



The Trickle- Down Effect



Townships Play a **Crucial Role** in Water Management

The goal: Keeping it clean without breaking the bank

BY JENNIFER L. HAWBAKER / ASSISTANT EDITOR

WATER SHOULD BE A PRETTY SIMPLE THING, IT SEEMS.

It comes down from the sky, up from the ground, and is there for the taking, right? Not so fast, local and state officials say. Water is complicated. It's controversial, and keeping it clean can cost big bucks. That's why the state is recommending an integrated approach to water management through initiatives such as the State Water Plan, the Chesapeake Bay Tributary Strategy, stormwater regulations, and more. Township officials say they're all for a clean and abundant water supply. The burning question, however, is how to get that without breaking the bank.



WATER MANAGEMENT



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On June 10, a reported 6 inches of rain fell on North Codorus Township in York County in one hour, chasing residents from their homes, closing more than a dozen roads, and uprooting an underground drainage pipe.

And yet, in Chapman Township, Clinton County, supervisor and PSATS Executive Board Vice Chairman Tim Horner says the water table there is suffering the ill effects of repeated droughts. As technician and operator for the township's water authority, he has reason to be concerned about Pennsylvania's unpredictable weather.

He's not alone. When it comes to the wet stuff, one thing is clear: We're at the mercy of Mother Nature.

Or are we?

"We may not have any power over how much water comes our way, but we

can control what happens to it once it's here," says PSATS Executive Board member Dennis Hameister, a supervisor for Harris Township in Centre County who served on the Upper/Middle Susquehanna Water Resources Regional Committee to help develop the State Water Plan. "That's why we're seeing such a concentrated focus on water quality and quantity issues from the state and federal government."

That spotlight is good news for the environment, and township officials say they're all for the ultimate goal of a clean, reliable water supply. "Who would disagree with wanting clean water?" asks Bob Pellegrino, manager of Northampton Township in Bucks County. "The question is how we go about doing that."

That question is gaining increased attention with last year's release of two reports on the state's current and future water supply and infrastructure needs. But that's just the beginning. Many municipalities are also subject to water quality requirements in Pennsylvania's Chesapeake Bay Tributary Strategy and the U.S. Environmental Protection Agency's stormwater permitting program. Local water-related issues, from development to oil and gas drilling, only add to the mix.

Here, the *Township News* offers an update on what's happening in the world of water management and how townships are doing more than just staying afloat. In some cases, they're leading the way in protecting water quality and quantity — along with taxpayers' dollars.

Water management issues seem to be raining down on township officials more than ever before. From stormwater concerns to drinking and wastewater infrastructure and requirements under the state's Chesapeake Bay Tributary Strategy, supervisors have a lot to think about when it comes to protecting the quantity and quality of the water in their townships.

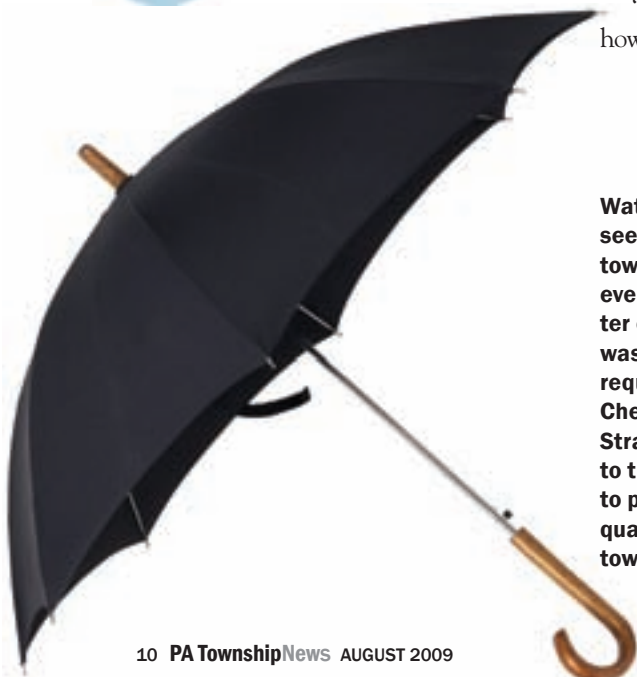




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Planning for the future

A 1971 amendment to the state's constitution guarantees residents the right to pure water and names the commonwealth as caretaker of this critical resource. That role was reinforced with the passage of Act 220 of 2002, the Water Resources Planning Act, which directed state officials to take a serious look at Pennsylvania's water supplies.

