# TESTIMONY OF
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# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
# BEFORE THE
# COMMITTEE ON RESOURCES
# U.S. HOUSE OF REPRESENTATIVES

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## INTRODUCTION

Good morning, Mr. Chairman and Members of the Committee. I am Ben Grumbles, Deputy Assistant Administrator for Water at the U.S. Environmental Protection Agency (EPA). First, let me convey Governor Whitman's regrets for not being able to be here today to speak with this Committee. Second, I appreciate this opportunity to provide the EPA's views on the Washington Aqueduct, and to discuss the National Pollutant Discharge Elimination System (NPDES) permit required under the Clean Water Act.

## BACKGROUND

The Washington Aqueduct is truly unique. The history, ownership, operations, regulation, and financing of the Aqueduct, coupled with the various responsibilities of the federal, State, and local agencies, and the District of Columbia, have presented -- and continue to present -- some interesting challenges.

Ordinarily, the States assume the primary authority for regulatory implementation and enforcement under the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA), as Congress intended. Forty-nine States have primary enforcement authority for supervising public water systems under SDWA, and forty-four States are authorized to carry out NPDES permitting responsibilities under the CWA. EPA takes on the permit-issuing or primary enforcement authority that States ordinarily assume only in those few situations in which a particular State has not assumed this authority. Such is the case in the District of Columbia for both the CWA and SDWA regulatory programs.

Two unique factors should be noted when discussing the Aqueduct's compliance with SDWA and CWA requirements. First, there is no other situation in the country where a federal agency is, by law, specifically assigned the role of providing municipal drinking water treatment -- which, in this case, means serving over a million customers in multiple jurisdictions. Second, as noted in the Senate Environment and Public Works Committee's November 1995 report on S. 1316 -- which became the SDWA Amendments of 1996 -- "The Corps of Engineers, as owner of the system, has no authority to finance capital improvement projects necessary to meet Federal drinking water standards." [S. Rpt. 104-169, p. 99]

Not only was the Aqueduct given a mission that is unique within the Corps (and within the entire federal government as well), but its pursuit of this mission has also been complicated by its lack of

the same access to capital funds that traditional municipalities or drinking water authorities have. Important Congressional initiatives to address the Aqueduct's situation were being formulated and subsequently implemented for some time while EPA was proceeding to revise the Aqueduct's discharge permit for drinking water treatment residuals, and EPA has very properly recognized and respected those initiatives.

## EPA'S ROLE AS NPDES PERMITTING AUTHORITY

EPA is the authority in the District of Columbia responsible for issuing NPDES permits, in accordance with Section 402 of the CWA, and for regulating public drinking water systems in the District under SDWA, acting in both cases in a role analogous to that undertaken by most States. EPA works closely with the Washington Aqueduct and its wholesale customers -- the District of Columbia Water and Sewer Authority, and Arlington County and Falls Church, Virginia -- to insure that the Aqueduct and its wholesale customers comply with all applicable requirements related to drinking water in order to provide customers with high quality drinking water. EPA also has issued NPDES permits for discharges from the Aqueduct into waters of the U.S., and oversees the facility's compliance with its permit.

Finally, EPA has responsibilities under section 7 of the Endangered Species Act (ESA), including the obligation to ensure that its actions are not likely to jeopardize the continued existence of listed endangered and threatened species or result in the destruction or adverse modification of designated critical habitat. The ESA complements EPA's and the States' responsibilities under the CWA to restore and maintain the biological integrity of the Nation's waters.

In general, the States and EPA (where a State lacks permitting authority) apply the following procedures in issuing an NPDES permit. Upon receiving an application for an NPDES permit (or in this particular case, an application to renew the permit), EPA begins to draft the permit. A major part of this work is preparing limits on the discharge of pollutants, based on technology requirements and water quality impacts. Limits may set conditions on the pollutants to be discharged, such as: restrictions on the mass and/or concentration of the pollutants; timing of the discharge; and, monitoring requirements. The responsible EPA Region often consults with federal and State agencies about possible provisions before it completes the draft permit. EPA also includes general conditions applicable to any NPDES permit, and prepares a fact sheet (a detailed explanation of the permit and its terms) or a statement of basis (a less detailed explanation). In the few States that lack NPDES permit authority, prior to seeking public comment on the permit, EPA will also send a draft to the appropriate State agency to certify that the permit will be protective of the State's water quality standards.

