



**Comment to the Decree Parties**  
**Flexible Flow Management Plan**  
**Listening Session October 2, 2013**  
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**Deputy Director, Delaware Riverkeeper Network**

Delaware Riverkeeper Network (DRN) submits this comment regarding the Flexible Flow Management Program (FFMP) on behalf of our 14,000 members who live in, work in, recreate in and enjoy the Delaware River and many of whom are among the more than 17 million people that rely on the Delaware River Watershed for drinking water.

DRN submits this written comment in addition to verbal testimony offered at the Easton, PA Listening Session.

**General Comments on Program History**

DRN supports the concept of a flow management program that replicates as closely as possible the natural flow regime of the river and its tributaries. The current FFMP strives to provide a more natural flow and to be more adaptive in managing releases and diversions from the reservoirs. DRN is supportive overall of the current flow program because we consider it to be more beneficial and supportive of the natural systems of the River and its streams. The fact that headwater tributaries of the River are impounded as reservoirs that are allowed to remove up to 800 million gallons of Delaware River water per day out of the basin without return sets up a formidable challenge for the River and its ecosystems. The natural flows are indelibly disrupted by the dammed tributaries and for years “banks” were used to manage flows to address critical needs. The FFMP is a more flexible method to determine when and how releases and diversions should be made to provide flow augmentation for the benefit of habitat protection and water quality benefits.

The current FFMP states that temporary modifications have been made. We support these modifications to allow for the repair of the Delaware Aqueduct system; for emergency thermal releases to protect the cold water fishery; and for enhanced summer releases through the use of the Interim Excess Release Quantity (IERQ) Extraordinary Needs Bank. We do not support increased releases for supplemental flood mitigation except those related to spill mitigation directly below the reservoirs.

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We support the permanent changes that allow for increased reservoir releases for habitat protection needs and the other uses outlined in this section of the FFMP. We will address the various aspects of the current program under the appropriate section.

### 1c. Criteria for FFMP Modification

We agree with inclusion of all of the criteria and comment on the following:

- Source and sustainability of water available to support modification and the environmental or economic resources: we agree that the sustainability of all water uses should be a key component of decision making so that water resources are not overextended. We point out that the postponement of a water resources assessment will deprive decision makers of needed information about the availability of water volume and source. For this reason, DRN considers the postponement of a full assessment to be a handicap and urges the Decree Parties to include such an assessment as soon as possible.
- Consideration of naturally-occurring habitats over manmade habitats: we agree this is a correct approach but point out that much of the natural systems have changed over time due to anthropomorphic influences so it is often a judgment call to discern between the two. Of course expert input is essential in this matter but on a basic level we agree that, for instance, natural forests should be protected over manmade park facilities and dwarf wedge mussel habitats should be protected over recreational uses.
- Scientific basis for modification: we support the employment of science and real data as opposed to modeling and reference data.
- Impacts to drought management and water supply: we agree these are major purposes to be served by the FFMP since the reservoirs are water supply reservoirs vulnerable to drought. We do not agree that flood mitigation should be included as a criteria except strictly limited to spill mitigation or areas in stream reaches below the reservoirs and local to the reservoir dams to avoid spills during storm flows or snow pack melt.
- Potential impacts to water quality, existing National and State Pollution Elimination System permits and assimilative capacity of the Delaware River: we agree that water quality impacts are inexorably connected to flow management and are an essential criteria in order to maintain the exceptional water quality of the Delaware River. The Congressional Wild and Scenic designation and the Delaware River Basin Commission's (DRBC) Special Protection Waters classification demand that the River's exceptional water quality not be degraded. These outstanding values of the Delaware River must be supported by the FFMP, requiring that the water quality implications of flow management be a major criteria.
- Adaptive management principles: we consider the flow program's reliance on adaption to weather and other variable environmental conditions to be an essential criteria that will allow the program to change with these variables which include regional weather patterns and global climate changes.
- Impacts to salinity: we agree that the science is clear that the releases and the River's flow regime are tied to the salt line in the tidal portions of the river, impacting millions of people's

water supply, extensive commercial and industrial uses, and vulnerable ecosystems that support many forms of river life.

