction of such thermal component with other pollutants), will assure, the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body of water, notwithstanding any variance that exceeds the values specified above.

Short of adopting our suggested language, we would request that the agency undertake the rewriting of this entire thermal section so that it explicitly includes biological integrity, not by inference as in (1) but in clear language in this thermal section.

Response: The language proposed by CRWC relates to § 316(a) of the federal Clean Water Act, which is implemented under 40 C.F.R. Part 125, subpart H. The requested change is unnecessary because the current thermal variance provision already meets federal requirements and has previously been approved by the U.S. Environmental Protection Agency (EPA). The variance provision in the VWQS only allows for a variance if the discharge will comply with all other applicable provision of the rules and if there will still be a full support of uses in the receiving water with the discharge. Uses protected under the rules include aquatic biota and wildlife that may utilize or are present in the waters and aquatic habitat to support aquatic biota, wildlife, or plant life.

10. **Commenter:** Environmental and Natural Resources Law Clinic at Vermont Law School

(...)

We urge the Vermont Department of Environmental Conservation (DEC) to include criteria for Permethrin and Anvil (Sumithrin), and any other pesticide or pesticidal ingredient that has been or is likely to be used in the state, in the 2016 Water Quality Standards revisions.

(...)

Response: Because the warned proposed amendments to the VWQS did not contain these additions, inserting such substantive changes at this time, without additional public or agency input, would not be in keeping with the intent and requirements of the APA process. Agency of Agriculture input, and a meaningful pre-rulemaking public outreach process to stakeholders, would be a critical part of any effort to adopt water quality criteria for the cited pesticides. Pursuant to the federal Clean Water Act, the Department has the responsibility to open the VWQS to examine the criteria and consider updates every three years. The formal APA process for this is always preceded by a pre-rulemaking stakeholder process, which is the best time to request insertion of new water quality criteria.

In addition, determining all other pesticides and pesticidal ingredients that are or are likely to be used in the State *and* developing criteria for those pesticides and pesticidal ingredients would take a huge amount of staff time and resources, time and resources not budgeted as part of this important set of updates to the VWQS.

Furthermore, the Department has examined the resources provided to assist the Department in adopting criteria for these pesticides, and noted that the Pesticides Action Network Database specifically stated that there are no recommended water quality guidelines from the United States or the World Health Organization for the two cited compounds. Additionally, a review of EPA's § 304(a) criteria reveals that EPA has not issued criteria for Permethrin or Sumethrin.

Based upon the foregoing, the Department will not be proposing additional criteria for pesticides in this round of water quality standard updates.

11. Commenters: CLF, Connecticut River Watershed Council, VNRC, Vermont Conservation Voters, LCI, MMR, VHB, and TRORC

The Department received numerous comments pertaining to the proposed changes to the Antidegradation Policy language. Comments largely focused on (1) the addition of the clause "in the area in which the waters are located" in 29A-105(c)(2)(B), and (2) the addition of the requirement for alternatives analysis in 29A-105(c)(3). These are addressed in turn.

- (1) All commenters requested additional clarification on the Agency's intent regarding the addition of the clause "in the areas in which the waters are located," while most commenters also requested that the proposed language change be delayed for adoption coincident with the Antidegradation Rule promulgation required by Act 64.

Response: Based upon the extensive public comments voicing concern over the clause "in the area in which the waters are located," the Department has decided to remove that language from the proposed rule.

Change to proposed VWQS: The Department proposes that Section 29A-105(c)(2)(B) now read, "after an analysis of alternatives, allowing lower water quality is necessary to prevent substantial adverse economic or social impacts on the people of the State."

- (2) Several commenters expressed concern over the construction of the alternatives analysis language in § 29A-105(c)(3). While commenters do not disagree with the alternatives analysis language per-se, they note that the language is open to interpretation.

Response: The proposed alternatives analysis language, along with the public participation language, reflects new federally-required language pursuant to 40 C.F.R. § 131.12(a)(ii), as adopted under the “Final Rulemaking to Update the National Water Quality Standards Regulation” in 2015. The insertion of the alternatives analysis carries forward good practice that occurs with many projects already. A good example would be the avoidance and minimization steps that are taken, and documented, during the development of a project subject to Sections 404 and 401 of the federal Clean Water Act. In those instances, applicants commonly undergo iterative project designs that identify alternatives to avoid or minimize impacts to water resources. The Department’s interpretation of the federally-required language is that a lowering would only be allowable when an alternative that prevents or lessens the degradation is selected. Should an alternative be chosen that prevents a degradation entirely, then antidegradation would be satisfied, de-facto. This is a useful provision that will be further addressed by the Antidegradation Rule.