After EPA has completed the draft permit, the Agency sends out a notice of the draft permit, a solicitation of comments, and the necessary information to request a hearing. EPA sends the notice to, among others: the permittee; other federal agencies, including the Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS); State agencies with responsibility over fish, shellfish and wildlife in the State; and persons who are on a mailing list EPA maintains of individuals who have expressed an interest in NPDES permits. EPA's NPDES regulations note the Agency's obligation to comply with the ESA as well as the possibility that EPA may impose conditions based upon comments from FWS or NMFS. Notice of the draft permit is also published in a daily or weekly newspaper within the area affected by the discharge. Anyone may ask for a copy of the draft permit, the fact sheet (or statement of basis), and at the same time request a

public hearing. Depending upon the interest in the permit, EPA may hold a public hearing to take comments on the draft permit.

After the public comment period is closed, EPA reviews the comments and prepares a document responding to them. At the same time, the Agency prepares a final permit, making any changes needed to respond to the comments. If the changes required are such that the original draft permit would not provide sufficient notice of the revised permit's contents, EPA will repeat the steps above, in effect issuing a new draft permit and providing an additional public comment period. EPA then issues the final permit, and sends a notice to anyone who sent in comments on the draft permit that the Agency has taken this action.

In taking any action to issue a permit, EPA must comply with the applicable requirements contained in section 7 of the Endangered Species Act (ESA) and 50 C.F.R. Part 402. Under section 7(a)(2), EPA must ensure, in consultation with the FWS and NMFS, that issuance of the permit is not likely to jeopardize the continued existence of any listed threatened or endangered species or result in the destruction or adverse modification of designated critical habitats. EPA has entered into a Memorandum of Agreement with the Fish and Wildlife Service and National Marine Fisheries Service that describes the process that the agencies will follow in consulting on NPDES permits. This process, which tracks the requirements in 50 C.F.R Part 402, includes a determination by EPA whether the permitted activity may affect a listed species and, if so, EPA requests either informal or formal consultation. Based on the consultation, EPA imposes any permit conditions needed to ensure that the discharge is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. Should the Service(s) anticipate incidental take of listed species, EPA also considers changes to the permit required by the Service(s) for incidental take to be authorized.

Any person who participated in the permit-issuance process is entitled to appeal a final permit to an administrative body at EPA, the Environmental Appeals Board, which can review whether the permit is based on a finding of fact or conclusion of law which is clearly erroneous, including a claim that the permit fails to comply with the ESA.

## PERMITTING OF WASHINGTON AQUEDUCT DISCHARGES

The Corps owns and operates the Washington Aqueduct facility. The functions of the facility include the collection, purification, and pumping of an adequate supply of clean drinking water for the District of Columbia, Arlington County (VA), and the City of Falls Church (VA). The Washington Aqueduct provides the drinking water supply for approximately one million residents of the District of Columbia and Northern Virginia. The area residents receive water through distribution systems owned and operated by the Water and Sewer Authority, "WASA" (for the District of Columbia), Arlington County, and the City of Falls Church (the "Wholesale Customers"). Drinking water distribution is the responsibility of the Wholesale Customers.

### The 1989 Permit and Its Revision

On April 3, 1989, EPA reissued NPDES Permit No. DC 0000019 to the Corps for the Washington Aqueduct facility, effective date May 3, 1989. (EPA had issued the original permit in 1983.) The contents of this permit were devised on a basis similar to that used by States in issuing many permits throughout the country -- on the permit writer's Best Professional Judgment, which is used

to determine what limitations to apply in the absence of relevant Effluent Limitation Guidelines. In this case, the NPDES permit allows for the discharge of residual solids from cleaning out the sedimentation basins used in filtering water withdrawn from the Potomac River. State-issued permits throughout the nation frequently allow such discharges when the receiving water body is a high-volume river such as the Potomac. The Aqueduct permit does not require any treatment of the discharge, but limits the timing of the discharges to the Potomac to high flow conditions, when the river naturally contains a large quantity of solids.

