

PROPOSED WATER QUALITY STANDARDS REVISIONS FOR 2015-2016

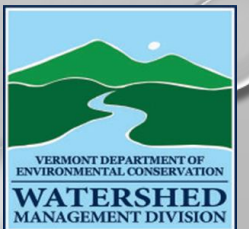
PRE-RULEMAKING PUBLIC OUTREACH MEETING

MAY 16, 2016



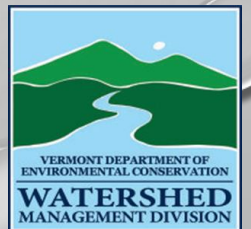
TODAY'S DISCUSSION

- BRIEF BACKGROUND
- ABOUT H517 AND THE NEW CLASSIFICATION SYSTEM
- PROPOSED STRUCTURAL CHANGES TO THE WQS
- WALKTHRU OF THE DRAFT RULE
- WQS AND THE FORTHCOMING ANTIDEGRADATION RULE
- NEXT STEPS



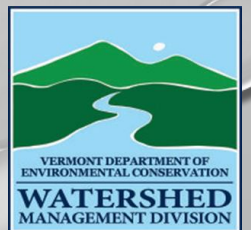
BACKGROUND: WQS CONTAIN

- WATER QUALITY CLASSIFICATION AND DESIGNATED USES
- ASSOCIATED CRITERIA
- ANTIDEGRADATION POLICY
- WQS TRANSLATE THE GOALS OF THE FED. CLEAN WATER ACT INTO STATE RULES.



PREFACE – H517

- INTENT OF H517 IS TO ADDRESS CERTAIN STRUCTURAL PROBLEMS AND AMBIGUITIES WITH THE VT WQS RULE.
- H517 WILL PROVIDE FOR REFINEMENT OF OUR CURRENT CLASSIFICATION SYSTEM.
- H517 WILL SET THE STAGE FOR THE AGENCY'S ANTIDEGRADATION RULE, AS DIRECTED BY ACT 64.



H 517

This law amends the classes of waters in the State. The law provides that the Secretary may, by rule, reclassify one or more uses of all or any portion of an affected water. In addition, the law indicates that when the Secretary of Natural Resources develops a basin plan, the Secretary shall identify waters that should have one or more uses reclassified as Class A(1) or Class B(1).

Class A(1): Waters in a natural condition that have significant ecological value... OR

Class A(2): Waters that are suitable for a public water source with filtration and disinfection or other required treatment; character uniformly excellent.

Class B(1): Waters in which one or more uses are of demonstrably and consistently higher quality than Class B(2) waters;

Class B(2): Waters that are suitable for bathing, swimming and other primary contact recreation; irrigation and agricultural uses; aquatic biota and aquatic habitat; good aesthetic value; boating, fishing, and other recreational uses and suitable for public water source with filtration and disinfection or other required treatment.



“WORKFLOW” OF FED CLEAN WATER ACT

What is the WB Use being assessed?

- Aquatic Life
- Habitat
- Swimming
- Fishery
- Secondary Contact
- Fish Consumption

What is the Class?

A1, A2, B1, B2

What are the criteria that protect that use?

- Oxygen, acidity, temperature
- Macroinvertebrates and fish
- Bacteria
- (...)

Are the Criteria met for that Use?

- **Yes: Use is supported**
- **No: Use not supported**

DIFFERENT VERY HIGH QUALITY USES ARE SUPPORTED BY DIFFERENT MANAGEMENT APPROACHES



	North Branch Winooski	Middlebury River
Class B1 Uses	Boating Aesthetics	Aquatic Biota Aquatic Habitat Fishing
Class B2 Uses	Aquatic Biota Fishing Aquatic Habitat Drinking Water Supply Irrigation	Boating Aesthetics Drinking Water Supply Irrigation

Conversion From Existing Water Management Types to Proposed Classifications

Existing  **Proposed**

(WATERS)

(USES)

