THE DISCHARGE EFFECTS OF THE WASHINGTON AQUEDUCT

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON NATIONAL PARKS, RECREATION, AND PUBLIC LANDS

OF THE

COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES

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OVERSIGHT HEARING ON THE DISCHARGE EFFECTS OF THE WASHINGTON AQUEDUCT ON THE C&O NATIONAL HISTORIC PARK

Tuesday, October 30, 2001
U.S. House of Representatives
Subcommittee on National Parks, Recreation, and Public Lands
Committee on Resources
Washington, DC

The Subcommittee met, pursuant to notice, at 10:14 a.m., in Room 2322, Rayburn House Office Building, Hon. George Radanovich [Chairman of the Subcommittee] presiding.

STATEMENT OF HON. GEORGE RADANOVICH, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. RADANOVICH. Good morning and welcome to the Subcommittee on National Parks, Recreation and Public Lands oversight hearing on the effects of Washington Aqueduct discharge on the C&O Canal National Historic Park.

Thank you for making the right room. I know the hearing rooms have changed about four different times, given the anthrax scare, and I know you all have invented different ways to get into the Rayburn House Office Building because most of the entrances are not open and the tunnels are closed. So I want to thank you all very much for being here.

The Subcommittee on National Parks, Recreation and Public Lands is meeting today on the effects of Washington Aqueduct discharge on the C&O Canal National Historic Park. I would like to say from the start that the purpose of this oversight hearing is not an attempt to alter the operation of the Washington Aqueduct to supply drinking water to the residents of the District of Columbia, Arlington County, or the City of Falls Church, Virginia, along with a number of installations throughout the Metro area. This is especially significant in light of the events surrounding September 11.

Rather, the purpose of this important hearing is to discuss equal application of the law, specifically, the application of the National Park Service Organic Act, the Endangered Species Act, and the Clean Water Act. The Subcommittee would like to understand how the Washington Aqueduct is permitted to annually discharge over 200,000 tons of chemically treated sediment or, in simpler terms, smelly polluting sludge, into the C&O Canal National Historic

Park and the Potomac River, which is a Heritage River proclaimed in 1998 by former President Clinton.

I want to add that the discharge of this polluting sediment is not a recent event. The Washington Aqueduct operation has been continuously dumping chemicals and sediments into the C&O Canal and the Potomac River for decades with the knowledge and the blessing of the Park Service, the EPA, and other agencies.

In this hearing the Subcommittee will seek to examine the following. Why has the National Park Service allowed the U.S. Army Corps of Engineers to continuously discharge sludge and other chemically treated water into waters within the C&O Canal National Historic Park? I ask this question because the National Park Service Organic Act and the Management Policies Act of 2001 clearly mandate that above all else, the Park Service is to protect and preserve unimpaired the resources and values of the park for the enjoyment of the people. Allowing 200,000 tons of sludge to be dumped into the C&O and the abutting Potomac River is hardly protecting park resources, especially when one of them, the shortnose sturgeon, is on the endangered species list and appears to be a spawning ground for that very same animal.

What is the relationship between the Park Service and the agency that operates the Washington Aqueduct, the U.S. Army Corps of Engineers, and the Environmental Protection Agency, the agency that continues to approve and permit the sludge to be discharged from the water treatment plant into local waterways? I ask this question because it is my understanding that the 1989 U.S. Army Corps permit issued for the continued operation of the aqueduct conditioned the construction of additional water basins at the Dalecarlia plant on developing a sludge treatment facility. Now, 11 years later, the treatment facility has not been constructed nor even planned. However, other water treatment facilities across the country, having far fewer financial resources, have been able to move forward with such modernizations. Why hasn't this one and why does the EPA continue to permit the dumping when it may be affecting an endangered species?

Question number three. What steps has the National Park Service taken to eliminate the detrimental effects from the plant's discharge that has and continues to enter the park's waterways, creating a foul odor, unsightly color to the water, and is lethal to aquatic life? I ask this question knowing that a National Capitol Region Park Police officer has filed numerous reports on the discharges, only to see them ignored. In fact, the Committee staff just visited the C&O Canal National Park last Friday and experienced a strong odor of chlorine. Clearly the chemical discharges continue to impact the resources. Why is the Park Service doing nothing about this?

Question four. What steps under the Endangered Species Act, specifically consultations mandated by Section 7, has the National Marine Fisheries Service taken to protect the endangered shortnose sturgeon and its habitat in the Potomac River from the continuous discharge of sludge from the water treatment plant?

And lastly, why does the Washington Aqueduct appear to receive unusual favorable treatment and support from a number of Federal agencies that would otherwise be fighting to be in front of the line

to shut down a similar water treatment plant anywhere else in America where sludge has been discharged not only into a heritage river but also into a national park visited by over 2 million people annually?

I would like to say that as a member who represents Yosemite National Park, I have seen first-hand how quickly your agencies move to shut down a facility when it discharges polluting waters into a national park, as did the EPA when the Wawona waste water treatment plant discharged into Yosemite National Park. I find it very troubling to understand why your agencies have stood by for so long and allowed discharge from the aqueduct into the C&O Canal National Historic Park while in other instances have sought immediate shutdowns.

And finally, I cannot help but be reminded of the incomprehensible situation in Klamath Falls, Oregon. As all of you know, earlier this year the Department of the Interior completely cut off water from hundreds of farmers and thus their livelihood—many of them, if not all, are being forced into bankruptcies—so that the habitat of an endangered sucker fish could be preserved—the habitat. There was no notice that the fish was present; it was just the habitat, very different from the situation here where we know there is an endangered species and the dumping still occurs. Yet another example of where the Federal Government did not hesitate to take action to protect the habitat of an endangered fish.

I think we ought to recognize that the new administration has inherited the indifference of previous administrations on this matter and it is my hope that a proactive decision will be made to remedy this problem as soon as possible, rather than continue the head-in-the-sand approach.

I hope to have these and other questions answered today and I look forward to the testimony of the witnesses and I appreciate the fact that you are here.

[The prepared statement of Mr. Radanovich follows:]

Statement of The Honorable George Radanovich, a Representative in Congress from the State of California

The Subcommittee on National Parks, Recreation, and Public Lands will come to order. Good afternoon everyone. Today, the Subcommittee will examine the effects of the discharge from the Washington Aqueduct on the Chesapeake &Ohio Canal National Historic Park and into the Potomac River.

