Anti-Degradation Pre-Rulemaking Meeting #1

Vermont DEC

January 26, 2010 – St. Leo's Hall, Waterbury, VT

Agenda

- Introductions
- Overview of Rule development
- Structure of Meetings
- Introduction to Anti-Deg
- Description of DEC permitting programs for discharges to surface waters
- Summary & Next Steps

Pre-Rule Stakeholder Process

- January 26, 2010 - St. Leo's Hall
  - Introduction to anti-degradation topics and issues
  - DEC Permitting Program Overviews

- February 16, 2010 - Skylight Conference Room
  - Identification and Protection of Existing Uses and High Quality Waters

Pre-Rule Stakeholder Process

- March 9, 2010 - Skylight Conference Room
  - Application of Anti-deg to Federal and State Permitting Programs
- March 30, 2010 - Skylight Conference Room
  - Cumulative Impacts
  - Alternatives Analysis
  - Socio-economic Justification Analysis
  - Public Participation

Pre-Rule Stakeholder Process

- April 21, 2010 - Skylight Conference Room
  - Wrap-up of Outstanding Issues
  - Discussion of Draft Rule Outline

Structure of Meetings

- Presentation of concepts in Issue Papers
  - Available at www.vtwaterquality.org prior to meetings
- Discussion slides after each topic area
  - Stakeholders provide comments related to the issues
- Minutes taken and posted on the website

What are the overall goals for the Anti-Degradation Rule?

- Compliance with federal and state law
- Pragmatic and workable approach
- Understandable for both regulated community and regulators
- Provide for consistent and predictable application
- Provide for balancing of environmental protections with social and economic factors

What are overall goals of Pre-Rule Stakeholder Process?

- Discussion of anti-deg concepts with stakeholders
- Obtain stakeholder input
- Reconcile competing viewpoints where possible
- Foster consensus where possible
- Consider stakeholder input when drafting rule
- Kickoff to the formal rulemaking process

General Framework of VT WQS

- Classifications of Waters & their Designated Uses
- Criteria – e.g. temperature, nitrates, pH, metals, dissolved oxygen, turbidity, e. coli – minimum values necessary to achieve D.U.
- Anti-Degradation Policy – protection of HQ waters so as not to manage solely to the minimum values – "management of assimilative capacity"

Introduction to Anti-Degradation

- What is the Anti-Degradation Implementation Rule?
  - Implements components of the State's Water Quality Standards
  - A procedure by which states review and permit activities that have the potential to lower water quality
  - A tool used to maintain water quality and protect existing and designated uses

Purpose of Anti-Degradation

- Anti-degradation is not a tool to completely prohibit discharges to surface waters; it is a tool to manage assimilative capacity of waters

- Assimilative capacity means “a measure of the capacity of the receiving waters to assimilate wastes without lowering their quality below the applicable water quality criteria.” (Section 1-01 of VWQS)

Federal Clean Water Act

Section 303 of CWA requires states to adopt WQS, which must include at a minimum:

- Designated Uses for all waterbodies
  - "Designated use" is any value or use, whether presently occurring or not that is specified in the management objectives for each class of water
- Water quality criteria that are necessary to support designated uses
- Anti-degradation provisions consistent with 40 CFR 131.12

40 CFR 131.12

- States must adopt anti-deg policies and identify implementation procedures to provide three levels of water quality protection:
  - Protection of existing uses
  - Management of high quality waters (waters where the water quality is better than the wq standard)
  - Protection of exceptional waters – outstanding resource waters

What are the three levels of anti-deg protection?

- **Tier 1** – Protection of existing uses
- **Tier 2** – Protection of high quality waters (waters where water quality is better than the standard)
- **Tier 3** – Protection of exceptional waters (outstanding resource waters)

TIER I

PROTECTION OF EXISTING USES

What are existing uses?

- "**Existing** use" means a "use which has actually occurred on or after November 28, 1975, in or on waters, whether or not the use is included in the standard for classification of the waters, and whether or not the use is presently occurring." (VWQS 1-101)

- "**Waters**" is defined in VWQS as "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." (VWQS 1-101)

Determination of Existing Uses

- VWQS Section 1-03.B.1
  - In making a determination of existing uses, "the Secretary shall consider at least the following factors:
    - Aquatic biota and wildlife that utilize or are present in the waters;
    - Habitat that supports existing aquatic biota, wildlife or plant life;

Determination of Existing Uses

- The use of the waters for recreation or fishing;
- The use of the waters for water supply or commercial activity that depends directly on the preservation of an existing high level of water quality."
- With regard to the above factors, evidence of the use's ecological significance in the functioning of the ecosystem or evidence of the uses' rarity.

