

Virginia Water Central

Virginia Water Resources Research Center

Blacksburg, Virginia

April 2000

FEATURE ARTICLE

2000 Virginia General Assembly

The Virginia General Assembly held its 2000 session from January 12 to March 10. Lawmakers considered 3,172 bills and resolutions (compared to 2,735 measures considered in 1999). Of these, 125 were water-related; that is, their provisions would have an impact on water resources or on water-related activities.

To identify these water-related bills, *Water Central* used the Internet site of the General Assembly's Legislative Information Service (<http://leg1.state.va.us/>). Using the system's subject index, we checked the following nine categories:

- 1 = Waters of the State, Ports and Harbors;
- 2 = Water and Sewer Systems;
- 3 = Fisheries and Habitat of Tidal Waters;
- 4 = Game, Inland Fisheries, and Boating;
- 5 = Drainage, Soil Conservation, Sanitation, and Public Facilities Districts;
- 6 = Health;
- 7 = Conservation;
- 8 = Mines and Mining;
- 9 = Waste Disposal.

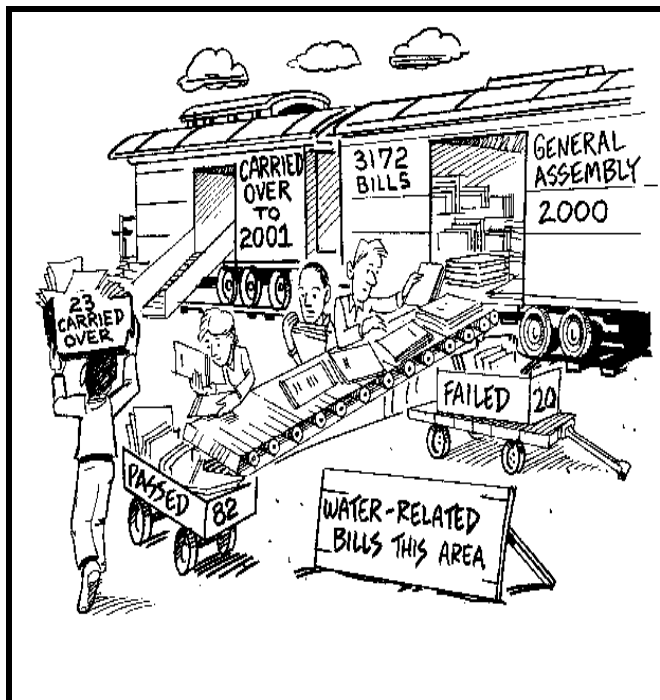
Our list, beginning on page 2, includes all bills found under categories 1, 2, and 3. For

categories 4–9, we include only those bills that appear, from the bill summary, to have a *potentially significant* impact on water resources or their management. For example, some solid-waste bills are included, but others are omitted because their provisions would affect water resources only marginally. Most land-conservation measures are included, however, because land use directly impacts water resources.

On the bottom of page 5 we list passed bills for which the governor subsequently recommended changes (often minor). None in our list were vetoed. The legislature will consider the governor's recommended changes at its reconvened session (the "veto session") on April 19.

INSIDE THIS ISSUE

Teaching Water _____	8
In and Out of the News _____	9
Notices _____	13
Virginia Water Research Symposium _____	14
For the Record _____	15
You Get the Last Word _____	16



Water Legislation in the 2000 Virginia General Assembly

The measures are grouped, first, by whether they passed, failed, or were carried over to the 2001 session; and, second, by the Virginia Legislative Information Service's indexing categories searched for this article. If a measure was found in more than one category, we list it in the category that seems most descriptive. The measures are numbered consecutively here to facilitate cross-referencing; those numbers have no *legislative* significance.

Abbreviations used in the list are as follows: **HB** = house bill (introduced in the House first); **HJ** = house joint resolution; **SB** = senate bill (introduced in the Senate first); **SJ** = senate joint resolution.

The descriptions of the measures are based on summaries by the Legislative Information Service. The use of "**etc.**" indicates that we have omitted a substantial portion of the original summary, due to space. Italic type within the summaries indicates emphasis added by *Water Central*.

P A S S E D

Budget

1. HB30 Budget bill: Appropriations for the 2000-02 biennium; includes over 60 references to "water."

Waters of the State, Ports and Harbors

- 2. HB48 Oyster grounds:** Provides that approximately five acres of land located within the Elizabeth River (city of Norfolk) shall no longer be considered part of the state's natural oyster grounds.
- 3. HB404 Toxic substances in state waters:** Increases the toxic-substance monitoring and reporting requirements for the Water Control Board, Dept. of Environmental Quality, and Dept. of Health; **etc.**
- 4. HB419 Local wetlands boards:** Allows members of wetlands boards in James City County to serve on local boards created to implement provisions of the Chesapeake Bay Preservation Act; **etc.**
- 5. HB625 Lake level contingency plans:** Requires that permits issued for surface-water impoundments used for cooling power generators include a contingency plan for low lake levels during drought conditions.
- 6. HB667 Impact of piers on shellfish grounds:** Allows construction of non-commercial piers by riparian landowners; eliminates a 12-month waiting period for encroachment on leased shellfish grounds if the Marine Resources Commissioner finds that the encroachment will not harm the grounds; **etc.**
- 7. HB737 Declaration of estimated tax; merchant seamen:** Adds merchant seamen to those individuals allowed to file this declaration on or before January 15 of the succeeding year; **etc.**
- 8. HB804 Va. Resources Authority; members:** Enlarges the Board of Directors of the Va. Resources Authority from nine to 11 members, adding the director of the Dept. of Aviation or his designee and one citizen appointed by the governor. This authority's purpose is to finance projects related to water supplies, sewer systems, drainage systems, solid-waste management, rail transportation, and—with the passage this session of **SB715**—major-league baseball stadiums.
- 9. HB876 Federal dam safety inspection reports:** Removes from the *Va. Code* references to obsolete U.S. Army Corps of Engineers' dam-safety inspection reports.
- 10. HB1095 Lease of Smith Mountain Lake:** Authorizes the Dept. of Conservation and Recreation to lease a parcel of land on Smith Mountain Lake to Franklin County for public recreational use; **etc.**
- 11. HB1170 Wetlands:** Requires a Virginia Water Protection Permit from the Water Control Board for certain activities in *nontidal* wetlands; the Board is directed to use a regulatory approach to achieve no net loss of wetlands and a voluntary approach to achieve a net *gain*; the bill clarifies that wetlands are "state waters," and requires the Board to seek a Section 404 Clean Water Act State Programmatic General Permit from the U.S. Army Corps of Engineers; **etc.**
- 12. HB1192 Maritime Incident Response Advisory Committee:** Establishes this committee to help improve management of maritime fires and other incidents in Hampton Roads and elsewhere.
- 13. HB1300 Chesapeake Bay Bridge and Tunnel Commission:** Expands the list of office-holders that can legally administer the oath of office to members of the Commission.
- 14. HB1305 Marine Habitat and Waterways Improvement Fund:** Establishes a fund for improving marine habitat and waterways; the fund will consist of payments for the use or lease of easements in state-owned bottomlands, plus fines for violating regulations regarding state-owned bottomlands; **etc.**
- 15. HB1424 Rappahannock River Basin Commission:** Repeals the "sunset" clause that would have terminated the Commission on July 1, 2000.

Passed, cont.