I would like to say from the start, the purpose of this oversight hearing is not an attempt to alter the operation of the Washington Aqueduct to supply drinking water to the residents of the District of Columbia, Arlington County, the City of Falls Church, Virginia, along with a number of installations throughout the Metro area. This is especially significant in light of the events surrounding September 11th.

Rather, the purpose of this important hearing is to discuss equal application of the law, specifically the application of the National Park Service Organic Act, the Endangered Species Act, and the Clean Water Act. The Subcommittee would like to understand how the Washington Aqueduct is permitted to annually discharge over 200,000 tons of chemically treated sediment, or in simpler terms, smelly polluting sludge, into the C&O Canal National Historic Park and the Potomac River, which was proclaimed a Heritage River in 1998 by former President Clinton. I want to add that the discharge of this polluting sediment is not a recent event. The Washington Aqueduct operation has been continuously dumping chemicals and sediments into the C&O Canal and the Potomac River for decades with the knowledge and blessing of the Park Service, the EPA, and other agencies.

In this hearing the Subcommittee seeks to examine the following:

1) Why has the National Park Service allowed the U.S. Army Corps of Engineers to continually discharge sludge and other chemically treated water into waters within the C&O Canal National Historic Park? I ask this question because the National Park Service Organic Act and the Management Policies of 2001 clearly mandate that, above all else, the Park Service is to protect and preserve unimpaired the resources and values of the park for the enjoyment of the people. Allowing 200,000 tons of sludge to be dumped into the C&O and abutting Potomac River hardly is protecting park resources, especially when one of them, the shortnose sturgeon, is on the endangered species list.
2) What is the relationship between the Park Service and the agency that operates the Washington Aqueduct, the U.S. Army Corps of Engineers, and the Environmental Protection Agency, the agency that continues to approve and permit the sludge to be discharged from the water treatment plant into local waterways? I ask this question because it is my understanding that the 1989 U.S. Army Corps permit issued for the continued operation of the Aqueduct conditioned the construction of additional water basins at the Dalecarlia plant on developing a sludge treatment facility. Now, eleven years later, the treatment facility has not been constructed nor even planned. However, other water treatment facilities across the country, having far fewer financial resources, have been able to move forward with such modernizations. Why hasn't this one and why does the EPA continue to permit the dumping when it may be effecting an endangered species?
3) What steps has the National Park Service taken to eliminate the detrimental effects from the plant's discharge that has, and continues to enter the park's waterways creating a foul odor, unsightly color to the water, and is lethal to aquatic life? I ask this question knowing that a National Capital Region Park Police officer has filed numerous reports on the discharges only to see them ignored. In fact, Committee staff just visited the C&O Canal National Park last Friday and experienced a strong odor of chlorine. Clearly, the chemical discharges continue to impact park resources. Why is the Park Service doing nothing about this?
4) What steps under the Endangered Species Act, specifically consultations mandated by Section 7, has the National Marine Fisheries Service taken to protect the endangered shortnose sturgeon and its habitat in the Potomac River from the continuous discharge of sludge from the water treatment plant?
5) And lastly, why does the Washington Aqueduct appear to receive unusual favorable treatment and support from a number of Federal agencies that would otherwise be fighting to be in front of the line to shut down a similar water treatment plants anywhere else in America where sludge was being discharged into not only a heritage river, but also into a national park visited by over 2 million people annually?

I would like to say as the Member who represents Yosemite National Park, I have seen first hand how quickly your agencies can move to shut down a facility when it discharges polluting waters into a national park as did the EPA when the Wawona waste water treatment plant discharged into Yosemite National Park. I find it very troubling to understand why your agencies have stood by for so long and allowed discharge from the Aqueduct into the C&O Canal National Historic Park while in other instances have sought immediate shut-downs.

Finally, I cannot help but be reminded of the incomprehensible situation in Klamath Falls, Oregon. As all of you know, earlier this year the Department of Interior completely cut off all water from hundreds of farmers—and thus their livelihood—so that the habitat of the endangered sucker fish could be preserved. Yet another example where the Federal Government did not hesitate to take action to protect the habitat of an endangered fish.

I think we ought to recognize that the new Administration has inherited the indifference of previous Administrations on this matter. It is my hope that a proactive decision will be made to remedy this problem as soon as possible, rather than to continue the head-in-the-sand approach.

I hope to have these and other questions answered today, and I look forward to the testimony of all of our witnesses. I now turn to the Ranking Member for her opening statement.

Mr. RADANOVICH. And I now turn to my Ranking Member, Ms. Christensen, for her opening statement.

STATEMENT OF HON. DONNA M. CHRISTIAN-CHRISTENSEN, A DELEGATE IN CONGRESS FROM THE VIRGIN ISLANDS

Mrs. CHRISTENSEN. Good morning. Mr. Chairman, thank you for continuing the business of our Committee. It is good to know that we are still working, especially since I do have a hearing coming up later on this week that is of great interest to my constituents and some of our other colleagues, so I want to commend you and the staff for keeping the Committee working.

As we understand it, the purpose of this oversight hearing is to examine the effects of the discharge of sediment and pollutants from the Washington Aqueduct on the C&O Canal National Historic Park and the habitat and population of the endangered shortnose sturgeon. We certainly share concern for both the park and the sturgeon and hope that today's hearing will provide the Committee information that will be useful in addressing any problems that may exist. But while we share some of the concerns you expressed, we do have some questions regarding the issues raised by this hearing.

It is our understanding that the aqueduct is operated by the Army Corps of Engineers, an agency over which this Subcommittee has no jurisdiction. In fact, of the agencies invited to testify today, only the Park Service falls within the purview of this Subcommittee and despite the impact on the park of the operations of the canal, it is unclear whether the National Park Service has any authority over the operation of the aqueduct. In addition, whatever steps may need to be taken to protect this endangered species are also outside of the Subcommittee's jurisdiction.

There may well be changes that need to be made in the manner in which this aqueduct is operated. Unfortunately, were legislation introduced to make those changes it also seems unlikely that it would be referred to this Subcommittee.

However, we have an outstanding array of witnesses. I would like to welcome them this morning and hope that the information they provide will prove valuable and I look forward to hearing their testimony.

Mr. RADANOVICH. Thank you very much.

Any other opening statements from any other members?

With that, we will proceed with the hearing. As you know, there is one panel today and many folks on that panel. On panel one I would like to again welcome Mr. John Parsons, who is the Associate Regional Director of Lands, Resources and Planning for the National Capitol Region of the Park Service, U.S. Department of the Interior.

