Testimony on H 517

An Act Relating to the Classification of Waters

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Preface

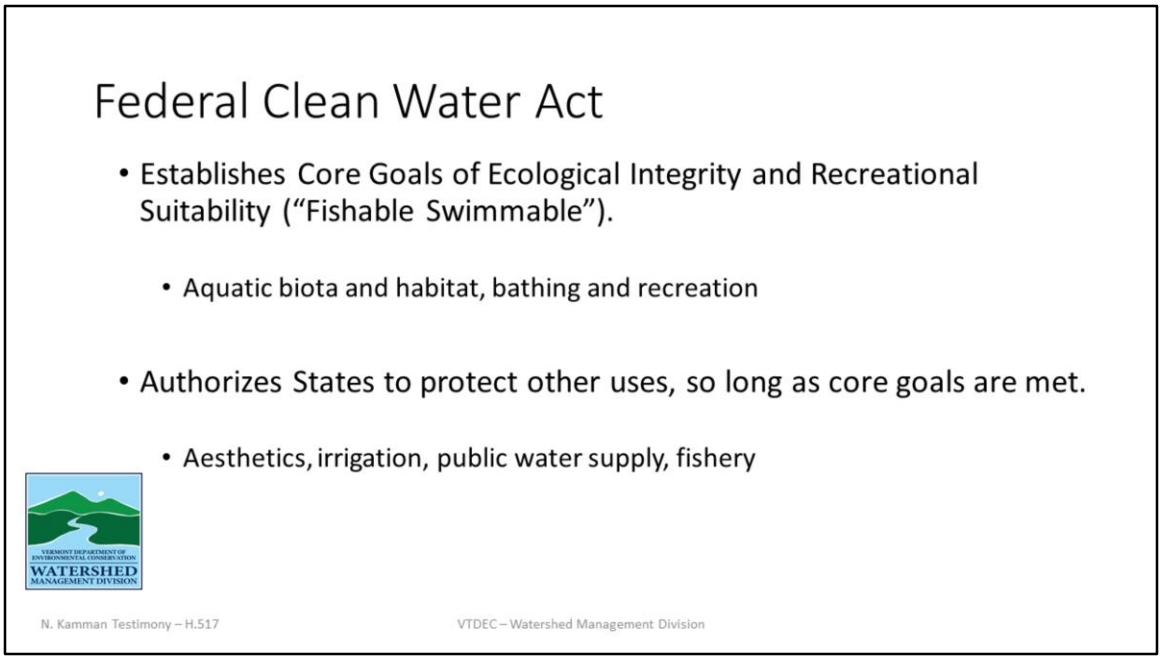
- Intent of H517 is to address certain structural problems with WQS rule by establishing a new classification for water uses.
- H517 will allow for a "new elevator stop" for VT surface waters that is of higher condition than Class B, but not necessarily of sufficient condition to meet Class A(1), or suitable for management as A(1).
- H517 will fix the unintended flaw in the Water Management Typing aspects of the current VT Standards that presumes all uses are supportable at equal levels of quality.

N. Kamman Testimony – H.517 VTDEC – Watershed Management Division

The bill language we are discussing today represents the first step in a three step process borne of DEC's scientists and technical staff. Making more clear and transparent the classification and designated use framework in 10 VSA 1252 and 1253 is the first step necessary to update the Water Quality Standards rule, then promulgate an Antidegradation rule. The results of this three-step effort will result in a predictable, precise, and transparent framework for the application of the water quality standards. In this presentation , I will walk thru why the Agency supports this bill, and provide occasional specific waterbody examples along the way.

