

General Assembly will consider fate of cleanup trust funds

by Jeri Gray

In the 2004 appropriations act, the N.C. General Assembly increased the amount of gasoline taxes diverted from the Highway Fund and Highway Trust Fund to two funds that pay for cleanup of contamination from leaking underground storage tanks and provide financial assurance for owners and operators of commercial underground storage tanks (USTs). The increase is limited to one year and is expected to amount to a one-time infusion of \$32 million for the N.C. Commercial and Noncommercial Leaking Petroleum Underground Storage Tanks Trust Funds. The extra funding will allow the State to pay off most of a \$38 million backlog of claims for cleanup work against the funds. It will also assure—at least for a time—that businesses that own and operate USTs can continue to rely on the commercial fund to fulfill their financial responsibility obligations under federal law.

Provision of extra money for the leaking underground storage tank (LUST) trust funds is the latest in a long string of efforts—including increasing tax revenue to the fund and relaxing cleanup standards—to shore up a program that has been in financial trouble almost since its beginning (see History of the Funds, page 6). The General Assembly has signaled that its patience with the demands of this program is wearing thin. The appropriations act directs the Environmental Review Commission and the Joint Legislative Transportation Oversight Committee to jointly study the desirability and feasibility of altering or eliminating the role of the State in providing funding for cleanup of contamination from leaking

petroleum tanks and in assisting owners and operators of USTs in meeting federal financial responsibility requirements. The joint study is to be presented to the General Assembly no later than January 31, 2005.

Background

This year marks the 20th anniversary of the federal Underground Storage Tank Program established by Title 1 of the Resource Conservation and Recovery Act (RCRA). Under the 1984 RCRA amendments, the U.S. EPA was required to develop a comprehensive regulatory program aimed at preventing leaks from underground tanks used to store petro-

leum or certain hazardous substances. In 1986, RCRA was again amended to require that owners and operators of underground storage tanks (USTs) demonstrate that they have the financial resources (\$1 million to \$2 million depending upon the number of tanks) to clean up contamination if a leak occurs. Since most USTs were owned and/or operated by small gas stations and convenience stores, and private insurance for pollution liability was nonexistent or enormously expensive, the financial responsibility requirements were seen as threatening the existence of these small businesses. Therefore, Congress also passed legislation that allowed

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Director's Forum

Reflections...and Thoughts on the Future

Kenneth H. Reckhow, Director, Water Resources Research Institute

As I leave WRRRI after 8½ years, I want to share some recollections and offer some thoughts on current/future water issues in North Carolina. I was fortunate that my predecessors at WRRRI, notably, David Howells and David Moreau, established a Water Resources Research Institute in North Carolina that was recognized as one of four (out of 54) exemplary water research institutes in the United States. This accomplishment was facilitated by the leadership of these former directors, plus a dedicated WRRRI staff. The stature of the UNC WRRRI also is directly linked to the outstanding scientists we have in North Carolina universities; in my years at WRRRI, I have had the privilege to work with some of the finest water scientists and engineers in the country.

Yet the contribution of North Carolina to water resources science and practice goes beyond the university community. Notably, the North Carolina Department of Environment and Natural Resources (DENR) has achieved some significant accomplishments. Water quality assessment and planning using a rotating basin concept, application of stream biocriteria, and nutrient trading are among North Carolina's contributions. As a consequence of these innovations, meaningful science/policy interactions with state water scientists provided rewarding experiences for many of us at WRRRI and at the universities.

Thus, I depart WRRRI with confidence that the scientific and engineering expertise exists to address future challenges. I have mentioned some of these challenges in past columns in

the WRRRI News:

- Sediment and erosion control
 - Our rivers and reservoirs continue to fill with sediment following heavy rains. Soil is lost, the turbidity standard is violated, and aquatic biota are damaged. We have the technology to improve this situation (and new technology continues to be developed), but governing bodies at the state level

have consistently failed to provide the necessary resources.

- Water supply – Suitable long-range planning and development for adequate surface and ground-water supplies is necessary to support the growth expected in North Carolina.
- Sustainable environmental protection – Human activity, growth,

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and development will strain our ability to maintain (let alone, improve) environmental quality. Can we develop, and implement in a timely manner, the technologies and land/water management strategies that will bring improvement where needed, even while growth increases environmental stressors?

- ❑ Pharmaceuticals in natural waterbodies – We are only beginning to recognize the extent of contamination of surface and groundwaters as a consequence of the variety of medicinal products used by humans and in livestock operations. What are the long-term implications of exposure to aquatic ecosystems?
- ❑ Nonpoint source pollution – Technologies and regulatory mechanisms for point sources and urban stormwater are increasingly providing opportunities for effective control. However, rural nonpoint source runoff is difficult to identify, control, and regulate. Broad-scale approaches such as riparian buffers can be effective for control of a variety of contaminants, but alternative pathways (e.g., atmospheric deposition) and by-pass mechanisms (e.g., drainage canals) suggest the need for more effective source regulation and control.

I believe that we have the technical ability to address these (and other) issues; however, do we have the awareness of their seriousness, and the will to implement effective corrective actions in a timely manner?

Season of Change at WRRI

WRRI has been experiencing a season of change...



Kenneth H. Reckhow, finished his 8.5 years of service as WRRI Director on July 31, 2004. Ken is now full-time as professor and chair of the Department of Environmental Sciences and Policy in the Nicholas School of the Environment, Duke University. You may view his accomplishments as WRRI Director in the March/April 2004 issue of *WRRI NEWS*. We thank Ken for all the work he has done for WRRI. We wish him the best in his role at Duke University.

Julie Mason, who served WRRI as the Program Coordinator for five years, is now the Contracts and Grant Specialist for the College of Natural Resources at NC State University. Julie handled grants and proposals for WRRI and coordinated logistics for the WRRI Annual Conference, seminars and workshops. In 2003, she received a Research and Graduate Studies Unit Award for Excellence given by NC State University to employees who go above the call of duty. We thank Julie for giving 110 percent serving WRRI with an upbeat attitude and smiling face. We wish her the best in her new position.



Greg Jennings, who has served as Associate Director for the past two years, is now serving as the Interim Director of WRRI. Since 1990, Greg has also served as a professor and extension specialist in the Department of Biological and Agricultural Engineering at NC State University. Since Greg has been here, WRRI has benefited from the network of water resources researchers he has brought in as speakers to our workshops, seminars and conferences. More information is available on Greg in the September/October 2002 issue of *WRRI NEWS*.