Also with us—and welcome, Mr. Parsons—Mr. William Hogarth, who is the Assistant Administrator for Fisheries, National Marine Fisheries, National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Welcome.

Also, Ms. Patricia Gleason, Chief of the Maryland and District of Columbia Watershed Branch of the United States Environmental Protection Agency. I would like to welcome you and thank you for being here.

Colonel Charles Fiala, who is the Commander and District Engineer of the Baltimore District for the Army Corps of Engineers. Welcome again, Col. Fiala.

Mr. Rob Gordon is the Director of the National Wilderness Institute in Alexandria, Virginia and Mr. Gordon Leisch is a Field Biologist, formerly of the Department of the Interior, Office of Environmental Policy. Welcome to you, as well.

What I would like to do is allow everybody to make their opening statement. Once we get through we are just going to open it all up for questions.

So Mr. Parsons, if you would like to begin? And I suppose we will do the clocks, although I want to make sure you get all your information out. If we have to take up information and follow-up questions, we will do it that way. So if you would be mindful of the clocks, that would be great. You have 5 minutes and begin if you would like.

STATEMENT OF JOHN PARSONS, ASSOCIATE REGIONAL DIRECTOR, LANDS, RESOURCES, AND PLANNING, NATIONAL CAPITAL REGION, NATIONAL PARK SERVICE, U.S. DEPARTMENT OF THE INTERIOR, WASHINGTON, D.C.

Mr. PARSONS. Thank you, Mr. Chairman. I believe you have copies of my testimony and in the interest of time I will just summarize that.

I thought a bit of history about the C&O Canal might be in order this morning. The C&O Canal construction began in 1828. This section of the river—that is, the first 23 miles—was opened to navigation in 1831. It then continued on to Cumberland and did not get there until 1850, but the section we are talking about was operational long before the Washington Aqueduct came into existence in 1864.

We have been able to uncover no records that indicate whether rights-of-way or permits were issued by the Canal Company in the period of 1860. We will continue that search but it is a very laborious process, frankly.

I should point out that the Canal Company did not own all the land in question here. They bought a right-of-way for the canal. Between the canal and the river was owned privately at that time. It did not come into public ownership until the 1940's and '50's and was acquired by the National Capital Planning Commission pursuant to Capper-Crampton Act of 1929 to protect the shore lines of the Potomac.

As we understand it, there are seven outfalls that exist in Montgomery County and the District of Columbia. Some discharge raw river water before it is even treated at Dalecarlia and the others are discharged downstream from that point.

The canal park was established in 1971 and a proviso in that was to allow all existing rights-of-way and permits to remain in place. That is, there was no requirement by the National Park Service to issue new permits or new rights-of-way for pipes and discharges that occurred under the canal. I should point out that none of these pipelines go into the canal; rather, they go beneath it in culverts or pipes and discharge into the Potomac.

As I am sure you know, the National Park Service has no requirement or jurisdiction over the waters of the Potomac River. Others here on the panel with me have that responsibility and are working on permits in that regard.

That, in summary, concludes my testimony and I would be happy to answer any questions as we move along.

[The prepared statement of Mr. Parsons follows:]

Statement of John Parsons, Associate Regional Director for Lands, Resources, and Planning, National Capital Region, National Park Service, U.S. Department of the Interior

Mr. Chairman, thank you for the opportunity to appear before your committee to discuss the impacts of discharges from the Washington Aqueduct on the Chesapeake and Ohio (C&O) Canal National Historical Park and on the habitat and population of the endangered shortnose sturgeon. Our comments will address the role of the C&O Canal National Historical Park in this matter.

The U.S. Army Corps of Engineers (Corps) owns and operates the Washington Aqueduct, which provides drinking water for more than one million people in the metropolitan Washington area. Its history dates back to 1798 when, with the capital city under construction, George Washington suggested that "the water of the Potomac may, and will be brought from Great Falls into the Federal City." In 1852, Congress commissioned a study of the water supply and, by 1864, the 12-mile aqueduct began carrying water to the Georgetown Reservoir. The primary water intakes for the aqueduct are located behind a low dam in the Potomac River at Great Falls. The river water runs in an underground pipe for most of its path to the Dalecarlia and Georgetown Reservoirs, which are used by the Corps to filter and treat water for public consumption.

The operation of the Washington Aqueduct has a long history that predates the establishment of the C&O Canal National Historical Park. Below, we discuss some of the facts about some of the outfalls known to the National Park Service at this time. Three outfalls are in Montgomery County, Maryland. These are permitted by the State of Maryland and provide backflow release that may be used by the Corps during facility maintenance. These outfalls are infrequently used and release raw, untreated river water at points that are within the C&O Canal National Historical Park.

A fourth outfall in Maryland is located near a pump station on Little Falls Branch, a few hundred feet upstream of the Clara Barton Parkway and the C&O Canal National Historical Park. The discharge flows into a natural stream that passes beneath the canal in a culvert. The discharge is permitted by the State of Maryland. Raw river water is discharged at this location during maintenance. On occasion, treated water is discharged here as well. The Corps has facilities to dechlorinate treated water prior to discharge into Little Falls Branch.

In September 2001, as part of a cleanup effort from an August storm, a National Park Service contractor tested the soil from the Little Falls Branch box culvert to determine the potential presence of hazardous or toxic materials in the sediment of the culvert under the Canal. The test was undertaken with applicable US EPA SW–846 methods for aluminum, Polychlorinated Biphenyls (PCBs), and Toxic Characteristic Leaching Procedure for herbicides, certain metals, pesticides, volatile organics, and base neutrals/acid extractables. The testing did not detect any of the parameters tested for, at or near the respective methods' Limits of Quantitation. Aluminum and barium were identified, but at concentrations significantly lower than the Federal regulatory thresholds. Based on this test, the contractor firm indicated that the material from the box culvert does not appear to exhibit hazardous characteristics.

Stream sedimentation resulting from discharge to Little Falls Branch does not appear to be a problem within the park. The topography of the area consists of a deep gorge with many rock ledges, and heavy runoff from natural as well as discharge events have scoured the stream bottom of sedimentation. Thus, accumulations of discharged sediments, if any, disburse easily into the stream and do not appear to significantly affect park resources.

Three outfall discharges are piped across the park in the District of Columbia. These outfalls discharge water, sediment and aluminum sulfate (alum) from the settling basins at the Georgetown and Dalecarlia Reservoirs. One pipe discharges directly into the Potomac River, and the other two discharge approximately 75–100 feet into a trench located on park land. This trench drains into the Potomac. The U.S. Environmental Protection Agency (EPA) is the permitting agency for discharges that occur in the District of Columbia, and we understand that it is currently is in the process of reissuing permits for these three outfalls.

