

IN AND OUT OF THE NEWS

November 2009 Issue Supplement

This page provides additional news items beyond the November 2009 issue of *Virginia Water Central*. The items below are based on information in the source(s) indicated in parentheses at the end of each item. Most of the items were reported in news media or by governmental agencies between September 4 and November 25, 2009. Except as otherwise noted, all localities mentioned are in Virginia and all dates are in 2009. All Web sites listed were functional as of December 3, 2009. Frequently used abbreviations: DEQ = Virginia Department of Environmental Quality; DCR = Virginia Department of Conservation and Recreation; EPA = U.S. Environmental Protection Agency; SWCB = Virginia State Water Control Board; VMRC = Virginia Marine Resources Commission.

Aquatic Systems, Water Quality, and Restoration (including Chesapeake Bay)

•Chesapeake Bay Blue Crab Developments

••The VMRC is considering whether to require that recreational crab pots include a device to prevent inadvertent capture of Diamondback Terrapins. Due largely to loss of habitat, the turtles are currently listed by the U.S. Fish and Wildlife Service as a “species of concern” under the federal Endangered Species Act. The turtles can get trapped in crab pots near shore when they enter them seeking food; this occurs less often with commercial crab pots, which typically are placed farther off-shore. (*Daily Press*, 9/26/09)

•Chesapeake Bay Oyster Developments

••On September 21, the VMRC voted to continue **oyster-harvesting restrictions** that were first implemented in 2007. The rules restrict harvesting to the period from December 1 to February 28 and to a specific area, which rotates annually; this year’s harvest area will be near Tangier Island. The decision was criticized by the VMRC’s waterman member, who asserted that the rotational system is not working. Other members advocated giving the system more time to evaluate its effectiveness in promoting oyster populations. (*Daily Press*, 9/23/09)

••As of early November, one month into Maryland’s 2009 oyster-harvest season, watermen were reporting **good harvests of oysters from Somerset County, Maryland’s portion of Tangier Sound**. (The southern portion of Tangier Sound is in Accomack County, Virginia, and includes Tangier Island.) Approximately 200 boats were working those waters at the time, out of about 250 working boats in Maryland, compared to about 2,500 boats harvesting oysters prior to the impact of two oyster diseases, MSX and dermo, in the 1980s. Salinity conditions in Tangier Sound seem to foster more resistance by oysters to these diseases. Virginia’s 2009-10 oyster season in Tangier Sound runs December 1, 2009-February 28, 2010. (*Delmarva Daily Times*, 11/1/09)

•On September 14, the Chesapeake Bay Program and the National Fish and Wildlife Foundation announced the recipients of \$2.8 million for 32 aquatic-restoration projects through the **Chesapeake Bay Small Watershed Grants** Program. Eight Virginia projects received over \$644,000 collectively. The Virginia projects are in the following water bodies and localities: Cedar Creek in Frederick and Shenandoah counties; Hazel River in Culpeper, Madison, and Rappahannock counties; Thornton River in Rappahannock County; Mechumps Creek in Hanover County; several streams in Rockingham County; Lafayette River in Norfolk; Reedy Creek in Richmond; and the northern Shenandoah Valley watershed in several localities. More information and the full list of projects is available online at <http://www.nfwf.org>. (National Fish and Wildlife Foundation news release, 9/14/09.)

•With a December 9 symposium called “Incentivizing Restoration through a Chesapeake Bay Economy,” the Rappahannock River Basin Commission (RRBC) began a process to form a “**bioregional marketplace**” called **the Chesapeake Exchange**. The Chesapeake Exchange is a pilot project that seeks to promote commercial activities that integrate environmental goals with financial rewards for landowners who preserve natural resources. More information is available from the RRBC’s executive director, Eldon James, at (540) 775-5422 or ejames7@earthlink.net, or online at www.rapriverbasin.org/symposium.htm.

•During the week of October 19-23, the James River Association (JRA) conducted its third “**Extreme Stream Makeover**” in the **Blackwater Creek watershed** in Lynchburg, and hundreds of volunteers participated. The effort organized citizens, businesses, and organizations to conduct various stream- and watershed-restoration projects, including streamside tree planting, litter removal, rain garden construction, and stormwater pond repair. JRA also uses the event for public education and awareness about water and watershed issues. In 2007 and 2008,

JRA organized similar efforts in Colonial Heights and Richmond, respectively. (*Lynchburg News & Advance*, 10/18 and 10/22/09)

- In October, the StreamWatch citizens' group released its latest report on **conditions in the Rivanna River watershed** (the Rivanna is a James River tributary in Albemarle, Fluvanna, and Greene counties and the city of Charlottesville). The latest report, covering the Summer 2006 to Spring 2009 period, indicates that 70 percent of the streams monitored by the group's volunteers rated "fair" or worse in an assessment of bottom-dwelling insects and other organisms; the report says those streams "probably do not meet" Virginia's water-quality standards for aquatic life. In the group's previous report, covering the 2005-2007 period, 75 percent of monitored streams were similarly rated. The report is available online at <http://streamwatch.org/stream-conditions>. (*Charlottesville Daily Progress*, 10/19/09)



On a June 2007 morning, mist on the James River obscures the mouth of the Rivanna River in the center of the photo.

- The **South River Science Team** is leading a pilot project that aims to stabilize a portion of the river near Waynesboro and prevent movement of mercury from the land into the river. The South River (a tributary of the South Fork Shenandoah River) was contaminated with mercury from the former DuPont plant in Waynesboro between the 1920s and 1950s, and fish-consumption advisories have been in effect since the 1970s. The South River Science Team has been working with Inter-Fluve of Hood River, Oregon, on the project design, which involves placing stabilizing materials in the river and on the bank, then planting native vegetation along the banks. (*Waynesboro News Virginian*, 9/5/09. For a previous *Water Central* item: June 2009, p. 24.)
- In September, the Virginia Department of Environmental Quality (DEQ) reported that Total Maximum Daily Load (TMDL)-related studies have found **levels of PCBs (polychlorinated biphenyls)** much above water-quality standards in upper tidal areas of the **Elizabeth River and the James River**. PCBs are environmentally persistent chemicals that were used until the 1970s as insulators or fire retardants in petroleum products, such as the oil in electrical transformers. PCB levels found in the James mainstem were near the water-quality standard of 640 parts per quadrillion (ppq), but levels in several tributaries ranged as high as 233,000 ppq. The results also indicate that PCBs are still entering the river. In the Elizabeth River, levels were near the standard in the mainstem and Western Branch but were as high as 140,000 ppq in the Southern Branch and 183,000 ppq in the Eastern Branch. The DEQ director said the PCB work is complex and time-consuming. (Virginia DEQ News Release, 9/24/09)
- On October 26, the Virginia Department of Agriculture and Consumer Services **banned the sale and transport of Beach Vitex** in Norfolk, Virginia Beach, and the Eastern Shore. Beach Vitex (*Vitex rotundifolia*) is a non-

native, invasive shrub or shrubby vine that can crowd out native plants on sand dunes and in other beach habitats. A native of a large area across the western Pacific Ocean, the species was found in Norfolk in fall 2008. It has already been banned in North Carolina and South Carolina where it has affected sand dunes and nesting sea turtles. At its December meeting, the Virginia Board of Agriculture and Consumer Services was scheduled to consider a permanent ban on the plant. More information on Beach Vitex is available at the Beach Vitex Task Force Web site, www.beachvitex.org. (*Virginian-Pilot*, 10/27/09)