July action of the N.C. Environmental Management Commission

The N.C. Environmental Management Commission (EMC) did not meet in August. At its regular meeting on July 8, 2004, the EMC took the following action:

- ❑ Approved holding a public hearing on adoption of emissions standards for heavy duty diesel engines for model year 2008 and beyond. The proposed rule is considered a precaution since there is some indication that EPA is considering weakening current standards, which would be a step backward for the State. Chairman David Moreau noted that diesels are a big source of nitrogen oxides and that it will be difficult to meet NOx maintenance without improvement in diesel emissions.
- ❑ Approved changes in several air quality rules in response to objections by the Rules Review Commission.
- ❑ Approved a State Revolving Fund loan for \$667,000 to the town of Beaufort for sewer rehabilitation to correct overflows.
- ❑ On recommendation of the Water Quality Committee, denied a petition for rulemaking to apply the Trout Water classification to an 11-mile section of the Catawba River near Morganton known as the Bridgewater Dam Tailwater. However, the Commission instructed staff to bring the issue back with more information in 2005. (See Water Quality Committee report for details.)
- ❑ Approved holding public hearings on proposed water quality standards for *Enterococcus* for coastal waters. (See Water Quality Committee report for details.)
- ❑ Approved reclassification to Trout Waters of a section of Richland Creek in Haywood County.
- ❑ Approved a local sewer permitting program for the City of Monroe.
- ❑ Approved reappointment of Greg Young, Town Manager of Boone, and Chester Lowder, representing the animal industry, to the Water Pollution Control System Operators Certification Commission. Approved appointment of Arthur Mouberry, Chief of the Groundwater Section of DWQ, as chairman of the commission.
- ❑ Heard from Vice Chairman Charles Peterson that on September 9, the EMC will meet in the morning with the Coastal Resources Commission and the Marine Fisheries Commission to review and discuss the Coastal Habitat Protection Plans. The regular EMC meeting will start in the afternoon of September 9.
- ❑ Heard from Chairman David Moreau that the commission's steering committee would be discussing reorganization of the Division of Water Quality that could result in consolidation of the EMC's Water Quality Committee and Groundwater Committee.
- ❑ Heard from the NPDES Committee that permit renewals setting lower limits for chloride for Mount Olive Pickle Company, Inc. and the Dean Pickle and Specialty Products Company will go to public hearing. Both companies have variances that allow chloride concentrations in discharges above the state standard. There is concern about the effect that lower discharge limits may have on the companies' operations. Once the permits have been noticed, the general public will have 30 days to comment on the proposed permit renewals. Check the NPDES unit web site for notices: <http://h20.enr.state.nc.us/NPDES/>
- ❑ Heard from Air Quality Committee chair Marion Deerhake that letters of objection and other actions by opponents had led the Rules Review Commission (RRC) to rescind three of the package of four rules adopted by the EMC to control hydrogen sulfide. The RRC had asked the EMC if they wanted the fourth rule (after some changes) to go forward. The EMC decided that the rules were a package and should move together. At that point it appeared that only a rule changing the Acceptable Ambient Level (AAL) for hydrogen sulfide would take effect.
- ❑ Heard from DENR Assistant Secretary Robin Smith about legislation to implement the NPDES Phase II stormwater program. (See article on page 14.)
- ❑ Heard from EMC counsel Frank Crawley that the Court of Appeals had upheld the 401 Water Quality Certification for the Randleman Dam and that the petitioner had until August to take the case to the State Supreme Court. **JG**

Cape Fear River Assembly 31st Annual Meeting

On April 29 and 30, 2004, the Cape Fear River Assembly (CFRA) convened for its 31st annual meeting in Fort Fisher, NC. Total Maximum Daily Loads (TMDL) was the topic of discussion from various perspectives which included the EPA, NC Division of Water Quality, Ecosystem Enhancement Program, and the Upper, Middle, and Lower Basin Associations of the Cape Fear River.

Since 1973, the Cape Fear River Assembly has been a basinwide forum where people from different perspectives can discuss competing and/or complementary use of the Cape Fear River. The annual meetings have produced ideas that have benefited people living within the basin. The Cape Fear River Basin is the largest river basin in North Carolina with more than two million residents residing within it. More information about the CFRA is available at <http://www.cfra-nc.org>

July action of the EMC's Water Quality Committee

At its regular meeting on July 7, 2004, the EMC's Water Quality Committee took the following action:

- Approved sending to the EMC the following day a proposed water quality standard for *Enterococcus* for coastal waters. The Beaches Environmental Assessment and Coastal Health Act (BEACH) of 2000 required development of an *Enterococcus* standard for marine waters and required that coastal and Great Lakes states adopt EPA's published indicators for pathogens with criteria as protective as those published by EPA. Because EPA had not published guidance, North Carolina and other states in EPA region 4 had not adopted a standard as required; nevertheless, EPA had threatened to promulgate a standard for NC. According to Tom Reeder, Supervisor of the Division of Water Quality's Standards and Classifications Unit, EPA had originally said it would promulgate standards for states out of compliance in 2005, but on the morning of the committee meeting, the agency had sent guidance and said it would begin promulgation of a standard for North Carolina. The Division of Water Quality proposed an *Enterococcus* standard to halt promulgation of a federal standard and avoid having to accept EPA language. *Enterococcus* is a superior indicator of viruses and other pathogens that can cause human illness, and the requirement for use of *Enterococcus* is aimed at assuring the safety of recreational waters. Once adopted, the *Enterococcus* standard will apply to "SC" (salt waters) and "SB" (salt waters designated for recreation), but the fecal coliform standard will continue to be used for "SA" (shellfishing waters) because the division of shellfish sanitation uses the fecal coliform standard. The proposed *Enterococcus* standard will be subject to public hearings at some time in the future when consistency with a federal standard can be assured.
- Approved the annual report on the Coastal Habitat Protection Plan that will be presented to the General Assembly. A draft plan is to be presented to the Marine Fisheries, Environmental Management and Coastal Resources commissions for their consideration in September 2004. A plan is to be adopted by December 21, 2004, and implementation plans are to be developed by July 1, 2005. For information on the plan check the Division of Marine Fisheries website at <http://www.ncdmf.net/habitat/index.html>.
- Voted to recommend that the full EMC deny a petition for rulemaking to reclassify a portion of the Catawba River (an 11-mile section near Morganton) to Trout Waters but revisit the petition after release of a draft management agreement under Federal Energy Regulatory Commission (FERC) relicensing for hydroelectric dams in the Catawba basin. The Southern Environmental Law Center (SELC) filed the petition on behalf of Trout Unlimited, American Rivers, and the Catawba Riverkeeper Foundation. Release of cold water from the bottom of Bridgewater Dam has created trout habitat that supports reproducing populations of both brown and rainbow trout. According to SELC, the Wildlife Resources Commission says that the area has the potential to become a trophy fishing stream, and the Town of Morganton is promoting it as a recreational fishing destination. The area is also under study by an interagency/stakeholder group as part of FERC relicensing of hydroelectric projects on the Catawba River. Staff of DWQ and a representative of Duke Power Company told the committee that a management agreement being developed will protect existing uses of streams and lakes in the basin.
- Heard an update on benthic criteria for swamp streams. Trish MacPherson, Supervisor of DWQ's Biological Assessment Unit, described development of swamp stream benthic sampling methods and criteria for benthic samples from Coastal Plain streams that stop flowing during summer or fall. MacPherson said that there is much variation in swamp streams and that her unit has developed criteria for 5 swamp ecoregions that DWQ is now using to determine use support for swamp streams.
- Heard an update on a bill that would provide for additional study of how best to protect water quality and endangered species in the eastern portion of Swift Creek in the Tar-Pamlico River Basin. The bill would have appropriated \$5,000 for studies of freshwater mussels and biological water quality in Swift Creek in Nash and Edgecombe counties. [The bill did not pass.]
- Heard an update on development of nutrient allocation scenarios for phosphorus and nitrogen reduction to Jordan Lake. Lin Xu of the Nonpoint Source Planning Unit told the committee that the stakeholder group wants controls to apply to both point sources and nonpoint sources. Updates on the Jordan Lake stakeholder process and nutrient response model can be found at <http://h2o.enr.state.nc.us/tmdl/SpecialStudies.htm#Jordan>.
- Heard from EMC Counsel Frank Crawley that a settlement has been mandated in the legal challenge to the buffer variance granted to Piedmont Triad Airport and that someone must represent the EMC in settlement negotiations. The committee authorized DWQ to appoint a staff member to represent the EMC. **JG**

Cleanup trust funds *continued from page 1*

states to set up funds to help tank owners with cleanup costs and financial responsibility requirements.