The U.S. Park Police is investigating whether any discharge from the Corps facility has either substantially impaired park resources or violated Federal or District

of Columbia law. This ongoing investigation was undertaken based on citizen complaints about odor and floating material.

The C&O Canal National Historical Park presently does not issue any permits to the Corps for discharging on or under Federal property within the park boundary. Public Law 91- 664'the 1971 law that established the C&O Canal as a national historical park provided for utility rights-of-way. Section 5(a) of that law states: "The enactment of this Act shall not affect adversely any valid rights heretofore existing, or any valid permits heretofore issued, within or relating to areas authorized for inclusion in the park." The Washington Aqueduct discharge lines were in place when the park was established. As we understand it, the Corps has employed such discharge practices since at least 1927. These discharges may predate establishment of the park and even the 1938 transfer of the land to the Federal Government by the Baltimore and Ohio Railroad.

The National Park Service does not have jurisdiction over the waters of the Potomac River, although it does have jurisdiction over the river bed in the District of Columbia. Responsibility for managing Potomac River water quality lies with the EPA, the City of Washington, D.C., and the Maryland Department of the Environment. However, water quality is a major concern of the National Park Service. The National Park Service cooperates with the responsible agencies to enhance protection of the river's water quality and to protect its aquatic resources.

Mr. Chairman, that concludes my prepared remarks. I would be pleased to answer any questions you or other committee members might have.

Mr. RADANOVICH. Thank you.

Dr. Hogarth.

STATEMENT OF DR. WILLIAM T. HOGARTH, ASSISTANT ADMINISTRATOR FOR FISHERIES, NATIONAL MARINE FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE, WASHINGTON, D.C.

Dr. HOGARTH. Good morning, Mr. Chairman and members of the Subcommittee. Thank you for the opportunity to testify today on the status of the shortnose sturgeon in the Potomac River and the potential effects of the discharge from the Washington Aqueduct on its population and habitat.

The shortnose sturgeon is anadromous, which means that it lives in the rivers and near-shore marine waters and migrates to fresh waters to spawn. The shortnose sturgeon was listed as endangered under the Endangered Species Preservation Act on March 11, 1967 and subsequently listed under the Endangered Species Act of 1973.

National Marine Fisheries Service (NMFS) has the sole responsibility for protecting the shortnose sturgeon under the ESA. The Chesapeake Bay population segment includes any shortnose sturgeon that inhabits rivers that flow into the bay, including the Potomac River. There is no population estimate available for this population segment.

Prior to 1996 there was limited data on the presence of shortnose sturgeon in the Potomac. Between 1996 and 2000, four shortnose sturgeon were captured in the upper and middle tidal Potomac River during a U.S. Fish and Wildlife Service reward program for Atlantic sturgeon. These sturgeon were captured in pound nets in the Potomac River between 55 and 123 miles downstream of the Washington Aqueduct discharge site. As of April 2001, an additional 42 shortnose sturgeon were captured via the reward program in other areas of the Chesapeake Bay but none in the Potomac River.

While the evidence does not conclusively demonstrate that shortnose sturgeon are present in any area that could be adversely affected by the discharge, there is sufficient evidence to show that it is at least a possibility. Since the standard for determining whether ESA consultation is necessary is whether an agency's action may affect a listed species, NMFS believes it is in the best interest of the species to consider the evidence showing that shortnose sturgeon are present in the Potomac River basin and may be present in the action area.

In addition, while we also have not documented the evidence of shortnose sturgeon spawning in the Potomac River, the habitat in the upper tidal Potomac River at Little Falls is consistent with the preferred shortnose sturgeon habitat in other river systems.

While concerns about the effect of Washington Aqueduct's discharge on water quality, fish, and other aquatic life existed prior to 1996, the impacts to shortnose sturgeon specifically were not considered. The capture of shortnose sturgeon in 1996 during the Fish and Wildlife reward program represented new scientific evidence that had to be considered in ESA Section 7 consultations.

Therefore, in 1998 NMFS worked with the U.S. Environmental Protection Agency and other Federal and state agencies to develop measures that would minimize the impacts of the sediment discharges to spawning, anadromous and resident fish in the short term. Specific recommendations were made for the operation of the Washington Aqueduct to minimize the adverse effects of sediment discharges on the spawning activities of anadromous fish and their habitat. Currently EPA and NMFS are in informal consultations regarding the effects of the Washington Aqueduct.

The Army Corps of Engineers, operator of the Washington Aqueduct, funded a 3-year water quality study to assess the discharge and its effects. We understand a final report of this study has been issued. We have not yet received the final document. EPA will use the discharge study results and other relevant data to develop a biological assessment of the potential effects of the Washington Aqueduct on shortnose sturgeon. Once we receive this evaluation we will determine whether the proposed Federal action is likely to adversely affect shortnose sturgeon and other listed species. If so, formal consultation will be necessary and NMFS will have to prepare a biological opinion.

To conclude, I look forward to working closely with Congress and the agencies for the protection of this species. Thank you for the opportunity to provide this testimony. And Mr. Chairman, due to a commitment at CEQ, I have to leave around 11:30, if that is no problem.

[The prepared statement of Dr. Hogarth follows:]

Statement of William T. Hogarth, Ph.D., Assistant Administrator for Fisheries, National Marine Fisheries Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce

Good morning, Mr. Chairman and members of the Subcommittee. Thank you for the opportunity to testify today on the status of shortnose sturgeon in the Potomac River, and the effects of the discharge of sediment and pollutants from the Washington Aqueduct on its population and habitat.

Background

The shortnose sturgeon is anadromous, which means that it lives in slow moving river waters or nearshore marine waters, but migrates periodically to fresher water to spawn. The shortnose sturgeon was listed as endangered under the Endangered Species Preservation Act on March 11, 1967, and subsequently listed under the Endangered Species Act (ESA) of 1973. NMFS has sole jurisdiction for protecting shortnose sturgeon under the ESA. The Chesapeake Bay population segment includes any shortnose sturgeon that inhabits rivers that flow into the Bay, including the Potomac River. There is no population estimate available for this population segment.