Awards and Achievements

- In July, the **City of Newport News' Deer Run Golf Course** received a Virginia Environmental Excellence Program **E4 award** for its container-recycling and pesticide-management program. E4 is the highest of three levels in the Virginia Department of Environmental Quality's environmental award program. (*Daily Press*, 7/9/09)
- Pending certification by the U.S. Green Building Council, **Dale City Fire Department's new Station 10** (in Prince William County) is expected to receive the **gold rating from LEED** (Leadership in Energy and Environmental Design). It would be only the second gold-rated fire station on the East Coast and only the ninth in the United States. The station's features include a rainwater-collection/storage system. (*Washington Post*, 7/16/09)
- In September, President Obama selected **Virginia Secretary of Natural Resources L. Preston Bryant as chair of the National Capital Planning Commission** in Washington, D.C. This commission is responsible for environmental studies, stewardship, conservation, and planning for new memorials or museums on federal property in the District of Columbia, suburban Maryland and northern Virginia. (*Lynchburg News & Advance*, 9/22/09)
- On September 21, the Chesapeake Bay Foundation named **former Richmond Times-Dispatch reporter Lawrence Latané** at its 2009 conservationist of the year, recognizing over 20 years (1986-2008) of writing about the Bay's people, communities, natural features, and policy issues. (*Richmond Times-Dispatch*, 9/22/09)
- On October 14, Virginia awarded the **first annual DOD Eagle Awards** to Fort A.P. Hill (Caroline County), Fort Pickett (Dinwiddie and Nottoway counties), and the Defense General Supply Center (Richmond) for the installations' efforts in seven environmental categories. Over 20 installations in the state were eligible for the awards. The governor's press release announcing the awards noted these accomplishments by the three winners: Fort A.P. Hill, establishing stream buffers, using innovative stormwater management approaches and protecting more than 2,900 acres through conservation easements; Fort Pickett, establishing an environmental management zone along the Nottoway River, capturing rainwater for reuse, and protecting more than 2,500 acres; and the Defense Supply Center Richmond, using low-impact stormwater-management techniques, reducing air emissions, and reducing hazardous waste. (Virginia Governor's Office news release, 10/14/09)
- In October, the Maryland League of Conservation Voters gave a **special award to Keith Campbell** for his record of financially supporting efforts to restore the Chesapeake Bay. The Keith Campbell Foundation for the Environment has given some \$50 million in grants, many of which were for Chesapeake-related efforts, including investigating the chronic fish kills in Virginia's Shenandoah River watershed. The Campbell Foundation is the largest single private donor to Bay-restoration efforts. (*Annapolis Capital*, 10/20/09)
- On November 13, the Virginia DEQ presented an **Environmental Excellence Program E2 award to the Baskerville Correctional Center** in Mecklenburg County. The award recognized the facility for its environmental management plan. (*South Hill Enterprise*, 11/18/09)

Boats and Ships

- On September 14 in Portsmouth, the Elizabeth River Project and the University of Virginia launched the **Learning Barge**, a new environmental-education vessel that began educational trips on the Elizabeth on October 1. The \$1.2 million boat—paid for by donations of money and services—is designed with solar energy, water-saving toilets, and other features to have little environmental impact. Its educational features include water-sampling stations and labs. Information on booking the vessel for schools or other groups is available from Robin Dunbar at the Elizabeth River Project, (757) 399-7487. (*Virginian-Pilot*, 9/15/09)

- On September 24, Virginia Wesleyan College and the Virginia Aquarium and Marine Science Center, both in Virginia Beach, christened ***Ocean Explorer***, a 45-foot ship for research, aquatic collecting, and marine-animal rescue trips in the Chesapeake Bay and the Atlantic Ocean. (Associated Press, 9/24/09)
- In early October, salvage workers from American Marine Group of Norfolk freed the disabled fishing vessel ***Frieda Marie*** from Assateague Island and towed it to Chincoteague. The crew of the 77-foot, 160-ton ship had grounded it at Assateague on August 3 after the ship began taking on water during a trip from Cape May, New Jersey to South America. The ship had grounded in an ecologically sensitive area of federal land, so its removal involved several state and federal agencies. About 10,000 gallons of diesel fuel had already been removed. Once cleaned of any other contaminants, the boat will be towed to New Jersey and sunk there to function as an artificial reef. (*Eastern Shore News*, 10/7/09)
- The Norfolk office of WR Systems, Ltd., headquartered in Fairfax, has developed a prototype of a **device for ships to monitor continuously their air-pollutant emissions** (sulfur oxides, nitrogen oxides, carbon dioxide, and particulates). Ships with the Norfolk-based Maersk Line tested the device on a run to New Jersey in September and an Atlantic voyage in October-November. The device is intended to help shipping lines comply with new emissions regulations that would be implemented under a 230-mile emissions-control zone that the United States and Canada have asked the United Nations' International Maritime Organization to establish. Similar standards are already in effect in parts of Europe and in California. (*Norfolk Virginian-Pilot*, 10/5/09)
- On October 28, several federal, state, and local agencies participated in an **oil-spill drill on the lower York River**, home to an oil refinery, U.S. Navy and Coast Guard facilities, the Virginia Institute of Marine Science, and several recreational and commercial boating and shipping interests. The drill included tests of communication channels, response vessels and equipment, assessment flights, and oil-containment boom deployment. (*William and Mary News*, 10/29/09)

Dams

- In its October 2009 "Drought Status Report," the Virginia Drought Monitoring Task Force reported that "[in] early September, **Gathright Dam** [which creates the Lake Moomaw reservoir] was assigned a U.S. Army Corps of Engineers Dam Safety Action Classification (DSAC) of II. The dam is considered to be potentially unsafe, and the Corps is implementing a number of monitoring and operational measures to reduce the risk to the public. These measures include lowering of the water level in the reservoir one foot per week. The Corps [met] with stakeholders during the week of October 26 to discuss short- and long-term plans to address dam safety concerns. If the lowering continues at the current rate, the minimum conservation pool will be reached by January 1, 2010." (Virginia Drought Monitoring Task Force Reports are available online at www.deq.virginia.gov/waterresources/drought.php#DroughtStatusReports.)