The law required the state Department of Environmental Protection to update the commonwealth's long-neglected water plan by 2008. The mission: identify, by region, how much water the state has, uses, and will need in the future; suggest ways to protect water quality and quantity; and then revisit the plan every five years. Regional committees, which coincide with major watersheds and river basins and include representatives from local government, business and industry, and environmental organizations, contributed to the final plan.

"I think that ultimately, it will have a positive effect," says Horner, who served on the Upper/Middle Susquehanna Water Resources Regional Committee. "Doing this plan for the whole state gives us a better idea of where the problems are and how we can resolve them in the long run."

Perhaps the first thing to understand

about the State Water Plan is that it's just that: a plan, not a mandate. It contains data on water use and offers recommended actions for all levels of government in the areas of water conservation, withdrawal, use, and quality; floodplain and stormwater management; water supply alternatives; and others.

Another important point is the focus on integrated water management. As the plan states: "Land development, flooding, stormwater, wastewater, groundwater recharge, irrigation, and water supply and withdrawals are elements of the same interconnected system. All water resources management decisions must respect these close relationships."

Intergovernmental cooperation also plays a big role, and that's something John Hines, DEP deputy secretary for water management, strives to make clear.

"It is absolutely vital that local governments are at the table, because the decisions made have an impact, positive or negative, on the economies of our local communities," he says. "As any township supervisor will tell you, when they're looking at growth, the key factors are water and sewer availability."

The State Water Plan, he says, doesn't just take stock of communities' current water needs and resources. "It is a key planning tool for local govern-

There's no doubt that Mother Nature can wreak havoc with water damage. Above at left, an employee from Manheim Township removes a secondary storm drain in North Codorus Township (both in York County) that was damaged during a torrential rainfall. Local governments are responding to water issues with innovation, however. The next two photos show unique wastewater treatment solutions in Wiconisco Township, Dauphin County. On the left, floating islands, created using recycled plastic mats, remove nutrients from the water. On the right, solar-powered aerators have already cut the facility's electric bills by half, and more savings are expected. And in the photo above, members of Lycoming County's Chesapeake Bay Tributary Strategy Advisory Committee learn about an off-stream watering system for cattle that could play a role in the county's nutrient credit trading program.

ments, counties, and the state to make decisions in the future," Hines says.

The plan's recommendations for state leaders include enacting laws to link local land use decisions with water management, helping local officials with water planning, integrating state and federal stormwater management regulations, and authorizing the creation of local authorities to manage stormwater infrastructure.

Thanks to another Act 220 provi-

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sion, some townships may soon learn that they're located in "critical water planning areas:" specific regions where water demand is expected to outpace existing supplies. DEP is now studying more than 30 watersheds that could meet that criteria. In the areas eventually designated as critical, advisory committees, which will include local government officials, will develop plans to address the problems.

Harris Township's Dennis Hameister says the Spring Creek watershed is one of the areas in the running for the "critical" designation. Municipalities there are already tuned in to the region's water needs and participate on the Spring Creek Watershed Commission to address them. They have also been working for several years with the University Area Joint Authority on a "beneficial reuse" project that treats

wastewater until it's super-clean and can be used by industry or returned to the ground upstream.

"We have a foot in the door in the Spring Creek watershed because our commission is the same kind of group that the state's critical water planning area would create," Hameister says. "We're two or three steps ahead of this. We would just have to look at the addition of the agriculture community and business and industry."