Occurrence in Potomac River

Prior to 1996, the most recent documented evidence of shortnose sturgeon in the Potomac was from 1899, and the best available information suggested that the species was extirpated from the Potomac River. Between 1996 and 2000, four shortnose sturgeon were captured in the lower and middle tidal Potomac River during a U.S. Fish and Wildlife Service (USFWS) reward program for Atlantic sturgeon. These shortnose sturgeon were captured in pound nets in the Potomac River, between 55 and 123 miles downstream of the Washington Aqueduct discharge site near Little Falls. As of April 2001, an additional 42 shortnose sturgeon were captured via the reward program in other areas of the Chesapeake Bay, but not near the Potomac River.

In addition to the reward program for Atlantic sturgeon, the USFWS conducted two sampling studies between 1998 and 2000 in the Maryland waters of the Chesapeake Bay watershed to determine the occurrence of shortnose and Atlantic sturgeon in areas of proposed dredge-fill operations. One of these studies was a Potomac River sampling study for a Section 7 consultation on the U.S. Army Corps of Engineers' Potomac River Federal Navigation Project. Specific concerns about this project included the potential effects of proposed open water disposal of dredged material in the lower Potomac River on shortnose sturgeon. This study included a total of 4,590 fishing hours conducted at 5 sites in the middle Potomac River. These sites ranged from approximately 30 to 74 miles downstream of the Washington Aqueduct discharge site. During this study, no shortnose sturgeon were captured at any of the 5 sites.

As part of the Potomac River sampling study, at NMFS" request, the USFWS also conducted an additional 77 hours of sampling at two other areas in the upper tidal Potomac River. This area, in the vicinity of Little Falls, Virginia, is near the best potential spawning habitat for shortnose sturgeon and the Aqueduct discharge site. No shortnose sturgeon were captured during 1998 and 1999 spring sampling in the vicinity of Little Falls.

Taken altogether, the evidence does not conclusively demonstrate that shortnose sturgeon are present in any area that conceivably could be adversely affected by the discharges. On the other hand, there is sufficient evidence to show that it is at least a possibility. Since the standard for determining whether ESA consultation is necessary is whether an agency's action "may affect" a listed species, NMFS believes that it is in the best interest of the species to consider the evidence as showing that shortnose sturgeon are present in the Potomac River basin, and may be present in the action area. This is based on the documentation of shortnose sturgeon in the lower and middle tidal reaches of the Potomac River as well as the suitable habitat in this river system. Because sampling for shortnose sturgeon has been limited in the upper tidal reaches, NMFS does not have sufficient evidence to conclusively state that shortnose sturgeon are present or absent in this area. While we have no documented evidence of shortnose sturgeon spawning in the Potomac River, the habitat in the upper tidal Potomac River at Little Falls is consistent with the preferred shortnose sturgeon spawning habitat in other river systems.

Interagency Cooperation

In 1998, NMFS worked with the U.S. Environmental Protection Agency (EPA) and other Federal and State agencies to develop measures that would minimize the impacts of the sediment discharges to spawning anadromous and resident fish in the short term. The agencies reviewed scientific literature and provided specific recommendations for the operation of the Washington Aqueduct to minimize the adverse effects of sediment discharges on the spawning activities of anadromous fish and their habitat.

Washington Aqueduct Section 7 Consultation History

While concerns about the effect of the Washington Aqueduct's discharge on water quality, fish, and other aquatic life existed prior to 1996, the impacts to shortnose

sturgeon specifically were not considered. The capture of shortnose sturgeon in 1996 during the USFWS reward program represented new scientific information that had to be considered in ESA section 7 consultations.

EPA and NMFS are in informal consultation regarding the effects of the Washington Aqueduct. This is based on the recent documentation of shortnose sturgeon in the Chesapeake Bay and the Potomac River, the possibility of the Little Falls area as a spawning site, and our inability at this time to conclusively state whether a spawning population of shortnose sturgeon is present or absent in this area.

The Army Corps of Engineers, operator of the Washington Aqueduct, funded a three-year water quality study to assess the discharge and its effects. We understand that a final report of this study has been issued but we have not yet received the final document. EPA will use the discharge study results and other relevant data to develop a biological assessment on the potential impacts of the Washington Aqueduct on shortnose sturgeon. Once NMFS receives this evaluation, NMFS will determine whether the proposed Federal action is likely to adversely affect shortnose sturgeon and other listed species. If so, formal consultation will be necessary and NMFS will prepare a biological opinion.

To conclude, I look forward to working closely with Congress and other agencies for the protection of this species. Thank you for the opportunity to provide this testimony.

Mr. RADANOVICH. We will see what we can do.

Dr. HOGARTH. Thank you.

Mr. RADANOVICH. Ms. Gleason, welcome.

STATEMENT OF PATRICIA GLEASON, CHIEF OF THE MARYLAND AND DISTRICT OF COLUMBIA WATERSHED BRANCH, WATER PROTECTION DIVISION, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 3, WASHINGTON, D.C.

Ms. GLEASON. Good morning, Mr. Chairman and members of the Committee. My name is Patricia Gleason and I am EPA branch chief in charge of the National Pollutant Discharge Elimination System or NPDES permitting in the District of Columbia. Thank you for your invitation to testify about the Washington Aqueduct.

EPA issues NPDES permits in the District of Columbia. EPA is also responsible for the regulation of drinking water. We work to ensure that the Washington Aqueduct complies with all applicable drinking water regulations and all water discharge permit conditions.

Finally, the Endangered Species Act requires the EPA to ensure actions are not likely to jeopardize the continued existence of Federally listed endangered or threatened species or adversely modify or destroy their critical habitat.

Additional information about the typical NPDES permitting process is included in my written testimony but in the interest of time I would like to turn now to the specific permitting process for the Washington Aqueduct.

In April 1989, EPA reissued NPDES permit number DC-10 to the Corps of Engineers for the Washington Aqueduct facility. This permit allows for the discharge to the Potomac River of residual solids from cleaning out sedimentation basins. Discharges are allowed only during high flow conditions. This permit had an expiration date of May 1994. The Corps applied for a new permit before the expiration date and by Federal law any permittee who timely applies to renew a permit is entitled to continue operating under that permit until a new one is issued. The permit required the Corps to study the potential toxicity of the discharge. That study

was completed in February 1993, concluding that there were no apparent water quality effects from the release of the discharges.

In early 1995, EPA circulated a new draft permit which produced significant concern from both the Corps and its customers because it proposed new conditions setting limits on the concentrations of iron, aluminum and total suspended solids. This would have forced the construction of a residual solids facility.

Late in 1995, Members of Congress requested EPA to delay the permit to give the parties a chance to build a new facility or develop an alternative plan, including a change in ownership and operations of the aqueduct. In April 1996 EPA agreed to delay the issuance of the permit and to work closely with the customer to resolve these issues.

