

Testimony by New York City Department of Environmental Protection

Testimony given by Jennifer Garigliano, Chief of Staff, NYC DEP Bureau of Water Supply

Pennsylvania House Republican Policy Committee

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Good afternoon, everyone. Thank you for inviting me to speak about the ongoing study of the Francis E. Walter Reservoir, for which New York City DEP is a co-sponsor. My name is Jennifer Garigliano, and I am the chief of staff for DEP's Bureau of Water Supply.

Our bureau is responsible for the operation, maintenance and protection of New York City's water supply, which is the largest municipal water supply in the United States. Our 19 reservoirs provide water to more than 9 million people, including New York City and roughly 72 communities north of the city.

As you might know, New York City has long been involved in the development of flow policies and programs for the Delaware River – a responsibility that began in 1931 when the U.S. Supreme Court first affirmed the city's right to draw drinking water from the headwaters of the river. The city owns and operates three reservoirs on the headwaters of the Delaware River – those being Cannonsville, Pepacton and Neversink reservoirs. Those reservoirs are part of our Delaware System, which provides about 50 percent of New York City's drinking water. Those reservoirs also created and sustain a thriving trout fishery on the Upper Delaware River, and our releases of water from those reservoirs make up a substantial portion of the flow in the river, especially during droughts.

New York City's involvement in the study of F.E. Walter Reservoir has been the source of considerable interest and skepticism over the past year. So I'd like to start my testimony today by assuring the committee, on the record, that New York City is not interested in drinking water from F.E. Walter Reservoir, we are not interested in renting storage space at the reservoir, we are not interested in controlling its operations in any way, and we are not interested in changing the recreation releases from the reservoir or its mission to protect the Lehigh Valley against floods. We recognize the indispensable role the reservoir plays in public safety, recreation, tourism, and commerce in this region, and we do not seek to interfere with any of that.

In fact, New York City DEP supported a precondition of the Army Corps study that said any changes to reservoir operations cannot affect the downstream releases that support the tourism and outdoor recreation economies in Pennsylvania.

Our interest in this study is very narrow and specific. This study is meant to assess potential changes at F.E. Walter Reservoir that could protect communities along the lower Delaware River and its estuary during severe droughts in the future. As climate change persists and ocean levels continue to rise, we know that salt water from the Atlantic Ocean will push farther north into the Delaware River. During droughts, scientists expect the concentration of salt in the river to rise

above the limits that are considered safe for drinking water. That saltier water would also pose a harm to the freshwater ecosystems of the lower river and the bay.

Currently, New York City's reservoirs on the headwaters of the Delaware, which are located about 200 miles to the north of this salt front, bear much of the responsibility for pushing that saltwater back toward the ocean during severe droughts. This would be done by opening large valves at our reservoirs and sending billions of gallons of water into the river at a time when those reservoirs are severely depleted. The travel time from our reservoirs to the lower river is approximately five to six days.

Recent modeling indicates that fighting the salt front with New York City's reservoirs alone is not an effective or efficient use of water. To be clear, we do not believe that water from our reservoirs alone will be enough to push the salt front back during the longest, most severe droughts that we can expect in the future.

That's why a group of scientists and river managers agreed several years ago to pursue this study, which was ultimately authorized by Congress. All of us wanted to understand whether other reservoirs in the basin could also contribute water to the river during those most dire droughts, when the health of our ecosystems and the viability of water supplies in all the basin states are in danger.

During those discussions, a fresh look at F.E. Walter Reservoir emerged as a top priority. Because F.E. Walter Reservoir is closer to the salt front, its waters could supplement releases from other reservoirs – including those owned by New York City – to help push saltwater back toward the ocean more efficiently and effectively.

That is the central question of this study. In simple terms, river managers and stakeholders want to understand: Can F.E. Walter Reservoir pitch in to protect the lower Delaware River during severe droughts?

This type of analysis for F.E. Walter Reservoir has been contemplated since the severe drought of the 1960s, which was the drought of record for many parts of the region. After that drought and the drought of the 1980s, the basin states and New York City signed something known as the "Good Faith Agreement," in which they agreed to examine options to fight droughts in the future. The potential use of water from F.E. Walter Reservoir to support and protect the lower basin was at the top of that list in the 1980s – and here we are today actually putting science behind that idea.