16. **HJ149 Study; Roanoke River Basin:** Requests the State Water Commission to study establishment of an intergovernmental structure to facilitate water-resources planning in the Roanoke River Basin.
17. **SB179 Toxic substances in state waters:** Identical to **HB404** (# 3).
18. **SB219 Oyster grounds:** Identical to **HB48** (# 2).
19. **SB296 Lake level contingency plans:** Identical to **HB625** (# 5).
20. **SB389 Resources Authority; Board of Directors:** Identical to **HB804** (# 8).
21. **SB459 Rappahannock River Basin Commission:** Identical to **HB1424** (# 15).
22. **SB613 Va. Resources Authority:** Allows the Virginia Resources Authority, with the prior approval of the Board of Health and the state treasurer, to pledge funds in the Water Supply Assistance Grant Fund as security for bonds of the Authority; **etc.** See **HB804** (# 8) for a description of this Authority.
23. **SB616 Water Supply Revolving Fund:** Transfers administration of the Virginia Water Supply Revolving Fund from the Board of Health to the Dept. of Housing and Community Development; **etc.**
24. **SB645 Water quality monitoring and reporting:** Contingent on funding, increases both the number of water-quality monitoring stations and the frequency of sampling by at least five percent annually, giving priority to impaired waters; **etc.** See related **SJ213** (# 107), which was carried over.
25. **SB648 Wetlands:** Identical to **HB1170** (# 11).
26. **SB689 Chesapeake Bay Bridge and Tunnel Commission:** Identical to **HB1300** (# 13).
27. **SB715 Va. Resources Authority; baseball stadiums:** See **HB804** (# 8), above.
28. **SB739 Maritime Incident Response Advisory Committee:** Identical to **HB1192** (# 12).
29. **SB752 Service charges for Va. Port Authority (VPA) facilities:** Allows service charges for tax-exempt property owned by the VPA to be based on the assessed value of the property and *the amount of VPA cargo tonnage shipped*; under current law, such service charges are based on the assessed value of the property and *the amount the locality spends for police and fire protection and refuse collection*; **etc.**
30. **SJ79 Study; submerged aquatic vegetation:** Directs the Virginia delegation to the Chesapeake Bay Commission to continue studying ways to protect submerged aquatic vegetation.
31. **SJ177 Study; shipbuilding industry:** Continues the Joint Subcommittee Studying Economic Incentives...[for] Virginia's Shipbuilding Industry; **etc.**

Water and Sewer Systems

32. **HB262 Liens for water and sewer charges:** Adds Culpeper County to those localities allowed to provide that charges for water or sewer service may be a lien on the real estate served.
33. **HB451 Sewage discharge certificates:** Requires that permit applications for sewage discharge into surface-water impoundments contain notification from the relevant locality that the discharge location and operation meet local zoning ordinances; **etc.**
34. **HB539 Mandatory water/sewage connection; Amelia County:** Adds this county to those counties allowed to require water/sewage connection by owners of property that may served by such systems; **etc.**
35. **HB909 Inspection of public water supply; DCLS to study costs therefor:** Requires every public water supply to test at least quarterly for *methyl tertiary-butyl ether (MTBE)*, a gasoline additive; the Division of Consolidated Laboratory Services is to report by November 1, 2000, on the estimated costs and personnel requirements for administering these tests; **etc.**
36. **HB1282 Wastewater reclamation and reuse:** Requires the Water Control Board to encourage, and establish requirements for, wastewater reclamation and reuse as an alternative to wastewater discharge.
37. **HB1377 Public utilities; termination of power supply to sewerage systems:** Requires sewerage-system operators to notify their energy utilities, the State Corporation Commission (SCC), and the Dept. of Environmental Quality (DEQ) that they operate sewage-treatment facilities; no energy utility shall suspend service to a sewerage system without 10 days' notice to the SCC and the director of the DEQ; **etc.**
38. **HJ161 Study; groundwater:** Directs the State Water Commission to study karst groundwater monitoring and protection in the Shenandoah Valley.
39. **SB177 Sewerage systems:** Requires owners of relatively small, privately-operated sewerage systems to obtain a discharge permit from the Water Control Board; the facility owner must file a plan for protecting public health and the environment if the facility ceases operation; **etc.**
40. **SB294 Sewage discharge certificates:** Identical to **HB451** (# 33).
41. **SB335 Mandatory connection to water and sewerage systems:** Identical to **HB539** (# 34).

Passed, cont.

Fisheries and Habitat of Tidal Waters

- 42. HB190 Taxation on intangible personal property; commercial fishing:** Classifies certain personal property used in commercial fishing as *intangible* and exempts the property from taxation.
- 43. HB1277 Free fishing days:** Authorizes three annual free days for both salt- and freshwater fishing.
- 44. SB750 Free fishing days:** Identical to **HB1277** (# 43).

Game, Inland Fisheries and Boating

- 45. HB123 Motor fuels tax; exemption for recreational pleasure boats and ships:** Allows a refund of motor-fuel tax paid for recreational boats.
- 46. HB502 Sale of artificially raised trout:** Allows sale of such trout for those uses that the Board of Game and Inland Fisheries may direct. Currently, such trout may be sold only for human consumption.
- 47. HB537 Powers of Director of Dept. of Game and Inland Fisheries:** Authorizes the director to work with constituent organizations to achieve the agency's mission.
- 48. HB664 Sportsman's hunting and fishing license:** Establishes a new combination license that can be purchased in lieu of separate hunting and fishing licenses; **etc.**
- 49. HB787 and HJ124 Constitutional amendment on hunting and fishing:** Collectively provide for a referendum at the November 2000 election on a proposed addition to the Virginia Constitution, stating that "the people have a right to hunt, fish, and harvest game, subject to such regulations and restrictions as the General Assembly may prescribe by general law"; **etc.**
- 50. HB896 Electronic point-of-sale system for hunting, trapping, and fishing licenses:** Authorizes the Dept. of Game and Inland Fisheries to implement such a system for issuing licenses; **etc.**
- 51. SB395 Sale of artificially raised trout:** Identical to **HB502** (# 46).

Drainage, Soil Conservation, Sanitation and Public Facilities Districts

- 52. HB106 Sales tax exemption for various organizations, including soil and water conservation districts:** Broadens the exemption for soil and water conservation districts to include tangible personal property that they *sell* as well as items they purchase; **etc.**
- 53. HB594 Sanitary districts:** Allows sanitary districts to exempt, defer, or reduce charges for the use of solid-waste disposal systems by low-income senior citizens and permanently disabled citizens; **etc.**
- 54. SB48 Sales tax exemption for various organizations, including soil and water conservation districts:** Nearly identical to **HB106** (# 52).
- 55. SB313 VDOT drainage easements:** Requires the Dept. of Transportation (VDOT) to perform repairs on permanent drainage easements.

Conservation

- 56. HB552 Protection of farm and forest lands:** Revises the Important Farmlands Law, which requires state agencies to evaluate the impacts of their actions on farm and forest lands; **etc.**
- 57. HB568 Income tax refunds to open space:** Removes the "sunset" date from the *Va. Code* section dealing with voluntary contributions of tax refunds for open-space recreation and conservation.
- 58. HB600 Va. Land Conservation Foundation:** Requires establishment of criteria for grants to localities for programs related to purchase of development rights, and that at least one member of the Foundation's Board of Trustees be a farmer.
- 59. HB713 Management of Virginia's natural resources:** Expresses the goals of the General Assembly regarding the future management of Virginia's natural resources; **etc.**
- 60. HB738 Open-space lands in Virginia Beach:** Provides that the city may, at the request of the fee owner of any land protected by an open-space easement or by some other interest in the land that the city has purchased, sell such interest to the fee owner *without* substituting *other* real property; **etc.**
- 61. HB858 Review of proposed acquisitions of real property; exceptions:** To simplify acquisition of conservation easements, provides an exemption from the mandatory review by the Dept. of General Services and approval of the governor for such acquisitions; **etc.**
- 62. HB895 Small business environmental fund:** Restricts how much of the Small Business Environmental Compliance Assistance Fund may be used for administrative costs; **etc.** This fund, created by the General Assembly in 1997, provides money to small businesses for certain pollution-control equipment and practices, including voluntary agricultural best management practices.