Determination of Existing Uses

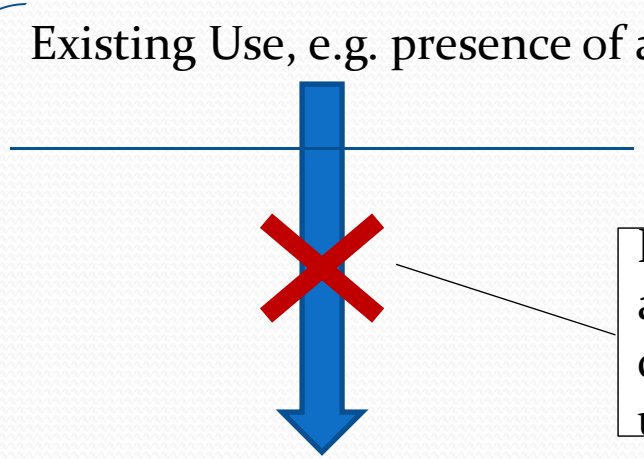
- VWQS Section 1-03 B.
  - "Existing uses of waters and the level of water quality necessary to protect those existing uses shall be maintained and protected."
  - "Determinations of what constitutes an existing use shall be made either during the **basin planning process** or during consideration of an **application**."

Determination of Existing Uses

- Section 1-01 of VWQS:
- "**Application**" is defined as "any request for a permit required by state or federal law when filed with, and deemed complete, by the reviewing authority."
- "**Permit**" is defined as a "certification, dam order, or other authorization in which during the application review process, **compliance with the Vermont Water Quality Standards** is evaluated pursuant to applicable state or federal law."

Tier 1 Protection – Existing Uses

Protection of Existing Uses



Must protect both the use and the level of water quality to maintain the use.

Existing Agency Guidelines for Determining Existing Uses

- Vermont Anti-Degradation Implementation: Existing use determination for use during river basin planning; June 2008
  - Contains a set of procedures to determine the presence of existing use(s) for contact recreation in flowing waters, recreational boating on flowing waters, recreational fishing on flowing waters and public drinking surface water supply.

Existing Agency Guidelines for Determining Existing Uses

- Vermont Anti-Degradation Implementation: Existing use determination for permit application use; November 1996
  - A procedure used in conjunction with new or expanding wastewater treatment facility discharges to determine the presence of existing use for contact recreation.

TIER 2

PROTECTION AND MAINTENANCE OF HIGH QUALITY WATERS

Protection of High Quality Waters

- What is a high quality water?

- VWQS Section 1-03C.

  "Waters the existing quality of which exceeds any applicable water quality criteria . . . shall be managed to maintain and protect the higher water quality and minimize risk to existing and designated uses.

High Quality Waters

- Vermont has assessed high quality on a parameter by parameter basis
- Waterbody may be impaired for some constituents and high quality for others

Protection of High Quality Waters

VWQS Section 1-03C.2

- "A **limited reduction** in the existing higher quality of such waters may be allowed **only when** it is shown that:
  - 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**;