As with the rest of the State Water Plan, the implementation of any recommendations from the critical area advisory committees would be voluntary, not mandatory. Hines doesn't see that as a problem, though.

"If local communities have enough vested interest in trying to find ideas and solutions to meet their needs," Hines says, "they will take it upon themselves to do so."

In fact, some municipalities have been making water management a local priority for years. Take the Pennridge Area Coordinating Committee, an informal intermunicipal group in Bucks County

that completed the first draft of its own water resources protection plan in 2001. David Nyman, a supervisor for East Rockhill Township in Bucks County, one of the participants, says he wouldn't be surprised if the local plan piqued interest in the issue at the state level.

"We were nearing the completion of our plan when the state started its work," Nyman says. "Our plan was done with DEP's blessing and full knowledge."

The initial goal, he adds, was to do a water resources study for the area covered by the eight municipalities in the Pennridge School District.

"We wanted to use that to ensure quality and quantity by implementing zoning changes and regulations," Nyman says.

The municipalities funded the project by contributing \$10,000 per year for five years, Nyman says. That provided a match to state grants that paid for engineering and other professional services. Participation is voluntary, and each municipality has implemented the plan to a different degree.

"East Rockhill Township has integrated the entire thing into our comprehensive plan," Nyman says. "The information is there for the municipalities to use for their benefit."

One of the township's biggest concerns, he adds, was protecting the residents. Some of their water supply actually comes from a neighboring community, where the water sources had been polluted. "We didn't want the same thing to happen here and see the water become unusable," Nyman says.

That freedom to do what works best for the community, and at a reasonable cost, is important to all local government officials. In Chapman Township, where gas wells drilled 50 years ago left a legacy of contaminated groundwater, Tim Horner wants clean water, but he doesn't want any more unfunded mandates.

"Cost at the local level is always a concern," he says. "I'm a firm believer that if the legislature mandates anything, they've got to bring the money along if they want the local governments to deal with it."

Improving infrastructure

Cost has been a huge concern in all areas of water management, especially



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when it comes to upgrading the state's aging water and sewer infrastructure. These days, the question is not just whether facilities can handle the increased volume from growing communities. For much of the state, federal regulations that require the discharge of fewer contaminants into local waters and, eventually, the Chesapeake Bay, have meant multimillion-dollar plant redesigns. The bay requirements, however, are just the tip of the iceberg.

Gov. Ed Rendell acknowledged that fact when he created the Sustainable Water Infrastructure Task Force in 2008. The group, which included PSATS Second Vice President Les Houck, was asked to assess the state's water infrastructure needs, identify ways to finance improvements, and make recommendations for more effective system management. The task force submitted its report to the governor in November.

"There were a lot of good recommendations, and it will be a good tool for planning in the future," says Houck, a supervisor for Salisbury Township in Lancaster County. "Carrying it out now is the big thing."

Big in many ways, including the price tag. The task force estimates the cost of capital improvements alone at more than \$36 billion over the next 20 years.

Another \$77.1 billion will be needed for operation and maintenance, replacement and repair, and debt retirement, for a staggering total of \$113.6 billion. If funding continues at current levels, the report says, that still leaves a gap of \$43.8 billion.

The task force recommends a serious look at regionalizing water infrastructure to help close that gap, and the suggestion seems to be gaining a foothold in at least one part of the state. A group called Renew Lehigh Valley, which promotes "smart growth and governance" and includes a wide range of participants, including local government officials, recently released a report on that region's aging water and sewer plants.

According to the study, consolidating the area's 40 water and sewer utilities into one could save \$60 million a year by 2020. Consolidating into three regional utilities could save \$40 million a year.

The governor seems to be backing the plan, and DEP's John Hines says that regionalization or "right sizing" could be the right choice — sometimes.