Passed, cont.

- 63. HB945 Soil and water conservation dams:** Establishes the Soil and Water Conservation District Dam Maintenance, Repair, and Rehabilitation Fund, to be available for major or minor dam repairs; **etc.**
- 64. HB1164 Land Conservation Foundation:** Enlarges the Foundation's Board of Trustees; alters the percentage of money transferred to the Open-space Lands Preservation Trust Fund; directs the Foundation to attempt to achieve a fair geographic distribution of lands protected; **etc.**
- 65. HB1306 Income tax credits; forested buffers for waterways:** Provides a non-refundable income tax credit, up to \$17,500, to individual or corporate landowners who maintain a forested buffer zone along a waterway for 15 years; **etc.** HB1306 is very similar to **SB664** (# 73), which also passed, except that HB1306 requires a buffer zone at least *35 feet wide*, while SB664 requires a zone at least *50 feet wide*.
- 66. HB1307 Agricultural Stewardship Act:** Requires that measures required to control agricultural water pollution be maintained by the owner or operator of the subject property. The bill also clarifies the manner in which various requirements of the Act may be enforced; **etc.**
- 67. HB1324 Open-Space Lands Preservation Trust Fund:** Allows Fund grants to help localities acquire open-space easements; removes the requirement that interests in open-space lands acquired by public bodies must be located in urban areas; **etc.**
- 68. HB1326 Conservation easements:** Allows charitable entities that do *not* meet the requirements of the Va. Conservation Easement Act to hold a conservation easement *if* the easement is co-held by another charitable entity that does meet the requirements.
- 69. HJ261 Farm and forest lands:** Requests all entities that exercise eminent domain powers to recognize the intrinsic value of farm and forest lands.
- 70. HJ301 Environmental education:** Recognizes Virginia Naturally 2000 as the Commonwealth's official environmental-education initiative; **etc.**
- 71. HJ372 Sustainable Forestry Initiative:** Encourages the public, forest landowners, environmental organizations, and agencies to support the forest industry's Sustainable Forestry Initiative; **etc.**
- 72. SB396 Protection of farm and forest lands:** Identical to **HB552** (# 56).
- 73. SB664 Income tax credits; riparian forest buffers for waterways:** See **HB1306** (# 65), above.
- 74. SB668 Soil and water conservation dams:** Identical to **HB945** (# 63).
- 75. SJ76 Study; Future of Virginia's Environment:** Continues the Commission on the Future of Virginia's Environment for a fifth year; the Commission is to continue to monitor the implementation of its recommendations; **etc.** Compare to **HJ102** (# 98), which failed.
- 76. SJ134 Study; farmland protection:** Establishes a task force to develop a comprehensive farmland protection policy for the Commonwealth; **etc.**

Waste Disposal

- 77. HB681 Local recycling and waste disposal:** Authorizes localities to grant recycling incentives.
- 78. HB981 Solid-waste management facilities:** Requires that applications for permit amendments or variances to *expand* certain non-hazardous industrial-waste facilities contain the same information required for applications for *new* facilities.
- 79. HB1023 Financial responsibility, solid-waste facilities:** Requires the Waste Management Board to include facilities receiving waste from *ships and other vessels* in regulations regarding recovery of relevant public health and safety costs from any person abandoning a solid-waste management facility.
- 80. HB1228 Landfill closure:** Requires closure by 2020 of disposal areas of landfills that are *not* equipped with liner and leachate-control systems meeting current Waste Management Board regulations.
- 81. HJ214 Memorializing Congress; importation of waste:** Urges Congress to enact unspecified legislation giving states and localities the power to control importation of waste into their jurisdictions.
- 82. HJ385 Importation of municipal solid waste:** Urges Congress to enact the Solid Waste Interstate Transportation and Local Authority Act of 1999, which gives state and local governments additional authority to regulate importation of municipal solid waste.

Passed bills for which the governor recommended changes

HB404 (#3); HB419 (#4); HB1164 (#64); HB1170 (#11) and identical SB648 (#25); HB1192 (#12) and identical SB739 (#28); HB1305 (#14); and SB177 (#39).

FAILED

Waters of the State, Ports and Harbors

- 83. HB1144 Service charges, Va. Port Authority facilities:** Similar to **SB752** (# 29), which passed.
- 84. HB1246 Certificates for alterations of state waters:** Would have added wetlands to the definition of state waters and required a certificate from the Water Control Board for excavations in wetlands; **etc.**
- 85. HB1410 Peninsula Ports Authority of Virginia:** Would have reduced the size of the commission of the Peninsula Port Authority of Virginia from nine to seven members; **etc.**
- 86. HJ7 Study; locations for an additional Potomac River bridge:** Would have requested the Virginia Dept. of Transportation to study locations for an additional highway crossing of the river; **etc.**
- 87. SB695 Certificates for alterations of state waters:** Identical to **HB1246** (# 84).
- 88. SJ3 Shipbuilding industry:** Identical to **SJ177** (# 31), which passed.
- 89. SJ217 Study; urban best management practices:** Would have directed the Commission on the Future of Virginia's Environment to study the need to include best management practices for *urban* land uses in the state's nonpoint-source pollution program.

Fisheries and Habitat of Tidal Waters

- 90. HJ180 Blue crab management:** Would have expressed the General Assembly's recognition that the Va. Marine Resources Commission is important in developing an effective blue crab management plan.
- 91. SB501 Va. Marine Resources Commission membership:** Would have enlarged the membership from nine to eleven, with the new members to have expertise in fisheries management; **etc.**

Game, Inland Fisheries and Boating

- 92. SB241 Beaver damage:** Would have allowed owners of property damaged by the effects of beaver activity on water bodies to seek relief against the owner of the property where the beaver are located; **etc.**

Health

- 93. HJ272 Study; certain asbestos and lead abatement issues:** Would have requested two state departments to study certain asbestos- and lead-abatement issues, including whether abatement projects across the Commonwealth are meeting state and federal requirements; **etc.**

Conservation

- 94. HB659 Redeemable beverage containers:** Would have placed a redemption value of at least 10 cents on all beverage containers sold in Virginia; any revenue above expenses would have gone to a trust fund to be used to improve waste management and recycling efforts in the state; **etc.**
- 95. HB1290 Definition of recycling:** Would have expanded the definition of recycling to include the composting of tree branches or stumps, leaves, brush, logs, or the like; such operations would have been required to abide by all water quality laws and regulations; **etc.**
- 96. HJ12 Chesapeake 2000 Agreement:** Would have requested the Governor to agree, along with the other signatories of the Chesapeake Bay Agreement, to a commitment to reduce by 30 percent the development of forest and agricultural land.
- 97. HJ36 Study; forestry practices:** Would have established a joint subcommittee to study the water-quality and natural-resource impacts of forestry activities; **etc.**
- 98. HJ102 Study; Future of Virginia's Environment:** Would have continued the Commission on the Future of Virginia's Environment for a fifth year, with specific instructions related to economic development, "smart growth," and sprawl. Compare to **SJ76** (# 75).
- 99. SJ34 Chesapeake 2000 Agreement:** Identical to **HJ12** (# 96).
- 100. SJ170 Study; VDOT funding and operations:** Would have requested the Joint Legislative Audit and Review Commission to study several issues regarding the Va. Dept. of Transportation, including compliance with the environmental impact-statement process and the land-use impacts of the department's activities.