The Corps, EPA and the customers agreed on October 3, 1997 that contractors would undertake a new study of the aqueduct's discharge. EPA believed this study, known as the discharge study, was necessary to establish a scientifically sound basis for any new requirements written into the reissued Washington Aqueduct permit.

While the study was being developed, EPA also entered into an interagency agreement with the Fish and Wildlife Service in April 1998 to determine whether there were any cost-effective, short-term actions which the aqueduct could employ to avoid potential impacts to fish species that may migrate or spawn in the vicinity of the discharges. EPA convened a panel of fisheries biologists which provided recommendations on minimizing impacts to migratory fish in March 1999. Meanwhile, field work for the new discharge study began in August 1999 and was completed in May of 2001.

The discharge study report was finalized on October 10, 2001. Based upon the results of this study and other information available to EPA, it appears that the sediments have a negligible effect upon juvenile and adult fish in the Potomac River. In EPA's opinion, the studies show that the discharge is not acutely toxic and that the chronic toxicity tests, while not conclusive, seem to support the conclusion 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 upon the concerns of National Marine Fisheries Service about the possible presence of shortnose sturgeon and the fisheries panel that the discharge may have a smothering effect on early life stages of fish and in light of our on-going Section 7 consultation about the sturgeon, EPA is considering preparing a draft permit that will be beyond the present permit requirements to protect the river and its living resources. EPA is now preparing a draft permit which will be submitted for public comment by the end of this calendar year.

In addition, as is normal practice, EPA will also consult with the District of Columbia to assure that the new permit meets water quality standards. We will continue consulting with Fish and Wildlife Service and National Marine Fisheries to ensure that endangered species and habitat are protected and the requirements of

the ESA and the Clean Water Act are met. EPA expects to issue the final permit next spring.

I would like to thank the members of this Committee for inviting me to speak here today and I would be happy to answer any of your questions. Thank you.

[The prepared statement of Ms. Gleason follows:]

Statement of Patricia Gleason, Chief, Maryland and District of Columbia Watershed Branch, Water Protection Division, U.S. Environmental Protection Agency, Region 3

INTRODUCTION

Good morning, Mr. Chairman and members of the Committee. My name is Patricia Gleason, and I am the Director of the Water Protection Division at the U.S. Environmental Protection Agency Mid Atlantic Regional Office in Philadelphia. I thank you for your invitation to testify about EPA's NPDES permitting process and how that process applies to the operation of the Washington Aqueduct.

EPA's ROLE

In accordance with the provisions of the Clean Water Act (CWA), EPA is the permitting authority responsible for issuing NPDES permits in the District of Columbia. In addition to its NPDES permit authority, EPA is also responsible for the regulation of drinking water. EPA works closely with the Washington Aqueduct and its wholesale customers, the District of Columbia Water and Sewer Authority, Arlington County and Falls Church, Virginia, to insure that the Aqueduct and its customers comply with all applicable drinking water responsibilities and that they provide their individual customers with high quality drinking water. Finally, the Endangered Species Act (ESA) requires the EPA to utilize its authorities to carry out programs for the conservation of endangered and threatened species. Enacted to provide for the conservation of the ecosystems upon which endangered and threatened species depend, the ESA complements EPA's CWA authorities to restore and maintain the biological integrity of the Nation's waters.

In general, EPA follows the following procedures when it issues an NPDES permit. After EPA receives the permittee's application for an NPDES permit (or in this case an application for renewal of the permit), EPA begins work on a draft permit. A major part of this work is preparing limits for the discharge of pollutants by the permittee. Permit limits are based on both technology requirements and water quality impacts, and they 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. EPA also puts in the draft general conditions that must be in any NPDES permit. At the same time EPA prepares the draft permit, it also prepares a fact sheet (a detailed explanation of the permit and its terms) or a statement of basis (a less detailed explanation). Prior to sending the permit out for public comment, EPA will send a draft version of the permit to the appropriate State agency for certification that the draft permit will be protective of the state's water quality standards. In addition, the Region often discusses possible provisions of the draft permit with Federal and State agencies before it completes the draft permit. This provides essential information to the Region which it uses to formulate well considered draft permits.

After EPA has completed the draft permit, the Agency sends out a notice of its intent to issue the permit with the conditions set out in the draft permit. The notice also includes a solicitation of comments on the draft permit and the necessary information to request a hearing on the draft permit. 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 EPA'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 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 the comments. At the same time, the Agency prepares a final permit, making any changes that are needed to respond to the public

comments. EPA then issues the 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 in section 7 of the Endangered Species Act (ESA) and 50 C.F.R. § Part 402. Under section 7, 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 recently 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 the need for 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.

The U.S. Army Corps of Engineers (COE) owns and operates the Washington Aqueduct facility. The functions of the facility include the collection, purification, and pumping of an adequate supply of clean water for the District of Columbia, Arlington County (VA), and the City of Falls Church (VA). The Washington Aqueduct provides the 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 or WASA (for the District of Columbia), Arlington County, and the City of Falls Church (the "Customers"). Water distribution is the responsibility of the Customers.

On April 3, 1989, EPA reissued NPDES Permit No. DC 0000019 to the COE for the Washington Aqueduct facility, effective date May 3, 1989. (EPA had previously issued this permit in 1983.) This NPDES permit allows for the discharge of residual solids from cleaning out the sedimentation basins used in water treatment to the Potomac River. Discharges to the Potomac are allowed only during high flow conditions. During these high flow events, the Potomac River contains a large quantity of solids. The Aqueduct's discharge represents less than twenty percent of the annual total river load of solids. The permit does not require any treatment of the discharge.

The present permit 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 COE to meet a pH level of not less than 6.0 standard units nor greater than 8.5 standard units. The COE must take monitoring samples at the time of discharge. Samples are taken of pH, Total Suspended Solids, Total Aluminum, Total Iron, and Flow. These samples provide EPA a representation of the discharge's volume and nature. The COE reports its monitoring results to EPA on Discharge Monitoring Reports.

This permit had an expiration date of May 2, 1994. The COE 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 EPA's decision to issue a new permit.