Further, the Federal Register, 80:162, p. 51032-51033 provides useful guidance on this matter, which begins: *“The final rule at § 131.12(a)(2)(ii) provides that before allowing a lowering of high water quality, states and authorized tribes must find, after an analysis of alternatives, that such a lowering is necessary to accommodate important economic or social development in the area in which the waters are located. That analysis must evaluate a range of non-degrading and less degrading practicable alternatives. For the purposes of this requirement, the final rule at § 131.3(n) defines “practicable” to mean “technologically possible, able to be put into practice, and economically viable.” When an analysis identifies one or more such practicable alternatives, states and authorized tribes may only find that a lowering is necessary if one such alternative is selected for implementation. This rule requires that states’ and authorized tribes’ antidegradation policies must be consistent with these new requirements.”*

The remainder of this section of the Federal Register provides useful guidance for the implementation of alternatives analysis in the context of an antidegradation review.

Changes to proposed VWQS: To ensure full compliance with federal regulations and to provide clarity, the Agency is proposing to make the following minor edits and to add the definition of “practicable” to the Antidegradation Policy section. The Department proposes that Section 29A-105(c)(3) now read:

“The analysis of alternatives required under subdivision (c)(2)(B) of this subsection shall evaluate a range of ~~practicable~~ alternatives that would prevent or lessen the degradation associated with the proposed activity. When the analysis identifies one or more practicable alternatives, the Secretary shall only find that a lowering is necessary if one such practicable alternative is selected for implementation. For purposes of this section, “practicable” means technologically possible, able to be put into practice, and economically viable.”

12. Commenters: MMR and VHB

Can examples be provided of where the 2010 Interim Procedure has been applied in a variety of permit situations? Are there examples of where the “necessary to prevent substantial adverse economic or social impacts on people of the State” test has been applied?

Response: The 2010 Interim Antidegradation Procedure has been used in a variety of permitting proceedings, including the Kingdom Community Wind wind project, the Vermont Gas Systems transmission pipeline project, and the TDI-NE electric transmission project, among others. In those instances, the Department conditioned relevant permits in such a manner that required practices would preclude a lowering, and thus a socioeconomic justification analysis was not needed. Furthermore,

those permits were also conditioned to include water quality monitoring to ensure on-going protectiveness.

13. Commenters: MMR and VHB

Section 29A-104 Classification of Water Uses: Why does the list of designated uses include “other recreational uses” in separate types of recreational uses? This is confusing.

Response: The Department agrees that the language is confusing and is proposing the following minor clarifying edits.

Changes to proposed VWQS: The Department proposes the following edits to § 29A-104(d):

(d) The designated uses are:

- (1) Aquatic biota and wildlife that may utilize or are present in the waters;
- (2) Aquatic habitat to support aquatic biota, wildlife, or plant life;
- (3) The use of waters for swimming and other primary contact recreation;
- (4) The use of waters for boating and ~~other~~ related recreational uses;
- (5) The use of waters for fishing and ~~other~~ related recreational uses;
- (6) The use of waters for the enjoyment of aesthetic conditions;
- (7) The use of the water for public water source; and
- (8) The use of water for irrigation of crops and other agricultural uses.

14. Commenters: MMR and VHB

Is the GMNF Proposal based upon data, or management objectives?

Response: The basis for the Green Mountain National Forest (GMNF) proposal is described in detail in the proposal document posted at <http://dec.vermont.gov/watershed/laws> in support of this rulemaking. For federally-designated Wilderness and the National Recreation Area, the designations were based on management objectives. For proposed Class A(1) outside of congressionally-designated areas of the GMNF, the designations were based on data for specific uses.

15. Commenters: MMR and VHB

Section 29A – 302 Criteria: Why are specific temperature criteria given for “waters for fishing” and not other uses such as biota? Please explain.

Response: The more stringent temperature criteria are proposed specifically to support cold-water obligate salmonids, and are appropriate when a specific Class B(1) or A(1)-level fishery is designated. Aquatic biota, as determined using the procedures in Appendix G, may be present at very high levels of quality at higher temperatures than coldwater-obligate salmonids, and therefore are protected by the existing temperature criteria.