"This is similar to the idea of integrated water resources in that communities should look at systems as a whole," Hines says. "In some cases, tying together some of our older systems, where you have several in an area that may not be operating up to par, could

WATER facts and figures

According to the State Water Plan, Pennsylvanians withdraw about 9.7 billion — yes, *billion* — gallons of water every day from a variety of surface and groundwater sources. Just who uses that much water, and for what? Here's the breakdown:

- 70 percent — thermal electric power industry
- 15 percent — public water supplies
- 12 percent — industry
- 2 percent — mining
- 1 percent — agriculture

Those figures are expected to rise with the anticipated growth in electric energy demand and the role that water plays in natural gas drilling.

Still, the statistics seem to be in the commonwealth's favor. Pennsylvania is considered to be a water-rich state, and it's easy to see why. According to the water plan, the state has:

- more than 86,000 miles of streams and rivers;
- 161,455 acres of lakes; and
- enough groundwater that, if brought to the surface, would submerge all of Pennsylvania under 8 feet of water.



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make sense if that's more cost-effective. On the flip side, it may make more sense for other systems to consider regionalized management, shared purchasing, and other potential cost-saving measures."

The other task force recommendations revolve around cost reduction and funding. Residents, however, might find them a bit hard to swallow.

"One of the most significant points is establishing user rates that support full-cost pricing," says Jodie Reese, project manager for CET Engineering Services out of Harrisburg.

That means making sure that users are paying what it actually costs to provide the service. Determining that dollar amount requires assessing the current condition of the system, its risk of failure, and expected costs for upgrades, operations, and maintenance.

"Once you've done that asset management to see what your major purchases are going to be, you build into the user rates the levels that will cover those future costs," Reese says.

And there could be substantial incentive to do that. First, the task force reports that the \$43.8 billion funding gap for water infrastructure would drop to \$6.8 billion if communities would increase their water and sewer rates up to 1.5 percent of the local median household income (*or a lower percentage for residents already paying the true cost of service*).

Second, Reese says, state funding would not kick in until the user rates have hit that 1.5 percent mark.

In addition to advancing a new pricing philosophy, the sustainable infrastructure report also calls for increased federal and state assistance. It stresses, however, that this must come in conjunction with cost reductions through effective management and conservation. Suggestions for the latter include installing rain gardens, green roofs, and forest buffers along waterways, as well

as restoring floodplains. The expected benefits: reduced costs to treat drinking water and less stormwater taxing the state's infrastructure.

Jeff Wendell, CET Engineering Services president and principal engineer, says the report can help municipalities help themselves in another way, too. "One of the things this information could be used for is educating the public on the true cost of infrastructure," he says.

"If a large expenditure has to be made," he adds, "the public has to understand how this became a problem and what alternatives have been looked at."

Saving the bay

The true cost of infrastructure became very apparent with the development of Pennsylvania's Chesapeake Bay Tributary Strategy. As part of a 2000 agreement among all the states in the bay's watershed, Pennsylvania developed this plan to reduce the nutrients (*nitrogen and phosphorous*) and sediment that flow into the bay. Too many of these contaminants from farming, water treatment facilities, stormwater

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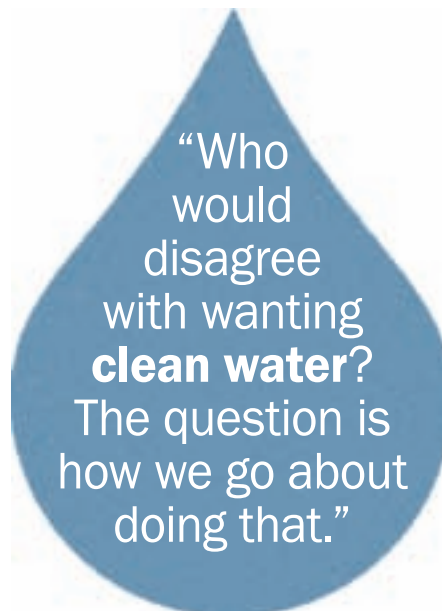
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runoff, erosion, and air pollution spell trouble for the plants and animals that live there.