Class A(1)

Class A(1)

Aquatic Biota, Aquatic Habitat Aesthetics, Fishing
Boating Swimming

Class A(2)

Class A(2)

Public Water Source

Class B (WMT B1)

Class B(1)

Aquatic Biota, Habitat, Aesthetics, Fishing, Boating

Class B (WMT B2)

Class B (WMT B3)

Class B

Class B(2)

ALL Uses



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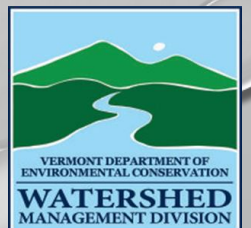
-303 GENERAL CRITERIA APPLICABLE TO ALL WATERS sludge, solids and the like, Ph, ALK. toxins

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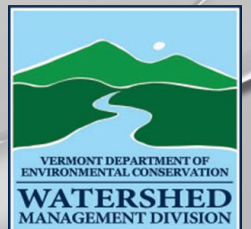
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STRUCTURAL REVISIONS

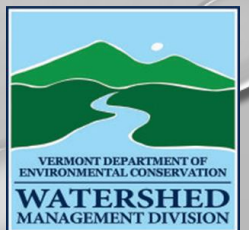
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- INCORPORATION OF BIOLOGICAL ASSESSMENT PROCEDURES
- ANOTHER UPDATE TO APPENDIX C (TOXIC CRITERIA)
- PROPOSED RECLASSIFICATION OF CERTAIN SURFACE WATERS TO A(1)
- ANTIDEGRADATION POLICY



SUBCHAPTER 1

§ 29A-104 Classification of Water **Uses**

- (a) Uses for waters are classified separately. A body of water may be assigned different classifications for different uses. For each use, management objectives and associated criteria for those objectives are presented by classification level in § 29A-306 of these rules.
- (b) All waters of the State shall be managed to support their designated and existing uses...
- (d) The designated uses are:
- (1) **Aquatic biota** and wildlife that utilize or are present in the waters;
 - (2) **Aquatic habitat** to support existing 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 recreational uses;
 - (5) The use of waters for **fishing** and other 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.



29A-306 Use-specific Management Objectives and Criteria by Class

(a) Aquatic Biota and Wildlife.

(1) Class A(1).

- (A) Management Objectives. Waters shall be managed to achieve and maintain **excellent biological integrity** and aquatic biota and wildlife consistent with waters in their natural condition.
- (B) Biological Criteria. Measures of biological integrity for aquatic macroinvertebrate and fish assemblages in the natural condition.
- (C) Nutrient Criteria. The nutrient criteria are in Table 2.

(2) **Class B(1).**

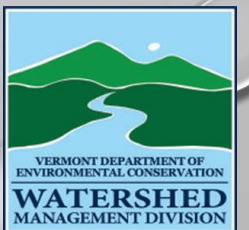
- (A) Management Objectives. Waters shall be managed to achieve and maintain **very good biological integrity**.
- (B) Biological Criteria. Change from the natural condition for aquatic macroinvertebrate and fish assemblages limited to minor changes in the relative proportions of taxonomic and functional components. Relative proportions of tolerant and intolerant aquatic organisms in the natural condition.
- (C) Nutrient Criteria. The nutrient criteria are in Table 2.

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

- (A) Management Objectives. Waters shall be managed to achieve and maintain **good biological integrity**.
- (B) Biological Criteria. Change from the natural condition for aquatic macroinvertebrate and fish assemblages not exceeding moderate changes in the relative proportions of taxonomic, functional, tolerant, and intolerant aquatic organisms.

