Delaware River Basin Commission

Statement

of

Carol R. Collier, P.P., AICP
Executive Director
Delaware River Basin Commission
P.O. Box 7360, 25 State Police Drive
West Trenton, NJ 08628-0360
609.883.9500
carol.collier@drbc.state.nj.us

before

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Committee on Transportation and Infrastructure
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on

Comprehensive Watershed Management and Planning

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Introduction

Madame Chair and members of the Subcommittee, I am Carol R. Collier, Executive Director of the Delaware River Basin Commission (DRBC). The DRBC is an interstate/federal commission, the mission of which is to manage water resources without regard to political boundaries. The members are the governors for the four basin states (NY, NJ, PA & DE) and the U.S. Army Corps of Engineers (USACE) Commander of the North Atlantic Division who represents the President and all federal agencies.

Thank you for inviting me to speak about my favorite topic – Comprehensive Watershed Management and Planning. I will discuss the value of water management at a watershed or basin scale, provide information on the Delaware River Basin Commission (DRBC) and why interstate river basin commissions are critical to successful water management in the United States.

The Value of Managing on a Watershed Basis and Problems with the Existing System

Water does not respect political boundaries. To effectively manage water resources it must be done on the river's terms – using geographic watershed boundaries, not political subdivisions. Of course, our socio-economic world is based on political boundaries, so we need to find a way to bring the two worlds together.

Unfortunately, as our environmental laws developed, aspects of water management were segmented, making it easier to regulate, but making it more difficult to assess multiple aspects on a watershed scale. We now have separate authorities for regulation of wastewater discharge, source water protection, water supply allocation, wetlands protection, stormwater management, flood loss reduction, and groundwater use. It made sense at the time, but now it's time to change and manage holistically.

Managing water resources on a project by project basis is not effective and can be more costly. Opportunities are missed. When looking across authorities, one can see that a downstream water quality problem or water supply shortage might be solved by implementing a better stormwater program in the upper watershed so more water is captured and infiltrated into the ground. This can improve stream base flow, assimilative capacity, and reduce pollutant loads. There is also the problem of unintended consequences. Designing a flood reduction structure without considering the hydrodynamics of the whole system could create downstream erosion and exacerbate flooding in other areas of the watershed. One must understand the whole watershed system in order to develop the best, cost-effective management strategy.

No one agency can manage water resources. Water management is a collaborative process. It takes all levels of government and stakeholders from different sectors of the watershed. Watershed planning is necessary to engage the stakeholders, build trust and develop a cost-effective strategy that uses the agency or group that is the best to complete an action. Federal agencies, state agencies, interstate basin

commissions, local governments, non-profit watershed organizations, and the private sector all bring expertise to the table and can beneficially add to the process. Holistic watershed planning allows the development of the best team.

DRBC works closely with many federal agencies, including the USACE, USGS, EPA, NOAA, USF&WS, NRCS, and NPS. They each have different sets of expertise and differing protocols for partnering and funding. We have found that the Corps of Engineers has the most difficult procedures since the funding is project based and not driven by priorities resulting from a watershed planning process.

Let me highlight two very different experiences in working with the Corps of Engineers. Some of our interactions with the Corps have not always been as easy or rewarding as they should be. Case in point – The DRBC led a 3 year effort developing a "Water Resources Plan for the Delaware River Basin," working with a stakeholder group of 48 representatives. The Plan sets direction for management of the basin for the next 30 years and was adopted by all four states and seven federal agencies. During the second year of plan development, the Corps received funding to do basin planning. Instead of using what had already been accomplished by the stakeholders, the Corps started at square one and sent out letters of inquiry as directed by their process. What a waste of time and money. This was not the fault of any one individual, but the regimented, project focused process that the District Office had to follow.

We had a very different experience when we recently worked with the Corps on the Multi-jurisdictional Use and Management Study. This was one of the pilot watershed studies initiated by the Secretary of the Army in 2006. We worked with the Corps' Philadelphia District developing a proposal based on priorities identified in our "Water Resources Plan for the Delaware River Basin," completed in 2004. We then worked with staff at the District Office to complete the required tasks. This initiative felt like we were partners in addressing needs identified in the Basin Plan.

Another example of the need for holistic watershed management is in the arena of flooding. Flooding seems to be on the increase in the United States as we are hit with increasing numbers of high intensity storms. The Delaware River Basin, after almost 50 years of no floods, had three large flood events between 2004 and 2006. The governors of our four states realized that you can not adequately plan for flood mitigation if you are only in charge of one side of the river. The governors charged DRBC with establishing and leading an Interstate Flood Task Force to prioritize actions across the basin. The Task Force proposed 45 specific recommendations; the states then developed a short list of prioritized projects, and we are working with federal agencies, (the Corps of Engineers, NOAA's National Weather Service and USGS) and the state agencies to implement the required actions.