Outline of Testimony

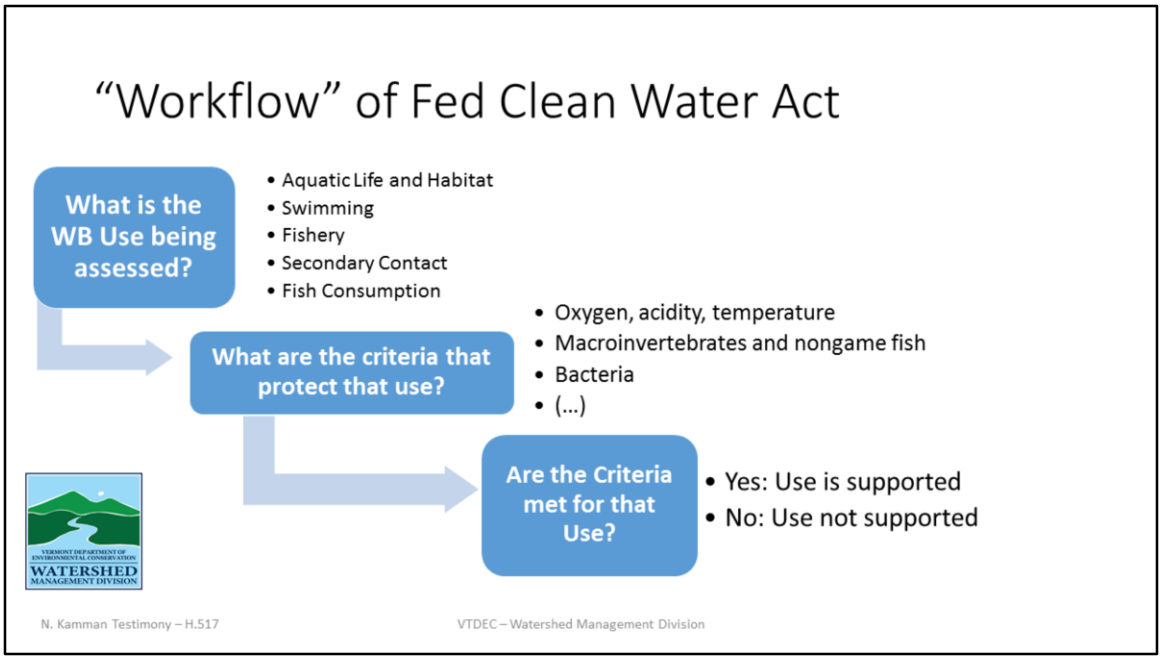
- Provide additional support to Leg. Counsel O'Grady's testimony describing how the Fed. Clean Water Act functions to support water quality.
- Provide information about how the Tactical Basin Planning Process identifies the quality of waters, and proposes changes to their management objectives.
- Walk thru examples of individual surface waters from a recently approved tactical basin plan, and show what criteria may apply



This slide serves as a reminder that the Federal Clean Water Act, Section 101(a) establishes the core goals that shall be managed for, for all navigable waters, by all States and Tribes. States are authorized to add additional protected uses, with two important caveats:

1) Assimilation of waste cannot be a use
2) Attainment of State designated uses cannot interfere with the attainment of the core goals.

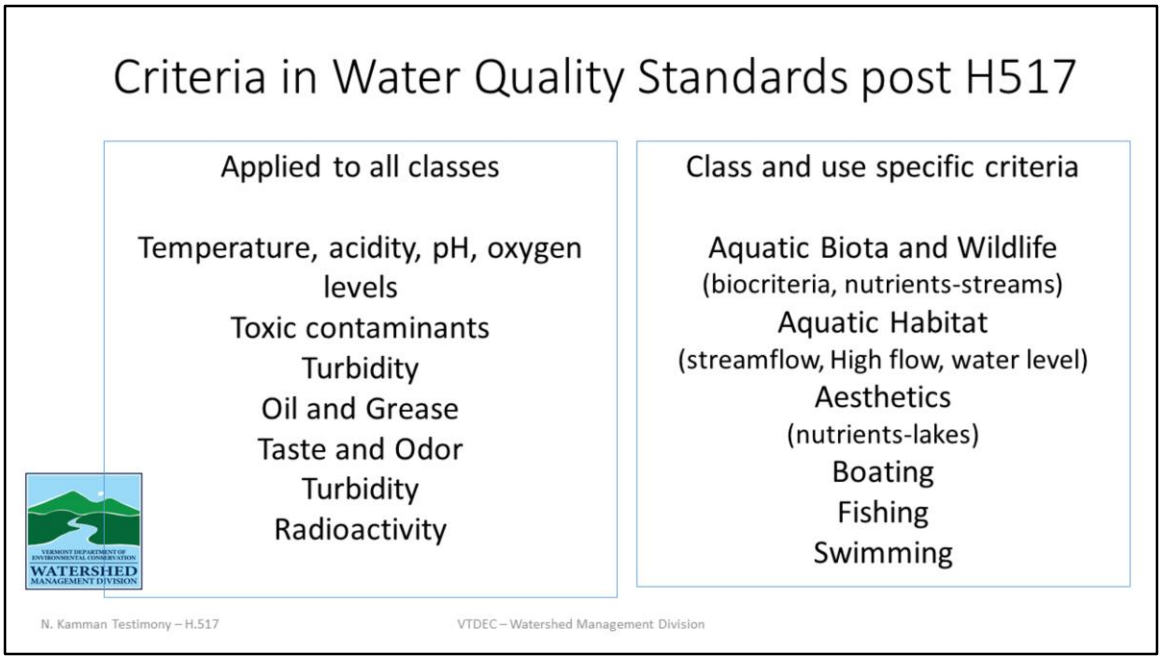
In addition, insofar as the federal Clean Water Act speaks to the quality of waters to support designated uses, EPA would not typically recognize as a designated use an activity that is not necessarily reliant upon the quality of water.