STREAM EQUILIBRIUM

- ACT 110 THEN 138 CODIFIED STATE POLICY THAT STREAMS ARE TO BE MANAGED TOWARDS THE EQUILIBRIUM CONDITION
- INSERTION OF THE EQUILIBRIUM IS SIMPLY INTENDED TO CROSSWALK 10 VSA CHAPTERS 47 AND 49.
- THIS IS ACCOMPLISHED BY DEFINING TWO NEW TERMS; EQUILIBRIUM CONDITION AND STREAM PROCESS, AND INSERTING MAINTENANCE OF STREAM PROCESS IN THE MANAGEMENT OBJECTIVES FOR HABITAT.



b) Aquatic Habitat.

(1) Class A(1).

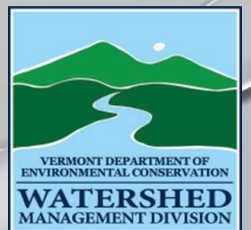
(A) Management Objectives. Waters shall be managed to achieve and maintain excellent quality aquatic habitat. The physical structure, stream processes, and flow characteristics of rivers and streams and the physical character and water level of lakes and ponds shall be managed consistent with waters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

(B) Criteria.

(i) Rivers and Streams. Flow characteristics, physical structure, and stream processes in the natural condition.

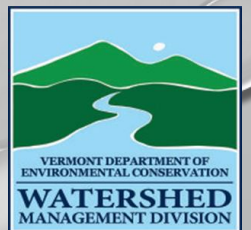
(ii) Lakes, Ponds, and Reservoirs. No change in aquatic habitat measures in the natural condition.

(iii) Hydrology Criteria. Waters shall comply with the Hydrology Criteria in § 29A-304 of these rules.



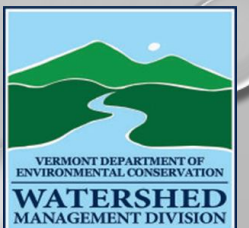
APPENDIX C UPDATES

- RECENT EPA RULE NOW REQUIRES THAT STATES ADOPT EPA 304(A) CRITERIA, UNLESS THERE ARE SPECIFIC REASONS NOT TO ADOPT THEM.
- EPA RECENTLY RELEASED REVISED CRITERIA GUIDANCE FOR 83 SETS OF CRITERIA WITH THE ADDITION OF 11 COMPOUNDS TO PROTECT HUMAN HEALTH.
- APPENDIX C THEREFORE REVISED TO REFLECT NEW EPA GUIDANCE.
- THIS IS GOOD HOUSEKEEPING, AND WSMD SUPPORTS UPDATING APPENDIX C ANYTIME THE WQS ARE BEING REVISED.



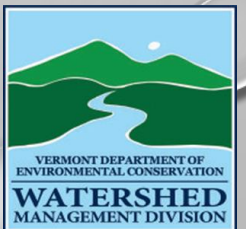
IMPROVED TEMPERATURE CRITERIA

- INCLUDED A NEW CRITERION FOR COLD WATER FISH HABITAT TO PROTECT CLASS A(1) AND B(1) COLDWATER FISHERY USE.
- **CLASS A(1)** - NO CHANGE FROM NATURAL CONDITION
- **CLASS B(1)** - NOT TO EXCEED 68F AS A ROLLING 7-DAY AVERAGE MAXIMUM, AND
- ONE-DEGREE INCREASE LIMITATION RETAINED.
- **CLASS B2** - UNCHANGED