The Delaware River Basin Commission

The Delaware River Basin is the longest un-dammed river in the eastern United States (see attached map). It drains portions of four states and provides drinking water to 15 million people, including New York City and Philadelphia. It is a small basin that serves a big need with over 8.5 billion gallons of water being withdrawn every day. Due to problems of drought, floods, and pollution, the Delaware River Basin Commission (DRBC) was formed in 1961, bringing the Governors of the four basin states and the federal government together to manage the water resources of the basin using the watershed boundary, not political boundaries. The formation of DRBC was signed into law by President Kennedy and ratified by Congress and the four basin states.

While DRBC has regulatory authority, the greatest value in my mind is that it serves as the coordinator of holistic watershed management and provides a forum to adapt policies and management strategies as issues change. We are able to implement the strategies through operating plans, such as for anticipated droughts, and impose the management approach of equitable allocations.

Much public attention has recently been focused on water supply-related tensions between Georgia, Alabama, and Florida during the historic drought of the Southeast. I believe the experience of the Delaware River Basin clearly demonstrates a much better way to address interstate water issues before they reach a crisis. No one can plan in the heat of a crisis.

The path of progress in the Delaware Basin has not always been smooth. Prior to the 1960s, the Delaware Valley was an arena of interstate conflict over water rights. Plans by New York City (NYC) to expand its reservoir system by exporting water out of the basin to the nation's largest city met with opposition among the three downstream states during the first half of the twentieth century. Efforts to resolve that interstate water dispute through discussions and negotiations were unsuccessful, so the states sued each other. The U.S. Supreme Court issued a 1954 decree in the case of New Jersey v. New York that established NYC's right to divert water from its three Delaware Basin reservoirs along with the right of the three lower basin states to compensating releases from those water supply reservoirs sufficient to maintain a minimum flow target about 80 miles downstream from where the main stem river begins.

When the Supreme Court settled that interstate conflict over 50 years ago, it did not guarantee a final resolution. To the contrary, the decree invited each of the parties – NYC and the four basin states – to resort to further litigation if circumstances changed. Instead of taking the litigious route, the four states and federal government in 1961 created the Delaware River Basin Commission (DRBC) to manage the shared waters without regard to political boundaries. This marked the first time that the federal government and a group of states joined together as equal partners in a river basin planning, development, and regulatory agency. Its five members include a federal representative selected by the president and the four basin state governors who directly, or through their appointed alternates, work together to foster and sustain a climate of

federal and state cooperation.

The compact creating the DRBC does not interfere with NYC's water allocation rights or the downstream states guaranteed minimum water flows under the decree, but it couples these guarantees with tremendous flexibility for the commission to address changing needs. The DRBC was given broad authority to plan, regulate and coordinate management of the basin's waters, including the authority to modify the terms of the 1954 decree upon unanimous consent of the five decree parties.

An early use of this adaptive management approach was demonstrated after the multi-year drought of the 1960s, when it was realized that there was not enough water to meet all of the decree's requirements. Instead of going back to the court, the DRBC undertook a series of "Good Faith Negotiations" to address drought releases. The result was an agreement in the early 1980s to ratchet down water diversions to NYC and downstream releases when reservoir storage declines, essentially "equalizing the hurt." In addition, another minimum flow target was established at the head of tide at Trenton. Freshwater flows must be maintained at Trenton to prevent salt water from creeping up from the bay and affecting the City of Philadelphia water supply and to maintain critical estuary biological communities. This agreement, along with an ambitious water conservation program, has carried the basin through multiple droughts and conserved billions of gallons of regional storage without the DRBC imposing mandatory water restrictions on industries and power generators.

Instream flow needs have presented the DRBC with another reason to review the original decree. Ecological and recreational issues unforeseen half a century ago are now a vital economic and social concern. Also, as is the case in the Southeast, federal law requires that river flows be managed to protect endangered species, like the dwarf wedgemussel found in the upper Delaware. Most recently, three serious floods between September 2004 and June 2006 have added yet another important management issue for consideration: the use of water supply reservoirs for flood mitigation. There is nothing static about managing a river system. Like any natural system, a river is dynamic, presenting new problems to solve around every bend.