The permit currently in use contains monitoring requirements but no specific effluent limits on Total Suspended Solids, Total Aluminum, Total Iron, and Flow in the permit. The permit does prohibit the discharge of floating solids or visible foam. The permit also requires the Aqueduct to meet a pH level of not less than 6.0 standard units nor greater than 8.5 standard units. At the time of the discharge, the Aqueduct must take monitoring samples of pH, Total Suspended Solids, Total Aluminum, Total Iron, and Flow, to provide EPA, through Discharge Monitoring Reports, a representation of the discharge's volume and nature.

As issued in 1989, the NPDES permit required the Corps to conduct several studies on the toxicity of the discharge. The Corps' contractor completed the initial studies and issued a report in February 1993, concluding that there were no apparent water quality effects from the release of the discharges.

The 1989 permit had an expiration date of May 2, 1994. The Corps applied for a new permit before the expiration date, and under 5 U.S.C. § 558(c) and 40 C.F.R. § 122.6(a), the prior permit continues in effect by operation of law pending the NPDES authority's (here, EPA's) decision to issue a new permit.

In early 1995, EPA prepared a draft permit for comment, and sent copies to the District of Columbia and the Aqueduct. In February 1995, the Wholesale Customers and the Aqueduct stated their significant concerns with proposed new conditions in the draft permit that would limit the concentrations of Iron, Aluminum and Total Suspended Solids in the Aqueduct's discharge. These limits would have required the construction of a residual recovery facility. This is a facility built adjacent to a drinking water treatment plant to dewater the solids (largely silt and organic material) removed from the water during coagulation and filtration, which occur prior to disinfection. Depending on the composition of the dried solids, they are either used for some commercial purpose (directly or after further treatment) or trucked to a landfill for disposal. The Wholesale Customers expressed concern that the cost of such a facility would be unaffordable for many and excessive in relation to what they and the Aqueduct considered were hypothetical or vague environmental benefits from a recovery facility.

As EPA was considering these concerns, Congress was drafting comprehensive legislation to reauthorize and reform the Safe Drinking Water Act. Contrasting bills had passed both the House and Senate in late 1994, but the 103rd Congress had adjourned before a compromise agreement could be reached. With this base of prior action to build on, a number of locally significant issues, like the future of the Aqueduct, were discussed at a relatively early point in the 104th Congress. A March 31, 1995 SDWA discussion draft of Sen. Kempthorne (then Water Subcommittee Chairman on the Senate Environment and Public Works Committee) included a provision authorizing the Corps to borrow "such funds as the Secretary of the Army determines are required to finance

capital improvements for the Washington Aqueduct." The relevant provision in Sen. Kempthorne's June 26, 1995 discussion draft took the form that was included in S. 1316 as passed by the Senate in November 1995.

Congressional discussions of the Aqueduct's financial situation were occurring at the same time as the Wholesale Customers and the Corps were questioning the cost and environmental benefits of the draft permit. At least one clear message seemed to emerge: that EPA should not issue an NPDES permit that would preempt or prematurely direct the Aqueduct's capital investment priorities separate from, ahead of, or in conflict with how Congress might direct the Aqueduct to address its many capital needs in the SDWA Amendments.

As a result, in April 1996, EPA agreed to delay the issuance of the permit. This was consistent with both the 1995 Senate-passed provision and Section 306 of the SDWA Amendments (Public Law 104-182) enacted August 6, 1996, which directed the Aqueduct and its Customers to explore the feasibility of turning over the ownership and operations of the Aqueduct to a non-federal entity.

Section 306 also required that, before reissuing the NPDES permit, EPA must consult with the Customers "regarding opportunities for more efficient water facility configurations that might be achieved through various possible transfers of the Washington Aqueduct. Such consultation shall include specific consideration of concerns regarding a proposed solids recovery facility, and may include a public hearing."