Protection of High Quality Waters

VWQS Section 1-03C.3

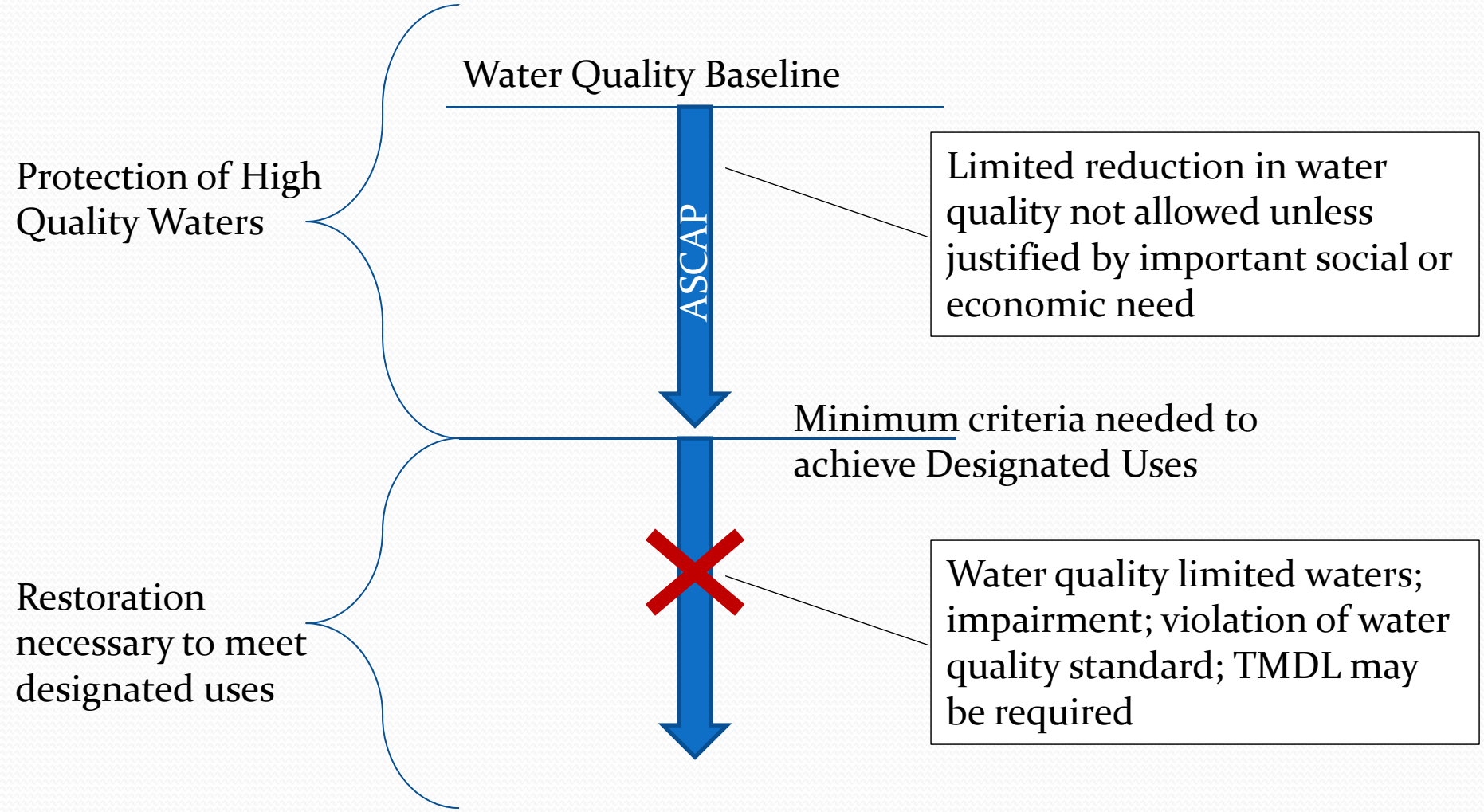
"To the extent **any reduction** in the quality of high quality waters is allowed, such reduction shall be limited to that which is necessary to comply with subsections C(2) above. "

Protection of High Quality Waters

40 CFR 131.12 provides:

- 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, consistent with state law.

Tier 2 Protection – High Quality Waters



TIER 3

PROTECTION OF OUTSTANDING RESOURCE WATERS

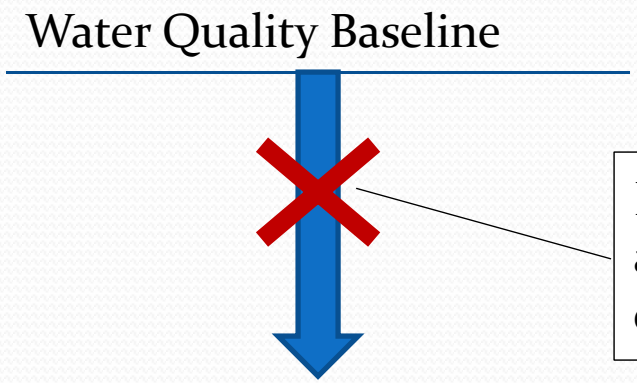
Tier 3 Protection

- VWQS Section 1-03.D

  " The Board may under 10 V.S.A. Section 1424a designate certain waters as Outstanding Resource Waters. Where the Board so designates such waters because of their water quality values, their **existing quality** shall, at a minimum, be protected and maintained.

Tier 3 Protection - ORWs

Protection of Outstanding Resource Waters (ORWs) for Water Quality



Lowering of water quality not allowed, except for temporary conditions

Vermont ORWs

There are four ORWs in Vermont, including the main-stem of the Battenkill from its headwaters to the NY state border; the North Branch of Ball Mountain Brook (“Pikes Falls”) between the confluence of Kidder Brook and a point 4000 feet downstream; the Poultney River from the Poultney/Fair Haven line downstream to Lake Champlain; and the “Great Falls” of the Ompompanoosuc River. None of these ORW designations were based upon water quality.

Application of Anti-Degradation

- Typically, anti-deg implementation methods adopted by states or supported by EPA require anti-deg reviews for "new or expanded" **regulated** discharges (e.g. NPDES permits, dredge or fill in wetlands, activities subject to state regulatory approvals).

