

POLICY RECOMMENDATIONS
FROM NEW JERSEY FUTURE

Regional Stormwater Management: Flood Control at Lower Cost

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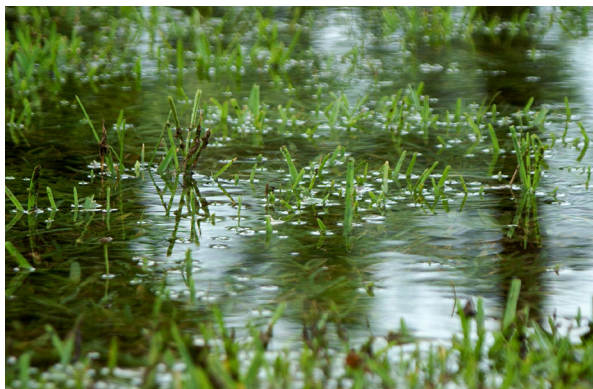


THE CASE FOR A REGIONAL APPROACH

Amidst the array of crazy weather stories that frequent the daily news is one that you may have missed: 2018 was the wettest year on record for New Jersey. This surge in precipitation follows a long trend of rising precipitation levels that increased pressure on the state's aging and underfunded stormwater systems and worsened chronic flooding and water quality problems. Localities have struggled to keep pace, and while the fix is not likely to be cheap, one approach that is gaining favor in other states could help control the cost. Under the right conditions, regional stormwater management can protect the environment and property at a fraction of the cost of the traditional site-by-site approach. When considering solutions, localities may wish to consider the unique benefits of a regional approach.

Similar to many other environmental problems, stormwater runoff does not respect neighborhood, municipal, or even county borders. In a given watershed area, the independent, disjointed

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decisions of different municipalities can negatively affect downstream communities. For instance, while detention basins designed to control the rate of stormwater runoff during peak storm conditions make perfect sense for a given property, the combined effect of hundreds of such basins simultaneously releasing stormwater into a local system can increase flooding and erosion by extending the peak runoff period or increasing flow during non-peak periods. I.e., site-by-site controls may not adequately account for incremental impacts on the larger watershed.

In the case of stormwater, it is often more effective to reduce pollution or flooding at the source, and that source may be in another municipality. Coordinating efforts across a region can be more effective at solving watershed problems than a fragmented approach where the methods used by one town may conflict with those used in another.

Most importantly, a regional approach changes the focus to emphasize projects that provide the greatest environmental cost/benefit for the entire watershed. Instead of relatively small municipal projects, regional plans yield a fewer number of larger projects.

In addition, municipalities share the cost of expensive data gathering (e.g., mapping, stream elevation) and feasibility studies, eliminate duplicative services (e.g., public outreach) minimize administrative costs and permit fees and, in some cases, creatively surmount land constraints (e.g., county use of private property to implement high-value stormwater improvements). Regionalization can also increase access to government loans and grants from favorable agencies.

Significant environmental benefits may also accrue, including a more comprehensive review of downstream impacts and more options to increase groundwater recharge (vital for sensitive aquifers).

From a planning perspective, the cooperative submits a single, shared stormwater plan to the state for approval. County planning district commissions often serve as the common organization.



CASE STUDY: WYOMING VALLEY SANITARY AUTHORITY

In 2016, the Wyoming Valley Sanitary Authority (WVSA) in Luzerne County, Pennsylvania initiated a feasibility study to explore the benefits of serving as the regional coordinating body for its member towns, all of which faced increasingly stringent regulations to reduce pollutant loadings into surrounding waterways that drain to the Chesapeake Bay. A year later, after consulting with legislators, the PA Department of Environmental Protection (PA DEP), and the affected municipalities, WVSA signed formal agreements with 32 towns within its service area.

Each town signed a cooperative agreement with WVSA. Implementation is occurring in three phases:

2017: WVSA completes new permit requirements, maps municipal systems, designs best management practices, provides public education and enacts a regional stormwater fee; towns continue to budget for capital and operation/maintenance of assets not installed by WVSA;

2023: WVSA administers all MS4 permits and planning functions as system lessee and as co-permittee with towns, who serve as lessor;

TBD: WVSA assumes the role of “stormwater system owner” while remaining a co-permittee with the affected towns.

Here are some examples of the anticipated benefits:

COST SAVINGS

To satisfy their stormwater permit conditions, the individual municipalities in WVSA's watershed planned to implement 455 stormwater projects. Over a five year period, that work would have cost \$69 million. Instead, the Authority will realize the same environmental benefit through 65 larger-scale, regional projects costing only \$12 million over five years, a savings of \$57 million (82%).

EXPANDED LAND USE

The most expensive part of constructing best management practices (BMP) for stormwater is acquiring the land on which to build them. When municipalities work individually, they are limited to their own borders, and most towns do not have much publicly-owned land available for this purpose. By partnering regionally, towns can get credit for

constructing BMPs anywhere within the watershed. This flexibility makes it possible to choose projects that maximize pollutant reduction at the lowest cost, which often translates to fewer construction projects.

ADMINISTRATIVE SAVINGS (I.E., LESS PAPERWORK)

The number of separate Pollution Reduction Plans (PRPs) submitted to the PA DEP for the Chesapeake Bay and individual watersheds were reduced from 64 to 7, with the WVSA submitting only one plan for the entire region and six PRPs for watersheds that are impaired. Since the typical cost of preparing a PRP totals \$20,000, the towns realize considerable savings.

POLLUTION REDUCTION

WVSA is projected to satisfy its assigned pollution reduction goal, reducing the annual pollutant load on local streams by 3.9 million lbs (10%) in five years.

IMPLEMENTATION ISSUES

The success of a regional stormwater approach depend on towns' willingness to:

- Fund a feasibility study
- View stormwater as a common issue
- Work together
- Cede some control (e.g. zoning, fees) to secure regional benefits

The WVSA's experience shows that a cooperative, regional approach to stormwater can protect the environment while saving money, thus benefiting the taxpayer. New Jersey municipalities will need to decide if it's the right solution for them.