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

In early 1995, EPA prepared a draft permit for comment. A copy of the permit was sent to the District of Columbia and the COE. In February 1995 significant concern arose from the Customers and COE because of the proposed new conditions in the draft permit. The new conditions would have set limits on the concentrations of iron, aluminum and total suspended solids from the Aqueduct's discharge. This would have forced the construction and use of a residual recovery facility. The Customers expressed concern about the cost of such a facility. One issue for them was their ability to provide the lowest possible capital and operating costs for the Aqueduct users. Both the COE and the Customers also questioned the environmental necessity of a recovery facility.

Late in 1995, Members of Congress requested EPA to delay the issuance of the permit to give the various parties involved a chance to build a new facility or develop an alternate plan including a change in the ownership and operations of the Aqueduct. As a result, in April 1996 EPA agreed to delay the issuance of the permit to provide time to explore the feasibility of turning over the operations of the Aqueduct to another operator. EPA also agreed to work closely with the Customers to resolve the issues.

On August 6, 1996, the Safe Drinking Water Act Amendments of 1996 (Public Law 104–182) became effective. Section 306 of the Amendments outlined a plan for the future operations of the Aqueduct. Congress encouraged the establishment of a non–Federal entity to take over the operations of the Aqueduct. 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.

After discussions among the COE, EPA, and the Customers, these parties agreed on October 3, 1997, that contractors for the 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 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. Recognizing the potential that new effluent limits and special conditions in a revised NPDES permit could mandate the expenditure of large amounts of public funds, EPA believed this study was necessary to establish a scientifically sound basis for any new requirements written into the reissued Washington Aqueduct permit.

While the study was being developed, EPA entered into an Interagency Agreement (IAG) with FWS in April 1998 for assistance in developing discharge guidelines for the Washington Aqueduct sediments. The purpose of this work was to determine whether or not there were any cost effective, short term 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. In order to perform this work, 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.

In March of 1999, the FWS submitted, in a report to EPA, the results of the 1998 Fisheries Panel's study and recommendations. EPA has discussed the results of the report with the COE. One recommendation by the Panel was that there should be no discharge in the Spring when anadromous fish spawn. This recommendation is difficult for the COE to implement because Springtime is often the only time during the year when high flow conditions are present in the Potomac and the COE cannot predict if it will be able to discharge later in the year. As stated earlier, the NPDES Permit limits the Aqueduct's discharge to high flow conditions.

On June 24, 1999, EPA approved the study plan for the Discharge Study. At EPA's request, staff from the Fish and Wildlife Service's ("FWS") Environmental Contaminants Branch from the Chesapeake Bay Office assisted EPA in the initial planning for the Discharge Study. EPA discussed the study plan with the FWS prior to approving it. 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 Customers.

Besides assisting EPA with the planning of the Discharge Study, FWS' Environmental Contaminants Branch has assisted in the review and interpretation of data generated by the Discharge Study. In addition, at the request of several citizen groups, FWS has participated with EPA in public meetings and informational sessions, most notably in the Spring of 2000 and on October 10, 2001. EPA was at both meetings to explain the techniques used during the collection of environmental data for the Discharge Study. EPA has reviewed the raw data which resulted from the

effluent toxicity testing part of the Discharge Study and committed resources to review the draft Discharge Study and to follow through, as necessary, to explain the results of the Discharge Study to the public.

Field work for the studies began in August of 1999 and they were finally completed in May of 2001. The Discharge Study Report was finalized by October 10, 2001. Based upon the results of the study and other information available to EPA, it appears that the sediments have a negligible effect upon juvenile and adult fish in the Potomac River. In EPA's opinion, the acute toxicity studies showed that the discharge is not acutely toxic and the chronic toxicity tests, while not conclusive, seemed to support the conclusion 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 presence of shortnosed 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 is considering preparing a draft permit that will be beyond the present permit requirements to protect the river and its living resources.

With the recommendations of the FWS panel and the completion of the Discharge Study, EPA is now in a position to prepare a draft NPDES permit. EPA anticipates that a draft permit will be submitted for public comment by the end of calendar year 2001. This is an important part of the permitting process because it allows the public to express their opinion regarding the acceptability of the permit. In addition, as is its normal practice, EPA will also consult with the DC Department of Health to assure that the new permit meets DC Water Quality Standards. We will continue consulting with US Fish and Wildlife Service and National Marine Fisheries Service to ensure that endangered species and habitat are protected. In addition, since that State of Maryland and the Commonwealth of Virginia share the waters of the Potomac with the District of Columbia, they too will be provided the opportunity to comment on the draft permit. After reviewing the comments, EPA will then prepare a response to the comments and issue the final permit. The length of time it will take to issue a final permit depends on a number of factors, including the number and content of public comments received, and results of Congressionally mandated consultation with the Customers. At this time, EPA would expect to be in a position to issue the final permit in the Spring 2002.

As described above, EPA consults with the Service(s) whenever discharges under an NPDES may affect a listed species. EPA has discussed with the FWS and NMFS whether listed species, including the shortnose sturgeon, are present in areas potentially impacted by discharges from the Aqueduct. EPA is engaged in informal consultation with the FWS regarding potential effects, if any, on listed species. The shortnose sturgeon is under the jurisdiction of NMFS, which is the expert agency with regard to this species. According to NMFS, there are no data documenting the presence of sturgeon in waters affected by the discharge, although the presence of shortnose sturgeon has been documented in the lower and middle tidal reaches of the Potomac River and the habitat in the upper tidal Potomac River at Little Falls is similar to shortnose sturgeon spawning habitat in other river systems. Because sampling for shortnose sturgeon has been limited to 77 hours of sampling in two areas in the upper tidal reaches, additional data gathering would be necessary to conclusively prove its presence or absence. While EPA is not required to consult on an action that will have no effect on listed species, EPA and NMFS are taking a conservative approach and are currently engaged in informal consultation regarding the sturgeon. EPA will complete this process in accordance with the consultation procedures in the Service regulations and include any permit conditions needed to ensure compliance with the requirements of section 7 of the Endangered Species Act. In addition the Agencies have held telephone conversations discussing the steps that they would take to deal with the possibility that the reissuance of the NPDES Permit might affect these species.

In sum, I would characterize our status at this point in reissuing the Aqueduct's permit as gathering information, including the information shared as a result of our consultations with the Services, so that we can prepare a draft permit that meets the requirements of the ESA and the CWA. I would like to thank the members of this committee for inviting me to speak here today. Since these matters have been the subject of litigation, for the past year a significant amount of speculative information has been circulated. I appreciate the opportunity to appear before you to explain the current status of this important matter. Thank you.

Mr. RADANOVICH. Thank you very much.

Col. Fiala, thank you and welcome.