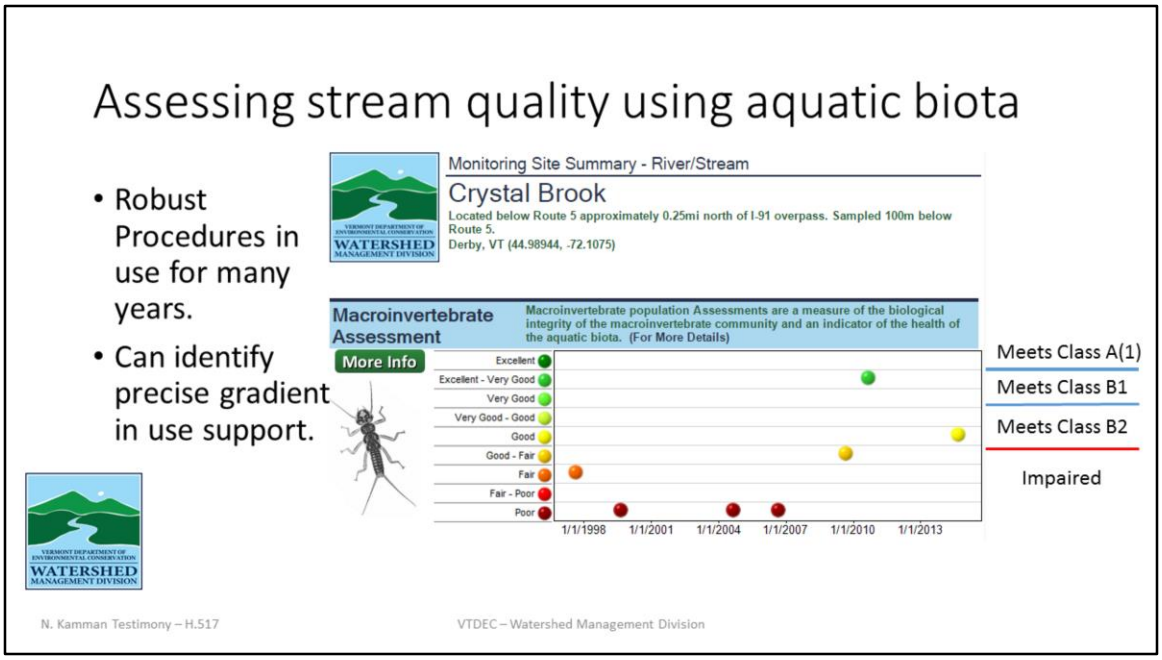
The general process of determine if a waterbody meets Federal Clean Water Act goals involves asking three questions:

1) What use of the water is being assessed?
2) What criteria pertain to that use?
3) Does the waterbody as measured for the use meet the criteria?

The Agency has a regularly updated Water Quality Assessment and Listing methodology that documents how this takes place. When one or more uses is not supported, then the Clean Water Act requires that we restore the uses. Restoration is accomplished by means of TMDL's, Water Quality Remediation planning, permits, and is beyond the scope of this testimony, though a specific restoration example will be featured in this testimony.



The structure of the Water Quality Standards in VT features all of the types of criteria listed above. To reiterate, the point of H517 is to provide for a pathway to upwardly classify specific uses of surface waters This testimony is written in such a manner as to highlight which criteria bear when a use is classified upwards.



VTDEC has for years been refining aquatic life use criteria to measure attainment of the core Federal Clean Water Act goal of ecological integrity. The figure above shows the restoration of Rice Brook, and on the right are shown the aquatic biota thresholds that indicate the level of use that is supported, over time. Note the descriptions of the community, which translate numeric biological measurements into terms such as Poor, Good, Very Good, or Excellent. These terms are defined numerically in a long-standing procedure of DEC, which has been used by scientists in the public, academic, and private consulting sector for many years. There are numerous examples where restoration has occurred.