On May 5, 1998, the Corps and the Wholesale Customers signed a Memorandum of Understanding (MOU). This MOU included their joint "determination that a desirable option is for the ownership, operation, maintenance, and management of the Washington Aqueduct to remain with the Army, ...and for the creation of a stable and mutually beneficial partnership ... between the Wholesale Water Customers and the Corps of Engineers." Section 306(e) authorized the Corps to borrow $75 million over three years for Aqueduct capital improvements; the Congressional Budget Office cost estimate for S. 1316 in Senate Report 104-169, referenced above, states that "[t]he Corps estimates that the modernization would cost about $275 million in 1995 dollars." [p. 111] However, the Wholesale Customers' recognition of their responsibility to help finance Aqueduct capital improvements, while not yet applied in practice, should finally enable the Aqueduct to finance a comprehensive, long-term program of asset management, including ongoing regulatory compliance.

Fish Issues

After discussions among the Corps, EPA, and the Wholesale Customers, these parties agreed on October 3, 1997, that contractors for the Wholesale Customers would undertake a new study of the water quality effects of the Aqueduct's discharge and would address issues raised by EPA ("Discharge Study"). The results of the Study, completed last Fall, are discussed later in this testimony. The parties agreed that the Discharge Study would include six parts: an effluent dilution and fate study, where a computer simulates river flow and the suspended solid's plume to determine acute and chronic dilution factors as a function of effluent loading and river flow; effluent toxicity testing to determine the toxicity of discharges to freshwater species; effluent chemical characterization, using existing effluent discharge data to calculate preliminary projections of receiving water concentrations in comparison to water quality criteria; an analysis of the Potomac's fishery to determine the effect of the discharge upon key anadromous and resident fish species; an

analysis of the Potomac's macroinvertebrate community to characterize the community prior to and after discharge; and, an analysis of a modification of the aluminum criteria in the event the other parts of the Aqueduct Study show that this would be desirable. EPA believed this study was necessary to establish a scientifically-sound basis for any new requirements written into the reissued Washington Aqueduct permit. New effluent limits and special conditions in a revised NPDES permit could mandate the expenditure of large amounts of ratepayer funds, and, taking the role of a State agency responsible for long-term public water system supervision, EPA recognized especially the challenges this would raise given the Aqueduct's unique financing issues.

While the study was being developed, EPA entered into an Interagency Agreement with Fish and Wildlife Service ('FWS') in April 1998 for help in developing interim discharge guidelines for the Washington Aqueduct sediments. The purpose of this work was to determine whether or not there were any near-term cost-effective remedies which the Washington Aqueduct could employ to avoid potential impacts to fish species that may migrate or spawn in the Potomac River in the vicinity of the Aqueduct discharges. EPA convened a panel of fisheries biologists from the District of Columbia, National Marine Fisheries Service, State of Maryland, FWS and the Interstate Commission on the Potomac River Basin (1998 Fisheries Panel) to provide recommendations on minimizing impacts to migratory fish from sediment discharges at the Aqueduct, while EPA and the Corps pursued a long-term solution.

In March of 1999, the FWS submitted, in a report to EPA, the results and recommendations of the Fisheries Panel's study, including that there should be no discharge in the Spring when anadromous fish spawn, and that rocks by one of the outfalls should be moved to facilitate the flow and dispersion of the discharge into the river.

On June 24, 1999, EPA approved the study plan for the Discharge Study developed in part with technical assistance from the FWS Environmental Contaminants Branch of its Chesapeake Bay Field Office. The Discharge Study was performed by scientists at EA Engineering, Science & Technology, Inc. under contract to the Metropolitan Washington Council of Governments on behalf of the Wholesale Customers. EPA held public meetings and informational sessions attended by FWS, most notably in the Spring of 2000 and on October 10, to explain the techniques used during the collection of environmental data for the Discharge Study.

Field work for the studies began in August of 1999 and was completed in May of 2001. The Discharge Study Report was finalized on October 10, 2001. Based upon the results of the Study (which analyzed observations made over the 21 month field study period) and other available information, EPA has concluded that the sediments appear to have a negligible effect upon juvenile and adult fish in the Potomac River. EPA has also concluded that the acute toxicity studies showed that the discharge is not acutely toxic, and the chronic toxicity tests, while not conclusive, seemed to support a judgment that the discharge is not currently affecting juvenile and adult fish. The Study did suggest a potential risk of smothering fish eggs and larvae if they are in the river at the time of the discharge.

Based on NMFS's continued concern about the potential presence of shortnose sturgeon, and the Fisheries Panel's similar concern that the discharge may have a smothering effect on early life stages of fish, and in light of our ongoing section 7 consultation about the sturgeon, EPA has prepared a draft permit that goes beyond the present permit requirements to protect the river and its living resources.