Education

- At the beginning of the 2009-10 school year, the Virginia Institute of Marine Science (VIMS) began the **Partnership between Educators and Researchers for Enhancing Classroom Teaching (PERFECT)** program to pair nine VIMS graduate students with teachers at Booker T. Washington Middle School in Newport News, Page Middle School in Gloucester, York (County) High School, and the Chesapeake Bay Governor's School in Rappahannock. The partnership is giving the middle-school and high-school students a chance to learn about how actual science research is conducted. (*Daily Press*, 9/22/09)
- In summer 2009, the new **Delmarva Discovery Center** opened in Pocomoke City, Maryland. Development of the museum was led by Barbara Tull, a native of Parksley, Va. (Accomack County). Examples of exhibits include those on Native Americans of the area, boat-building on the river, and aquatic life in the river. (*Salisbury [Md.] Daily Times*, 9/10/09)
- In November, the Virginia Aquarium and Marine Science Center in Virginia Beach capped a \$25-million, two-year renovation project by opening its new permanent exhibit, **"Restless Planet—A Global Journey that Brings You Closer to Home."** The exhibit includes four environments currently found in the world that are similar to conditions found in Virginia hundreds of millions of years ago. The renovation project also increased the museum's animal holdings to 12,000 individuals in 700 species. (*Virginian-Pilot*, 11/17/09)

Energy Use and Developments/Climate Change Developments

•**Wind energy** is in the news on both sides of the state. Here are some recent “snapshots.”

••Stream and wetland impacts are issues to be confronted in the ongoing construction (started in August 2009) of Highland New Wind Development’s (HNWD) **19-turbine, 39 MW-capacity project in Highland County** (to date, Virginia’s only commercial wind-energy project). The project involves work in and near Laurel Fork and associated wetlands, including drilling under the stream. HNWD was instructed by the State Corporation Commission—which granted a permit for the project in December 2007—to work with state agencies to reduce impacts to aquatic resources. Those agencies include the Department of Game and Inland Fisheries, which has recommended a certain amount of setback in order to avoid stream sedimentation and impacts on native Brook Trout, and the Department of Conservation and Recreation, which has made recommendations to protect rare plants. Depending on how construction will eventually impact wetlands, HNWD may need to seek wetlands-related permits from several other agencies. (*Augusta Free Press*, 10/26/09)

••On September 15, Governor Kaine wrote to Elizabeth Birnbaum, the director of the U.S. Department of Interior’s Minerals Management Service, to request formation of a **federal-state-local task force to provide guidance on federal leasing of offshore waters for wind-energy projects**. (*Richmond Times-Dispatch*, 9/23/09)

••On November 11, Governor Kaine, Maryland Governor Martin O’Malley, and Delaware Governor Jack Markell signed a Memorandum of Understanding (MOA) creating a partnership among the three states to promote **development of off-shore wind energy**. (Virginia Governor’s Office news release, 11/11/09)

••Several local governments are considering or have recently enacted **regulations for the placement, height, and other features of wind-energy structures**. 1) The City of Virginia Beach enacted an ordinance in August 2009. 2) As of late September, the York County Planning Commission was discussing a possible ordinance amendment. 3) In September, the Nelson County Board of Supervisors held a public hearing on a proposed ordinance. 4) Also as of September, Amherst and Bedford county officials were considering ordinances. 5) On November 17, the Albemarle County planning commission forwarded to the county Board of Supervisors a recommended ordinance; the planning Commission has been working for about two years to develop guidelines for wind-turbine height and location. Special-use permit requests for wind turbines are allowed in various other localities. (*Daily Press*, 9/30/09; *Lynchburg News & Advance*, 9/30/09; *Charlottesville Daily Progress*, 11/18/09)

••In a September lecture at the Virginia Institute of Marine Science, Charles Natale, Jr., the president and CEO of ESS Group, Inc., asserted that he expects approval by the end of 2009 by the federal Minerals Management Service for his company’s **Cape Wind Project**. The Cape Wind Project would place 130 wind turbines (generating 468 MW of electricity, enough to power 160,000 homes) on about 24 square miles some 5 to 10 miles off the coast of Massachusetts. (For comparison, the Highland New Wind Development project under construction on ridges in Highland County will have 19 turbines and have a 39-MW capacity, the Dominion Virginia Power coal-fired plant under construction in Wise County will have a 585-MW capacity, and the coal-fired power plant proposed for Surry County by Old Dominion Electric Cooperative would have as much as a 1,500-MW capacity.) Mr. Natale stated that approval of his project would be a significant market signal for other wind-energy efforts, including initiatives off the coast of Virginia. (*William and Mary News*, 10/27/09)

••For some **additional regional context for wind energy in Virginia**: As of mid-September, 17 wind-energy projects were either finished or under construction in Maine, Massachusetts, New York, Pennsylvania, and West Virginia; collectively they could power about 875,000 homes. At least 15 offshore wind-energy projects are seeking permits, in Delaware, Massachusetts, New Jersey, and Rhode Island; these projects would provide enough power for about 2.1 million homes. Closest to Virginia, the 124-turbine (each 400 feet high) Beech Ridge project in southeastern West Virginia is being contested over potential impacts on bats, while at the Casselman project in southwestern Pennsylvania, developer Iberdrola Renewables of Spain is working with researchers on a system of slowing the turbine blades at night when bats are most active. (*Land Letter*, 9/10/09)

••On September 30, the Southern Environmental Law Center (SELC) announced an appeal of the Richmond Circuit Court’s August 10 decision rejecting a claim that carbon emissions should be regulated as part of the air permits for **Dominion Virginia Power’s coal-fired power plant under construction in Wise County**. SELC is representing several groups who are the plaintiffs in the lawsuit. This appeal follows resolution earlier in September of another aspect of the lawsuit, regarding mercury. While rejecting the carbon-emissions claim, the August 10 ruling accepted the plaintiffs’ argument to invalidate the original permit because of its mercury provisions, which would have allowed the plant to emit mercury beyond the permit’s limits if the plant were not able to meet the limit. On September 2, the Virginia DEQ issued a new air permit for the plant, removing the

provision for exceeding the permit limit. The limit remains the same, at 4.45 pounds of mercury per year. (*Bristol Herald Courier*, 10/1/09)

- On November 23, about 200 people attended a public hearing by the Town of Dendron's (Surry County) planning commission on a rezoning request for **Old Dominion Electric Cooperative's proposed coal-fired power plant**. The planning commission had been scheduled to vote on the request, but they deferred action until December 14. 2016 is the cooperative's target for beginning operations; the Town of Dendron and Surry County began considering the proposal in early 2009; the company has said 50 federal, state, and local permitting processes will be needed. *Virginian-Pilot*, 11/24/09; for a previous *Water Central* item: June 2009, p. 26)