Over the next few years, states came under intense pressure from retail commercial tank owners—principally owners of service stations and convenience stores—to set up such funds, and almost every state did, using a combination of fees paid by tank owners and public taxes (usually on motor fuels).

At the inception of the UST program tank owners were required to register tanks. At that time there were more than 2 million regulated tanks nationwide. Since then, about 1.5 million tanks have been permanently closed, leaving about 693,000 tanks subject to requirements of the UST program. Since the beginning of the program, about 427,000 incidents of contamination from petroleum releases have been reported nationwide with 67% of them cleaned up. According to the Association of State and Territorial Solid Waste Management Officials, as of 2002, state funds had paid out nearly \$10 billion for cleanups.

N.C. LUST funds status

At the end of the 2003 fiscal year, 18,858 incidents of releases from USTs had been reported in North Carolina; 9,236 contaminated sites had been closed (about half of the total reported); more than \$415 million had been expended from the state's two LUST funds; pending claims against both funds exceeded \$36 million; and the balance in each fund was about \$1 million. Those figures indicate that for every site closed in North Carolina about \$50,000 in claims has been filed, and that if past costs were a guide, it could require another \$450 million to close out the remaining sites already reported. With about 900 new releases being reported each year and an unknown number of abandoned tanks to be discovered and assessed, demand for cleanup money could remain high for decades. In addition, several pending third-party lawsuits could place heavy demands on the funds.

According to Grover Nicholson, Chief of the UST Section in the N.C. Division of Waste Management, throughout most of the life of the two funds, there was no front-end control of costs, and tank owners contracted with cleanup companies for "Cadillac" cleanups when in many cases "Yugo" cleanups would have been sufficient.

"If a half-million dollar cleanup can be his for \$20,000 [the usual deductible under the commercial fund rules], a tank owner has no incentive to look for a less expensive cleanup," says Nicholson. He adds that as lending institutions and the general public have become more aware of the liabilities associated with contaminated properties, the incentive to get sites super clean has strengthened.

As the drain on the state commercial LUST fund became evident, lawmakers and regulators instituted Risk-Based Corrective Action (RBCA), which customizes cleanups based on the degree of risk to human and environmental health, and Pay-for-Performance cleanups, in which companies agree to accomplish specified cleanup levels at a set cost and on a specified time-frame. RBCA has allowed the state to close out a significant number of sites with little or no remediation (55% of all contaminated sites closed out have been completed since RBCA was adopted in 1995), but few tank owners have opted for the voluntary Pay-for-Performance contracts, and claims have continued to flow in, along with complaints about delays in reimbursement.

After an expedited claims review process was put into place in 2001, the backlog of claims that had been reviewed but could not be paid because of insufficient funds in the commercial fund ballooned. At the same time, the noncommercial fund, which had been able to pay all its claims to that point, began to see claims exceed revenue and the fund balance shrink. In 2003, the General Assembly mandated that cleanup costs be pre-approved by DENR as a way to

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History of the N.C. Leaking Petroleum Underground Storage Tanks Trust Funds

1988-1992

1988 General Assembly passed H 1304 establishing two funds (Commercial and Noncommercial) for reimbursing eligible UST owners, operators and landowners for costs of cleanup and third party liability claims. Required tank owners to pay tank operating fees of \$30 for tanks of 3,500 gallons or less and \$50 for larger tanks and directed tank fees to the commercial fund. Required tank owners to demonstrate financial responsibility of \$100,000.

1989 General Assembly passed H 957 applying one-half cent of the kerosene and motor fuel inspection tax to the tank funds, raising tank fees to \$45 and \$75, setting deductibles at \$50,000 for cleanup and \$100,000 for third party damages and requiring demonstration of financial responsibility for those amounts.

1991 General Assembly passed H 1222 raising tank operating fees to \$100 and \$150, establishing the N.C. Petroleum Underground Storage Tank Funds Council, establishing the Groundwater Protection Loan Fund to help tank owners upgrade tanks, and applying one-half cent per gallon of the gasoline excise tax to the three funds.

1992 General Assembly passed S 1169 that gave landowners not responsible for tanks access to the commercial fund.

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Cleanup trust funds *continued*

finally eliminate unnecessarily expensive cleanups. With claims against both the commercial and noncommercial funds exceeding fund balances by about \$32 million at the end of fiscal 2003, the General Assembly again took action. In addition to providing extra money to pay off the backlog of claims in the 2004 appropriations act, the legislature prohibited DENR from pre-approving cleanup costs unless there will be enough money in the funds to pay the costs within 90 days of the time a claim is approved (except in the case of emergencies or if the owner agrees to wait for payment). This so-called “check-book” policy is aimed at preventing another backlog of claims.

However, the latest legislation raises troubling questions: Tank and property owners have not been relieved of the responsibility for cleaning up contaminated sites and meeting financial responsibility requirements. But, with reimbursement uncertain, will tank owners refuse to initiate cleanup? Will new contamination go unreported? If the state commercial LUST fund cannot assure reimbursement of cleanup costs, how long can it still provide financial responsibility assurance for tank owners? These questions will have to be addressed when the joint legislative committee tasked with studying the state LUST funds begins deliberation.

Funds in trouble nationwide

North Carolina is not the first state to consider eliminating its LUST trust funds. According to the Association of State Underground Storage Tank Cleanup Funds, of the 47 states that have LUST trust funds, 18 have set dates after which new releases will no longer be covered or at which the fund program ends. The problem in many other states is the same as in North Carolina: too much demand and too little money. A survey by the Vermont Department of Environmental Conservation showed that in June 2002, outstanding claims exceeded cleanup fund balances in nine states.

Moreover, it is likely that demands on state LUST trust funds will remain high. Nationwide, there are still about 140,000 reported releases that have not been cleaned up completely, and hundreds of thousands of abandoned USTs have not even been investigated. Moreover, thousands more releases are being reported every year. Although trust funds were originally established to clean up leaks that occurred before regulatory programs were put into place, recent evidence indicates that tank technical and operating standards have been only partially successful in preventing new leaks. According to a 2001 survey by the U.S. General Accounting Office, discharges are probably occurring from a significant number of tanks installed or updated according to 1998 requirements. And, what’s worse, MTBE—a fuel oxygenate that is nearly impossible to remove from soil and groundwater—is turning up in many newly reported contamination incidents.