Draft Permit

Draft permit number DC 0000019 was issued by EPA Region III on March 28 for public comment. It contains several new provisions including:

- A prohibition against the Washington Aqueduct discharging during the spawning season for the native fish of the river, which runs from February 15 to June 15, unless specifically allowed to do so by EPA because of emergency conditions.

- A requirement that drainage times be lengthened for the two of the sedimentation basins at the Aqueduct, and that the amount of untreated process water used to flush and clean these basins be increased, resulting in a less concentrated effluent.

- A requirement that, as a technology-based control, a conceptual study plan be completed to identify engineering controls capable of removing a total of 85% of all incoming solids, and that implementation of the plan begin within 5 years.

- A requirement to remove the rocks in the vicinity of one of the outfalls pursuant to the recommendations of the Fisheries Panel.

- A requirement that the Washington Aqueduct perform a study, using an approved National Marine Fisheries Service (NMFS) protocol, to evaluate whether shortnose sturgeon are present in District of Columbia waters of the Potomac River. In its planning for and performance of this study, the Aqueduct must consult with NMFS and the U.S. Fish and Wildlife Service.

In the preparation of this draft permit, EPA took several steps to ensure adequate public involvement from all interested parties. This included informal consultation with the D.C. Department of Health, and we believe that the District of Columbia will certify under Clean Water Act Section 401 that the new permit complies with D.C. Water Quality Standards. Informal consultation with the FWS and NMFS -- to ensure that endangered species and habitat are protected -- has also occurred, with the constructive results discussed in this testimony. In addition, since the State of Maryland and the Commonwealth of Virginia share the waters of the Potomac with the District of Columbia, they too were provided the opportunity to comment on the draft permit. EPA and the Washington Aqueduct also hosted a public meeting on March 26 to explain to local community members the provisions in the draft permit. Finally, pursuant to requests from both Congress and the Washington Aqueduct, the public comment period for the draft permit, initially scheduled to run until Monday, April 29, was extended by EPA to run until June 28.

ESA Consultation

The ESA provides for consultation with the appropriate federal wildlife agency when a federal action may affect endangered species. The ESA regulations give a federal Agency two options for consultation: informal or formal. As provided by the regulations, informal consultation is designed to determine whether formal consultation is necessary.

EPA has been engaged in "informal" consultation under the Endangered Species Act with the National Marine Fisheries Service (NMFS) for about a year, concerning the issuance of the NPDES permit for the Washington Aqueduct and possible effects on the federally-listed endangered shortnose sturgeon. While the draft permit's prohibition on discharges during spawning season was designed to protect fisheries in the river, EPA and NMFS have this month agreed to enter into formal consultation to determine the effects of the limited potential for emergency discharges from the Aqueduct on shortnose sturgeon if sturgeon were to be present at this location during such emergency discharges. According to NMFS, there are no data documenting the presence of sturgeon in waters affected by the discharge or within 55 miles of those affected waters. Because additional data gathering would be necessary to conclusively prove its presence or absence in those waters, EPA and NMFS are taking a conservative approach by formally consulting, to determine the response to this lack of information in the context of the draft permit. The NMFS is currently reviewing the matter, and will provide a Biological Opinion with recommendations to EPA.

EPA will then address whatever recommendations are contained in the Biological Opinion, and after review of, and response to, any comments received in the public comment period, will issue the final permit. The length of time it will take to issue a final permit depends on a number of factors, including when EPA concludes its consultation with NMFS, the number and content of public comments received, and results of Congressionally mandated consultation with the Customers.

**CONCLUSION**

In summary, by following the requirements of the Clean Water Act, the Endangered Species Act, and the Safe Drinking Water Act, EPA believes that we can issue a new permit for the Washington Aqueduct that will protect the river's ecosystem and aquatic life.

I would like to thank the Members of this Committee for inviting EPA to participate in this important hearing. The Administration shares the Committee's concern for the preservation of our nation's park system and protection of endangered species, and commends the Chairman for his interest in this particular issue.

This concludes my prepared remarks, and I would be happy to answer any questions that you may have at this time.

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