- Here are several **energy/federal stimulus funds** items:

- On September 18, Gov. Kaine's office announced that **\$25 million in 2009 federal stimulus funds will be used to pay for five renewable-energy projects at state facilities**. The state will collaborate with private companies to implement the projects, through the Virginia Public-Private Educational Facilities Infrastructure Act. The five projects are the following: photovoltaic solar panels at several parking decks and buildings at Virginia Tech, Virginia Commonwealth University, and the Department of General Services; solar hot water generation, green roofs, and energy-efficiency work at Virginia Commonwealth University; photovoltaic panels, solar thermal for hot water, and other practices at selected Department of Game and Inland Fisheries facilities; improved efficiency and utilization of biomass to augment coal in boilers at the Virginia Correctional Center for Women; and a wind turbine at the Wallens Ridge State Prison. (Virginia Governor's Office news release, 9/18/09)

- On September 24, the U.S. Energy Department announced **\$16.1 million in 2009 federal stimulus funds for energy-efficiency and energy-conservation projects** in Virginia. Small communities will receive \$9.7 million for energy audits and for improving energy-efficiency in public buildings and municipal power plants. The remaining \$6.4 million money is to be used for renewable energy projects throughout the state. (*Daily Press*, 9/25/09)

- On October 6, Gov. Kaine announced that Virginia will receive **\$40 million in 2009 federal stimulus funds to help implement the Virginia State Energy Plan**. Specifically, the funds will be used as follows: 1) \$15 million to the Virginia Energy Efficiency Rebate Program for rebates to consumers who purchase energy efficient products and equipment; 2) \$15 million to the new Renewable Energy Rebate Program, providing rebates for citizens who install renewable-energy systems; and 3) \$10 million for biomass and waste-to-energy projects. The governor also announced another **\$9.7 million for Energy Efficiency and Conservation Block Grants**, to be distributed to local governments in small localities. (Virginia Governor's Office news release, 10/6/09)

- On October 14, Governor Kaine's office announced that **\$119 million in bond authorizations** under the 2009 federal stimulus act will be available for **energy-efficiency or renewable-energy projects at Virginia schools**. Projects will be selected on a competitive basis through the Qualified School Construction Bond Program. (Virginia Governor's Office news release, 10/14/09)

Fishing and Fisheries

- August 20 was the effective date for a new State Water Control Board (SWCB) regulation that designates "**aquaculture enhancement zones**" on the Eastern Shore for waters that support or could support shellfish aquaculture. The regulation applicants for wastewater discharge permits in these water to evaluate alternatives to a wastewater discharge and to demonstrate that their proposed discharge is the alternative that produces the least environmental impact. (*Daily Press*, 10/8/09)

- On September 30, the Natural Resources Defense Council (NRDC) filed a petition with the U.S. Fish and Wildlife Service (FWS) **seeking to have the Atlantic Sturgeon placed on the federal Endangered Species List**. The NRDC petition asserts that fishing bans put in place by Atlantic Coast states in 1998 have not resulted in sustainable populations of the species, which still faces threats from water pollution, dams, ship strikes, and other factors. FWS has 90 days to respond to the petition. If it finds sufficient evidence in support of the petition, the agency may proceed with a 12-month study of whether or not to list the species. More information about the species, its population status along the Atlantic Coast, and previous actions related to Endangered Species Act listing is available at the National Marine Fisheries Service Web site at www.nmfs.noaa.gov/pr/pdfs/species/atlanticsturgeon_detailed.pdf. (*Virginian-Pilot*, 10/17/09)

- In mid-October, the Virginia Department of Health reported that unrestricted **shellfishing can continue on over 1400 acres in the Lynnhaven River** in Virginia Beach. Several months of water-quality testing indicated

that the area continues to be clean enough to allow shellfishing. This portion of the Lynnhaven was reopened for shellfishing in 2008 after having been closed for decades. (*Virginian-Pilot*, 10/17/09)

Groundwater

•In late August, the Exxon Corporation discovered that the **soil on a Great Falls gas station scheduled to be sold had been contaminated with methyl tertiary butyl ether (MTBE)**, formerly used as a gasoline additive. Exxon notified the Virginia DEQ on August 26, and the DEQ took charge of the response then. Exxon requested to test wells at 38 homes within one-half mile of the station, and eventually tested 16 wells, finding MTBE in four. (Perchlorate was found in one, but this is possibly a remnant of a contamination problem in the area in the 1990s that resulted in several residences connecting to public water). The levels of MTBE found are estimated to be well below the Virginia Health Department's advisory level of 20 parts per billion. One retest of the four wells found no MTBE contamination. As of mid-September, the station had not been confirmed as the source of the contamination, the DEQ planned to gather more data, and Exxon was providing bottled water to the homes where MTBE had been detected. (*Great Falls Connections*, 9/15/09)

•In early September, residents of the **Loudoun County community of Raspberry Falls** met with local and state officials to express concerns over two **high-bacteria events at one of the community's wells**. High bacteria readings caused temporary shutdowns of the well on September 2; a previous shutdown occurred in May 2009. Nearby streams typically have high bacterial readings after rains, but the Virginia Department of Health has determined that the wells are not under direct surface-water influence, a conclusion challenged by some residents. Loudoun Water, which runs the community water system, was considering three options for the problem well—drilling a replacement well, installing a sand-filtration system, or installing a membrane-filtration system. (*Loudoun Independent*, 9/4/09)

•Here's an update on the **former Hidden Lane landfill site in Loudoun County**, now a federal Superfund site: In 2008, the U.S. EPA added the former Hidden Lane landfill near the Broad Run Farms subdivision of Loudoun County to the National Priorities List under the Comprehensive Environmental Response, Compensation, and Liability Act, better known as the Superfund program. The listing was due to groundwater contamination by trichloroethylene (TCE) coming from the 35-acre landfill site. As of October 2009, the EPA was in a "remedial investigation" phase at this site, in which the agency investigates the source, movement, and source of the contamination. (*Loudoun Independent* seven-part series, 9/10/09-10/22/09, available online at www.loudouni.com/news/2009-09-07/hidden-truth-hidden-lane-part-i-dangerous-ground)

•On October 5, **Carroll County officials declared a local emergency** after discovering leaking or improperly sealed barrels of nitric acid and hydrochloric acid at a former business in the Lamsburg area. The business had used the acids to remove metals from computers. The U.S. EPA took over clean up of the site, which contained an estimated 300 containers of materials, and the agency began soil and water testing on October 6. Clean-up was expected to take about a week, by which time the EPA also expected to have results on whether soil or water had been contaminated. (*Galax Gazette*, 10/7/09)