Precise scientific scientific data underlies these findings…

Macroinvertebrate Site Summary - River/Stream

Crystal Brook

Located below Route 5 approximately 0.25mi north of I-91 overpass. Sampled 100m below Route 5.
Derby, VT (44.98944, -72.1075)
Stream Type: Small High Gradient

Macroinvertebrate Community Metrics

Macroinvertebrate Community Assessments are based primarily on eight metrics of the Macroinvertebrate community. These include metrics of abundance, species richness, and indexes of Sensitive to tolerant species ratios. (For More Details)

Date	Density	Richness	EPT Richness	PMA-O	B.I.	Oligo.	EPT/EPT + Chiro	PPCS-F	Community Assessment
9/4/1997	1824	46.0	18.0	46.9	4.92	7.46	0.32	0.35	Fair
9/14/1999	2876	38.5	9.0	31.7	5.56	5.95	0.13	0.32	Poor
9/16/2004	3280	27.0	5.0	42.3	7.21	14.27	0.29	0.11	Poor
9/7/2006	9960	36.0	7.0	32.8	6.84	14.94	0.18	0.30	Poor
9/16/2009	2068	37.0	21.0	68.7	4.41	6.96	0.96	0.36	Good - Fair
9/16/2010	2388	43.0	24.0	84.2	3.13	1.34	0.94	0.54	Excellent - Very Good
9/16/2014	2150	55.5	23.5	65.6	4.22	2.13	0.48	0.52	Good
9/15/2015	1604	41.0	27.0	69.0	3.49	3.49	0.95	0.46	
Scoring Guideline for a SHG Stream of Water Quality Class B									
	≥ 350	≥ 28	≥ 17	≥ 50	≤ 4.35	≤ 9.5	≥ 0.47	≥ 0.45	Full Support
	≥ 300	≥ 27	≥ 16	≥ 45	≤ 4.5	≤ 12	≥ 0.45	≥ 0.4	Meets Threshold
	≥ 250	≥ 26	≥ 15	≥ 40	≤ 4.65	≤ 14.5	≥ 0.43	≥ 0.35	Near Threshold
	< 250	< 26	< 15	< 40	> 4.65	> 14.5	< 0.43	< 0.35	Non-Support

N. Kamman Testimony – H.517

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The data presented in this data-rich table is from the exact same location. The purpose of this slide is to illustrate that the biological assessments, and translations of biological condition to terms like “good, fair, or poor,” are grounded in science, and relate actual measurements of the biological community to the goals in the water quality standards.

Role of Tactical Basin Plans

1. Document condition of waters – where are uses met, and where they are not.
2. For waters with use impairments – the most effective restoration strategies are identified
3. For individual waters that contribute to downstream impairments – the most effective strategies to reduce pollution that contributes
4. For waters that exceed criteria – identification of new management objectives.

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The watershed-specific findings of tactical basin plans may vary by planning basin, but the content is consistently expressed across the basins, such that the reader can access and obtain similar information for any basin of interest. In a given basin plan, the Introduction presents a brief basin description, purpose of the plan, planning process, the partners involved in the process to develop the plan's recommendations, and the expected outcomes over the five-year implementation horizon.

The section entitled "Chapter 2. Water Quality in the Basin," presents a textual and graphical characterization of the basin, and presents several aspects of importance to substantiate why the subsequent prioritized implementation actions are as stated. Key items include: surface waters exhibiting very good or excellent biological, geomorphic, chemical, and/or fisheries; impaired, stressed, and altered waters; waterbody-specific TMDLs; and, the status of direct discharges (municipal or industrial wastewater). This section of the plan is derived by a thorough analysis of several types of assessments.

In Chapter 3. Establishing Management and Protection Goals for Surface Waters, each tactical plan outlines opportunities for augmented protections for surface waters. This plan chapter lists those waters identified through the planning process that

present opportunities for Outstanding Resource Water Designations (10 V.S.A. 1424a), waterbody reclassifications (10 V.S.A 1253(d)), or wetland reclassifications (Vermont Wetland Rules; NRB, 2010). Chapter three of each tactical basin plan also references listings of existing uses that are consulted in the application of antidegradation review.