16. Commenters: MMR and VHB

Section 29A-102 Definitions: There are a number of new or amended definitions that warrant explanation and understanding of how they will be used in assessing compliance with the VWQS. In particular, it would be useful to understand how these definitions tie back into the criteria for various designated uses: equilibrium condition, flow characteristics, physical structure, and stream processes.

Response: The new definitions were added for purposes of applying the aquatic habitat criteria for rivers and streams and are consistent with the definitions and terminology used in state statute, the Stream Alteration Rule, and ANR Stream Geomorphic Assessment and Reach Habitat Assessment Protocols. Additionally, minor clarifying edits are proposed to the definitions.

Changes proposed to VWQS:

“Equilibrium condition” means the condition in which water flow, sediment, and woody debris are transported in a watershed in such a manner that the stream maintains its dimension, pattern, and profile without unnaturally aggrading or degrading the channel bed elevation at the ~~river~~ stream reach scale.

“Flow characteristics” means the depth, volume, velocity, and variation of streamflow that, in part, determine stream processes, physical habitat structure, and aquatic habitat quality in channels and floodplains as governed by factors associated with valley setting, geology, and climate.

“Physical habitat structure” means the diverse combination and complexity of instream forms created within substrate and woody debris on and within the bed and banks of the channel by ~~natural~~ stream processes and flow characteristics. Physical habitat structure, in part, determines aquatic habitat quality at the stream reach and stream network scales by providing for all life cycle functions, which include the full set of forms necessary for the provision of and access to cover, overwintering, and temperature refuge and the substrates necessary for feeding and reproduction of aquatic biota and wildlife.

“Stream processes” means the hydrologic, bed-load sediment, and large woody debris regimes of a particular stream reach and is a term used to describe stream channel hydraulics, or the erosion, deposition, sorting, and distribution of instream materials by the power of flowing water. Stream processes work toward an equilibrium condition, are governed by flow characteristics, stream morphology, channel roughness, and floodplain connectivity and, in part, determine physical habitat structure and aquatic habitat quality ~~as vertical and lateral stream movements work toward an equilibrium condition.~~

17. Commenters: MMR and VHB

Sections 29A-102 Definitions and Section 29A-306 Aquatic Habitat: Given the proposed addition of the following definitions: (14) Equilibrium Condition, (34) Physical Structure, and (43) Stream Processes, along with the proposed Management Objective language as written appears to be inconsistent with existing policy, and would be highly problematic. For example, the combined reading of these sections would seem to make it impossible for ANR to issue a Sec. 401 Certification for any kind of hydroelectric project, including existing facilities undergoing relicensing. In contrast, EPR Chapter 27 (Section 27-102(c)) recognizes the following: “Many of Vermont’s cities, towns, villages, highways, and other critical

infrastructure have been built next to streams, and are therefore vulnerable to flooding and erosion. The State recognizes that particular stream reaches must be managed in a non-equilibrium condition to protect pre-existing improved property.” The language should be revised to recognize that there are existing departures from the equilibrium condition, and that obtaining Sec. 401 certification for such facilities would not be precluded by the aquatic habitat criterion.

Response: In the initial proposed draft of amendments to the VWQS, the only differentiation between Class B(1) and Class B(2) aquatic habitat management objectives and criteria for rivers and streams was the word “very” describing the degree of high quality habitat in Class B(1) waters. This raised a legitimate concern that without greater differentiation, the Agency would not be able to issue water quality certifications for facilities that modify the natural stream processes associated with bed load sediment and woody debris.

Since it is not the intent of the current VWQS revision to increase or decrease the habitat standard used to certify the existing instream structures and facilities that occur in Class B(2) waters, the Department is proposing that language be added that is consistent with language in the existing VWQS and that more clearly distinguishes between the criteria for Class B(1) and Class B(2).

The proposed aquatic habitat criteria for B(1) waters is: change in flow characteristics, physical habitat structures, and stream processes limited to minor differences from the natural condition and consistent with the full support of very high quality aquatic habitat. This means that only minor changes in the natural hydrologic, bed-load sediment, and large woody debris regimes (i.e., hydrology and hydraulics) may occur provided the physical habitat structures fully support the life cycle functions of aquatic biota and wildlife at the very high quality level.