Land Use

•Do you know what "RC&D" means? If you missed finding out during **September 21-27—"RC&D Week"**—let's fill you in now. **Resource Conservation and Development Councils** exist in 375 areas in the United States and its territories for the purpose of identifying and addressing various community challenges related to natural resource use. Local citizens serve on the councils, and typical partners in Virginia include soil and water conservation districts, the Virginia Department of Forestry, Virginia Cooperative Extension, localities, businesses, non-profit organizations, and planning district commissions. More information about the nine RC&D's in Virginia is available from the Virginia Association of Resource Conservation and Development Councils, online at <http://www.varcd.org>. (*Suffolk News-Herald*, 9/21/09)

•By April 2010, a Botetourt County couple plans to open the Breeden's Bottom Arcadia Campground that will be a **12-acre, primitive camping area for boaters and tubers on the James River**. The Breedens formerly managed a 300-head cattle herd on the property. The couple and county officials anticipate this site being part of an eventual Upper James River Blueway. (*Roanoke Times*, 9/10/09)



The James River at James River State Park (Nelson County), July 2009

- On September 24, the National Parks Conservation Association (NPCA) released “**Advancing the National Park Idea**,” a 46-page summary report on the status of the U.S. national parks system. Established in 1916, the system now has 391 units, 21,000 full-time employees, and 274 million people annually. NPCA commissioned a special 26-member panel to conduct the study over the past year. The summary report calls for expanding educational opportunities in the parks, increased local partnerships to assist conservation, and a “sweeping revitalization” of the National Park Service (NPS). The summary report and more-detailed committee reports are available online at www.npca.org/commission/. (*Land Letter*, 9/24/09)
- In October the Virginia Commonwealth Transportation Board awarded seven contracts, worth \$50.7 million and using funds provided by the 2009 federal stimulus act, to **repair or replace 119 structurally deficient bridges** in 41 localities. The funds are part of \$694.5 million in federal stimulus funds that Virginia intends to spend on highway projects. (Governor’s Office news release, 10/22/09)
- In November, the Fort Monroe Development Authority reported that it has asked Virginia officials to work **seek Congressional legislation designating parts of Fort Monroe in Hampton as a national park** after the U.S. Army leaves the base in 2011. The Army is working to on an estimated \$100-million clean-up of several contaminated areas on the 570-acre facility, including a former landfill, a former medical and dental clinic, and the moat surrounding the fort. (*Richmond Times-Dispatch*, 5/25 and 11/23/09)

Laws & Regulations

- “[T]he definition of waters protected by the [federal Clean Water Act] should be clear, understandable, well-supported, and transparent to the public.” That was an opinion expressed in the May 20, 2009, letter from the Obama Administration to U.S. Sen. Barbara Boxer (D.-Calif.), chair of the Senate Environment and Public Works (EPW) Committee, regarding **the Clean Water Restoration Act**, S. 787 (chief sponsor is Democratic Sen. Russell Feingold of Wisconsin). The bill, which passed the Senate EPW committee on June 18, would amend the Federal Water Pollution Control Act—the Clean Water Act (CWA)—to clarify the waters over which the CWA has jurisdiction. As of December 2, the bill had not progressed further in the Senate. (*National Wetlands Newsletter*, July-August 2009)
- In a long, investigative article published on September 12, **the New York Times examined the extent of Clean Water Act and Safe Drinking Water Act violations** and the level of enforcement by states and the U.S. EPA. The article reported that since 2004 over a half-million violations of the CWA were reported, with about 60 percent categorized as “significant non-compliance,” with a low percentage resulting in fines or punishment and with many enforcement cases taking years to resolve. In the article’s reporting of CWA enforcement rates by state from 2004 to 2007, Virginia’s had about 13 percent of its regulated facilities out of compliance at some time (a relatively low percentage compared to other states), and during that period enforcement actions were taken against 37 of the 148 violators (25 percent, a relatively high rate, compared to other states). This article is one of a series on water pollution; other segments covered atrazine (8/22/09), agricultural runoff (9/17/09), water impacts of

disposing of pollutants removed from power-plant air emissions (10/12/09), and wastewater-treatment system infrastructure. The series is available online at <http://projects.nytimes.com/toxic-waters>.

•On October 7, the U.S. EPA announced that the agency will begin in 2009 “a **comprehensive new evaluation of the pesticide atrazine** to determine its effects on humans. At the end of this process, the agency will decide whether to revise its current risk assessment of the pesticide and whether new restrictions are necessary to better protect public health.” Atrazine is a widely used herbicide. Besides reviewing the potential human health effects, EPA plans to ask the FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) Scientific Advisory Panel to review the chemical’s potential impacts on aquatic animals, such as fish and amphibians. EPA’s online information about atrazine is available at www.epa.gov/pesticides/reregistration/atrazine/atrazine_update.htm. (U.S. EPA news release, 10/7/09)

Mining

•Here are some development in regulation of **mountaintop-removal coal mining** (for a previous *Water Central* on mountaintop mining; Aug. 2009, p. 26).

••In the September 25 *Federal Register*, the U.S. EPA’s Science Advisory Board announced that an **ad hoc committee will be formed** to provide advice on an assessment of the water-resources impacts of mountaintop-removal/valley fills, a surface-mining technique widely used in Virginia and other Appalachian states for mining coal. Previously, EPA Region 3 had requested that EPA’s Office of Research and Development conduct a scientific assessment of the ecological impacts of mountaintop-removal mining and valley-fills. The assessment is to include impacts on headwater streams, downstream water-quality effects, resulting impacts on instream aquatic life, and cumulative ecological impacts. The assessment will also examine restoration methods used by mining operations. More information on the assessment is available from Edward Hanlon at (202) 343-9946 or hanlon.edward@epa.gov; the Science Advisory Board’s Web site is <http://yosemite.epa.gov/sab/sabpeople.nsf/WebCommittees/BOARD>. (U.S. EPA Science Advisory Board, 9/28/09)

••On October 15 at Mountain Empire Community College in Big Stone Gap, over 400 people attended a U.S. Army Corps of Engineers public hearing on the **Corps’ July 15 proposal to eliminate use of Nationwide Permit 21 for permitting discharges of mountaintop-removal mining materials** into stream channels (known as “valley fills”), and instead require mining operations to seek individual permits. According to the *Bristol Herald-Courier*, people spoke passionately about the economic importance of coal mining to southwestern Virginia, property rights, local decision-making, the impact of valley fills on local land and water, and the implications of the issue beyond southwest Virginia. The Corps also held five other public hearings between October 13-15, but this was the only one in Virginia. (*Bristol Herald Courier*, 10/16/09)

Oceans

•On September 17, the President’s Council on the Environment released for a 30-day public review the **interim report of the Interagency Ocean Policy Task Force**, created on June 12, 2009. The Task Force was charged with developing recommendations for a national policy for U.S. oceans, coasts, and the Great Lakes; a framework for improving Federal policy coordination; and an implementation strategy. Within 180 days, the Task Force is to have developed a “recommended framework for effective coastal and marine spatial planning,” according to this news release. The report is at www.whitehouse.gov/administration/eop/ceq/initiatives/oceans/interimreport/. (NOAA news release, 9/17/09. For a look back at the 2004 report of the Oceans Commission appointed by President George W. Bush, please see the August 2004 *Water Central*, p. 1.)

