Preserving our river

Photo courtesy of the Nanticoke Watershed Alliance

The Nanticoke River and its tributaries are in trouble, and they need your help

The evidence is obvious: algae infestation of several ponds in the area, robbing waters of life-giving oxygen; swimming prohibited in Trap Pond because of high bacteria levels; an unsafe level of nitrates in our drinking water; the 1997 discovery of the lethal form of the micro-organism *Pfiesteria* in the nearby Pocomoke River.

You might think these are just isolated problems — but they are warning signs of the much larger, much more complex problem of water pollution throughout the large land area that drains into the Nanticoke River and its tributaries — this area is called the "watershed." If you live west of Route 113, you live in the Nanticoke watershed.

We have to tackle this tough problem — not just in response to a federal court case that required Delaware to set pollution limits, but to safeguard human and environmental health.

Because water quality is so important, the Delaware Department of Natural Resources and Environmental Control has asked citizens of the Nanticoke watershed to form a "Tributary Action Team" to develop strategies for controlling pollution. The team consists of a wide range of average citizens who are grappling with this big challenge — and they need your help.

In order to develop strategies that will have wide public support, the Tributary Team members are asking their fellow citizens to consider a variety of approaches to the water-pollution problem. Those approaches will be presented on pages like this over three consecutive weeks, starting with Approach 1 below. Approach 2 will appear on Nov. 15, and Approach 3 will appear on Nov. 22.

Your neighbors on the Tributary Team would like you to read through the three approaches and think about the possible costs and benefits of each one. Although these approaches are presented separately, they really are not intended to be mutually exclusive "choices," but rather an examination of topics that will help us discover the complexity of the water-pollution problem. You are not expected to choose one approach over another — in fact, we would be surprised if you found any one approach to be without fault.

The most important step you could take after reading the approaches would be to share your opinions, reactions, thoughts and questions about them. You can do that in the following ways.

How to register your opinions

• Attend a public forum to discuss these topics with your neighbors on Wednesday, Dec. 5, from 6:30 p.m. to 9 p.m., at the Seaford Library Community Room.

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You may register your opinions after reading Approach 1, but keep in mind that Approaches 2 and 3, to be published the next two weeks, may influence your feelings. You don't have to wait for publication though — all the approaches are available online at www.rec.udel.edu (click "publications").

There is no one "right" solution. You will have to struggle with the issues, challenge the information presented, and weigh the pros and cons of each approach. The future of the Nanticoke River depends on our efforts.

Approach 1: Make existing laws and programs work

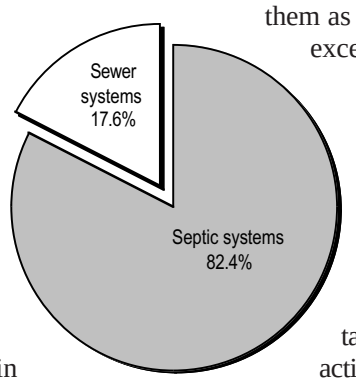
Proponents of this approach say:

There's no doubt that we need to take action to reduce water pollution in the Nanticoke River, but there are many tools at hand that are not being used or are not being used effectively. The county, state and federal governments all have programs and regulations that will help protect the river, if we take advantage of them.

For example, state septic system regulations require a minimum distance from waterways — but some properties that were laid out before the regulations went into effect in 1984 are allowed to violate this sensible rule.

We should use existing tools first before creating new bureaucratic programs that may not be enforced. The proper attention and coordination by all levels of government, and by businesses and private citizens, could bring about a significant improvement in water quality — without any new programs and with few new costs.

Proponents of Approach 1 are not satisfied with the status quo — they are alarmed about the condition of the Nanticoke River and its tributaries, and want to take action to improve them. But they think it's more sensible to first fine-tune existing protections before throwing a whole new set of regulations at the problem.



Sewage disposal in the Chesapeake Basin (by households)

Proponents of Approach 1 advocate these strategies:

• Carefully review of all federal, state, county and local laws, regulations and programs that address pollution, and resolve all inconsistencies and conflicts in order to develop a concise set of rules that both governments and citizens can understand. Then implement them as they are written without making exceptions.