Responses

Because many state LUST funds have become money pits, state fund managers and lawmakers have tried a number of measures to contain cleanup costs. Like North Carolina, many states have adopted RBCA, Pay-for-Performance, and pre-approval of cleanup costs. However, in states with a large number of tanks, discovery of new releases and continued high demand on the funds required more drastic action.

Texas has 173,000 registered tanks, with one in four known to have leaked. The Texas Natural Resource Conservation Commission estimated in 1995 that it would cost \$1.3 billion—in addition to the \$280 million already spent—to clean up all known contamination. By 1995, the Texas legislature had had to bail out the state cleanup fund twice with special appropriations and that year ordered an end to the reimbursement program. Since 1998, Texas has required that tank owners

1993-1996

1993 N.C. Environmental Management Commission approved changes to groundwater cleanup rules providing that where no threat to human health or the environment exists, cleanup may be based on “natural remediation.” The State Auditor released a report saying that without additional cost containment measures the solvency of the state’s Commercial LUST Trust Fund would be in jeopardy. The report also revealed frequent shoddy work by individuals and businesses that install and remove tanks leading to leaks from new tanks and residual contamination at closed sites.

1995 General Assembly passed S 1012 directing the EMC to adopt rules for risk-based assessment and cleanup of discharges and releases from USTs and prohibited reimbursement from the funds for cleanup of sites that do not pose an unacceptable level of risk. It also required operating permits for USTs, prohibited placement of petroleum product into a UST that does not have an operating permit, and provided for civil and criminal penalties for violating the prohibition and various other UST regulations. Because of the immediate need to staunch the flow of money from the commercial fund, the EMC passed temporary rules that partially implemented risk-based corrective action.

1996 General Assembly passed S 1317 requiring DENR to immediately classify all known discharges according to risk criteria specified in the bill until such time as risk-based cleanup rules were adopted by the EMC and to deny reimbursement from the fund for discharges posing no risk. The legislation required the EMC to adopt a permanent risk-based rule by October 1997.

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Cleanup trust funds *continued*

and operators utilize a financial mechanism other than the state fund (principally private insurance) to demonstrate financial responsibility to clean up contamination. The reimbursement program is being phased out and cannot expend funds after September 1, 2006.

Because of its high groundwater tables and heavy reliance on groundwater, Florida made a major commitment to cleanup of UST contamination in 1986. The state first committed to cleaning up all existing contamination reported by a specific date. Many more contamination incidents were reported than had been expected and it became evident that the UST problem was ongoing and would need to be addressed into the future. Florida then set up a fund to provide insurance for cleanup for future contamination, with tank owners responsible for insurance for third-party claims. The state also set up two smaller specialized programs to deal with abandoned tanks and sites not covered by other programs. The programs were generous, all inclusive, and favorable to cleanup companies, and the state's cleanup standards were high. By the early 1990s, the state had amassed liabilities of nearly a billion dollars from all its corrective action programs. In 1992, the Florida legislature passed legislation to increase revenue to the main cleanup fund to handle backlogged claims but to phase out the program. The legislature acted on the belief that as tank owners upgraded or replaced tanks and as insurance became more affordable and available, the state could get out of the cleanup business without adversely affecting the environment. The state cleanup program was phased out with decreasing coverage for new incidents over the next 5 years; however, the reimbursement program was converted to a pre-approval program in 1996 in an effort to contain costs in the interim.

Appeal to Washington

With large numbers of contamination incidents continuing to be reported,

cleanup costs running into the billions nationwide, and states running out of money to deal with the problem (some have even "raided" funds to help balance state budgets), lobbyists for tank owners and petroleum marketers have turned to the federal government for help. The National Association of Convenience Stores (NACS) and the Petroleum Marketers Association of America (PMAA) are promoting legislation that would increase appropriations from the federal LUST fund and require EPA to distribute to states 80% of its appropriation from the fund. The federal LUST fund was set up in 1986 to help clean up contamination from abandoned tanks and assist states with administration of the UST regulatory program, but appropriations from the fund have been small (according to PMAA, less than the annual interest on the fund) and the balance now stands at nearly \$2 billion. In addition, NACS and PMMA and the Oxygenated Fuels Association want Congress to loosen the restrictions on use of federal funds so that they can be used for LUST remediation in general, and, in particular, remediation of MTBE. Various bills that included these provisions—including the Energy Policy Act of 2003—have been introduced in both the House and Senate but none has become law. According to some critics, provisions related to cleanup of MTBE in the energy bill would let producers of MTBE and gasoline with MTBE off the hook for cleanup and quickly drain the federal fund with little to show for it.

UST regulatory programs falling short

In order to ever reach a point at which no additional cleanup of leaking petroleum tanks is needed, new releases must be prevented. However, according to the 2001 GAO report, in spite of the 1998 requirement that active tanks be upgraded and in spite of the technical advances in tank system design, it is likely that contamination from USTs is continuing. GAO says that EPA and state UST regu-

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1997-present

1997 General Assembly passed S 114 prohibiting DENR from requiring cleanup of any LUST site that had been classified as CDE (low risk) under requirements of S 1317 and requiring the EMC to adopt a temporary rule to put risk-based assessment and cleanup into place by Sept 1997. In Sept 1997, the EMC adopted temporary risk-based assessment and cleanup rules that became effective Jan 1, 1998. In Oct 1997, the EMC adopted permanent risk-based rules.

2001 General Assembly passed H 1063 providing for the voluntary use of pay-for-performance cleanups.

2003 General Assembly passed H 897 to require that cleanups be pre-approved by DENR and that payments from the funds be limited to that necessary to achieve the most cost-effective cleanup that addresses imminent threats to human health and the environment. Required that DENR consider the availability of funds in the Commercial Fund in establishing a schedule for assessment and cleanup of sites that will be paid for from the fund.

2004 In the 2004 appropriations act (H 1414) the General Assembly increased the amount of gasoline excise tax going to the trust funds to one and one-tenth cents a gallon for one year. The legislation also prohibits DENR from pre-approving any cleanup costs unless money will be available in the funds to pay the claim within 90 days of approval. **JG**

Cleanup trust funds *continued*

latory programs are so understaffed and under resourced that they cannot ensure that all regulated tanks have the required equipment to prevent leaks, spills, and overfills or that tanks are safely operated and maintained. Says GAO:

Only physical inspections can confirm whether tanks have been upgraded and are being properly operated and maintained. However, only 19 states physically inspect all of their tanks at least once every 3 years—the minimum EPA considers necessary for effective tank monitoring. Another 10 states inspect all tanks, but less frequently. The remaining 22 states do not inspect all tanks but instead generally target inspections to potentially problematic tanks, such as those close to drinking water sources.

GAO recommends that Congress consider appropriating more money from the federal LUST fund and allowing states to use a portion of state allocations for inspection and enforcement as well as for training of tank operators.

Grover Nicholson says that state UST program managers support larger allocation of federal trust fund money for state regulatory programs. Nicholson says that to assure proper maintenance and operation of commercial tank systems, each facility needs to be inspected once a year, but with 12,000 facilities (with more than 30,000 tanks) and 11 inspectors (out of a staff of 99), the best his staff can do is inspect each facility every four to five years. Nicholson says that while his staff does a lot of training for tank owners and operators in proper maintenance and operation of tank systems, they need to do even more because turnover in tank operators is so high.