•On about September 26, a dead **Humpback Whale floated from the ocean into the Chesapeake Bay** and eventually settled at near the mouth of the Perrin River, a York River tributary near Gloucester Point. Dead whales land on beaches occasionally each year, but rarely do the carcasses cross the Bay and end up along small rivers. No state funds were available to move the whale, which according to nearby residents developed an unbearable odor. On September 30, however, a local marine-assistance company donated its services to tow the dead animal across the York River to an uninhabited cove, where the Virginia Aquarium will conduct a necropsy to try to determine what killed the whale. (*Virginian-Pilot*, 9/29 and 9/30/09)

Solid Waste Management

•Poplar Manor Enterprises of Floyd County, one of two Virginia businesses licensed by the Virginia DEQ for food composting, is working with several schools and colleges in southwestern Virginia to sort leftover food and other

compostable materials from lunchroom waste. At Christiansburg High School in Montgomery County, for example, over one ton of compostable materials were recovered in August. The other licensed food-composting business in Virginia, Royal Oak Farms of Bedford County, works with larger companies. (*Roanoke Times*, 9/15/09)

- On November 17, the board of the **Southeastern Public Service Authority voted to sell the authority's waste-to-energy facility and a sorting facility in Portsmouth** to a Wheelabrator, a subsidiary of Waste Management, Inc., for \$150 million and additional incentives. The money will help SPSA retire its current debt of \$240 million. SPSA provides solid waste services to Virginia Beach, Norfolk, Chesapeake, Portsmouth, Suffolk, Franklin, Isle of Wight County and Southampton County. Wheelabrator will provide waste disposal to a significant portion of the SPSA service area, with the rest of the area's solid waste going to private landfills in other areas. Approval from the U.S. Navy is also needed (the Norfolk Naval Shipyard uses steam generated by the Portsmouth facility). The SPSA board rejected two offers to purchase the entire assets of the authority. (*Virginian-Pilot*, 11/18/09. For a previous *Water Central* item on SPSA: June 2009, p. 29.)

- In September, the SPSA completed **closing and capping a 103-acre part of its regional landfill near the Great Dismal Swamp**. SPSA stopped accepting trash in this area in 2006, but the authority encountered a number of delays in doing the work to close the area and prepare it for the required 30 years of monitoring for any leaks of materials into groundwater. It received two violation notices from the Virginia DEQ due to the delays. SPSA has no plans to use the site for any new purpose. (*Virginian-Pilot*, 9/9/09)

Wastewater

- On September 4, Governor Kaine announced that \$13.9 million in **2009 federal stimulus funds are available for additional wastewater projects** in six localities (Tazewell County, Wise County, Lexington, Norton, Pulaski, and Richlands). The funds result from lower-than-expected bids from some of the 32 Virginia projects initially designated in April to receive \$76.9 million in federal stimulus funds. (Virginia Governor's Office news release, 9/4/09)

- About 80 local, state, and federal officials, citizens, and land developers met in September to discuss **long-standing wastewater issues on Virginia's Eastern Shore**. State Delegate Lynwood Lewis (D-100th) organized the meeting. Four Shore towns, a NASA facility, and a hospital have centralized wastewater systems, while some smaller towns have decentralized systems. Failing septic systems, Chesapeake Bay-related nutrient requirements, inadequate capacity for growth, lack of an overall plan for the area, and costs of options are key issues facing Shore towns and its two counties, Accomack and Northampton. In a related matter, on September 21 Virginia Secretary of Natural Resources Preston Bryant encouraged officials of the Eastern Shore localities of Cape Charles, Cheriton, and Northampton County to collaborate to support a new wastewater-treatment system in Cape Charles, as opposed to Cape Charles accepting a public-private partnership proposal submitted in 2008 by Webtide, a private investor group. The secretary asserted that Cape Charles could lose \$4.4 million in federal stimulus funds if the town changes its current treatment-plant expansion plan and accepts the private-investor proposal. (*Eastern Shore News*, 9/15 and 9/26/09. For a previous *Water Central* item on wastewater issues at some Eastern Shore localities: Sept. 2007, p. 18.)

Also on the Eastern Shore: In November, **South Port Investors sued the Town of Cape Charles** over the town's plan to build a new wastewater-treatment plant on land leased to South Port. The investment company claims that lease agreements it signed with the town in 2007 allow only expansion of the existing plant, not a new plant. State regulations are requiring that the town replace its existing plant by 2011. (*Eastern Shore News*, 11/12/09)

- In a settlement agreement filed September 29 in U.S. District Court in Norfolk, the **Hampton Roads Sanitation District will pay a \$900,000 civil penalty for over 300 wastewater overflows** since 2003. Virginia and the U.S. Justice Department had filed a joint complaint in federal court over the HRSD overflows. The settlement also calls for HRSD to collaborate with municipalities to develop and implement a regional plan for preventing wastewater overflows due to severe storms. HRSD has 1.6 million customers in 17 Virginia localities. (*Virginian-Pilot*, 9/30/09)

- On October 19, **Tazewell County broke ground on a \$10.2-million sewer-line extension** to provide 711 connections in the Baptist Valley and Adria parts of the county. Construction is expected to be completed in spring 2011. Major sources of money project are \$4.6 million from the Virginia Clean Water Revolving Loan Fund, \$4 million from 2009 federal stimulus funds, \$927,000 from Southern Rivers Watershed Enhancement Program of

the Virginia Department of Housing and Community Development, and \$450,000 from the county. (*Bluefield Daily Telegraph*, 10/21/09)

•**Isle of Wight County intends to bill International Paper Company** for what the county contends is the company's **unauthorized wastewater discharge** of millions of gallons per day for an as yet undetermined period. The City of Franklin, whose treatment plant receives the wastewater from the county, has for several years disputed the volume of wastewater coming from county, and in 2008 the county hired a consultant to investigate the discrepancy. International Paper said in 2008 that a cooling tower had been discharging 1.5 MGD of wastewater but contended that flow was rerouted. As of late October, the county was reviewing records and agreements with the company to determine how much it intends to bill the company. (*Daily Press*, 10/30/09)