The proposed aquatic habitat criteria for B(2) waters is: change in flow characteristics, physical habitat structures, and stream processes limited to moderate differences from the natural condition and consistent with the full support of high quality aquatic habitat. This means that only moderate changes in the natural hydrologic, bed-load sediment, and large woody debris regimes (i.e., hydrology and hydraulics) may occur provided the physical habitat structures fully support the life cycle functions of aquatic biota and wildlife at the high quality level.

This differentiation recognizes that modified streams (i.e., those experiencing long-term and persistent moderate changes in bed sediment and woody debris regimes) can fully support high quality habitat that fully provides for the life cycle functions of aquatic biota. This is achievable as long as flow characteristics are maintained (i.e., set by the Hydrology Criteria in § 29A-304), and actions going forward do not cause new instability in the stream bed and a further departure from equilibrium.

This is consistent with the ANR Stream Geomorphic Assessment and Reach Habitat Assessment Protocols, the policies set forth in the Stream Alteration Rule (§27-102), and the Flood Hazard Area and River Corridor Protection Procedure (§5.0(c)(2)(B)(2)).

Changes proposed to VWQS: The Department proposes the following clarifying edits to § 29A-306(b) Aquatic Habitat:

(1) Class A(1).

(A) Management Objectives. Waters shall be managed to achieve and maintain excellent quality aquatic habitat. The physical habitat structure, stream processes, and flow characteristics of rivers and streams and the physical character and water level of lakes and ponds shall be managed consistent with waters in their natural condition.

(B) Criteria.

(i) Rivers and Streams. ~~Flow~~ No change in flow characteristics, physical habitat structure, and stream processes consistent with waters in their outside the range of the natural condition.

(2) Class B(1).

(A) Management Objectives. Waters shall be managed to achieve and maintain very high quality aquatic habitat. The physical habitat structure, stream processes, and flow characteristics of rivers and streams and physical character and water level of lakes and ponds necessary to fully support all life-cycle functions of aquatic biota and wildlife, including overwintering and reproductive requirements, are maintained and protected.

(B) Criteria.

(i) Rivers and Streams. ~~Flow~~ Changes to flow characteristics, physical habitat structure, and stream processes necessary to limited to minor differences from the natural condition and consistent with the full support of very high quality aquatic habitat.

(3) Classes A(2) and B(2).

(A) Management Objectives. Waters shall be managed to achieve and maintain high quality aquatic habitat. The physical habitat structure, stream processes, and flow characteristics of rivers and streams and physical character and water level of lakes and ponds necessary to fully support all life-cycle functions of aquatic biota and wildlife, including overwintering and reproductive requirements, are maintained and protected.

(B) Criteria.

(i) Rivers and Streams. ~~Flow~~ Changes to flow characteristics, physical habitat structure, and stream processes necessary to limited to moderate differences from the natural condition and consistent with the full support of high quality aquatic habitat.

18. Commenters: VNRC, Vermont Conservation Voters, LCI, and TRORC

Section 29A – 103, 29A-104 and 306 (and throughout proposed rule) – As noted in the FAQ for the proposed rules, the main impetus behind the rule changes is because Act 70 of 2016 revised the water classification structure for Vermont's surface waters. We supported Act 79, and support reflecting the new B1 and B2 classifications in the VWQS, and the fact that specific uses of waters may have different classifications. We believe these changes have the potential to lead to more waters being properly classified to reflect their higher level of water quality. To ensure that the intent of Act 79 is realized, we recommend that Section 29A-103 be revised to require DEC to propose reclassifications of waters made in tactical basin plans as a result of the basin planning process.

Response: Under 10 V.S.A. § 1253(c) the “Secretary *may* initiate” rulemaking on the Secretary’s own motion or on receipt of a written request that the Secretary adopt, amend, or repeal a reclassification. Further, under 10 V.S.A. § 1253(d)(2) basin plans *shall* identify waters that should have one or more uses reclassified under section 1252. Because the requested change goes beyond the statutory intent, the Department is not contemplating further changes to § 29A-103(e)(5), and instead intends to carry out its stated commitment to pursue reclassifications under the VWQS once new tactical basin plans have been issued which contain Class B(1) recommendations.

19. Commenter: TRORC

TRORC is primarily concerned with the onerous process in place for the reclassification of waters. TRORC believes that it takes too long to establish the sufficient criteria required to support reclassification. The superfluous steps required to initiate a reclassification are a serious impediment to the reclassification of waters, and are not needed since the test is not whether such quality exists, but that it is *reasonably attainable*.