• Put a high priority on enforcement of this set of rules, even if it means hiring additional enforcement personnel. Make sure existing regulations are effectively and consistently enforced.

• Use existing economic incentives — low-interest loans, subsidies, and tax breaks — to encourage voluntary actions, such as Best Management Practices, to protect waterways. Create cost-sharing programs for the shipment of poultry manure out of the watershed. Investigate sources of funding for pollution controls, so that all available money is put to use.

• Strengthen state efforts to assist farmers with proper fertilizer application. Create a nutrient-control strategy for animal-feeding operations.

• Strive to educate citizens about the effects of their actions on the environment — for example, how allowing motor oil to drip on their driveways or how overfertilizing their lawns affects local waterways.

Arguments against Approach 1:

• Trying to enforce existing regulations, which have not prevented water pollution so far, will have little effect on the problem.

• Increasing enforcement will cost taxpayers money and will add more bureaucracy with little real improvement to water quality.

• People already know that their actions may contribute to water pollution — the educational strategy is a "feel-good" idea that will contribute little to water-quality improvement.

• This approach is too little, too late.

A likely trade-off

No solution is free of costs, whether economic, environmental or human. As we consider Approach 1, we may have to debate this trade-off:

Should we rely on improving the existing pollution-control strategies, even if history shows that they have been ineffective at making local waterways fishable and swimmable?

After you read Approach 1, jot down your thoughts. Then see 'how to register your opinions' above.

Approach 2 — 'Consider science and costs' will run on Nov. 15 Approach 3 — 'Take immediate action' will run on Nov. 22

All articles are also available on the Web at www.rec.udel.edu (click 'publications')

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This is the second part in a three-part series of articles designed to inform you about pollution problems, and to inspire you to share your opinions about how to solve them.

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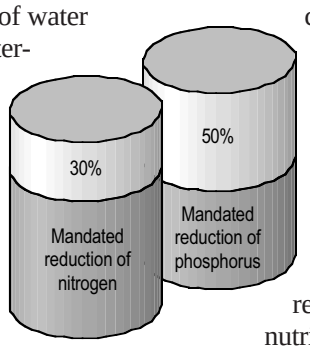
The future of the Nanticoke River depends on our efforts.

Approach 2: Consider science, and costs vs. benefits

Proponents of this approach say:

Blame for water pollution is mostly based on anecdotal evidence, not hard scientific study. The river and its watershed make up a complex system — what may be a symptom of pollution could also be a natural ecological occurrence. In addition, little thought has been given to the high cost of implementing radical anti-pollution measures.

Rather than devising hasty, poorly planned programs that may not work, we should make an all-out effort to first understand the complex causes of water pollution in the Nanticoke River watershed. For pollution-control strategies to be efficient, we need a clearer understanding of the specific sources of contamination. In addition, it would be economically wise to figure out the true costs of proposed anti-pollution actions before jumping into them with an open checkbook.



Approach 2 is not a stand against water-pollution controls. We should just make sure that we don't rush headlong into drastic policies and programs without a solid scientific understanding of the complex issue of water pollution, and without carefully balancing the costs and benefits of our actions. While we're making these careful evaluations, we should enact water-pollution controls that have proven to be ecologically and economically effective.

Proponents of Approach 2 advocate these strategies:

• Gather all completed studies of the Nanticoke and its tributaries, and convene a team of scientists to review existing data on the polluting effects of the various land-use activities within the watershed. Take no new regulatory actions until scientific consensus is attained.

• Create new studies that research the historical, chemical, physical and biological factors that have led to the current ecological conditions within the watershed.

• Carefully analyze the costs of using a specific pollution-control strategy and compare that to the specific nutrient reduction that will occur from the use of that strategy.

• Create a program for nutrient trading within the watershed so that parties who can more easily reduce their nutrient output can do so while creating nutrient "credits" that can be purchased by parties who cannot easily reduce their nutrient effluent.