- EPA has indicated that anti-deg may apply to unregulated nonpoint sources, but does not require states to regulate nonpoint sources that are currently unregulated.

New discharge

- VWQS Section 1-01 defines "**new discharge**" as "any discharge not authorized under the provisions of 10 V.S.A. Section 1263 as of January 7, 1985 or any increased pollutant loading or demand on the assimilative capacity of the receiving waters from an existing discharge that requires the issuance of a new or amended permit.

“Moving Pieces” of Anti-Deg

- There are many “moving pieces” in the anti-deg analysis - examples include:
  - Measuring water quality to determine when and by how much it exceeds water quality parameters is resource intensive; updates needed
    - Most states allow some non-significant degradation in high quality waters without SEJ analysis

“Moving Pieces”

- Social, economic and environmental impacts in the SEJ analysis can be hard to quantify
  - Demonstrating that a limited lowering of water quality is necessary requires analysis of alternatives and assurances that all legal, cost-effective and reasonable controls are in place.
- What constitutes degradation? This may vary across activities and discharges and watersheds.

“Moving Pieces”

- Designation of Tier 3 waters can be problematic; landowners may fear a ban on development
- Protection of Tier 3 waters requires upstream pollution controls and anti-deg controls
  - Most states allow some short-term limited degradation if long-term impacts are avoided

“Moving Pieces”

- Measuring cumulative impacts
  - How is this done?
  - Will vary depending on watershed, type of activity or discharge

“Classic Anti-Deg” POTWs and Direct Discharges

- Existing Use Analysis conducted using Contact Recreation Procedure

- For sanitary discharges, if there is contact recreation found in the proposed waste management zone, then the project is denied or the project has to be modified so that it will not eliminate the existing use

POTW and Direct Discharges

- For non-contact recreation if the discharge will protect all designated uses, it is presumed to meet existing uses unless evidence to the contrary is provided.
- ASCAP analysis performed under “worst-case” conditions
- For new or expanded discharge (increase in load) an evaluation of effect on water quality is conducted
- If necessary, a SEJ evaluation occurs.

POTW and Direct Discharges

- Information for the SEJ analysis is provided by the applicant
- Reissuance of permits for existing discharges (i.e. not new or increased) - it is assumed that protection of designated uses will protect existing uses unless new evidence to the contrary provided
- If there is not a change in load, the initial SEJ analysis is presumed still be applicable

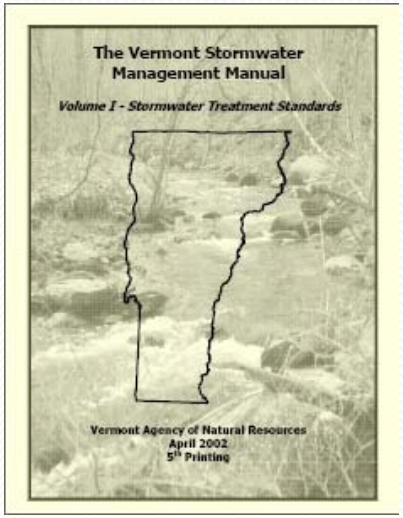
OTHER DEC SURFACE WATER PERMITTING PROGRAMS

Indirect Discharges

- Indirect WW Discharge Program
  - Indirect discharges of sewage waste
  - NSAAB analysis performed
- Indirect discharges of non-sewage waste
  - E.g. land application of food processing waste; non-pathogenic waste
  - Impacts accounted for in accordance with AAPs and nutrient management plans

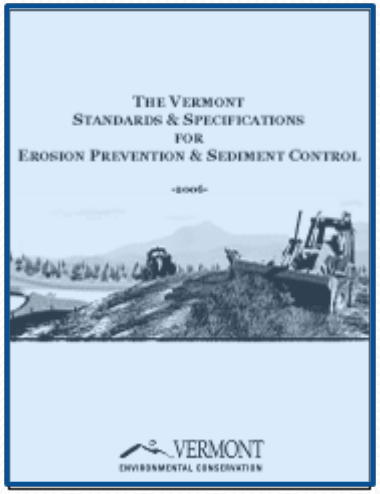
Stormwater Permitting: Operational/ "State Stormwater"

- Potential impacts to the water resource
  - Pollutant wash off and flow impacts from discharges from impervious surfaces
- Controls used
  - BMPs as required in the Stormwater Management Manual to address: Water quality, Channel protection, groundwater recharge, flood protection for 10yr and 100yr storm events
    - Ponds, wetlands, infiltration, filtering, open channels