Water Supply and Conservation

•In October, the town council of **Woodstock** (Shenandoah County) gave the town manager approval to enter into an agreement with the Virginia DEQ) to build a **water line to serve town businesses whose wells have been contaminated by petroleum products**. The project is to be funded by the DEQ from 2009 federal stimulus funds and from money set aside by the petroleum industry for such situations. No cost estimates have been made yet for the new line, which the Town will own. (*NV Daily*, 10/12/09)

•As of late October, construction was in progress on a **new water line to the Grit area of Pittsylvania County**. The Virginia DEQ is providing about \$700,000 for a 7,400-foot line to serve primarily 34 homes whose wells were contaminated by an underground storage tank leak, along with an many as 90 additional homes. On October 5, the Pittsylvania County Board of Supervisors voted to provide \$118,919 for an 2,500-foot extension of the DEQ-funded line in order to serve an additional 30-40 residences. (*Altavista Journal*, 10/7/09)

Wetlands

•In September, the Nature Conservancy announced that it had received a **federal grant of \$919,774 to protect bird habitat on Virginia's Eastern Shore**. The funds come from the North American Wetlands Conservation Act, and matching funds of over \$2.4 million will be provided by the Nature Conservancy, the Virginia Eastern Shore Land Trust, the Eastern Shore Soil and Water Conservation District, and the Virginia Department of Game and Inland Fisheries. The money will be used to preserve 772 acres of habitat and restore 423 acres, adding to over 10,000 acres already conserved through the efforts of the Southern Tip Ecological Partnership. The Delmarva Peninsula—particularly its southern end, or the “southern tip”—is an important area along the migratory route of many bird species. (*Eastern Shore News*, 9/16/09)



A bird-watching platform, part of the Coastal Virginia Wildlife Observatory in Kiptopeke State Park (Northampton County), October 2007.

Out of Virginia

Chesapeake Bay States

•In October, the Maryland Department of Natural Resources conducted its third year of crayfish sampling, particularly **seeking to monitor the spread of the non-native invasive Rusty Crayfish**, which was found in 2007 and 2008 in a Maryland stream within the Potomac River watershed. The Rusty Crayfish, a native species in the Ohio River basin, was found in Pennsylvania over 10 years ago. Disposal of live Rusty Crayfish that had been purchased for bait is thought to be a key means of introducing the species to a new area. Once it becomes established in a new watershed, its larger size and more aggressive behavior compared to other crayfish species make it a threat to displace native species. In the middle and upper Potomac basins and in the Susquehanna basin, Maryland allows possession of Rusty Crayfish only if the head has been removed. In Virginia, a special permit is required to possess or sell Rusty Crayfish, according to Virginia's Nongame Fish, Reptile, Amphibian,

and Invertebrate Regulations (online at www.dgif.virginia.gov/fishing/regulations/nongame.asp). (*Carroll County Times*, 10/13/09)

- In October and November, at least two news media in Maine were reporting about concerns among that state's recreational Striped Bass industry over a proposal to allow **commercial Striped Bass fishing operations** to carry over their catch quota from one year to the next. The proposed rule change was to be considered by the Atlantic States Marine Fishery Commission (ASMFC) on November 2; the Commission also was scheduled at that meeting to review a new report on the population status of Striped Bass. Anglers and regulators in Maine have expressed concern over commercial catches in the Chesapeake Bay, the main spawning area for the species. For example, in the 11/15/09 *Maine Morning Sentinel*, George Lapointe, commissioner of Maine's Department of Marine Resources, said "That's the generator of our striped bass. That's where they go to spawn and that's where they grow up. So if the Chesapeake Bay suffers, we suffer too." Maine is one of several ASMFC states that do not allow commercial Striped Bass fishing; Virginia does allow it, as regulated by the Virginia Marine Resources Commission.

Meanwhile, on October 19 the Maryland Department of Natural Resources reported that its **annual survey of juvenile Striped Bass** found that the population increased over the 2008 level but was below the long-term average of surveys conducted since 1957. In 2009, the Striped Bass index (the average number caught per net in the survey) was 7.9, compared to 3.2 in 2008 and the long-term average of 11.7. A more complete stock assessment, including both adult and juvenile Striped Bass populations, will be reported later in 2009.

And in one other Striped Bass development, in November **Maryland released proposed regulations on recreational Striped Bass fishing** in March and April. The regulations, which will be available for public comment until January 4, 2010, would restrict the number of fishing days, the type of gear allowed, and the use of bait (*Baltimore Sun*, 11/17/09; *Annapolis Capital*, 10/21/09; *Maine Morning Sentinel*, 10/20 and 11/15/09; and Maine Public Broadcasting Network, 10/21/09)

- **Maryland's Chesapeake Nitrogen Reduction Act of 2009** took effect on October 1, 2009. The law requires nitrogen-removal technology when homeowners install or replace septic systems in Maryland's "critical areas" (land within 1000 feet of the Chesapeake Bay or its tidal tributaries). Funds to help homeowners with the cost difference between a conventional system and a nitrogen-removal system are to be taken from the state's Bay Restoration Fund (the so-called "flush tax" fund)—into which 420,000 septic system owners pay \$30 each per year—as long as funds are available. Violators of the new law could face a fine of up to \$1000 per day. (*Southern Maryland Online*, 9/12/09)

- On November 12, the U.S. EPA announced that it had cited the city of Baltimore, Anne Arundel County in Maryland, and 12 municipalities in Pennsylvania for **violations in their municipal separate storm sewer (MS4) programs**. The two Maryland localities and seven of the Pennsylvania localities are in the Chesapeake Bay watershed. The EPA ordered the municipalities to take actions to come into compliance with state-issued stormwater permits. (U.S. EPA news release, 11/12/09)

- Here are some recent developments related to **potential water impacts of natural gas drilling in the Marcellus shale formation** in parts of Maryland, New York, Ohio, Pennsylvania, and West Virginia (for a previous *Water Central* item on Marcellus developments, please see the August 2009 issue, p. 30).