Most legislation proposed in Washington to break loose money from the federal LUST fund has included provisions that EPA allocate more money to states for UST program enforcement and training. However, PMAA, NACS and other industry groups insist that legislation also provide funding for cleanup of MTBE contamination, and—in the case of the 2003 energy bill—product liability immunity for producers of gasoline with MTBE,

and these provisions are strongly opposed by a number of groups, including public water supply providers. Therefore, the prospect of additional financial assistance to states from EPA appears to be dim, and many states—including North Carolina—face the situation of having to spend more on administration of trust funds than on regulatory programs.

Possible solutions

As the North Carolina General Assembly deliberates the plight of the state LUST funds, it can study the experiences of other states for possible strategies and solutions. The September/October 2004 issue of the *WRRINEWS* will take a look at experiences of other states that have eliminated or radically modified their trust funds as well as the current market for private pollution liability insurance, which may well have to be part of any affordable strategy to protect the state's groundwater from pollution from underground storage tanks.

UST information on the web

EPA UST: <http://www.epa.gov/OUST/>
NC UST: <http://ust.ehnr.state.nc.us>



Excavated USTs awaiting proper disposal/EPA photo (<http://www.epa.gov/OUST/>)

Environment-related legislation passed by the General Assembly

The following environment-related legislation was passed by the General Assembly during the 2004 short session.

S 64 AN ACT TO APPOINT PERSONS TO VARIOUS PUBLIC OFFICES UPON THE RECOMMENDATION OF THE PRESIDENT PRO TEMPORE OF THE SENATE AND THE SPEAKER OF THE HOUSE OF REPRESENTATIVES AND TO MODIFY THE MEMBERS OF THE CENTENNIAL AUTHORITY. Among the appointments made are the following: **Environmental Management Commission:** Donnie Brewer of Pitt County for a term expiring June 30, 2006. Thomas K. Jenkins of Macon County for a term expiring June 30, 2005. **North Carolina Petroleum Underground Storage Tank Funds Council:** William Witherspoon of Wake County, Douglas Howey of Wake County, Tom C. Mehder of Mecklenburg County, Michael Richard Hare of Perquimans County, and Anne Coan of Wake County for terms expiring June 30, 2005. **Rules Review Commission:** David R. Twiddy of Pasquotank County, Thomas Hilliard, III of Wake County, and Jim Funderburke of Gaston County for terms expiring June 30, 2005. Robert Saunders of Wake County, Lee Settle of Moore County and Graham Bell of Gaston County for terms expiring June 30, 2006. **North Carolina Board for Licensing of Soil Scientists:** Edward Hearn of Wake County for a term expiring June 30, 2005. Charles Martin of Franklin County and John B. Allison of Haywood County for a term expiring June 30, 2007. **Well Contractors Certification Commission:** Wilson Martin of Iredell County for a term expiring June 30, 2005. Michael Floyd of Mecklenburg County for a term expiring June 30, 2006. Glen Endreson of Dare County and David Hutson of Durham County for terms expiring June 30, 2007. **Wildlife Resources Commission:** John Pechmann of Cumberland County, Bobby Purcell of Wake County, Russell Maughn Hull, Jr. of Pasquotank County, and Eugene Price of Wayne County for terms expiring April 24, 2005.

S 732 AN ACT TO AUTHORIZE THE COASTAL RESOURCES COMMISSION TO IMPLEMENT A PILOT PROGRAM UNDER WHICH A COUNTY MAY DESIGNATE AN AREA AS A NEW URBAN WATERFRONT UNDER THE COASTAL AREA MANAGEMENT ACT OF 1974. The purpose of the pilot is to determine the water quality and other environmental impacts from a new urban waterfront area development and to evaluate the benefits from the development to the area in which the development is located.

S 859 AN ACT TO ESTABLISH THE CATAWBA/WATEREE RIVER BASIN ADVISORY COMMISSION AND THE YADKIN/PEE DEE RIVER BASIN ADVISORY COMMISSION.

These are inter-state commissions with advisory authority only. They are to study and make recommendations on the use, stewardship and enhancement of the water and other natural resources for all citizens within the river basins.

S 1152 STUDIES ACT OF 2004. Provides that the Environmental Review Commission may study Effectiveness of Environmental Programs, Plan to Share Floodplain Mapping Information, Water Restriction Guidelines, development and funding of Regional Water Supplies, Clean Air Trust Fund, Fair Bargain Act, Deterrents to Stormwater Runoff, Protecting Property Owners Adjacent to Activities for which a Stormwater Permit is Issued, Highway Use Tax Based on Efficiency/Vehicle Registration Based on Vehicle Miles Traveled, Stormwater Issues.

Provides that the Geographic Information Coordinating Council and DENR shall recommend a plan to improve mapping and digital representation of surface waters in North Carolina.

Creates the Study Commission on the Organization, Powers, Duties, Functions, Funding and Potential Consolidation or Elimination of State Boards, Commissions, and Councils. Report, including any recommendations, to be presented to the 2005 General Assembly.

Provides that the Legislative Research Commission may study a long list of things, including light pollution, landscape/irrigation contractors, purchasing alternative-fuel or low-emission school buses, soil and water conservation issues, authority and responsibility of homeowners associations, and size/scope of boards and commissions. If the last study is undertaken, the commission shall establish a schedule for reviewing 25% of the total number of State boards and commissions each year for the next four years.

Provides that the Joint Legislative Growth Strategies Oversight Committee may study delegating authority to cities and counties, modernizing city and county planning, and transferable development rights.

Provides that the Commission for Health Services shall evaluate the desirability and feasibility of developing and implementing a pilot program whereby any individual seeking to use an innovative residential wastewater system that employs peat-based technology complies with specified standards.

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Provides that the Joint Legislative Utility Review Committee may study economic, environmental and social issues associated with development and use of renewable and alternative energy in the state.

Provides that the North Carolina Building Code Council shall study the Residential Building Code to determine which provisions, if any, are unnecessary, outdated, overly stringent, or that otherwise unduly increase the cost of housing.