The strategy requires one source of these contaminants, namely larger water treatment facilities, to reduce their nutrient output by 2010. For many, that means expensive facility upgrades or even total rebuilds. Even as the work gets under way, however, the rules of the game may be changing — for a number of reasons.

First, there's the fact that the nutrient reduction goals set for next year in the Chesapeake 2000 agreement are simply out of reach. While studies show that the states are making progress, there's still a long way to go.

Then there's the lawsuit that the Capital Region Council of Governments filed in March 2008 to block implementation of the state's bay strategy. A judge recently gave the green light for the case to move forward. And in January, the Chesapeake Bay Foundation (a nonprofit that works to restore and pro-



tect the bay and its tributaries) filed suit against the U.S. Environmental Protection Agency. It wants a court order for the agency to use its enforcement authority to get things moving and reduce bay pollution from all sources.

And now the president is getting into the act. In May, President Barack Obama issued a comprehensive executive order that, among other things, names the EPA as the lead agency in overseeing the bay cleanup and defines roles for other federal agencies, too. And finally, on the same day, the council of state leaders that sets policy for the bay's restoration announced new two-year nutrient reduction targets, thought to be more achievable and, ultimately, more effective in helping the bay than the previous longer-range targets.

"We had been focusing on our long-term goals for the bay in 2025," Hines of DEP says. "We now have incremental steps to measure our progress. It sets the bar for us to be able to say, 'OK, in two years, if we aren't meeting these goals, we need to step things up.' We can better evaluate where we are and where we need to go."

Such changes, however, can also make people nervous. "The difficulty is trying to determine if our requirements are going to be more stringent," CET's Jeff Wendell says. "You don't want to design [a facility] that's going to be out of date immediately. It's a very difficult time to know what the actual target is."

The stepped-up bay effort does bring some good news for municipalities, though. Since DEP developed the state's

bay strategy, local governments have been crying foul over what they saw as a lopsided focus on water treatment facilities. These "point sources" are responsible for 11 percent of the state's nitrogen, 18 percent of the phosphorus, and none of the sediment that enters the bay. Compare that to the leading nonpoint source, agriculture, which contributes 49 percent of the nitrogen load, 63 percent of the phosphorus, and 72 percent of the sediment.

"The new two-year milestones will also look at how the states and the EPA deal with nonpoint sources," says John Brosious, deputy director of the Pennsylvania Municipal Authorities Association. "Agriculture is certainly one of the biggest contributors, but we also have 20 percent of the nitrogen coming from runoff from forested lands and another 15 percent from stormwater runoff. That means parking lots, roads, and new developments, and those three areas are very difficult to regulate."

The state's focus on nonpoint source pollution, Hines adds, will include a close look at how technology and other alternative solutions can help the bay.

DEP doesn't have the market on novel solutions, though. Wiconisco Township in Dauphin County is one municipality that's getting into the act by using several innovative technologies that will help purify its wastewater and reduce its electric bills.

"We're in the last phase for meeting the Chesapeake Bay requirement, so our [nutrient] limits might not be all that high," chief plant operator Doug Klinger says, "but our supervisors were mainly looking at savings on the electric bills."

The township's wastewater treatment system, which serves about 450 customers, includes two lagoons. Effluent flows from the lagoons into a chlorine tank before being discharged into a stream that ultimately flows into the Chesapeake Bay.

"The system was not accomplishing nutrient removal to any appreciable degree," says Stephen Zeller, project manager for Brinjac Engineering, Inc., which introduced the township to the idea of "floating islands" to help the process along while keeping operating and maintenance costs low.

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of 100 percent recycled plastic. Plants grow on top of the mats, with their roots extending through the bottom to help cleanse the water, just as they would in a naturally occurring eco-

system. And in Wiconisco Township, three floating islands seem to have created an ecosystem all their own, starting with the “good” bacteria that get rid of the bad nutrients.