• Encourage new technologies that reduce pollution from chicken manure, such as feed additives, genetically altered feed and poultry litter additives. Promote new methods of manure disposal, such as shipping pelletized manure out of the watershed.

• Use economic incentives — low-interest loans, subsidies, and tax breaks — to encourage voluntary actions, such as setting aside agricultural lands, forests and wetlands as open space, creating vegetative "buffer strips" along the waterways, or installing environmentally friendly septic systems.

Arguments against Approach 2:

• Cost/benefit analyses are time-consuming and may not change decision-making.

• Action is needed in the face of uncertainty when environmental health is at stake.

• Scientific consensus may take years to achieve, while conditions in the watershed continue to degrade. It's incorrect to imply that there's doubt about the sources of water pollution — while there may be some disagreement, there is much consensus on which to base action.

• This approach will delay effective action, leading to further inappropriate development and the associated adverse ecological effects.

A likely trade-off

No solution is free of costs, whether economic, environmental or human. As we consider Approach 2, we may have to debate this trade-off:

Should we demand scientific agreement and cost/benefit analysis before moving forward with pollution-control programs even if this would mean further degradation of a water system already in danger?

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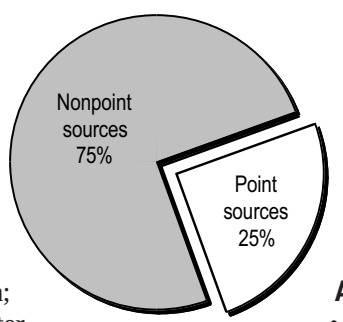
Approach 3: Take immediate action to save the river

Proponents of this approach say:

The troubling signs of water pollution in the Nanticoke watershed point to even bigger issues. First comes the loss of habitat for aquatic life, oxygen-deficient water and high levels of nitrogen and phosphorus in the water, then the loss of species, a less diverse ecosystem, reduced recreational benefits and a decline in property values.

We have to stop talking about the problem and do something about it. Current laws, regulations and plans haven't worked. It's time for new plans and real action — not more study, more blue-ribbon panels, more legislative debate. We need urgent action for many reasons: to protect property values; to safeguard human and environmental health; and to restore ecological balance to the watershed, for example. But there is no greater reason than this: we have a moral obligation to preserve the Nanticoke River watershed for future generations. We must act now if we do not want the degradation of the river to be our legacy to our children and grandchildren.

Where does nitrogen come from ?



Proponents of Approach 3 advocate these strategies:

• Designate the Nanticoke River and its tributaries, as well as the lands around them, as endangered areas that require special regulatory attention.

• Create a land-use plan that protects ecologically sensitive areas from development, protects existing open space and requires new developments to incorporate open space in their design.

• Charge an impact fee for septic systems and place the money in a fund for future sewer plant expansion and construction.

• Develop a fertilizer management plan that vigorously ensures that fertilizers (including animal waste) do not contaminate ground and surface waters. Apply strict guidelines to the fertilizing of all types of properties, including farms, golf courses and residential lawns.

Arguments against Approach 3:

• Restrictive land-use policies have severe impact on economic vitality, and may conflict with private property rights.

• Increased regulation costs government regulators and the regulated parties both time and money.

• Taking aggressive action without sound scientific study could lead to other unforeseen problems.

• Promoting and relying on alternative and innovative technologies may be detrimental to the environment since these technologies have not stood up to the test of time.

The trade-offs

	Favor	Oppose	Not sure
■ We should improve existing pollution-control strategies that are driven by government regulations, **even if** history shows that they have been ineffective.	❑	❑	❑
■ We should demand scientific agreement and cost/benefit analysis before moving forward with pollution-control programs **even if** this would mean further degradation of a water system already in danger.	❑	❑	❑
■ We should give the river top priority by enacting strong environmental programs, **even if** this may create short-term economic hardship for some.	❑	❑	❑

What other concerns do you have about the river system and its watershed?_____

_____

_____

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