Importantly, I want to stress that this study is an honest one. The Army Corps of Engineers is studying a range of structural and non-structural options, which the committee heard about this morning from the Corps. The outcome of those analyses will be based on sound science, and not the desires of New York City or any other party. The study is accounting for the needs of all stakeholder groups, including people who live in and around the floodplains below the dam, those who rely on the reservoir for tourism, recreation and commerce, and communities that might benefit from additional protection during future droughts.

Along the way, we believe the study is likely to find simple ways to enhance the benefits that people in the Lehigh Valley already enjoy from the reservoir. We believe the Army Corps of Engineers might find ways to manage the reservoir differently to improve fisheries and boating, and potentially make additional releases for recreation without compromising its mission of flood protection.

Our opinion is based on recent changes that we've made to the operation of New York City's reservoirs on the headwaters of the Delaware River. As I mentioned, our reservoirs are drinking water reservoirs. Their primary goal is to provide a reliable quantity of clean, unfiltered drinking water to New York City throughout the year.

Until about 20 years ago, they were operated essentially to meet that mission alone. For decades, New York City kept its reservoirs as full as possible for as long as possible. We operated them to fill and spill as often as we could, and relatively little attention was paid to other interests, stakeholders or management options.

That is not the case now. Advancements in technology and science have allowed us to predict, quantify, and ultimately release additional water from our reservoirs into the Delaware River to meet the needs and desires of downstream stakeholders. Thanks to dozens of river gauges, modern runoff forecasts, snow measuring equipment, and computer models that can process massive amounts of data, we now operate our reservoirs to support the cold-water fishery of the Upper Delaware River, increase the flood attenuation that our reservoirs already provide, and carry out our primary mission of supplying drinking water at the same time.

Instead of filling and spilling the reservoirs, we now meticulously examine the amount of water coming into the system on a daily basis and proactively release water downstream with the goal of filling our reservoirs by June 1, which is the start of our water year, while also minimizing the amount of water passing through their spillways. This management strategy results in larger releases downstream throughout the course of a typical year, which is great for the cold-water fishery, the businesses that depend on it, and the natural ecology of the river.

In 2020, for example, 182 billion gallons of water from our Delaware System reservoirs were used for drinking water, while 230 billion gallons from those reservoirs were proactively released downstream as a result of changing our operational philosophy. We cannot overstate how differently we operate these reservoirs now compared to just 20 years ago – all because we remained flexible, responded to the needs of more stakeholders, and applied sound science to our operations.

We used objective science and advanced forecasting to successfully guide operational changes at New York City's reservoirs, and we believe similar strategies could be applied to other reservoirs throughout the Delaware Basin. In fact, the Army Corps of Engineers has already implemented forecast-informed reservoir operations in its Southern Pacific Division, which oversees many reservoirs in California. We believe the North Atlantic Division could apply this operational strategy to F.E. Walter Reservoir to enhance all the benefits that are seen during a typical year, and provide low-flow augmentation during severe droughts when additional freshwater will be needed to protect community water supplies, including those in Pennsylvania.

This study of F.E. Walter Reservoir is part of a broader set of studies and conversations that are happening among the states of Delaware, New Jersey, New York, and Pennsylvania, New York City, and the DRBC. Each of those entities – and everyone at this hearing – has an interest in periodically examining water resources throughout the Delaware Basin to ensure they are being used properly, flexibly and efficiently to meet the challenges facing our communities now and in the future.

To conclude my testimony, I want to reiterate that New York City is not interested in drinking water from F.E. Walter Reservoir, nor are we interested in any control over the reservoir. We believe this study by the Army Corps of Engineers could benefit the entire Delaware River Basin, but especially folks in the lower basin who will face more numerous and difficult challenges as climate change and sea-level rise continues. Most importantly, the outcomes of this study must be driven by sound, objective science, with an eye toward benefits for everyone who has a stake in the operation of F.E. Walter Reservoir. This is not about what's best for New York City – it is about what is best for the Delaware River and the people who depend on it.

Thank you again, and I look forward to answering your questions.

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Jennifer Garigliano has served as the chief of staff for New York City's water supply since 2012. Garigliano graduated from the U.S. Military Academy at West Point in 2007, where she earned a bachelor's degree in environmental engineering and was commissioned as an officer in the U.S. Army. Garigliano served one tour of duty in Afghanistan, for which she earned a bronze star. She continued her service at Fort Richardson in Alaska and later transitioned into the reserves. In 2021, Garigliano was appointed president of the Water Resources Association of the Delaware River Basin.