In a report for the Institute of Water Resources of the U.S. Army Corps of Engineers, Bruce Hooper summed it up well when he wrote:

> *"Effective governance in the water sector is not linear, prescriptive and logical; rather it tends to be adaptive and 'messy', responding to the dynamic nature of the political and economic forces operating at the time, and in response to changing environmental conditions (floods, hurricanes, droughts)."*

The DRBC continually develops and assimilates new information and participants; works with its partners to build knowledge and consensus; and seeks creative, win-win solutions to water resource challenges. Indeed, its use of science, adaptation, and collaboration has realized accomplishments that a static, 50 year-old court decree could not achieve.

DRBC provides the forum for adaptive management. This is becoming ever more important with the speed of scientific discovery and development of sophisticated computer modeling. Addressing the uncertainties of climate change and the associated significant impacts on our water systems will also require an adaptive, holistic watershed approach.

River basin commissions like the DRBC are a sound and proven alternative to costly water wars. Our national water policies need to recognize their value as effective tools to address the many difficult water resource management issues facing the U.S.

Needs and Recommended Solutions

Need: - A mechanism to bring key policy makers together on a watershed basis.
Recommended Solution: - River basin commissions are the best option for large interstate rivers. The DRBC, Susquehanna River Basin Commission (SRBC) and the Interstate Commission for the Potomac River Basin (ICPRB) have state and federal members, thus bringing the critical decision makers to the table. We also have a number of advisory committees that provide a voice for non-profit, academic and the private sectors. There are 36 river basin commissions throughout the United States with differing levels of authority. The Interstate Council for Water Policy (ICWP) has information on these interstate organizations.

No one approach will be perfect for all watersheds or river basins, but if you do look at increased support for interstate basin organizations, they should be empowered to implement as well as to plan. There are lessons we can learn from other countries that have been conducting multi-party river basin management for many years; especially advanced are Europe and Australia. If interstate organizations are supported and encouraged, we can avert conflicts and be better prepared for environmental emergencies.

Need: - Defining the role of the federal government in watershed management
Recommended Solutions: -
1) Federal agencies should provide support to watershed management initiatives initiated by states or interstate organizations. This support can take different forms depending on the needs. Most often, technical expertise is required – developing a model, conducting monitoring, assessing alternatives, etc. For some situations, group facilitation and leadership may be required.

2) Federal agencies should be encouraged to work collaboratively so the best team is developed. As a case in point, DRBC received $500,000 from our four states to develop a model to assess how best to use our system of 15 reservoirs to improve flood mitigation. We received separate proposals from the USACE and USGS. Both were suitable, but not the best. We asked the Corps of Engineers, USGS and NOAA's National Weather Service to come together and submit a joint proposal. The

collaboration resulted in a far superior product, and we were able to leverage funds to make a stronger flood mitigation package.

Need: - Funding for Watershed Partnerships and Planning
Recommended Solutions: -
1) Provide funding for additional pilot watershed studies in the Corps of Engineers initiative and funds for the next phases of the five existing pilot studies.

2) Provide federal funding for the three river basin commissions that have the President's appointee as the official representative of all federal agencies. You can use the DRBC, SRBC, and the ICPRB as studies to evaluate how holistic watershed management should work and better define the federal role.