Waste Disposal

- 101. HJ118 Study; reduction of solid waste:** Would have established a joint subcommittee to examine strategies to reduce the amount of solid waste being deposited in Virginia's landfills; **etc.**
- 102. SJ133 Study; reduction of solid waste:** Would have directed the Commission on the Future of Virginia's Environment to examine strategies to reduce the amount of solid waste being deposited in Virginia's landfills and increase recycling; **etc.**

CARRIED OVER

Waters of the State, Ports and Harbors

- 103. SB7 Maritime Investment Act; created:** Would establish a program to provide grants, subject to appropriation, to eligible ship-repair companies making a capital investment of at least \$50,000; **etc.**
- 104. SB573 Maritime Investment Act:** See similar measure **SB7** (# 103).
- 105. SB684 Firefighting on Hampton Roads:** Would require the Virginia Port Authority, from funds appropriated for this purpose, to purchase a vessel to fight fires on Hampton Roads and adjacent property.
- 106. SB705 Dumping of motor oil from used oil filters and anti-freeze:** Would make it unlawful to discharge motor oil from used oil filters or anti-freeze into state waters, lands, or stormwater systems; **etc.**
- 107. SJ213 Study; water-quality monitoring system:** Would request the Joint Legislative Audit and Review Commission to study the progress made by the Dept. of Environmental Quality in implementing the Water Quality Monitoring, Information, and Restoration Act. See related **SB645** (# 24), which passed.

Water and Sewer Systems

- 108. SB142 Local septic system databases:** Would require, subject to appropriations, the Board of Health to establish an electronic database for applications and permits for septic systems; **etc.**

Fisheries and Habitat of Tidal Waters

- 109. SB621 Female crabs; penalties:** Would make it unlawful to catch, possess, sell, or purchase an egg-bearing female crab or a female crab from which the egg pouch has been removed; **etc.**

Health

- 110. HB930 Regulated medical waste:** Would define regulated medical waste; **etc.**
- 111. HB1531 State Board of Health; on-site soil evaluators:** Would require that people authorized by the Board as on-site soil evaluators hold a current Virginia professional soil scientist certificate.
- 112. SB726 Lead-poisoning prevention; memorandum:** Would require the Commissioner of Health and the Director of the Dept. of Medical Assistance Services to develop and execute a memorandum of agreement relating to the prevention of lead poisoning, particularly among children; **etc.**

Conservation

- 113. HB590 Conservation easements:** Would require that, when localities purchase conservation easements, public access be allowed to the land subject to the easement.
- 114. HB712 Natural Resources Policy Act; created:** The Act would repeal the existing Environmental Impact Statement review process (applying to projects using \$100,000 or more state funds); would institute a natural-resource impact review for projects using \$500,000 or more of state funds; **etc.**
- 115. HB791 Voluntary remediation of contaminated properties:** Would expand the voluntary remediation program for properties owned by local governments; would create the Voluntary Remediation Fund to provide grants to encourage local-government remediation of contaminated properties; **etc.**
- 116. HB881 Environmental laboratory certification programs:** Would exempt from the Division of Consolidated Laboratory Services' laboratory-certification regulations those laboratories in municipal treatment facilities that serve fewer than 20,000 people; **etc.**
- 117. HB1167 State recordation tax to Land Conservation Foundation:** Would require that, if the annual revenue from state recordation taxes exceeds \$91.4 million (the amount generated by the tax in 1996), the excess is to be distributed to the Va. Land Conservation Foundation; **etc.**
- 118. HB1217 Environmental laboratory certification:** Would direct the Dept. of Environmental Quality to establish two certification programs: one, for laboratories conducting analyses *required* by state environmental laws; a second, for laboratories that routinely provide testing services for customers; **etc.**
- 119. SB704 Collection of used oil, oil filters, and anti-freeze:** Would require the Dept. of Environmental Quality to create, maintain, and promote a toll-free number and Internet site with information on collection sites accepting used motor oil, oil filters, and anti-freeze; **etc.**
- 120. SB712 Environmental laboratory certification programs:** Identical to **HB1217** (# 118).
- 121. SJ167 Study; preserving open-space:** Would request the Dept. of Conservation and Recreation to study future land use along Paradise Creek and to recommend ways the state might participate in developing a park and recreational area. (The U. S. EPA has placed lands and tidal wetlands along this creek, which is located within the Norfolk Naval Shipyard in the city of Portsmouth, on the National Priorities, or "Superfund" List).

Carried Over, cont.

Mines and Mining

122. HB880 Mining activity: Would provide that permits for coal surface-mining operations not be approved unless the permit applicant demonstrates that the proposed mining area is *not* located under a public water-supply impoundment, a watercourse that supplies a significant quantity of water to such impoundments, or an adjacent area reasonably necessary to protect a public water supply; **etc.**

Waste Disposal

123. HB249 Financial assurance for solid-waste facilities: Would direct the Waste Management Board to require the following of facility owners and operators: a test of financial viability; escrowed funds to care for the site when the facility closes; and the ability to pay for facility-related pollution events; **etc.**

124. HB1025 Solid-waste reports: Would require *quarterly* (rather than the current *annual*) reports by the Dept. of Environmental Quality on the amount of solid waste disposed of in Virginia; **etc.**

125. SB720 Abandoned solid-waste management facilities: Would require the Waste Management Board, when promulgating regulations pertaining to financial responsibility for abandoned facilities, to consider whether there is some type of financial assurance required by a locality.

–By the *Water Central* staff

Please note: The Feature Article in the next *Water Central* (June 2000) will examine bills that are receiving attention from various water-resource and public-policy professionals.

TEACHING WATER

For Virginia's K-12 teachers

This Issue and the Virginia Standards of Learning

In this section, *Water Central* suggests Virginia Standards of Learning (SOLs) supported by this issue's Feature Article and For the Record section (p. 14). We welcome readers' comments on whether the articles actually do, in fact, help teachers with the standards listed or with others. Abbreviations: C/T-computer technology; ES-earth science; LS-life science.