“The operator has seen bullfrogs there and ducks nesting on the islands,” Zeller says.

The islands are also doing their job when it comes to nutrient removal. “We’re seeing the benefit of the floating

island lagoon versus the control lagoon, which has no islands,” Zeller says. “So far, results are showing a substantive 20 percent reduction in nitrogen and 10 percent reduction in phosphorus, with better results expected as the islands mature and as solar pumps continue pumping wastewater over the islands to increase the microbial nutrient removal.”

A township of just about 1,100 might not seem like the place for groundbreaking technology, but Zeller says the Wiconisco treatment plant is a “beta” test site for use of these particular floating islands for wastewater treatment.

“The islands’ supplier, Floating Islands International, has been very supportive of the project, donating additional islands and equipment,” Zeller says. State Growing Greener grants helped pay for the project, and they also helped launch another innovative solution that is already netting substantial savings for the township’s wastewater treatment plant.

“The other project at Wiconisco is the installation of solar-powered aerators to replace the existing grid-powered aerators in the lagoons,” Zeller says. “This will be the first wastewater treatment plant in Pennsylvania to go from total grid to total solar for aeration and mixing.”

As of June, the plant was still running half of the electric-grid aerators until the system is stabilized. Even so, Klinger says, “Our light bill averages about \$1,400 a month, and on the last couple of bills since we installed the solar aerators, we saved close to \$600 a month.”

The township is looking forward to even more savings when it shuts down the rest of the electric-grid aerators this fall, especially given the expected elimination of electric rate caps.

“It’s not perfect for every application, but for the ones where it’s good, it’s really good,” Zeller says. “The proof is in the fact that it works.” A bonus, he adds, is that the algae have completely disappeared from the effluent for the first time since the plant began operations.

Trading credits to save cash

Fairview Township in York County is proving that another alternative strategy to meet the Chesapeake Bay requirements can work, too. When the

STAY INFORMED

Tap into these DEP sources for water management information

The Pennsylvania Department of Environmental Protection offers a wealth of water information on its Web site, www.dep.state.pa.us.

Once on the site, click on “Water Topics” to see a list of options, including details on the State Water Plan, the Sustainable Water Infrastructure Task Force, the Chesapeake Bay Strategy, stormwater regulations, and much more.

Townships may also contact their DEP local government liaisons by region as follows:

- **Northeast Regional Office, Wilkes-Barre**
Serving Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, and Wyoming counties
Robert Pitcavage — (570) 826-2511
- **Northwest Regional Office, Meadville**
Serving Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, and Warren counties
Erin Wells — (814) 332-6816
- **Northcentral Regional Office, Williamsport**
Serving Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, and Union counties
Daniel L. Vilello — (570) 327-3763
- **Southeast Regional Office, Norristown**
Serving Bucks, Chester, Delaware, and Montgomery counties
Kevin Gallagher — (484) 250-5940
- **Southcentral Regional Office, Harrisburg**
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supervisors realized the township would be facing multimillion-dollar plant upgrades to meet the reduced nutrient discharge loads, they looked to another solution: nutrient credit trading.

Nutrient credits are created when someone, such as a farmer, reduces pollutants entering the bay watershed. DEP certifies those reductions in the form of credits, which can then be sold to another entity — in this case a wastewater treatment facility — that is not meeting its nutrient reduction requirements.

“In Fairview Township, nutrient credit trading will save the taxpayers about \$4 million over 15 years and achieve the same goals under DEP’s mandate to reduce nitrogen as plant upgrades would,” manager Stephen Smith says.

The township will buy its credits from a company — essentially a “middleman” — that aggregates them from farming operations and sells them based on pounds of nutrient reduction required.

“We bought 15 years worth of credits for a semi-fixed price,” Smith says. “Our existing debt will be paid off before that, in 2021, so if we need to do a capital improvement project for the plants then, we can do that without additional cost to our ratepayers.”