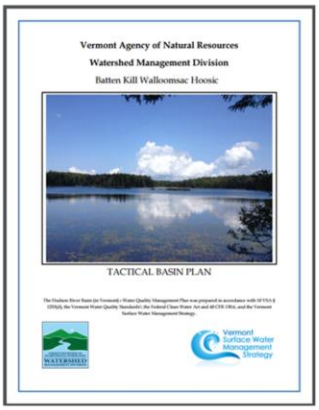
Examples Reclassification Actions from recent Tactical Basin Plans

- Recommendations for Class A(1)
- Examples of recommendations for Class B(1)
- Examples for recommendations for Outstanding Resource Waters

In the next few pages, a few examples from recent tactical basin plans are provided, and the specific criteria that would result from the proposed designations are shown.

Class A(1)

- Beebe Pond (Sunderland) and tributaries
- Branch Pond Brook
- Bourn Brook (where not in Wilderness lands)
- South Fork of the Roaring Branch and tributaries
- Pond identified by VTDEC as "ALDER" Pond (Sunderland) and tributaries
- Black Brook and tributaries upstream of confluence with Fayville Brook
- Lye Brook and tributaries (portion forming boundary between Lye Brook Wilderness and non-wilderness GMFLNF lands)
- Cardinal Brook
- Bourn and Branch Ponds



Relevant criteria for A(1) waters to protect Aquatic Life Use

- Aquatic Biota
  - Meets the reference expectation for the type of stream in question (streams).
- Numeric Nutrient Criteria
  - Meets Class A(1) numeric nutrient criteria (9-18 ppb depending on the stream type)
- Habitat criteria
  - Streamflow Protection – no greater than 5% change in base flows.
  - High Flow Regime – retains natural condition.
  - No artificial water level manipulation for lakes.

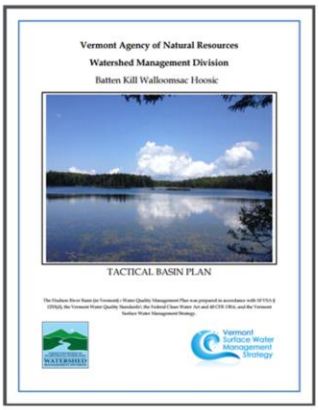
Other criteria always triggered by A(1) Classification.

- Discharge
  - No discharge that contained human waste prior to treatment
  - No Indirect discharge larger than 1000 gallons per day, per lot.

Currently, when a waterbody is classified as A(1), there are some particular restrictions that always apply, regardless of the use being designated.

Class B(1) for Aquatic Life Use

- Chunks Bk. RM 0.9 and up
- Battenkill in several reaches
- Walloomsac RM 10.1 and up
- Furnace Brook
- Hancock Pond
- Miller Pond



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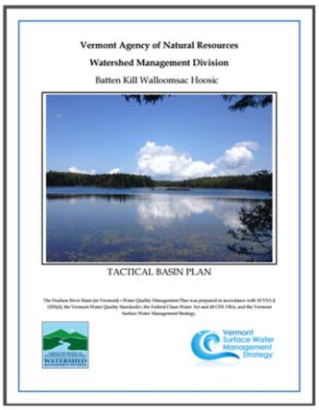
Here are a few examples of surface waters identified as prospective Class B1 candidates in the recently approved Battenkill Tactical Basin Plan.

Relevant criteria for B(1) waters to protect Aquatic Life Use

- Aquatic Biota
  - No more than a minor change from reference condition. Aquatic Biota rated consistently Very Good based on macroinvertebrate or Fish biometrics.
- Numeric Nutrient Criteria
  - Meets Class B(1) numeric nutrient criteria (10-21 ppb)
- Habitat criteria
  - Streamflow Protection – minor changes allowed, no greater than 5% change in base flows.
  - High Flow Regime – minor changes allowed, no alteration to peak flows that would adversely affect channel integrity.
  - Minor allowable water level manipulation for lakes.

Class B(1) for Fishing Use

Sub-watershed	Streams Surveyed	Description (entire unless otherwise described)
Batten Kill	Mainstem	NY state line upstream to confluence of West & East branches.
Green River	Mainstem	Confluence with Batten Kill upstream.
Bourn Brook	Mainstem	Confluence with Batten Kill upstream.
West Branch	Mainstem	Confluence with Batten Kill upstream.
East Branch	Mainstem	Confluence with Batten Kill upstream.
White Creek	Mainstem	New York state line upstream to confluence with Sandgate Bk. (Branch).