#### 4a. Releases – Conservation

We agree that releases are to be made to protect the ecology in the stream reaches below the reservoirs based on the Habitat Protection Program (HPP). We have not engaged an expert to analyze the HPP or the Operations Support Tool but we support the concept of using real data for these stream reaches and the main stem Delaware River to design a protective program that benefits habitat and the living creatures that make up that habitat.

#### 4d. Releases – Interim Excess Release Quantity Extraordinary Needs Bank

We oppose the use of this needs bank for flood mitigation in the main stem Delaware River. Flood protection downstream on the main stem river cannot be successfully achieved by reservoir management that employs voids so it should not be allowed to be considered as a water use of the Extraordinary Needs Bank. Although this use is not specifically listed in this section, this section allows the DRBC to approve water-use activities for which this bank can be employed.

#### 5d. Drought – New Jersey Offset Bank

We oppose the New Jersey Offset Bank arrangement that will allow New Jersey to take more water than previously due to water storage provided for offsetting the increased diversions by New Jersey during drought. The additional increases as established in Table 1 will allow New Jersey to take its full 100 million gallon per day diversion through the Delaware and Raritan Canal during Drought Watch and Drought Warning and up to 85 million gallons per day during drought emergency. This relieves New Jersey of having to employ extra conservation measures during these drought periods that they would otherwise have to follow. New Jersey should have to adhere to full drought restrictions when river flows are low due to drought and there is no compelling reason to relieve them of this obligation. Further, this will require more water to be kept “in reserve” by New York City in the reservoirs so that it is available as an offset contribution to river flows for New Jersey if drought conditions occur. This means that there will be less water available for conservation releases to benefit the habitats and stream life downstream of the reservoirs. This water is needed for flow augmentation to benefit fish, fishlife and habitat based on a scientific assessment of habitat and species needs and this analysis should determine the flow regime and release framework, not a negotiated deal with New Jersey. DRN opposes this arrangement with New Jersey and advocates that it be removed from the FFMP.

#### 6. Habitat Protection Program

We support the management goal of the Habitat Protection Program “...to protect the cold water fishery while maintaining aquatic community diversity, structure, and function through improved ecological flow release”. The four categorical protection levels should reflect actual conditions in those stream reaches based on data gathered from those reaches; the FFMP states that New York and Pennsylvania fishery managers developed the categories. We are familiar with the PA Fish and Boat Commission’s 2010 comments regarding the FFMP and the efforts of fishery advocates to provide maximum protection to these special habitats through flow management.

Our greatest concern is the protection of Delaware River native species of fish, fishlife and aquatic life, particularly threatened and endangered species including the dwarf wedgemussel. We are especially concerned that the FFMP states that “Requirements for protection of the federally endangered dwarf wedgemussel are currently under study and are poorly defined”. Adding to our concern is the classification of the river section that contains one dwarf wedgemussel population located in the vicinity of Calicoon, New York, under a “Minimal” protection level. We advocate that the dwarf wedgemussel segment of the river be afforded greater protection based on maintaining the special conditions this animal may require such as flow velocity, rippling and stream bottom characterizations. We oppose the minimal classification of this segment that contains these species and advocate for a conservative approach that provides greater protection while the species is studied and its needs are better understood.