The credit trade, Smith adds, is a lot cheaper for residents than a plant upgrade.

“We instituted a \$9 dollar Chesapeake Bay fee on the bills that is specifically set aside to pay for nutrient and engineering costs,” he says. “We realize that this is a whole new world. If we hadn’t done this, we would have a sewer plant that may or may not comply with the nutrient requirements.”

Although any municipality can enter into a nutrient credit trade on its own, Lycoming County, in northcentral Pennsylvania, is taking a regional approach.

“The cost of fixing the sewer plants in Lycoming County is over \$220 million,” says Bill Kelly, deputy director for the county’s Department of Planning and Community Development. “We can’t afford to fix these things, but the EPA has said we have to do it. Credit trading used intelligently can help reduce the cost.”

The county held an initial stakeholders meeting with representatives from

local government, industry, agriculture, and many other groups in early 2008 to figure out what role it might play in implementing the state’s bay strategy locally. “It was after that meeting that we realized the county would be the best quarterback for a regional approach,” Commissioner Jeff Wheeland says.

As a result, Lycoming County is developing a program in which nutrient credits will be generated and used locally — and townships will need to play a sizable role in the process.

“Regulations have to catch up with

innovation,” explains Megan Lehman, environmental planner for the county.

Kurt Hausammann Jr., AICP, director of the county’s Department of Planning and Community Development, agrees. He says that municipalities need to start allowing for the type of water management practices that will lead to cleaner water.

“It’s very important to note that some of these best management practices are going to require changes to township zoning and nuisance ordinances,” Hausammann says. “Some townships



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have a weed ordinance that says the grass can't be longer than 6 inches, but a good management practice is not to mow the entire way to a stream's edge."

Other best practices for stormwater management, he says, such as providing for smaller paved cartways and rights of way, should also be addressed.

"The Chesapeake Bay is the ultimate winner, but the direct winner is our backyard, our streams, our waterways," Kelly adds. "We're doing it because it helps Lycoming County."

A stormy response to stormwater regs

Local governments are also getting involved with another water issue that

affects all municipalities, and that's stormwater management.

Under federal law, about half of the state's urban and nearby suburban municipalities must obtain permits for their storm sewer systems and develop a stormwater management program. The six-pronged program consists of public education on stormwater impacts; public involvement; illicit discharge detection and elimination; construction site stormwater runoff control; postconstruction stormwater management; and pollution prevention/good housekeeping for municipal operations.

For most affected communities, that's old news. New, however, are DEP's proposed changes to the permit requirements that have some townships questioning their role in the process and who will foot the bill.

Under the proposed changes, "total maximum daily loads" would prescribe how much polluted water runoff from

streets, yards, and fields could enter local waterways designated as "impaired."

"We're concerned about the fact that the municipalities are now going to have the burden to trace the source of any discharges that might be causing us to exceed our TMDL and that we would have to go onto private property and deal with the property owners to enforce this," says Northampton Township's Bob Pellegrino. The township is part of a consortium of municipalities in Bucks County — one of several forming in the region — voicing its concern about the proposed changes.

"Obviously, there's a cost associated with all of this that nobody seems to have thought about," he adds. "We continue to incur costs every year to do the education and monitoring, and now they're asking us to enforce stricter regulations, pretty much with no help."

DEP accepted comments on the proposal through July 6.

CLOSE TO HOME: State Water Plan focus includes local government

Pennsylvania's State Water Plan, finalized just last year, contains data on water use and offers recommended actions for all levels of government in the areas of water conservation, withdrawal, use, and quality; floodplain and stormwater management; water supply alternatives; and other water management issues.

Here's a sampling of the recommendations for state officials and lawmakers:

1) Enact legislation to link local land use decisions with water resources planning and management. Also, provide funding to develop the information that local governments need to make sound land use and water management decisions.

2) Provide services to help county and local officials prepare and implement integrated water resources management plans.