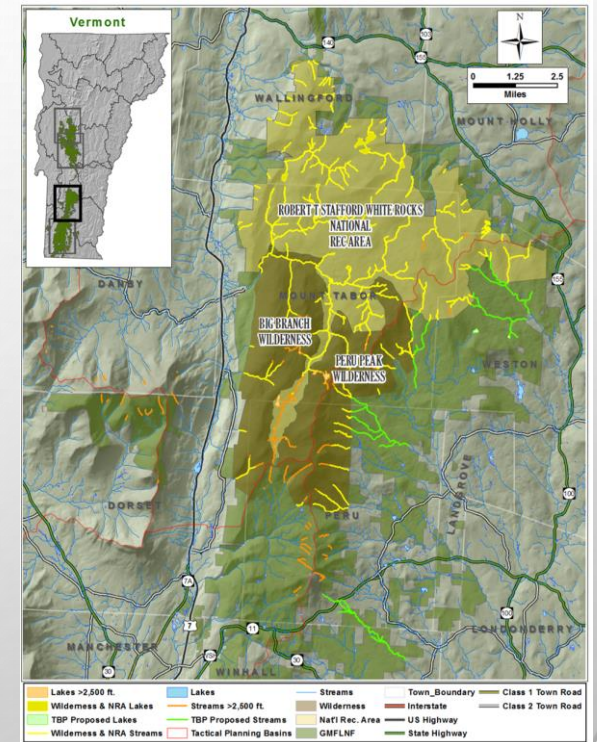
BIOLOGICAL ASSESSMENT PROCEDURES

- LANGUAGE INDICATING THAT THE SECRETARY MAY ADOPT PROCEDURES TO ASSESS BIOLOGICAL INTEGRITY AND HABITAT ASSESSMENTS CAN BE USED TO ASSESS THAT USE - REMAIN LARGELY UNCHANGED,
- PROPOSAL TO ADD AN APPENDIX OF A STREAMLINED VERSION OF THE WSMD “PINK-BOOK” PROCEDURE FOR BIOLOGICAL ASSESSMENT.
 - CODIFIES SCORING ALGORITHMS
 - MAKES CLEAR THE PROCEDURES PARTIES SHOULD USE WHEN CONDUCTING BIOLOGICAL ASSESSMENTS
 - ADDS A NEW STREAM TYPE FOR SOFT BOTTOM STREAMS FOR MACROINVERTEBRATE ASSESSMENTS



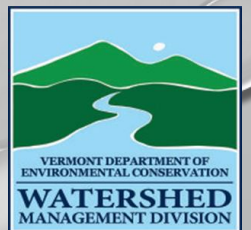
PROPOSED RECLASSIFICATIONS

- MOVING CLASSIFICATIONS TO APPENDIX A INSTEAD OF CHAPTER 4
- US FOREST SERVICE WATERS IDENTIFIED IN TACTICAL BASIN PLANS
- CERTAIN CLASS A2 PUBLIC WATER SOURCE WATERS FOR WHICH THE RELEVANT MUNICIPALITY IS PROMOTING RECLASSIFICATION TO A1.



IDENTIFYING USE CLASSIFICATIONS IN THE WQS

- USES ARE DESIGNATED TO CLASS INDEPENDENTLY
- NEW APPENDIX A REPLACES CHAPTER 4, WITH MUCH MORE CLARITY ON CLASSIFICATIONS APPLIED TO INDIVIDUAL SURFACE WATERS.
- A SURFACE WATER CAN HAVE MOST USES DESIGNATED TO CLASS B2, BUT HAVE ONE OR MORE USES DESIGNATED TO B1, A2, OR A1.
- WE ARE GOING TO WALK THRU AN EXAMPLE USING A WATERBODY THAT IS CURRENTLY DESIGNATED A2.



TWO WAYS TO PORTRAY CLASS A2 WATERS EXEMPLIFIES INDEPENDENT CLASSIFICATION OF USES...

Waters	Aq. Biota	Aq. Hab.	Aesthetics	Boating	Fishing	Swim	Pub. WS	Agricul.	Date	Approx. Miles/Acres
Battenkill, Walloomsac, Hoosic (Basin 1)										
Unnamed tributary to Bromley Brook. Village of Manchester water supply. (...)	A2	A2	A2	A2	A2	A2	A2	A2	6/30/64	0.5 mile
Unnamed tributary to Bromley Brook. Village of Manchester water supply. (...)	B2	B2	A2	B2	B2	A2	A2	B2	6/30/64	0.5 mile