- So far **\$5 to \$6 billion has been spent to develop the Marcellus formation in Pennsylvania**, but an estimated \$55 billion total will be needed. That was the assessment by Penn State University Cooperative Extension educator Tom Murphy, a member of Penn State's Marcellus Education Team, at a September 28 meeting of about 200 people on the potential environmental impacts of natural gas drilling in the Marcellus shale formation. Another assessment of the impact that natural gas drilling may have on Marcellus shale states comes from the following quote from Jennifer Porter, of the Wayne County, Penn., group Workforce Wayne: "We are just at the start of a major transformation in terms of workforce and how our community looks and functions, because this is an industry that's planning to be here for the next 35 to 50 years." (*Wayne Independent*, 9/29/09; and *Williamsport Sun-Gazette*, 9/29/09)

- **Discharges of treated wastewater from gas-drilling operations** have been an issue in Pennsylvania, as one of the direct water-resources considerations of the Marcellus shale gas-drilling phenomenon. In October the Pennsylvania Department of Environmental Protection (DEP) was considering several permit requests for drilling-wastewater discharges, including discharge of 400,000 gallons per day into the West Branch of the Susquehanna River near Williamsport; a request to discharge 380,000 gallons per day into Messhopen Creek, a Susquehanna River tributary in Wyoming County; and a request to discharge 500,000 gallons per day into the

Susquehanna River in Wyoming County. According to the DEP, the number of permits issued for gas drilling in the Marcellus shale tripled in 2009 over 2008. (*Williamsport Sun-Gazette*, 10/1/09; WNEP Television, 10/21/09; *Wilkes-Barre Times Leader*, 10/21/09; and *Centre Daily Times*, 11/9/09)

- Pennsylvania's League of Women Voters chapter has an initiative** to research and discuss the various issues related to use of Marcellus shale natural gas. The state chapter has compiled information from various perspectives on the issue at <http://palwy.org/issues/MarcellusShale/index.html>. (*Centre Daily Times*, 11/9/09)

- On September 30, New York State released for public review a **new set of regulations for natural gas drilling in New York's portion of the Marcellus shale formation** (the formation underlies approximately the southern half of the state). The state's Department of Environmental Conservation has been developing the proposed rules for about a year. The proposal includes requirements that drilling companies disclose the materials in its hydraulic fracturing fluid; test private water wells within 1000 feet of a drilling site prior to beginning drilling; and prepare plans for reducing the impacts of carbon emissions, noise, and traffic. (Associated Press, 9/30/09)

- The Susquehanna River Basin Commission is proposing to install a **network of 30 water-quality monitoring stations** on small waterways in northern Pennsylvania and southern New York to monitor impacts from natural-gas operations in the Marcellus shale formation area. (*Harrisburg Patriot-News*, 11/11/09)

- In November, in a bill providing funding for federal environmental agencies in Fiscal Year 2010, Congress called for the U.S. EPA to conduct a **scientific, peer-reviewed study of the effects on drinking water of the natural gas-recovery technique of hydraulic-fracturing**, commonly used in the Marcellus formation area. The technique, which has been used for several decades, involves injecting a mix of water and chemicals underground to displace natural gas from rock. (*Land Letter*, 11/5/09)

Elsewhere

- In September, **METRIC, a satellite-based water-measurement tool that is being used by some western states to determine water use for agricultural irrigation**, received one of six nationwide Innovations in American Government awards (out of 700 entries) from Harvard University's Kennedy School of Government. METRIC stands for "Mapping EvapoTranspiration with High Resolution and Internalized Calibration. More simply put, it's a computer program that uses satellite images to determine how much water is evaporating from a particular land parcel. Such measurements can help indicate how much water has been used for irrigation, a key piece of information in water-short western states where irrigation can constitute a high percentage of water consumption and where several interstate water disputes are taking place. (*Land Letter*, 09/17/09)

- While Virginians are considering a proposal for uranium mining in Pittsylvania County (previous Water Central: June 2009, p. 28), **uranium mining is an issue in other states as well**. As of September 2009, the Nuclear Regulatory Commission (NRC) had eight pending applications for uranium mines (new, restarted, or expanded) and expected to receive 18 additional applications by 2012. Federal data indicate that the United States has about one billion pounds of uranium reserves, much of it in southwestern states. Developments in Arizona illustrate some of the debate over the use of these reserves. An area in Arizona north of the Grand Canyon may have as much as half of the country's known reserves, but in July U.S. Secretary of the Interior Ken Salazar imposed a two-year moratorium on new uranium mining projects near the Grand Canyon to allow time for study of potential impacts on water and land resources in Grand Canyon National Park. Some American Indian tribes in Arizona are taking various actions to oppose uranium mining on their lands, a reaction to negative impacts of a large number of abandoned mine sites that have led to groundwater contamination. But the Toronto-based Denison Mining Corporation, which is seeking to open a mine in northern Arizona, asserts that new technologies and regulations are in place to prevent the contamination problems that occurred in the past. (*Land Letter*, 9/24/09)

- "When the Klamath dams come down, it will be the biggest dam removal project the world has ever seen." That's the assessment of Steve Robert, California director for the non-profit organization American Rivers, of the possible **removal of four PacifiCorp hydroelectric dams on the Klamath River between California and Oregon**. Removing the dams would help restore salmon and steelhead trout whose migratory runs have been partially blocked by the dams since 1908. In late September, 29 parties agreed to support the removal, which has been the subject of contentious debate for several years. The agreement still needs approval by state agencies in California and Oregon by the U.S. Interior Department, to be followed by transfer of the dams from PacifiCorps to the federal government. (*Land Letter*, 10/1/09)

Final Words

•Here are two comments on the degree to which **long-term storage of spent nuclear fuel** is an obstacle to the future of nuclear energy use in the United States. The country lacks a central depository for such fuel, despite law that called for the federal government to provide such a facility by 1998. For years, a facility was envisioned at Yucca Mountain in Nevada (some \$13 billion has been spent on the site), but the site has proved too controversial and the Obama administration stopped work on the site this year. Currently an estimated 60,000 metric tons of spent fuel are at various storage sites, and plants produce about 2000 metric tons more annually.

“Whether or not you build new nuclear plants in this country will be determined by traditional business factors. We have to have a plan to deal with spent fuel, but we do not see it as an impediment.” –Steven Kraft, senior director for used fuel management for the Nuclear Energy Institute.

“The constipation of the nuclear fuel cycle—our inability to develop a plan to deal with the waste—effectively puts a hold on any kind of significant redevelopment of nuclear power in this country.” –Donald Hudson, member of a community advisory committee for the former Maine Yankee nuclear power plant in Wiscasset, Maine (the plant was shut down in 2005 and its spent fuel remains onsite). (Both quotes from *Christian Science Monitor Weekly Edition*, 9/13/09)

•“A **clean [Chesapeake] Bay** will have water that everybody can swim in, anywhere in the bay, without any threat of getting sick; where anybody can fish in and be confident that they can bring up crabs and oysters and fish, that they can be confident are not diseased.”—Tommy Landers, of Environment Maryland, in an article on people’s conception of what would be a clean or restored Chesapeake Bay. (*Annapolis Capital*, 9/27/09)

•“There’s not a day I wake up and dread going to work.” Jeff Lill, captain of the M/V John C. Widener, speaking about the Widener’s annual spring and summer work of **replacing 600 Chesapeake Bay buoys** from Anne Arundel County to Calvert County, Maryland, along with ice-breaking duties during the winter. (Associated Press, as published in *Washington Examiner*, 9/7/09)