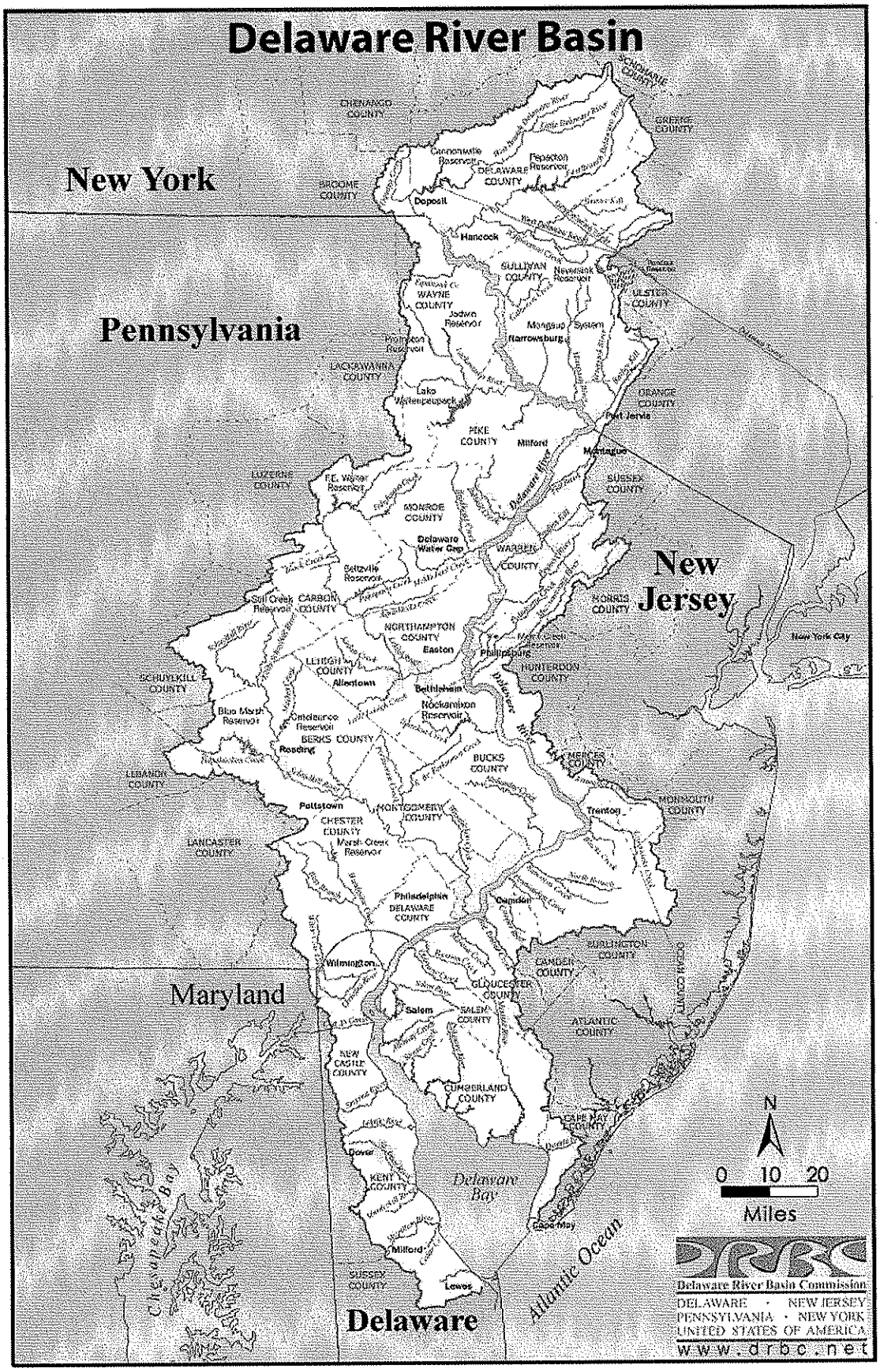
3) Provide funding that is not tied to specific projects to the Corps of Engineers Districts and other federal agencies so federal staff can participate in watershed planning initiatives. The initial stages of a watershed management strategy are spent developing trust among the watershed stakeholders. This is a critical step to establish buy-in from the key stakeholders and increase the chances of effective implementation. Often, the federal agencies are not able to participate in these early stages of watershed planning due to budget constraints.

Need: - Legislation to promote Holistic Watershed Management
Recommended Solution: - Legislation is needed that supports place-based, holistic water management. There are too many examples of ineffective programs that were developed only looking at one aspect of water system – e.g. water supply strategies that exacerbated flooding or negatively altered critical instream flow patterns. Even though it may take a bit longer, working through an integrated watershed planning process will result in more effective solutions, a better state of preparedness, and at less cost.

Thank you for this opportunity to present the DRBC views on Comprehensive Watershed Management and Planning. I would be glad to work with you and/or on a water committee to more thoroughly address the options.

Self-Evident Truths About Water Management

- Water does not respect political boundaries.
- Water should be managed on a holistic, watershed basis.
- What happens on the land affects streams and rivers. You can not manage water without managing the land.
- There is only one water system. We must consider ground water & surface water; stormwater, water supply and wastewater integrated as one system.
- We need to provide information about potable water availability and quality, and flood hazard areas, so industries and local governments can make educated decisions on siting new facilities and accommodating residential growth.
- Downstream water supplies are dependent on the actions of other users.
- Floods will occur. We can not stop the flood waters, but we can reduce the losses and damages from flooding. A floodplain is a natural extension of a river. It will flood. Strategies need to consider upstream solutions, as well as keeping people out of harms way and warning them of impending floods.
- When establishing a water allocation and reservoir release program, one must consider water supply, instream flow needs, and flood mitigation both downstream and upstream of the dam.
- River systems are surprisingly sensitive and can change quickly. We need to base our decisions on the range of conditions, not averages. Climate change will force us to consider even greater extremes.
- There is not enough water in the Delaware River Basin to support all uses in another drought of record.
- We do not know all the answers. We need a stronger base of science to support the decision makers.
- Water management is not unilateral; it is a collaborative process. We need to engage all levels of government, including federal, state, interstate, and municipal governments, and local stakeholders.
- The management system of a river must be adaptive. Changes occur in the underlying science, management alternatives, and regional priorities. A river basin commission provides the forum for adaptive management.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