Feature—General Assembly 2000

Science SOLs: 6.11, LS.12, ES.7

Social Studies SOLs: 7.2, 7.4, 12.7, 12.8, 12.13

For the Record—State Water Regulations

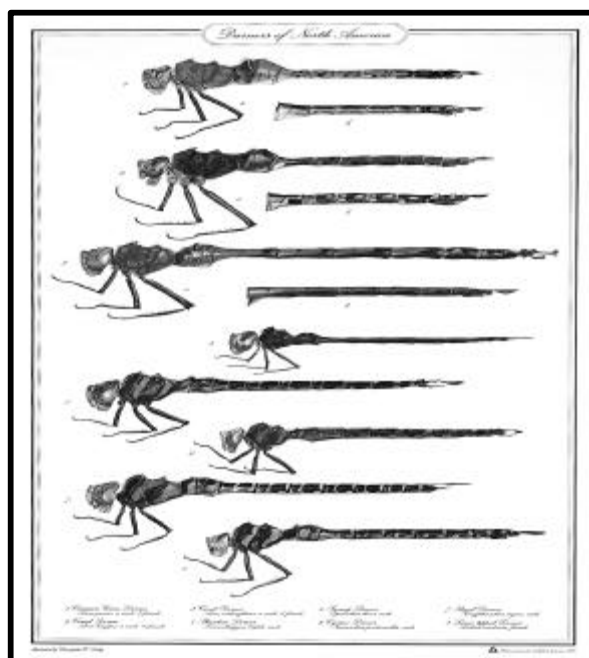
Computer Technology SOLs: C/T 8.4

Social Studies SOLs: 7.2, 7.4, 12.7, 12.8, 12.13

Dragonflies Poster

Darners, in the family known as **Aeshnidae**, are some of the largest and most familiar dragonflies. A new poster from the Massachusetts Audubon Society can help you

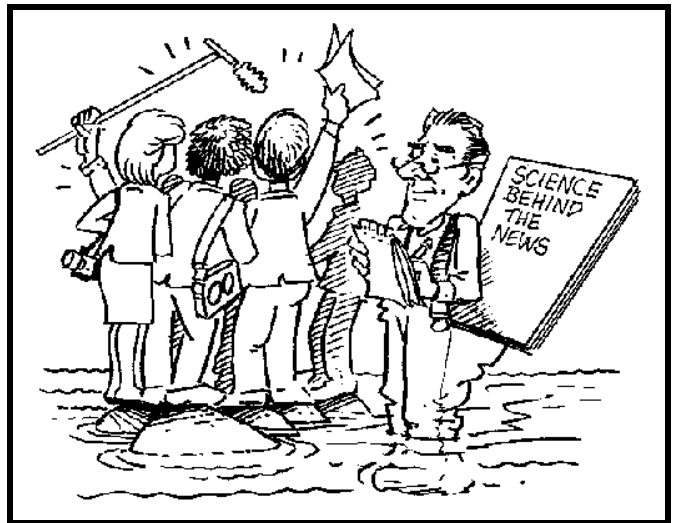
know a darter when you see one. A black and white miniature of the poster is shown below; the actual color poster is 17x28 inches, contains common and scientific names, and shows male/female color differences. Cost is \$12. Contact the Society at 208 South Great Road, Lincoln, MA 01773; (781) 259-9506; e-mail: edresources@massaudubon.org.



SCIENCE BEHIND THE NEWS . . .

. . . will return next issue with a look at chance, probability, and other aspects of that *curse* of coffee-shop confabs, that *bane* of a barber-shop barney:

Statistics!



IN AND OUT OF THE NEWS Newsworthy Items You May Have Missed

The following summaries are based on information in the source(s) indicated at the end of each item. Selection of this issue's items ended March 31. Unless otherwise noted, all localities mentioned are in Virginia.

In Virginia...

•**What weighs 71 pounds and 12 ounces**, is four feet long, and has “whiskers”? The new state-record Blue Catfish, caught from the James River by Hugh Self on Nov. 19, 1999. Big Blue is still lurking, too: Mr. Self released the fish back into the James. (*Virginia Wildlife*, Feb. 2000)

•**An internal audit by the Dept. of Environmental Quality** (DEQ), following a spill from a small sewage-treatment facility in Henry County, has pointed out several deficiencies in the DEQ's oversight of small sewer plants statewide. The problems cited include poor intra- and inter-agency communication; poor response to citizen complaints; failure to ensure small *regulated* systems comply with water-quality standards; and failure to address issues related to small *unregulated* plants. The DEQ has begun addressing the problems. (*Roanoke Times*, 2/2/00)

•**Dendron Swamp, in Sussex County**, will become Virginia's 28th nature preserve. The Dept. of Conservation and Recreation (DCR) bought the 179-acre area along the Blackwater River (Chowan River watershed) from the Hancock Timber Resource Group for \$104,072. The tract contains trees that are perhaps 300-years old. DCR Director David Brickley called the tract “one

of the South's few remaining ancient cypress swamps.” (*Associated Press*, 2/3/00)

•The **city of Chesapeake** has been ordered by the U. S. Environmental Protection Agency (EPA) to restore three acres of **non-tidal wetlands** that the city drained to provide a school site. The land was drained by the so-called “Tulloch-ditching” technique, which was removed from federal regulation by a June 1998 court ruling. The city is challenging the order. (*Virginian-Pilot*, 2/5/00)

•**A court motion filed by the State Water Control Board** alleges that the District of Columbia's prison in Lorton (Fairfax County) has been discharging untreated sewage into Mills Branch, a tributary of the Occoquan River (Potomac River watershed). The motion requests the District be fined at least \$175,000. (*Associated Press*, 2/14/00)

•The **twists and turns of the Potomac River between Virginia and Maryland** are an apt symbol for the current interstate dispute over a proposal by the Fairfax County Water Authority for a new water-intake pipe. The Authority, which provides drinking water to 1.2 million people, wants to extend its intake pipe from its current near-shore location to the middle of the river, where the water typically contains less sediment, debris, and contaminants. The

Authority spends about \$1 million annually cleaning debris from the current intake pipe. The starting point of the conflict is Maryland's ownership—under a 1632 land grant from England—of the river up to the Virginia shore.

Here are some current twists to the tale:

- ⊘ the dispute is pending before a Maryland administrative law judge;
- ⊘ the Va. attorney general's has asked the U. S. Supreme Court to rule that Virginia has a right to build the pipe even without Maryland's approval;
- ⊘ the Md. General Assembly has passed legislation preventing construction of the pipeline until time-consuming environmental studies are completed, but a subsequent amendment offered by a Montgomery Co., Md., state senator would let the project proceed with only the permission of the Maryland Department of the Environment; and
- ⊘ the Washington Suburban Sanitary Commission, which serves Maryland suburbs, expects to request a permit for a similar project. (*Washington Post*, 2/18 and 3/31/00).

•**Changed processes at the International Paper (formerly Union Camp) mill** in Franklin have eliminated the mill's discharges of dioxins into the Blackwater River, in the Chowan River watershed. As a result, dioxin levels in the Chowan River in North Carolina have dropped sufficiently to allow that state to remove completely the fish-consumption advisory along the river. The advisory was put into place in 1990 and removed for most fish species in 1998. (*Associated Press*, 2/22/00; with additional information from the N. C. Div. of Water Quality)

•Recent reports of events in Virginia and two neighboring states illustrate the **challenges of enforcing water-quality laws:**

- ⊘ Sewage-overflow problems at a trailer park in the **Virginia** city of Chesapeake that began in the 1970s recurred periodically for over 20 years—through late 1999—despite inspections, citations, court orders, and fines. According to the report, factors contributing to the problems' persistence until recently were the relatively small size of the spills (“a few thousand gallons at worst”); no major damage to the environment; no reported cases of disease; changing park ownership; regulatory authority shifting among different agencies; and, perhaps most important, lack of money by the owner to make adequate repairs. (*Virginian-Pilot*, 2/29/00)

- ⊘ The **North Carolina** attorney general's office has assigned a team of lawyers to help environmental regulators enforce regulations on livestock farms with “a history of pollution

violations.” The team filed lawsuits against four hog farms and one poultry farm on February 28. The situation on one of the farms illustrates two basic sides of the issue. On the one hand, hog-waste-lagoon levels at the farm were found to be too high on 14 of 16 regulatory inspections since 1995. On the other hand, this farm's owners maintain that they have been “doing the best [they] can to comply with all the...regulations.” (*Raleigh News & Observer*, 2/29 and 3/2/00)

- ⊘ **Maryland** environmental officials are suing a machining and welding business in Carroll County, claiming the company operated without a permit and discharged illegal amounts of copper for over 20 years. (*Baltimore Sun*, 3/12/00)

•**There's bad news and good news about Virginia boating.** The *bad* news is that the reportable accident rate for *conventional boats* continued to increase, as it has since 1994 except for a decrease in 1998. (Reportable accidents are those where at least \$500 damage occurs or medical treatment beyond first aid is needed). The 1999 rate was one accident per 1,469 conventional boats, compared to one per 2,384 boats in 1994. The *good* news is that the accident rate for *personal watercraft* continued to decrease, as it has since 1995. The 1999 rate was one accident per 405 personal watercraft, compared to one per 169 boats in 1995.