S 1210 AN ACT TO PROVIDE FOR THE TEMPORARY IMPLEMENTATION OF FEDERAL PHASE II STORMWATER MANAGEMENT REQUIREMENTS BY PROVIDING: (1) THAT LOCAL GOVERNMENT APPLICATIONS FOR PHASE II STORMWATER PERMITS THAT WERE SUBMITTED IN ACCORDANCE WITH THE TEMPORARY STORMWATER RULE WILL BE DEEMED TIMELY RECEIVED; (2) STANDARDS FOR THE EVALUATION OF APPLICATIONS FOR PHASE II STORMWATER PERMITS; (3) AN EXEMPTION FROM PHASE II STORMWATER PERMIT REQUIREMENTS FOR CERTAIN SMALL MUNICIPALITIES; (4) THAT NEW DEVELOPMENT AND REDEVELOPMENT LOCATED IN A REGULATED COVERAGE AREA MUST COMPLY WITH THE STORMWATER MANAGEMENT RULE; (5) THAT THE ENVIRONMENTAL MANAGEMENT COMMISSION WILL ADMINISTER AND ENFORCE THE STORMWATER MANAGEMENT RULE IN A REGULATED COVERAGE AREA UNLESS A COUNTY VOLUNTARILY UNDERTAKES TO IMPLEMENT A LOCAL STORMWATER MANAGEMENT PROGRAM; (6) FOR THE COORDINATION OF PHASE II STORMWATER MANAGEMENT PROGRAMS AND OTHER EXISTING STATE PROGRAMS THAT REGULATE STORMWATER IN ORDER TO AVOID CONFLICTING, DUPLICATIVE, OR INCONSISTENT STORMWATER MANAGEMENT REQUIREMENTS; (7) THAT A LOCAL GOVERNMENT MAY OPT TO BE COVERED UNDER A GENERAL STORMWATER PERMIT DEVELOPED BY THE ENVIRONMENTAL MANAGEMENT COMMISSION; (8) DEADLINES FOR WHEN THE ENVIRONMENTAL MANAGEMENT COMMISSION MUST MAKE CERTAIN PHASE II STORMWATER PERMITTING DECISIONS; (9) DESIGNATION AND PETITION PROCESSES BY WHICH ADDITIONAL LOCAL GOVERNMENTS AND OTHER ENTITIES MAY BE REQUIRED TO OBTAIN A PHASE II STORMWATER PERMIT; (10) FOR THE DEVELOPMENT OF A STORMWATER MODEL ORDINANCE AND STORMWATER DESIGN MANUAL; (11) FOR THE ROLES OF STATE AND LOCAL GOVERNMENTS IN REGULATING THE STORMWATER IMPACTS OF FEDERAL AND STATE PROJECTS; (12) DEFINITIONS OF TERMS TO BE USED IN THE IMPLEMENTATION OF THIS ACT; (13) THAT CERTAIN AGRICULTURE AND FORESTRY ACTIVITIES ARE EXEMPT FROM PHASE II STORMWATER

PERMIT REQUIREMENTS; AND (14) HOW THE ACT SHALL BE CONSTRUED. (See article page 14.)

S 1219 AN ACT TO INCREASE THE PERCENTAGE OF REVENUE CREDITED TO THE DRY-CLEANING SOLVENT CLEANUP FUND THAT MAY BE USED TO PAY COSTS OF ASSESSMENT OR REMEDIATION OF DRY-CLEANING SOLVENT CONTAMINATION THAT OCCURRED PRIOR TO 1 JULY 2001. Increases from 10% to 25% the percent of revenue that can be used in a fiscal year.

H 1083 AN ACT TO PROMOTE WATER CONSERVATION IN MULTIFAMILY RESIDENTIAL PROPERTIES BY AMENDING VARIOUS STATE LAWS REGARDING THE USE OF SUBMETERS IN LIGHT OF CHANGES IN POLICY RELATED TO WATER TESTING REQUIREMENTS AND WATER CONSERVATION BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

H 1112 AN ACT TO IMPLEMENT REQUIREMENTS APPLICABLE TO NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS AND ANIMAL WASTE MANAGEMENT PLANS GOVERNING ANIMAL FEEDING OPERATIONS TO MAKE THE STATE PERMIT REQUIREMENTS CONSISTENT WITH FEDERAL REQUIREMENTS.

H 1414 2004-2005 BUDGET BILL. Among the many provisions of the budget bill are the following:

Removes provision that the Rules Review Commission is administratively independent. Transfers all personnel and equipment assigned to the Rules Review Commission to the Office of Administrative Hearings and makes the Chief Administrative Law Judge responsible for hiring of RRC staff.

For one year, increases the portion of the excise tax on gasoline that goes to the Commercial and Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds and the Air and Water Quality Account. Provides money from the commercial account to support additional staff to process claims against the account. Provides that DENR develop a schedule of reasonable and necessary costs for specific cleanup tasks for which pre-approval is required. Requires that DENR shall not pre-approve any task to be paid for from the commercial or noncommercial funds unless there is enough money in the fund to pay the cost within 90 days after a claim had been submitted and eligibility has been verified—unless the potential claimant agrees to wait for payment until previously approved claims have been paid or unless the discharge or release creates an emergency situation. Applies risk-based assessment and cleanup requirements previously established for commercial fund expenditures to noncommercial fund as well. Provides that the Environmental Review

continued next page

Environment-related legislation *continued*

Commission and the Joint Legislative Transportation Oversight Committee shall jointly study the desirability and feasibility of altering or eliminating the role of the State of North Carolina and DENR in implementing federal law and rules related to oil discharge controls (Chapter 143, Article 21A, Part 2A of the N.C. General Statutes).

Limits to 400 square feet the area of impervious surface meant for vehicular parking that a retail merchant can use for display of nursery stock unless on-site stormwater controls are provided.

Provides that the Department of Transportation shall use up to fifteen million dollars (\$15,000,000) during the 2004-2005 fiscal year for a stormwater pilot project to clean up State-maintained ocean outfalls and associated outlets through new and innovative technologies and filtering mechanisms.

H 1427 AN ACT TO AMEND THE STATUTES GOVERNING THE CULTIVATION OF SHELLFISH AND TO AUTHORIZE THE MARINE FISHERIES COMMISSION TO STUDY ISSUES RELATED TO THE CULTIVATION OF SHELLFISH. Requires Marine Fisheries Commission to adopt training requirements for people applying for new shellfish cultivation leases.

H 1429 AN ACT TO REQUIRE FISHERY MANAGEMENT PLANS TO ACHIEVE SUSTAINABLE HARVEST RATHER THAN OPTIMAL YIELD AND TO SPECIFY A TIME PERIOD FOR ENDING OVERFISHING AND REBUILDING A FISHERY.

H 1449 AN ACT TO MAKE TECHNICAL AND CLARIFYING CHANGES TO THE ADMINISTRATIVE PROCEDURE ACT. Among other things, provides that written objections to adoption of permanent rules requesting legislative review must be filed with the

Rules Review Commission no later than 5:00 p.m. of the day following the day the RRC approves the rule.

H 1574 AN ACT TO AUTHORIZE THE ADDITION OF THE LOWER HAW RIVER STATE NATURAL AREA TO THE STATE PARKS SYSTEM, AS RECOMMENDED BY THE ENVIRONMENTAL REVIEW COMMISSION, AND TO DIRECT THE DIVISION OF PARKS AND RECREATION OF THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES TO STUDY THE FEASIBILITY AND DESIRABILITY OF ESTABLISHING A STATE RECREATION AREA AT BLEWETT FALLS LAKE.

H 1607 AN ACT TO REMOVE A PORTION OF HEMLOCK BLUFFS STATE NATURAL AREA FROM THE STATE NATURE AND HISTORIC PRESERVE AND THE STATE PARKS SYSTEM TO PROVIDE A RIGHT-OF-WAY FOR THE WIDENING OF KILDAIRE FARM ROAD IN THE TOWN OF CARY, AND TO REMOVE THE HORNE CREEK LIVING HISTORICAL FARM LOCATED WITHIN PILOT MOUNTAIN STATE PARK FROM THE STATE PARKS SYSTEM IN ORDER TO ALLOW THE PROPERTY TO BE REALLOCATED TO THE DEPARTMENT OF CULTURAL RESOURCES FOR USE AS A STATE HISTORIC SITE.