3) Establish an information center to train local government officials, solicitors, and engineers on the importance of considering integrated storm-

water and floodplain management as part of every municipal decision.

4) Integrate existing state and federal stormwater management regulations, policies, and requirements to provide a seamless stormwater management program.

5) Authorize the creation of local authorities, utilities, or management districts and/or other sustainable funding sources to collect fees and generate revenues dedicated to planning and maintaining public and private stormwater management infrastructure.

6) Improve enforcement provisions of the state's stormwater management program to provide local governments with meaningful economic incentives to adopt, amend, and implement stormwater management plans and ordinances.

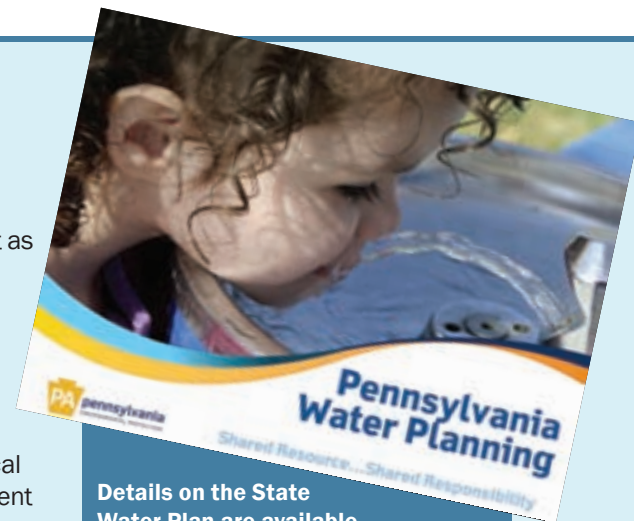
7) Expand stormwater management plans developed under the Stormwater Management Act (Act 167 of 1978) to support local flood mitigation projects and include recommen-

dations for reducing flooding.

8) Provide increased funding for sewage treatment facility upgrades, the retrofitting of stormwater management facilities, and the implementation of agricultural best management practices to improve water quality.

9) Enact legislation to establish statewide standards for private water well construction.

For more information on the plan, log onto www.dep.state.pa.us. Click on "Water Topics" and then choose "Act 220 (State Water Planning)."



Details on the State Water Plan are available at www.dep.state.pa.us under "Water Topics" and then "Act 220."

"I think it's a good thing that communities are coming together," DEP's John Hines says. "When we get the comments in, I'm going to be very interested in the commonalities as we evaluate whether to make changes.

"I think the key issue with many communities comes down to the cost of retrofitting some of the stormwater systems," Hines adds. "It's something we're going to have to take into further consideration and figure out ways we can work with these communities and be more supportive."

That should come as welcome news to concerned township officials. Still, most can't help but see dollar signs with every regulatory change that comes their way.

"We try and be on the cutting edge here in Bucks County," Pellegrino says. "We pay attention to this stuff, but we have enough trouble balancing our budget right now. The last thing we need is another unfunded mandate, which is how we view this."

It doesn't help that local governments seem to be faced with wave after wave of water regulations. "The burning issue for municipalities is that there is a lot happening right now with stormwater from many different directions," says Al Brulo, P.E., vice president of Herbert, Rowland & Grubic, Inc., a Harrisburg-based engineering firm. "I think their two biggest issues are having a consistent, nonconflicting implementation of all these standards and then figuring out how to fund it."

In fact, water management is getting so complex that some municipalities are exploring the creation of a stormwater authority or utility to handle it, Brulo says. "The advantages are that you can go beyond municipal boundaries, have consistency in adjoining municipalities, and create a funding stream."

As more and more townships are learning, it pays to explore every option when it comes to protecting water quality and quantity. Delaying those decisions could mean the final cost — to local governments, residents, and the environment — might be more than anyone can afford.

"That's always the big question," Salisbury Township's Les Houck says. "It's either pay me now or pay me later." ♦

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