In 1999 there were 217,454 registered conventional boats; 21,082 registered personal watercraft; and 200 total accidents, 52 of which involved personal watercraft. Boating statistics are maintained by the Va. Dept. of Game and Inland Fisheries. (*Roanoke Times*, 3/10/00)

•**Virginia's participation in the Conservation Reserve Enhancement Program** was made official on March 8 when Gov. James Gilmore signed an agreement with the U. S. Dept. of Agriculture (USDA). The program seeks to increase wetlands restoration and the development of plant buffers in riparian (stream-side) areas; the ultimate objective is to improve aquatic habitat and decrease the amount of pollutants reaching waterways. The Virginia program allocates \$91 million over the next 15 years to set aside 35,000 acres from agricultural production. This program “enhances” the “continuous sign-up option” of the federal Conservation Reserve Program, which targets environmentally-sensitive lands like wetlands and riparian areas. (Governor's Office Press Release, 3/8/00; *Richmond Times-Dispatch*, 3/9/00; with additional information from the Natural Resources Conservation Service)

•The **largest federal investment in a water project in southwestern Virginia** recently came to fruition in Baptist Valley, a rural community in Tazewell County. The project cost \$10.8 million; except for about \$280,000 from the county, the money came from the USDA's Rural Utility Service and from the Community Development Block Grant program. The money was used to renovate the town of Tazewell's water plant, which will now serve some 1,000 Baptist Valley customers as well as 1,850 current town customers. (*Richlands News-Press*, 3/18/00)

•**Draft regulations on poultry manure** were released by the Water Control Board on March 29. The regulations would cover storage, treatment, and management of poultry waste from large-scale operations. To enquire about the regulations, call the DEQ at (800) 592-5482. (*Richmond Times-Dispatch*, 3/30/00)

•As regulation of **non-tidal wetlands** was getting attention at the 2000 General Assembly, the Va. Institute of Marine Science (VIMS) published some information that helps define the scope of the issue. Existing wetlands have been inventoried in about 90 percent of Virginia, according to the National Wetland Inventory. Within the inventoried area are about 1,267,000 acres of wetlands. About 15 percent of the acres are *tidal*, that is, they are associated with tidal waters. The remaining 85 percent are *non-tidal*, occurring around lakes, adjacent to or within rivers or streams, or isolated from a specific water body. (VIMS' *Va. Wetlands Report*, Winter/Spring 2000)

Meanwhile, the **Virginia Wetlands Restoration Fund** has so far been used to purchase for preservation 1500 acres of wetlands around the Hampton Roads, Richmond, and Northern Neck areas. The fund, begun in 1995, is managed by the Nature Conservancy and the U. S. Army Corps of Engineers. Developers may choose to donate to the fund, in lieu of constructing wetlands to replace those destroyed by development. (*Virginian-Pilot*, 3/14/00)

•**VIMS scientists are collaborating with colleagues in China** to study sediment in the East China Sea and its tributary, the Yangzi

(formerly Yangtze) River. The Yangzi is where the large Three Gorges Dam is being constructed. Plans are to use measuring techniques that VIMS scientists have used extensively in the Chesapeake Bay. In return, VIMS hopes to gain new understandings of "mud transport" that can be applied to problems in Virginia's waters. (VIMS' *The Crest*, Winter/Spring 2000)

•With the gasoline additive **methyl tertiary butyl ether**, better known as **MTBE**, showing up in groundwater supplies—including in two town wells in Purcellville (Loudoun County) in 1998—the 2000 Va. General Assembly passed a bill (HB909) to require public water supplies to test for MTBE at least quarterly. The chemical has

been used since the 1970s to improve gasoline combustion, in turn reducing harmful tailpipe emissions. But when underground gasoline-storage tanks leak, MTBE tends to move more quickly through the soil than other gasoline constituents, increasing the potential for MTBE to reach groundwater. A study by the U. S. Geological Survey and the Oregon Graduate Institute of Science and Technology found that 9,000 wells in 31 states may have been contaminated with

MTBE. In March 2000, the U. S. EPA moved to phase out MTBE.

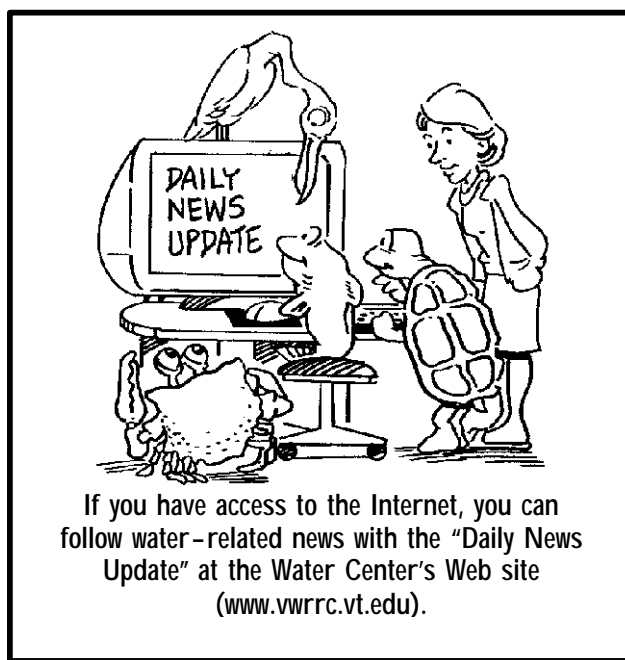
Here are recent MTBE developments from two of Virginia's neighbors:

☛ Between 1992-1998, North Carolina officials found over 1,000 wells contaminated with MTBE; ☛ MTBE has been found in about seven percent of the Maryland's public water systems. (Sources: *Associated Press*, 2/10/00; *Raleigh News & Observer*, 2/11/00; *Washington Post*, 3/21/00)

[For a previous item on this topic, see the April 1999 Water Central, p. 13]

...and Elsewhere

•According to the World Bank, **80 countries currently have water shortages** that threaten public health and national economies, and over



If you have access to the Internet, you can follow water-related news with the "Daily News Update" at the Water Center's Web site (www.vwrrc.vt.edu).

two billion people in the world lack access to clean water or sanitation. (*Arizona Water Resource*, Arizona Water Center, Nov.-Dec. 1999)

•**Weather events attributed to the 1997-98 El Niño** caused an estimated 189 deaths and major economic losses to property, agriculture, and recreation-related businesses. There was a definite positive side, however, including an estimated 850 lives *saved* and various economic benefits from mild winter weather. A detailed accounting of the impacts is available in “Impacts of 1997-98 El Niño-generated Weather in the United States,” *Bulletin of the American Meteorological Society* (Vol. 80, No. 9). (Univ. of Colorado’s *Natural Hazards Observer*, Jan. 2000)