MOST A2 AND B2 CRITERIA ARE IDENTICAL

A2

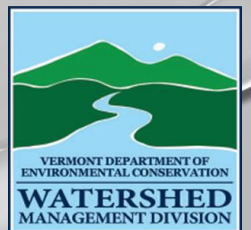
3. **Aquatic Biota, Wildlife and Aquatic Habitat** - Biological integrity is maintained, no change from the reference condition that would prevent the full support of aquatic biota, wildlife or aquatic habitat uses. Change from the reference condition for aquatic macroinvertebrates and fish assemblages shall not exceed moderate changes in the relative proportions of taxonomic, functional, tolerant and intolerant components. All expected functional groups are present in a high quality habitat and none shall be eliminated. All life cycle functions, including overwintering and reproductive requirements are maintained and protected. Changes in the aquatic habitat shall not exceed moderate differences from the reference condition consistent with full support of all aquatic biota and wildlife uses.

B2

(...) change from the reference condition for aquatic macroinvertebrate and fish assemblages shall be limited to moderate changes in the relative proportions of tolerant, intolerant, taxonomic, and functional components. Changes in the aquatic habitat shall be limited to moderate differences from the reference condition consistent with the full support of all aquatic biota and wildlife uses.

ANTIDEGRADATION POLICY

- MODIFIED TO REFLECT FEDERAL REQUIREMENTS, WHILE RETAINING IMPORTANT ATTRIBUTES OF VT LANGUAGE
- TIER 1 (EXISTING USE) AND TIER 3 (ORW PROTECTIONS) UNCHANGED
- REPLACING “STATEWIDE” TEST FOR SOCIOECONOMIC JUSTIFIABILITY WITH “AREA IN WHICH THE WATERS ARE LOCATED.”
- INSERTED REQUIREMENT FOR PUBLIC PROCESS IN DETERMINATION OF LOWERING
- INSERTED REQUIREMENT FOR ALTERNATIVES ANALYSIS WITHIN ANTIDEG. PROCEDURE.
- CREATION OF NEW CLASS B1 MAKES “EXISTING USE” A REAL AND WORKABLE CONCEPT IN VT.



HOW DOES H517 HELP ANR APPLY ANTIDEGRADATION?

Current WQS policy indicates NO lowering, unless NOT lowering results in widespread social and economic impact to citizens of VT.

Procedure: “Lowering” measured against baseline of Class A(1) or B.

Class A(1)

EXISTING CONDITION



Class B



HOW DOES H517 HELP ANR APPLY ANTIDEGRADATION?

Class A(1) Criteria

Existing condition now becomes the “Existing Use”

NEW Class B(1) Criteria

Class B(2) Criteria



SUBCHAPTER 1

§ 29A-105 Antidegradation Policy

(Under Tier 2 Protection of high quality waters) - TO BECOME CONSISTENT WITH EPA LANGUAGE

~~2.~~(2)A limited reduction in the existing higher quality of such waters may be allowed only when it is shown that:

- a.(A) ~~the adverse economic or social impacts on the people of the state specifically resulting from the maintenance of the higher quality of the waters would be substantial and widespread~~ through the applicable permitting or approval process, the Secretary has provided public notice of the draft decision and an opportunity for public comment on the decision;
- b.(B) ~~these adverse impacts would exceed the environmental, economic, social, and other benefits of maintaining the higher water quality~~ 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 area in which the waters are located; and
- c.(C) there shall be achieved the highest statutory and regulatory requirements for all new or existing point sources, and all cost effective and reasonable ~~accepted agricultural practices and best management practices, as appropriate~~ for nonpoint source control, including RAPs and AMPs, as applicable, consistent with state law.

~~3.~~(3)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 alternative is selected for implementation.

NEXT STEPS

- FOLLOW-UP SECTOR SPECIFIC MEETINGS
 - WHAT ADDITIONAL MEETINGS ARE NEEDED?
- MEETINGS TO DISCUSS RECLASSIFICATIONS
 - TWO OR MORE MEETINGS PLANNED IN CENTRAL AND SOUTHERN VT
- TIMELINE FOR FORMAL RULEMAKING