TRORC believes that a simplified process, although slightly less thorough, can be efficient and effective. If a specific surface water starts as an A(1) ecological water because it is above 2,500 feet in elevation, and that water continues below 2,500 feet but the land use surrounding that water is unchanged, then the classification should also be an A(1) ecological water. This method significantly expedites the reclassification process and would lead to the greater protection of Vermont’s surface waters. There are several examples of this in our region, including Corporation Brook in Pittsfield and Rochester, Chittenden Brook in Rochester, Howe Brook in Hancock, and several tributaries of the Upper White River.

Response: In regards to the development of a simplified process, DEC worked with the Vermont General Assembly on Bill H.394 (2014), which would have conferred to the Secretary authority to conduct “upward” reclassifications, and designations of Outstanding Resource Waters, following an administrative determination process. The process would have relied on a comprehensive public outreach effort for each determination, but Secretary determinations would have been made without the need for the APA process for each individual surface water. The Bill was not supported by the Committee of jurisdiction.

In regards to the extension of Class A(1) designations, the Department does not agree that Class A(1) designation should be conferred based simply on watershed characteristics. The determination of Class A(1) should be made in those instances where the management objectives for Class A(1), essentially the management of the waterbody to maintain its natural condition, are understood and debated by all stakeholders, with full understanding of the associated regulatory implications. Thru the process of tactical basin planning, candidate Class A(1) surface waters may be vetted for proposal for

reclassification. The present proposed WQS reclassifications to Class A(1), that are supported by TRORC, exemplify this.

20. Commenter: TRORC

29A-103(C)(4) should be amended to reflect that basin plans “shall” contain recommendations for reclassification.

Response: Since 10 V.S.A. § 1253(d)(2) contains “shall,” the Department agrees with this comment and proposes to amend the language as shown below. The Department is not, however, incorporating the additional TRORC-proposed markup at this time as it was not available for consideration by all stakeholders during the public comment period.

Changes to proposed VWQS: The Department proposes the following edits, including a clarifying edit, to § 29A-103(e)(4):

- (4) Each tactical basin plan shall identify strategies, where necessary, by which to allocate levels of pollution between various sources as well as between individual discharges. Tactical basin plans ~~should~~ shall, to the extent appropriate, contain specific recommendations by the Secretary that include the identification of all known existing uses, any recommended changes in classification and designation of waters, including reclassifying waters’ uses from Class B(2) to a higher classification level and designating waters as Outstanding Resource Waters, schedules and funding for remediation, stormwater management, riparian zone management, and other measures or strategies pertaining to the enhancement and maintenance of the quality of waters within the basin.

21. Commenters: Trout Unlimited and Connecticut River Watershed Council

Only four areas have been designated ORWs and none since 1996. They include the Batten Kill and its West Branch, Town of East Dorset and Arlington; Pikes Falls / Ball Mountain Brook North Branch, Town of Jamaica; the lower Poultney River in the Towns of Poultney and Fair Haven; and Great Falls on the Ompompanoosuc River in Thetford. The fact that none have been designated in the **past** twenty years shows the need to update the policy and procedure for designation.

Response: The Department shares the enthusiasm of Trout Unlimited and CWRC regarding outstanding resource water (ORW) designation. In fact, it should be noted that each tactical basin plan issued since 2010, except for one, has contained recommendations for ORWs. One opportunity to further highlight ORWs is to acknowledge them in the VWQS, since presently, ORW designations are only listed in individual old Water Resources Panel decision files. As such and in response, the Department proposes to add a new Appendix H. to the VWQS to list the four existing ORWs and for purposes of designating future ORWs. Additionally, the Department proposes adding a cross reference to the new Appendix H. in § 29A-105(d).

Change to proposed VWQS: The Department proposes adding Appendix H. for purposes of listing ORWs. The Department also proposes the following addition to § 29A-105(d):

(d) Protection of Outstanding Resource Waters. The Secretary may under 10 V.S.A. § 1424a designate certain waters as Outstanding Resource Waters. Outstanding Resource Waters are listed in Appendix H of these rules. Where the Secretary so designates such waters for specific exceptional natural, recreational, cultural, or scenic values, their existing quality, associated with the values for which they have been designated, shall, at a minimum, be protected and maintained.

22. Commenters: Trout Unlimited and Connecticut River Watershed Council

The commenters would appreciate assurance that ORW's are exempt from 29A-105(c)(2).