•**Hurricane Floyd**, the worst natural disaster in **North Carolina** history, “was not planned for and could not have been planned for,” according to findings in the state General Assembly’s Hurricane Floyd Recovery Act. “Public and private decision-making was [based] on the 100-year floodplain; actual flooding was throughout, and even outside of, the 500-year floodplain.” (North Carolina’s *WRR* News, Jan.-Feb. 2000)

•**The Urban Wet Weather Priorities Act of 2000** (H.R. 3570) was introduced to Congress on February 2. Sponsored by Reps. LaTourette (R-OH) and Pascrell (D-NJ), the bill would give legal protection to local governments for unavoidable sanitary sewer overflows, block the U. S. EPA from setting *numeric* stormwater-pollution limits for localities, and establish a federal grants program to help localities control stormwater. (Inside EPA’s *Water Policy Report*, 2/16/00)

•Maryland Gov. Parris Glendening proposed legislation to the 2000 General Assembly that would require all new and replacement **septic systems to have a feature that reduces the amount of nitrogen released into groundwater** (HB283/SB210, the Water Quality Protection Act). The estimated cost of the equipment is \$3,000—\$7,000 with \$200 annual maintenance costs. The legislation would offer some financial assistance (tax credits or grants) to homeowners. Maryland has some 400,000 septic systems; it is not clear how many would be affected. (*Washington Post*, 2/17/00)

•**Chesapeake Bay oyster survival during the 1999 drought** was higher than expected by Maryland scientists. Dry conditions reduced water flow to the Bay, in turn increasing the Bay waters’ *salinity*. The two critical Bay-oyster diseases, MSX and dermo, both do well in higher

salinity. Infection rates were the highest since 1992, but an estimated 66 percent of infected oysters survived, compared to a 54-percent survival rate in 1992. (Alliance for the Chesapeake’s *Bay Journal*, March 2000)

•**What does the Chesapeake Bay have in common with the Baltic, Black, and North seas?** They all suffer from too much nitrogen and phosphorus. Like the states in the Bay watershed, the nations surrounding these important European seas are also trying to reduce the amount of nutrients reaching these waters. Furthermore, as in the Chesapeake watershed, some progress has been made, but substantial challenges remain. For more details of this trans-Atlantic comparison, by the Univ. of Maryland’s Center for Environmental Science, see p. 18 of this item’s source. (*Bay Journal*, March 2000)

•A draft regulation for **arsenic in drinking water** is at the federal Office of Management and Budget (OMB), having been delivered by the U. S. EPA on February 16. OMB has 90 days to review the proposed rule, after which it will be published in the *Federal Register*. The rule would reduce the current arsenic “maximum contaminant level” of 50 parts per billion (ppb) (set in 1942) to somewhere in the range of 3—10 ppb.¹ (*Water Policy Report*, 3/1/00)

•A draft study by the U. S. EPA estimates that **\$1 trillion** will be needed to pay for **water and wastewater facilities between 2010 and 2020**. The money will be needed to replace old equipment as well as to develop new capacity to accommodate population growth. This would be a substantial increase in the rate of water-infrastructure spending: from 1952 to 1992, the nation spent \$1 trillion on these needs, and another \$1 trillion in such spending is expected by 2009. An example of the problem comes from North Carolina, where the state has spent \$165 million on sewer upgrades for localities since July 1999. (*Water Policy Report*, 3/15/00; *Associated Press*, 3/26/00)

•Finally, here’s how **Walter Cherry**, executive director of the **North Carolina Pork Council**, describes the range of **suggestions he’s heard for dealing with hog waste**, a major water-quality issue in that state: “Anything from magic foo foo dust to some systems that probably do work.” (*Raleigh News & Observer*, 2/27/00)

¹ For perspective, one part per billion is comparable to one second in about 32 years.

N O T I C E S

On the Public Calendar

•**May 16**—Groundwater Protection Steering Committee meeting, 9 a.m., Va. Department of Environmental Quality Central Office, Richmond. For more information: Mary Ann Massie, (804) 698-4042; e-mail: mamassie@deq.state.va.us.

Wetlands Education Events

•**May 16-19**—Wetland Identification and Delineation Class;

•**July 19**—Tidal Wetlands Seminar.

For more information: Bill Roberts, Va. Institute of Marine Science, (804) 684-7395; e-mail: wlr@vims.edu.

Asking the right questions (when teaching about groundwater)?

That's what the Groundwater Foundation wants to help you find out at its Fall 2000 conference, "Asking the Right Questions: Evaluating the Impact of Groundwater Education." **November 13—15** in Lincoln, Nebraska. **Presentation proposal deadline: May 28.** For more information: Cindy Kreifels, (800) 858-4844; e-mail: cindy@groundwater.org.

Living Downstream?

Aren't we all! This year's annual meeting of the University Council on Water Resources will take a detailed look at "Living Downstream in the Next Millennium." **July 31—August 4** in New Orleans. For more information: UCOWR Headquarters at Southern Illinois University, (618) 536-7571; e-mail: ucowr@uwin.siu.edu.

7th National Watershed Conference

The theme of the conference is "Small Watershed Programs: Past Present and Future." Sponsored by the National Watershed Coalition. **May 20-23, 2001** in Richmond, Va. **Abstract deadline: October 1, 2000.** For more information on submitting an abstract or on the conference in general: John Peterson, (703) 455-6886 or -4387; e-mail: jwpeterson@erols.com.

Volunteer Monitor Newsletter


Published twice yearly, this free newsletter seeks to aid the exchange of ideas, methods, and advice among volunteer groups monitoring water, wetlands, and other resources. To subscribe or

request back issues: River Network, (503) 241-3506; e-mail: info@rivernetwork.org;  → www.epa.gov/owow/volunteer/vm_index.html.

At the Water Center

•**National Water Research Symposium 2000:** "Advances in Water and Land Monitoring Technologies and Research for Management of Water Resources." **November 7—9**, in Roanoke, Va. Please see page 14 for more details.

•Calling All Water Monitors!

The Virginia Water Monitoring Council, for which the Water Center provides administrative support, is working to foster cooperation and information-exchange among the many agencies and groups that monitor Virginia's water resources. *Membership and participation in the Council are open to any interested person or group.* For more information on the Council or on becoming a member: Jane Walker, (540) 231-4159; e-mail: janewalk@vt.edu;  → www.vwrrc.vt.edu.

•Statewide Advisory Board Named

The Water Center's Statewide Advisory Board is mandated by the legislation that established the Water Center (*Va. Code 23-135.7: 8-13*). The Board's duties are to recommend policy guidelines for implementing the Center's functions; evaluate Center programs; and give advice to help the Center director carry out the Center's purpose. The governor recently appointed new members to the Board, as follows: Eric H. Bartsch; Weston F. Conley, Jr.; Martin G. Farber; Ronald A. Gregory; Robert L. Green; Benjamin H. Grumbles; John A. Johnson; J. W. Langhammer; Stephen D. Mallette; Brian F. Mannix; Terrell J. Reid; Ward W. Staubitz; and Dennis R. Wanless.

CORRECTION FROM A PREVIOUS ISSUE OF WATER CENTRAL

February 2000, p. 8: The James River Basin is *not* contained entirely within Virginia; a small portion of the watershed is in West Virginia. Of Virginia's major basins, only the Rappahannock and the York are contained entirely within the state. *Water Central* thanks the reader who pointed out this error.