H 1636 AN ACT TO PROVIDE TAX CREDITS FOR DISPENSING AND PROCESSING RENEWABLE FUELS.

Allows a tax credit of 15% of the cost of constructing and installing dispensing equipment used exclusively for dispensing or storing renewable fuel. Allows a tax credit of 25% of the cost of construction and equipping a facility for processing renewable fuel. Defines renewable fuel as biodiesel or ethanol either unmixed or in mixtures of 70% or more ethanol. **JG**

New DENR publication on groundwater occurrence and flow in the Piedmont and mountains of NC

NC DENR's Division of Water Quality has published "A Master Conceptual Model for Hydrogeological Site Characterization in the Piedmont and Mountain Region of North Carolina," by Harry E. LeGrand, Sr. This document describes "generalizations" of groundwater occurrence and flow and provides examples of their application to everyday, real world groundwater protection issues.

This report can be accessed via the internet, free of charge. To download, please follow the instructions below:

1. Go to the website:
<http://gw.ehnr.state.nc.us/>
2. Click on the "Publications" button.
3. Scroll to the list "Groundwater Section Documents Currently Available"
4. Click on item #12 from this list; you will see the flag "new" beside the title.

If you have difficulty with this procedure, contact Mr. David Eudy at (919) 715-6188. Please note that this report is a large file (2,969 Kb) and may take significant time to download via traditional, dial up connections.

WRI-sponsored research reported

by Carla Burgess, freelance writer

High-resolution imaging accurately maps land use/land cover

Siamak Khorram, Center for Earth Observation (CEO), NCSU; James Gregory, Department of Forestry, NCSU; and Donald F. Stallings and Halil Cakir, CEO

This is a summary of the final report submitted to complete the requirements of investigators in WRI-sponsored research. The report, "High-Resolution Mapping Land Cover Classification of the Hominy Creek Watershed," was submitted by principal investigator Siamak Khorram, Center for Earth Observation (CEO), NCSU; co-investigator James Gregory, Department of Forestry, NCSU; and Donald F. Stallings and project manager Halil Cakir, CEO. The report will not be published by WRI, but a journal on the work is forthcoming.

Researchers at North Carolina State University have demonstrated the latest high-resolution remote sensing imagery in accurately characterizing stream buffer zones and difficult-to-assess areas such as impervious surfaces and land cover types in urban watersheds. WRI funded the study, which was conducted by the Center for Earth Observation and the Department of Forestry.

A comprehensive understanding of the impact of land use on water quality depends on assessment of the type and location of changes within a watershed. This task requires detailed, accurate, and current maps of land use/land cover (LU/LC).

The researchers used IKONOS multispectral imagery (4-meter multispectral spatial resolution) to map a 4-by-11-mile portion of the Hominy Creek watershed near Wilson, North Carolina. The watershed contains a mix of urban, suburban, and rural land uses. Previous projects that used remote sensing to determine LU/LC in the same watershed were much less effective because of the limited resolution

(e.g., 20 or 30 meters) of the available imagery. IKONOS imagery identified small-scale and mixed LU/LC classes that low-resolution imagery is incapable of detecting.

To assess the precision of IKONOS imagery in this study, researchers compared the results with extensive field data supported by Global Positioning System and photo interpretation. They determined the high-resolution imagery to be highly detailed and accurate. The best LU/LC classifications derived through IKONOS imagery had an overall accuracy of 77 percent. Water was identified with 100 percent accuracy.

Because IKONOS captured images at a single point in time, there was some confusion in interpreting the imagery of some LU/LC classifications. For example, bare and disturbed soils, which are nearly identical spectrally, were often incorrectly classified as fallow farmland. Further, grassy areas and open space, usually a significant component of urban and suburban watersheds, were often denoted as agricultural areas with crop cover. Using IKONOS on multiple days and during a range of seasons could better distinguish these and other land-use classifications.

The researchers believe that the approach used in the study will be applicable to other watersheds and also provide significant improvement (compared to low-resolution imagery) in delineating and monitoring stream buffers.

They recommend additional research, including studies using multiple-day IKONOS imagery with multivariate image analysis and studies that use proprietary fusion techniques to assess the use of IKONOS in improving LU/LC classifications within an urban watershed and to identify LU/LC changes. Alternatively, they suggest using new high-resolution imagery that is comparable to IKONOS, yet cheaper and more widely available, to gather data for future studies. For example, the SPOT-5 satellite

has 10-meter multispectral and 2.5-meter panchromatic imaging capacity. The Quickbird satellite can also provide high-resolution imagery.

The researchers also recommend incorporating LIDAR (light detection and ranging) data into image classification and change-detection data sets to provide high-resolution mapping of headwater streams throughout the watershed. Such integration will accurately show connections between stream networks and adjacent land-use classes.

To read about additional findings and recommendations, you may download the entire final report (CEO Technical Report 220) at <http://www.ceo.ncsu.edu/pubs.htm#tech>.

Conferences

20th Annual On-Site Wastewater Treatment Conference: Planning, Implementing and Managing Decentralized Wastewater, October 11-13, 2004, McKimmon Center, NC State University, Raleigh, NC. For more information visit <http://www.soil.ncsu.edu/swetc/onsite-conf/2004/main04.htm> or call 919-515-7154.

Watershed Academy: Principles of Water Quality Monitoring, Planning and Restoration, November 1 - 3, 2004, The North Carolina Arboretum, Asheville, NC. Registration deadline is October 18, 2004. For more information visit <http://www.aces.edu/waterquality/streams/academy2.htm>

Groundwater and Public Health: Making the Connection, Groundwater Foundation Annual Conference and Groundwater Guardian Designation, November 4-5, 2004, Washington, DC. Early registration deadline is October 6, 2004. For more information call 1-800-858-4844. or visit <http://www.groundwater.org>

Legislature provides for temporary implementation of federal NPDES Phase II Stormwater Rule

In July, the N.C. General Assembly passed Senate Bill 1210 to protect municipalities from possible lawsuits for noncompliance with federal stormwater rules while the Environmental Management Commission (EMC) and the Rules Review Commission (RRC) duke it out in court over proposed state rules to implement the federal program.

Following are highlights of the provisions of S 1210:

- If a small MS4 (a municipality that owns and operates a storm sewer system) submits an application for a permit for an NPDES Phase II Stormwater permit according to the schedule in the temporary rule adopted by the EMC in October 2002, it is to be considered in compliance with requirements to submit a “timely” application. (The RRC’s rejection of the EMC’s permanent rule extinguished the temporary rule and with it an extension of federal deadlines for some municipalities.)
- Development and redevelopment in unincorporated areas of counties must comply with federal stormwater rules beginning in July 2006 if it is:
 - in an area designated as an “urbanized area” under the 1990 or 2000 census,
 - in an area that extends one mile beyond a municipal “urbanized area” with a population of less than 10,000; two miles beyond a municipal “urbanized area” of 10,000 to 25,000 population; or three miles beyond a municipal “urbanized area” of more than 25,000 population
 - in an area designated by the EMC (under provisions of the bill, see below)
 - in a county where one or more of the above provisions applies to 85% of the geographic area
- The EMC shall delineate candidate unincorporated areas near designated municipalities as “regulated coverage” areas—if it determines there are adverse water quality impacts from stormwater from the areas—on the basinwide planning schedule.