Response: The provisions in § 29A-105(c)(2) allowing for a limited lowering of water quality after completing a socio-economic justification do not apply to Outstanding Resource Waters.

23. Commenters: Trout Unlimited and Connecticut River Watershed Council

Second, the adjudicative process for designation of an ORW is too onerous and expensive for the average citizen, effectively locking them out of the process and thereby limiting the potential for designation. Moreover, the Agency may not have the same expertise as the shuttered quasi-judicial Water Resources Board to carry out this type of adjudicative process. While the Agency inherited this process, it was created for the Board. Instead, the Agency should develop, working with the Legislature as necessary, a simpler, but thoughtful, process.

Response: Designation of ORWs is no longer subject to an adjudicative process. This changed under Section 38 of Act 115 of 2004. Pursuant to 10 V.S.A. § 1424a(a), designation of ORWs must now comply with the administrative rulemaking process provided for under 3 V.S.A. Chapter 25. Pursuant to 10 V.S.A. § 1424a(a) and 3 V.S.A. § 806, any person may petition the Secretary to designate an ORW. Within 30 days of receiving the request, the Secretary must either initiate rulemaking proceedings or deny the petition, giving its reasons in writing.

24. Commenters: Trout Unlimited and Connecticut River Watershed Council

The commenter recommends that ORW be included in the criteria for inclusion in tactical basin plans, in 29A-103(c).

Response: Because 10 V.S.A. § 1253(d) specifically identifies ORWs in the list of items required by tactical basin plans, the Department agrees. Please note, ORWs have been added to § 29A-103(e)(4), as shown in response to Comment 20.

25. Commenters: Trout Unlimited and Connecticut River Watershed Council

The commenter requested an update on the development of guidance for ORW, stating specifically:

Has DEC made any strides in drafting a **guidance document**? Were the specific, scientific-based criteria every developed? And were there any results from working with the Legislature? DEC seems genuinely interested in expanding the ORW program, making it easier to petition and implement, as well as easier to understand. We would be very interested in assisting in any work that is underway, or help jump-start any such work that may have stalled over the years.

Response: In 2014, the Department drafted, and then very recently updated a draft Procedure for the Identification of Outstanding Resource Waters, for use in tactical planning, and to assist stakeholders whom may be interested in pursuing ORW designation. The Department is presently finalizing that document for Commissioner signature, and would be happy to meet with stakeholders to describe our vision of its application, and identify opportunities for complementary efforts in this area.

26. Commenters: MMR and VHB

Section 29A-103 Riparian Policy: The Riparian policy includes an expanded concept of “the provision of habitat and travelways for a wide variety of species”. Presumably this is designed to protect non-aquatic species like birds and mammals that use the riparian areas. Why is this change being proposed as part of the VWQS? How will it be used as part of the VWQS? What is the relationship, if any, to the ANR Buffer Policy/guidance document used for Act 250 and Section 248 proceedings?

Response: The added statement concerning the “provision of habitat and travelways for a wide variety of species” was proposed by the Vermont Department of Fish and Wildlife for inclusion in the Riparian Policy, for the simple purpose of creating consistency between the policy statement in the Standards, and ANR’s riparian buffer guidance, which is used for Act 250 and Section 248 project review. The statement is not intended to confer protections to terrestrial species through the VWQS. Rather, the statement is intended to clarify that riparian buffers have important functions and values that complement the protection of designated uses in the Standards.

27. Commenters: MMR and VHB

Section 29A-305 Numeric Biological Indices and Aquatic Habitat Assessments: In subsection (a), we disagree with the deletion of “and aquatic habitat uses”, as the determination of full support for the aquatic biota use should, of necessity, demonstrate full support of aquatic habitat criterion, since appropriate habitat is required for healthy biota.

Response: When all life-cycle functions of aquatic biota and wildlife, including overwintering and reproductive requirements, are maintained and protected, and such is evidenced by numeric biological indices, or other appropriate assessments of aquatic life use, then the Department agrees that aquatic habitat is necessarily supported. The original proposed deletion was made specifically in the context of those numeric biological indices that are captured by Appendix G, and not considering other aquatic life use assessments that may be made. With this caveat understood, the Department agrees.

Change to proposed VWQS: The Department proposes the following edit to § 29A-305(a):

(a) In addition to other applicable provisions of these rules and other appropriate methods of evaluation, the Secretary may establish and apply numeric biological indices to determine whether there is full support of the aquatic biota and aquatic habitat uses for each class of water ...