Virginia Water Research Symposium 2000:

Advances in Water and Land Monitoring Technologies and Research for Management of Water Resources

November 7—9, 2000

Hotel Roanoke Conference Center, Roanoke, Virginia

This national symposium will be an interdisciplinary forum for presenting and discussing information in three related areas of work: advanced and innovative water-monitoring technologies (physical, chemical, biological); research on natural waters (surface water, ground water, estuarine, wetlands, precipitation, etc.); and advanced land-use monitoring techniques (such as remote sensing and satellite imagery). A common theme will be the impact of these areas on decision-making processes in the management of water resources.

The symposium is intended for individuals involved with the development of monitoring technologies, research scientists, engineers, educators, consultants, watershed managers, policy-makers, and decision-makers. Abstracts are being solicited on the following topics:

- advanced water-quantity and –quality monitoring technologies and instrumentation;
- water-monitoring research (sampling, analytical, and statistical techniques);
- design of monitoring networks;
- pollutant-source identification;
- monitoring studies for TMDL plan development;
- legal, institutional, and financial issues related to water monitoring;
- advanced land-use monitoring technologies, research, and case studies for management of water resources; and
- other topics relevant to the purpose of symposium.

The symposium will be developed through a series of invited and submitted papers.

Abstracts (500 to 750 words in length) should be submitted by mail, fax, or e-mail by May 30, 2000 to the following:

Dr. Tamim Younos, Virginia Water Resources Research Center, 10 Sandy Hall (0444), Blacksburg, VA 24061; (540) 231-8039; FAX (540) 231-6673; e-mail: tyounos@vt.edu.

The deadline for submission of papers (7,500 to 10,000 words) for inclusion in the symposium proceedings will be September 30, 2000.

Exhibitors: Attention please!

The 2000 Virginia Water Research Symposium provides an opportunity for exhibitors to demonstrate and display software, products, and services to a variety of water related professionals. Booth space is limited and will be offered on a first come-first served basis. Booth rental will be \$350 for a 10'x8' or 8'x8' piped and draped space. There will be an additional charge for electrical hook-ups. For more information: Ms. Judy Poff, Public Relations Coordinator, Virginia Water Resources Research Center, (540) 231-8030; FAX (540)231-6673; e-mail: jupoff@vt.edu.

FOR THE RECORD

Sources for Selected Water Resources Topics

Following State Water Regulations

State regulations cover water-supply and wastewater facilities, aquatic-resource protection and management, fishing, shellfishing, boating, and many other activities involving Virginia's water resources. Listed below are the agencies and citizen boards primarily involved in developing—or *promulgating*—water-related regulations in Virginia.

Virginia Agencies and Citizen Boards that Issue Water-Related Regulations

Agencies

Dept. of Agriculture and Consumer Services
Chesapeake Bay Local Assistance Dept.
Dept. of Conservation and Recreation
Dept. of Environmental Quality
Dept. of Game and Inland Fisheries
Dept. of Health
Dept. of Mines, Minerals, and Energy

Citizen Boards

Ches. Bay Local Assistance Board
Conservation and Recreation Board
Marine Resources Commission
Potomac River Fisheries Commission
Soil and Water Conservation Board
Waste Management Board
Water Control Board
Waste Management Facility Operators' Board
Water- and Wastewaterworks Operators' Board

In proposing the adoption, amendment, or repeal of regulations, agencies and boards must follow the Virginia Administrative Process Act (*Va. Code* Title 9, Chapter 1.1:1). A fundamental requirement is public notification of regulatory actions in the *Virginia Register of Regulations*. The *Register* contains "Notices of Intent" to take action, all proposed and recently adopted regulations, and other official state notices.

Adopted regulations, once they become effective, become part of the *Virginia Administrative Code*. Yet another "code" identifies information in this document. In "4VAC3-20-10," for example (one section of the state's stormwater regulations), here's what those symbols indicate:

Continues next column

4 = Title 4—Conservation and Natural Resources;
VAC = Virginia Administrative Code;
3 = Agency 3 *within that title*—Conservation and Recreation Board in this title (agency numbers differ among the different titles);
20 = Chapter 20, the chapter number assigned to the particular regulation; and
10 = Section 10 within the Chapter.

Finding Proposed Regulations

Virginia Register. Published biweekly, with quarterly indices. Copies are available at many public libraries. Subscriptions cost \$100 per year; for subscription information, phone (804) 786-3591; or e-mail: tedwards@leg.state.va.us. An on-line version is available at the following Web-site: **legis.state.va.us/codecomm/register/issfiles.htm**.

The new "Virginia Regulatory Town Hall" allows citizens to track the regulatory process electronically. This Web-site includes drafts of proposed regulations, agency policy discussions, economic impact analyses, and other valuable information. Users may sign up for a free notification service that automatically sends e-mail notices of proposals and public meetings. The site address: **www.townhall.state.va.us**.

Finding Existing regulations

The *Virginia Administrative Code*, in print, is available at larger libraries. It is also available on-line: **leg1.state.va.us/000/reg/TOC.HTM**. In addition, individual agencies should be able to provide copies of regulations they administer (in print or via their own Web-sites).

Water Central thanks Cindy Berndt, Va. DEQ Office of Regulatory Affairs, for reviewing this section.

Upcoming "For the Record" Schedule

2000

June – Following Federal Water Regulations
August – Water Maps: Types and Sources
October – Aquatic-life Information Sources
December – Coastal/Marine Information Sources

2001

February – Drinking-water Information Sources
April – Water-quality Information Sources

Schedule subject to change

Virginia Water Central

Published bimonthly by the Virginia Water Resources Research Center, 10 Sandy Hall (0444), Blacksburg, VA 24061; (540) 231-5624; fax (540) 231-6673; e-mail: water@vt.edu; Leonard Shabman, director.

Water Central staff: Alan Raflo, editor; George Wills, illustrator.

This publication does not necessarily reflect official views of the Water Center or Virginia Tech, nor does the mention of trade names, commercial products, or services constitute an endorsement. Reproduction of articles, with proper credit, is welcomed.

Virginia Tech does not discriminate against employees, students, or applicants on the basis of race, color, sex, sexual orientation, disability, age, veteran status, national origin, religion, or political affiliation. Anyone having questions concerning discrimination or accessibility should contact the Equal Opportunity and Affirmative Action Office, 336 Burruss Hall, Blacksburg, Virginia 24061-0216, (540) 231-7500, TDD (540) 231-9460.

Attention Web-crawlers!

Water Central is available on the Water Center's Web site, www.vwrrc.vt.edu. If you prefer to read the newsletter there, *instead of* receiving a paper copy, please send your e-mail address to water@vt.edu, and we will notify you when a new issue is posted.

Virginia Water Resources Research Center
10 Sandy Hall (0444)
Blacksburg, VA 24061

Return Service Requested



Printed on recycled paper

VT/348/0400/2.65M/203362

YOU GET THE LAST WORD

Please answer the following questions to let us know whether the newsletter is meeting your needs. Please mail this page to the Water Center address listed in the box to the left, or e-mail your responses to water@vt.edu. Thank you.

1. Would you rate the content of this issue as good, fair, or poor?
2. Would you rate the appearance as good, fair, or poor?
3. Would you rate the readability of the articles as good, fair, or poor?
4. Is the newsletter too long, too short, or about right?
5. Do the issues come too frequently, too seldom, or about right?
6. Please add any other **comments** you wish to make.

**Non-profit Org.
U.S. Postage Paid
Blacksburg, VA 24060
Permit #28**