- The EMC shall administer and enforce standards for new development and redevelopment in “regulated coverage” areas unless public entities with jurisdiction in the areas volunteer to implement the standards
- In an area where both the NPDES stormwater rules and any other of the State’s stormwater rules are applicable, the most stringent shall apply.

- The EMC must develop an NPDES Phase II Stormwater General Permit whose provisions cannot be any more stringent than those set out in the 2002 temporary rules. Any MS4 can opt to be covered by the General Permit but must submit a notice of intent to be covered by the General Permit even if it has applied for individual coverage under the 2002 temporary rule.

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North Carolina Precipitation/Water Resources

Rainfall (+/- average)

	May	June
Asheville	3.23" (-1.18")	7.39" (+3.01")
Charlotte	2.78" (-0.88")	8.20" (+4.78")
Greensboro	2.00" (-1.95")	2.36" (-1.17")
Raleigh	3.44" (-0.35")	4.22" (+0.80")
Wilmington	3.81" (-0.35")	2.66" (-2.70")
Elizabeth City	4.59" (+0.16")	7.64" (+3.91")

Streamflow

Index Station (County, Basin)	May mean flow (CFS) (% of long-term median)	June mean flow (CFS) (% of long-term median)
Valley River at Tomotla (Cherokee, Hiwassee)	229 (78%)	185 (75%)
Oconaluftee River at Birdtown (Swain, Tenn)	536 (74%)	403 (106%)
French Broad River at Asheville (Buncombe, FB)	2,083 (74%)	1,920 (120%)
South Fork New near Jefferson (Ashe, New)	502 (59%)	312 (94%)
Elk Creek at Elkhite (Wilkes, Yadkin/Pee-Dee)	108 (62%)	68.7 (106%)
Fisher River near Copeland (Surry, Yadkin/Pee-Dee)	194 (61%)	135 (171%)
South Yadkin River near Mocksville (Rowan, Yadkin/PD)	369 (48%)	204 (58%)
Rocky River near Norwood (Stanly, Yadkin/Pee-Dee)	446 (33%)	257 (78%)
Deep River near Moncure (Lee, Cape Fear)	820 (87%)	848 (62%)
Black River near Tomahawk (Sampson, Cape Fear)	916 (175%)	894 (118%)
Trent River near Trenton (Jones, Neuse)	164 (307%)	288 (218%)
Lumber River near Boardman (Robeson, Lumber)	1,267 (99%)	1,020 (65%)
Little Fishing Creek near White Oak (Halifax, Pamlico)	154 (94%)	106 (35%)
Potecasi Creek near Union (Hertford, Chowan)	183 (51%)	62.6 (29%)

Groundwater

Index well (Province)	May monthly mean water level (ft) (Monthly mean last month - ft)	June monthly mean water level (ft) (Monthly mean last month - ft)
Blantyre (Blue Ridge)	29.73 (29.35)	30.68 (29.73)
Mocksville (Piedmont)	15.82 (15.68)	16.70 (15.82)
Simpson (Coastal Plain)	3.59 (3.61)	3.90 (3.59)

Source: U.S. Geological Survey's *Water Resources Conditions in North Carolina*
<http://nc.water.usgs.gov/monthly/>



Stormwater event in downtown Raleigh

- The EMC must send draft decisions on permit applications to public hearing for MS4s designated by the 1990 census, by Nov 1, 2004 and for MS4s designated by the 2000 census, by May 1, 2005. A public entity designated for coverage by EPA must implement post construction stormwater management measures within 24 months of the date its permit is issued. A public entity designated for coverage by the State (under provisions in the bill) or designated under a TMDL implementation plan must implement postconstruction stormwater management measures within 36 months of the date its permit is issued.
- An owner or operator of a permitted storm sewer system may petition the State to have anyone who discharges into its system to be required to obtain a separate stormwater permit. Anyone can petition the State to require a stormwater system to obtain a permit if it is in a fast-growing area (under provisions in the bill), if its discharge contributes significantly to pollution of sensitive waters, or if it is specifically listed as a source of urban stormwater pollutants in a TMDL implementation plan.

- The EMC shall develop a model ordinance in cooperation with local governments and other interested parties. The ordinance shall allow use of both structural and nonstructural BMPs. The division of water quality, soil and water conservation, and land resources along with NC State University shall produce a design manual to provide assistance in determining which controls are best suited to the unique characteristics of permittees.

S 1210 is not to be construed to affect pending litigation, or to affect any vested right to development under any provision of statutory or common law.

The provision of the act are not to be codified but are to be set out as notes to General Statutes along with sections of the 2002 temporary stormwater rule. The act expires Oct 1, 2011.

For a summary of S 1210, the text of the bill, and links to relevant sections of the 2002 temporary rule, please visit the Division of Water Quality's Stormwater and General Permits Unit website: http://h2o.enr.state.nc.us/su/Phase_II_Update_07_04.htm. **JG**

People

Will Autry, formerly Erosion Control Team Leader for the Mecklenberg County Water Quality Program, has joined the Orange County Erosion Control Division as Erosion Control Officer II.

Charles S. Jones, who has served as acting director of the Division of Coastal Management since late 2003, has been named the agency's new director. Jones will oversee the division responsible for carrying out the Coastal Area Management Act and the state's Dredge and Fill Law. He replaced Donna Moffitt, who has become the director of the N.C. Aquarium at Fort Fisher. Jones was formerly assistant director for permits and enforcement for the division. He has worked for the agency since 1978.

Dwane L. Jones, formerly planner for the Pitt County Planning Department, has joined the Neuse Education Team and the NC Cooperative Extension Service. He represents the team as an Assistant Area Specialized Agent for Pitt, Lenoir, Greene and Wayne Counties. He has over five years experience in issues related to environmental planning.

Kyle Sonnenberg, formerly town manager for Southern Pines, has joined the City of Fayetteville as an assistant city manager. He also began serving as the chair of the NC Sedimentation Control Commission (SCC) in April. He has served on the SCC since 2000 as the representative for the NC League of Municipalities and the NC Association of County Commissioners.

Reserve Your Calendars

WRI Preconference Symposium

*Low Impact Development Approaches
for Sustainable Water Management*

April 4, 2005

Jane S. McKimmon Center

WRI Annual Conference

Managing Water Quality & Quantity:

Integrating Science,

Technology & Policy

April 5, 2005

Jane S. McKimmon Center

Look for the **Call for Abstracts**
announcement in the
September/October issue.

It will also be posted to the
WRI-News electronic list and
our web site in October.

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2004 Tentative Luncheon and Forum Schedule

December 6, 2004

Jane S. McKimmon Center,
NC State University

The Impact of TMDLs on Stormwater Programs

Updates to this schedule
will be posted on web site:

<http://www.ncsu.edu/wri/events/ncwra>

All luncheon/forums take place at 11:30 am
at the McKimmon Center, NC State University.

For directions visit:

[http://mckimmoncenter.ncsu.edu/mckimmon/
fac-map.html](http://mckimmoncenter.ncsu.edu/mckimmon/fac-map.html)

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