#### 7. Discharge Mitigation Program

We recognize that in certain conditions such as storm flows, high water, and snow pack melt, spills from the reservoirs require management to avoid flooding directly below the reservoirs. The effort to maintain the Conditional Storage Objective with a goal of mitigating “... the effects of flooding immediately below the City Delaware Basin Reservoirs” is reasonable. Whether or not this will result in a 10% void depends on water supply and environmental conditions. Although the FFMP does not strive for flood control voids except for this stated limited purpose, DRN states for the record that we do not support any additional effort to add voids for flood flow storage to the reservoirs for flood control purposes in the downstream river. As the Decree Parties are aware, DRBC analyses of major Delaware River flood events between 2004-2006 show that voids in the reservoirs cannot provide meaningful flood protection benefits in the downstream Watershed. Attempting to provide flood control through the New York City reservoir system is not feasible, beneficial, or environmentally or economically sound. The water supply reservoirs were not designed for that but more importantly, they are not an effective means to accomplish a reduction in flooding and flood damages.

In fact, flood damages are best controlled by protecting floodplains and implementing policies and funding to remove structures from the path of floodwaters because, simply put, floodplains flood. DRN points out the most effective, preventive, and cost beneficial measures we can take is to reduce storm runoff by limiting land use changes; to employ effective stormwater recharge systems; to buffer riparian areas along all waterways to allow storm flows to be absorbed and slowed; and to avoid damages and catastrophic losses by keeping floodplains vegetated and people and structures out of harm’s way. These are aspects of watershed management not included in the FFMP but are important planning and regulatory concepts under the purview of the DRBC and the watershed states.

#### 8. Salinity Repulsion

We support the releases provided to protect lower basin water supplies and ecosystems from salinity concentrations caused by salt water moving upriver from the Atlantic Ocean. Salt line management is critical to the water supply of several million people downriver and several species

of fish, bivalves, and aquatic life are sensitive to salinity concentrations, which freshwater flows from the upstream reservoirs repel.

#### 9. Dwarf Wedgemussels

We support modifications to avoid taking, harming, or adversely affecting dwarf wedgemussels based on U.S. Fish and Wildlife Service (USFWS) information and study results from the US Geological Society (USGS) and USFWS. These animals are at risk due to the lack of adequate protection under the current FFMP categories, as stated previously in this comment.

#### 12. Estuary and Bay Ecological Health

We support modifications based on the protection of the ecological health of the Delaware Estuary and Bay and appreciate the specific mention of oysters, shellfish, and endangered species. Newly discovered freshwater mussel species in these low reaches that are not listed as endangered and other fish and aquatic life are likely to benefit from targeted efforts to protect the named species. We support research and efforts that are ongoing by the DRBC and others to provide healthy habitat and protection for the ecological systems of the Estuary and Bay and advocate that this information be used to design modifications.

#### 13. Warm Water and Migratory Fish

Several species of native warm water fishes are dependent on the flow management regime established by the FFMP and we support the conservation of these species and migratory species that require reservoir flow management to provide healthy habitat and to meet water quality needs.

#### 14. Monitoring and Reporting

We support monitoring of water temperatures and also advocate for monitoring of other environmental parameters to gather data on water quality and ecological health. This is most appropriately conducted by the DRBC with input from the National Park Service and other engaged partners.

#### 15. Reassessment Study

We support a reassessment study that also includes an assessment of water resources and the impacts of surface disturbance and watershed condition changes that can affect water quality, quantity and flows. Mapping of environmental features, habitats and natural resources is also needed to understand the effects of reservoir releases and the FFMP regime. Again, this is most appropriately conducted by the DRBC with input from the National Park Service and other engaged partners.

#### Closing

We thank the Decree parties for the opportunity to submit comment at the Listening Sessions. However, we find it very difficult for the public to participate without a means to submit written comment through a web portal or by regular mail. Limiting the comment to those who can physically attend excludes many members of the public and does not allow for robust participation

by all those interested and who hold a stake in the FFMP process. Also, the timing of the sessions is problematic because the FFMP is already in place from May 2013 through May 2014. It would have been meaningful for the current FFMP to receive public input before the implementation of the current program. Comments after the implementation have no effect on the Decree Parties' decisionmaking, which is supposed to be the point of public participation.

Sincerely,



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the Delaware Riverkeeper



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