

Flexible Flow Management Program (FFMP)

OVERVIEW AND BACKGROUND:

The Flexible Flow Management Program (FFMP) is a comprehensive water management plan developed by the Decree Parties (NY, NYC, NJ, PA, DE) to balance the competing interests of water supply, flood control, hydropower, habitat, and environmental protection in the Delaware River Basin. The basin is home to more than 15 million people, including the cities of Philadelphia, Trenton, and Wilmington, and provides drinking water to approximately 13.3 million people.

The Delaware River Basin is a 13,500 square-mile area that encompasses portions of New York, New Jersey, Pennsylvania, and Delaware. Before the FFMP was created there were various water supply management plans for the NYC Delaware basin reservoirs. Flexibility was a crucial element in the development of the FFMP, which aimed to address the problems encountered in earlier management plans.



The purpose of the FFMP is to manage the water resources of the Delaware River Basin in a flexible and adaptive manner to meet the needs of all stakeholders. The plan aims to balance the water supply needs of the region with the protection of the river's ecosystem, while also considering the impact of climate change and other factors that may affect water availability.

KEY FEATURES:

The FFMP incorporates the latest scientific data, official weather forecasts, and models to predict how much water is available so it can be managed in a more beneficial way. The water that will not be needed for water supply, “Forecast Available Water”, is used to increase flow in the river for multiple down basin purposes.

The program is focused on the operation of the New York City reservoirs and was developed with the input of various stakeholders, including water supply utilities, hydropower facilities, and recreational users. The plan also incorporates the existing basinwide drought management plan for the basin and contains provisions to assist in flood control.



BENEFITS:

- The FFMP provides a comprehensive and coordinated approach to managing water resources in the Delaware River Basin, to help meet the goals and objectives of many stakeholders. These goals include protecting the ecosystem, providing enough water for droughts, and creating some space for floodwater to help reduce flooding when possible in the upper basin. The FFMP helps to protect the river's ecosystem by maintaining minimum flow requirements.
- Banks of water were established for additional releases when the water temperatures become too warm in the upper Delaware river wild trout fishery (thermal mitigation bank) and to reduce the impact of large changes in reservoir releases (rapid flow change bank). In addition, water can be reallocated to an Extraordinary Needs Bank for other water management objectives.
- The FFMP considers the temperatures of the Upper Delaware River and helps maintain the cold-water ecosystem that supports the health of aquatic wildlife.
- The FFMP provides a reliable source of water for drinking, agriculture, industry, and recreation, supporting economic growth and development in the region.



The Flexible Flow Management Program is an innovative and comprehensive water management plan that balances the competing needs of various stakeholders in the Delaware River Basin. The improved plan aids in providing a reliable source of water for drinking, agriculture, industry, and recreation, while also protecting the river's ecosystem and adapting to changing conditions. The FFMP serves as a model for other regions seeking to balance the competing needs of water resource management.

CHALLENGES:

Despite its many benefits, the FFMP faces several challenges, including the following:

- The program must adapt to changing conditions, including the impacts of climate change, which can be difficult to predict.
- Public engagement opportunities in the Decree Party process and the implementation of the FFMP are very limited. Formal public notice and public comment periods are not required for major water management decisions made by the Decree Parties. Two DRBC committees - Regulated Flow Advisory Committee and the Subcommittee on Ecological Flows- offer narrow access to FFMP decisions but are not sufficient to generate a robust interaction between the parties and interested watershed stakeholders.
- The role of the FFMP in flood mitigation: While the FFMP is primarily focused on balancing competing water uses, it can also play a role in mitigating the impacts of floods. However, this requires careful management and coordination to ensure that flood management actions do not undermine other FFMP objectives.
- Water from the New York City reservoirs, as well as all the water in the river, contributes to managing the salt front, where saltwater from the Atlantic Ocean meets freshwater from the Delaware River. With sea level rise, the salt front will be upstream more often and may affect how, and for what purposes, the water can be used. Saltier water can have significant impacts on ecosystem health and the treatment of drinking water for Philadelphia and parts of central NJ. The amount of water flowing from upstream, and thus from NYC reservoirs, assists in maintaining a healthy balance of salt in the river.