N. Kamman Testimony – H.517

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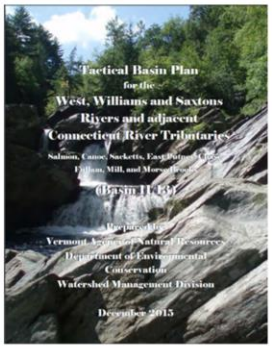
Here are a few examples of surface waters identified as prospective Class B1 candidates, for recreational fishing, in the recently approved Battenkill Tactical Basin Plan.

Relevant criteria for B(1) waters to protect Fishing Use

- Fishery Criteria
  - For Cold Water Fisheries in Running Waters: Wild Brook, Brown or Rainbow Trout populations exhibiting multiple year- classes and achieving at least 20lbs/ acre and at least 1,000 fish/mile
- Habitat criteria
  - Consistent with all Class B2 criteria for Habitat

Boating Use

Waterbody	Location of Use	Towns	Documentation of Existing Use
West River	Townshend Dam to the Connecticut River	Townshend, Newfane, Brookline, Dummerston, Brattleboro	Rated as HIGHLY IMPORTANT for boating[1] Put In: USACE Townshend Dam Take Out: Retreat Meadows boat launch
Winhall River	Kendall Farm Road to the West River	Winhall, Jamaica, Londonderry	Rated as HIGHLY IMPORTANT for boating, continuous Class III run of over 4 miles[1] Put In: GMNF land at Arthur Court bridge crossing Take Out: USACE Winhall Campground
Wardsboro Brook	Wardsboro to Jamaica	Wardsboro, Jamaica	Rated as HIGHLY IMPORTANT for boating[1] (source: Jenkins & Zika, 1992) Put In: South Wardsboro Road crossing Take Out: Eaton Rd. crossing USACE property
Rock River	Penner Road to Williamsville	Newfane	National Whitewater Inventory, American Whitewater listing[2] Put in: Penner Road crossing Take Out: Williamsville Covered bridge
Rock River	Williamsville to West River	Newfane, Dummerston	National Whitewater Inventory, American Whitewater listing[2] Put in: Williamsville Covered bridge Take Out: Williamsville Station
Ball Mountain Brook	Metcalf Road to Jamaica State Park	Jamaica	National Whitewater Inventory, American Whitewater listing3 Put in: Metcalf Road crossing Take Out: Jamaica State Park



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The Basin Planning process is only recently working with VT Paddlers Assoc. and American Whitewater to help identify whitewater resources that are suitable for consideration as Class B(1). This work is in early stages and needs refinement. As part of the West River tactical plan development, VTDEC received comment from American Whitewater which caused the Department to recognize in the Basin Plan that certain reaches are considered important for whitewater boating. The waterbodies that may be suitable for B1 designation are a subset of those recognized.

Relevant criteria for B(1) waters to protect Boating Use

- Boating Criteria
  - No more than a minor degradation due to artificial flow and water level management or artificial physical impediments.
- Habitat criteria
  - Streamflow Protection – minor changes allowed, no greater than 5% change in base flows.

All Other Class B(2) Waters

- All other waters not identified in the tactical basin plan as A(1) or B(1) are specifically recognized as Blass B(2) waters, as consistent with the current 10 VSA 1252.
- All uses protected at Class B2 criteria
- Criteria will be unchanged from the current Water Quality Standards.

Summary

- The Agency supports H 517. Considerable staff time has gone into designing a set of revisions to the WQS that will translate the statutory changes into practice.
- Outreach process has already begun and there is interest from the community in working on the WQS rule amendments.
- Enactment of this language is necessary to authorize the Agency to pursue these beneficial Water Quality Standards Amendments,
- As noted in prior testimony, this will pave the way for work on the antidegradation rule.

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In consideration of the goals of Act 64 of 2015, this proposal presents is a clearer and more predictable framework for the management and protection of surface waters than has to date been in place. Replacing the confusing Water Management Types with a consistent classification framework and independent designation of uses is consistent with how other States' WQS rules are structured. The Agency has done outreach on this proposal with advocacy and representatives from the consulting and development communities. Thru this process, the Agency has received valuable feedback on how to structure the WQS in such a manner as to present clarity, and to avoid unintended consequences. The Agency looks forward to pursuing the rulemaking process for the Water Quality Standards, which will allow for the promulgation of a clear and transparent antidegradation rule.