Stormwater Permitting: Construction/ CGP

- Potential impacts to the water resource
  - Pollutant wash-off from construction sites
- Controls used
  - BMPs as required in the Vermont Standards and Specifications for Erosion Prevention & Sediment Control
    - Minimization of disturbed areas, stabilization, revegetation, and treatment



Stormwater Permitting: Municipal Stormwater/MS4 GP

- Potential impacts to the water resource
  - Pollutant wash off and flow impacts from discharges from municipal storm sewers
- Controls used
  - BMPs in the Stormwater Management Plan (SWMP)
    - 6 Minimum measures: public education, public involvement, illicit discharge detection and elimination, construction EPSC, post-construction stormwater management, good housekeeping for municipal operations

Stormwater Permitting: Industrial/MSGP

- Potential impacts to the water resource
  - Pollutant wash off from industrial facilities
- Controls used
  - BMPs as required in the permit
    - Good housekeeping, minimize exposure, preventative maintenance, limits on vehicle washing, spill prevention, employee training, erosion prevention, runoff management, salt management, sector specific BMPs

Stream Alterations – Dredge & Fill SAP and 401 WQ Certification

- Potential impacts to the water resource
  - Flow and sediment regime impacts; Physical alteration of stream channel morphology and hydraulics that results in impacts to existing uses; Pollutant wash-off from construction sites; Instream erosion and sedimentation during construction.
- Controls used
  - BMPs as required in Stream Alteration Permits (SAP) and WQ certifications to minimize extent of physical constraints and encroachment, protect existing uses, and minimize instream erosion and sedimentation; and specify erosion prevention & sediment control practices at the construction site.

Dams, Water Withdrawals, Hydro 401 WQ Certs & Dam Orders

- Potential impacts to the water resource
  - Flow and water level manipulation; Sediment regime impacts; Aquatic habitat alteration; Physical alteration of stream channel morphology and hydraulics that results in impacts to water chemistry and existing uses; Aesthetic and recreation impacts; Pollutant wash-off from construction sites; Instream erosion and sedimentation during construction.
- Controls used
  - Condition design and operation of project in WQ certifications and Dam Orders to ensure compliance with ANR rules and procedures and WQ Standards; specify erosion prevention & sediment control practices at the construction site.

Wetlands CUD/Permitting

- Potential impacts to water quality
  - Fill in a surface water
  - Sedimentation
  - Aquatic habitat loss
- Controls Used
  - Erosion Prevention and Sediment Controls
  - Minimization and Avoidance
  - Stream crossing BMPs

Lake Shoreland Encroachment Permit

- Covers activities including fill, retaining walls, dredging, docks, pipelines, cables in public water
- Potential impacts to the water resource
  - Loss of public trust uses (e.g. swimming, boating)
  - Turbidity, cumulative effect on f&w habitat
- Controls used:
  - No encroachment allowed without offsetting public good
  - Conditions in permit such as use of silt curtain, protection of existing shoreline vegetation

Aquatic Nuisance Control Permit

Chemical, physical, mechanical and biological methods

- Potential impacts to the water resource
  - Affect on non-target environment
  - Affect on public health
  - Public good
- Controls used:
  - Limits on acreage of control activity
  - Use of silt curtains

  Pesticides:
  - Public notification
  - Use of species-specific pesticides
  - Concentration maximums, pesticide minimization

Current Litigation on Anti-Deg

- Kentucky
  - Sixth Circuit overturns EPA approval of KY anti-deg rule in Kentucky Waterways Alliance v. Johnson 540 F3d 466 (2008)
  - 2009 - New set of rules developed and presented to EPA for approval

Current Litigation on Anti-Deg

- Alaska
  - In Cook Inletkeeper v. EPA and Union Oil, environmentalists are charging that Alaska has failed to adequately address anti-deg in water act permits
  - Case involved appeal of permit to oil and gas rigs off Alaska's Cook inlet
  - Environmentalists, industry and EPA have been in negotiations since June

Current Litigation on Anti-Deg

- Indiana
  - Environmentalists are asking EPA to remove the state's CWA delegation for failure to adopt anti-deg rules designed to prevent new or expanded sources from degrading Indiana's streams

Current Rule Anti-Deg Rulemaking

- Stakeholder processes underway:
  - Minnesota
  - Alaska
  - New Hampshire

Current Processes underway in Vermont

- Water Quality Standards revision process
- SPAC process
- Anti-deg stakeholder process

Next Steps

- Next meeting scheduled for February 16th to discuss High Quality Waters and Existing Uses
- Meeting Summaries will be posted on the website:
  - WWW.VTWATERQUALITY.ORG
- Issue Papers will be posted on website prior to next meeting