STATEMENT OF COLONEL CHARLES J. FIALA, JR., COMMANDER AND DISTRICT ENGINEER, BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS, BALTIMORE, MARYLAND

Col. FIALA. Thank you, Mr. Chairman, members of the Committee. I appreciate the opportunity to testify this morning. I am Colonel Charles J. Fiala, Jr., commander and district engineer of the Baltimore District Corps of Engineers, United States Army.

The Baltimore District has a long and distinguished history of service to the nation, the region and the city. Members of my 1,200-person staff continue to support recovery operations at the World Trade Center and at the Pentagon. For more than two decades the Baltimore District has been in the forefront of environmental restoration in the Chesapeake Bay, including projects that have provided improved water quality and habitat in the Potomac, Anacostia and Susquehanna Rivers.

You asked me to provide information on the legally permitted discharges of the Washington Aqueduct, a division of the Baltimore District. I would first like to summarize the major role the aqueduct plays in supporting our nation's capital and the surrounding areas, then respond to the issues raised by your invitation.

In 1853, at the direction of Congress, the Corps began construction of the aqueduct. We have supplied water to the District of Columbia since 1859. Many of the original structures from the 1850's are still in operation and many others date back to the 1920's. Most of the real estate supporting the aqueduct's mission and current treatment processes were acquired and functioning decades before the C&O Canal became a national park.

Today the aqueduct provides all water supplied to Washington, D.C., Arlington County, Virginia and the City of Falls Church, Virginia. This area is home to many agencies that support the administration and the defense of this country, including the very building we are meeting today; in fact, the water we have sitting out here today.

For example, the aqueduct supplied water used to fight fires at the Pentagon on 11 September. Providing high-quality, safe and affordable water to approximately 1 million customers in these areas, particularly in light of the 11 September attacks on our country, is one of our highest priorities.

The aqueduct is a unique Federal institution in that it operates like a business. It gets its operational and capital improvement funds from the fees it charges its customers for the water it supplies. It is regulated by the Safe Drinking Water and Clean Water Acts and takes its compliance responsibilities seriously. It operates in accordance with the National Pollutant Discharge Elimination System permits issued to it by both the State of Maryland and the Environmental Protection Agency. These permits allow the aqueduct to make routine discharges from sediment basins and infrequently maintained-related discharges.

All water treated by the aqueduct comes from the Potomac River that naturally transports a very large sediment volume. Treatment involves a three-step process that includes sediment, filtration, and disinfection. In the case of the aqueduct, sediment removal begins in an initial sediment basin, then occurs more actively in six large

basins with the aid of a coagulant, aluminum sulfate, that is typically used in the water production industry.

Periodically these six sedimentation basins must be cleaned of the sediment build-up. Their contents, which include raw or river water, the accumulated sediments, and the accumulated coagulant, are flushed into the Potomac River, in keeping with the terms of the EPA discharge permit. We estimate that 95 percent of the sediments discharged from naturally occurring sediment from the river and 5 percent of the solids are due to the coagulant. The volume of the solids discharged to the Potomac River from the six basins is only about one-half of the total volume of solids removed from the water, taken from the river. At a maximum, it represents less than 1 percent of the solids in the river flow during the discharge period.

With respect to the nonroutine discharges for plant maintenance, the State of Maryland permits the aqueduct to discharge raw water—that is, untreated water—into the streams and on lands across park property. EPA has also issued the aqueduct a permit that allows discharge of raw water dosed with coagulant if maintenance is required on a major conduit. The path of this discharge is open and crosses the park property. Discharges of this nature seldom occur, once every 2 years for approximately 6 hours.

Two other discharges are allowed under this permit. One is the ground drain water from under the sediment basins. That water goes directly to the Potomac River. The other is a drain water from a large conduit to Rock Creek. That discharge might occur only once in 10 years and involve sediment-free, clear, unchlorinated water.

All of our discharge points or outfalls are properly regulated and comply with Federal and state permits. At this time there are no known effects from these discharges on the C&O Canal Historic Park property.

The next issue you asked me to discuss is the impact of sediment discharges, if any, on the shortnose sturgeon. As you are aware, that particular question is subject to current litigation brought on by the National Wilderness Institute against several of the Federal agencies testifying here today. In accordance with the Endangered Species Act, consultation among Federal agencies regarding the shortnose sturgeon is on-going at this time.

I can mention that at the request and direction of the EPA, we contracted for two significant scientific efforts to study the impacts, if any, of sediment discharges upon aquatic life of the Potomac River. Based on the study plan coordinated with Fish and Wildlife, approved by the EPA Region 5 and performed in accordance with accepted scientific procedures and analysis, the most recent study was just completed and sent to these agencies. EPA is now determining whether to reissue the aqueduct's current permit for the sediment discharges. Meanwhile we continue to work with the EPA and our other Federal parties to do what is best for the environment and ensure the availability and safety of the drinking water we supply this region.

Again I thank you for this opportunity to be here this morning to apprise the Subcommittee about the operations of the Washington Aqueduct and I will respond to your questions.

[The prepared statement of Col. Fiala follows:]

Statement of Colonel Charles J. Fiala, Jr., Commander and District Engineer, Baltimore District, U.S. Army Corps of Engineers

Mr. Chairman and members of the subcommittee, thank you for inviting me to testify before you today. I am Colonel Charles J. Fiala, Jr., the Commander and District Engineer of the Baltimore District, United States Army Corps of Engineers.

You invited me here today to provide information regarding the legally permitted discharges of the Washington Aqueduct, which is a division within the Baltimore District. I would like to provide a brief background of the significant role the Washington Aqueduct plays in support of our nation's capital and the surrounding areas and then respond to the issues raised in your invitation.

At the direction of Congress in 1853, the United States Army Corps of Engineers began construction of the water delivery system that is today known and operated as the Washington Aqueduct. The United States Army Corps of Engineers has continuously supplied water for drinking, fire protection, and a host of other purposes to the City of Washington and the District of Columbia since 1859. Many of the original structures from the 1850s are still in operation and many others date back to the 1920s. Consequently, many of the real estate interests acquired to support the Aqueduct's mission and the treatment processes currently used by the Aqueduct were acquired and functioning decades before the C&O Canal National Historic Park became a national park.

Today, we own and operate wholesale water production facilities that provide all of the water supplied to Washington, D.C., Arlington County, Virginia, and the City of Falls Church, Virginia, an area home to numerous agencies which support the administration and defense of this country including the very building we are meeting in today. By way of example, the Washington Aqueduct supplied the water used to fight the fires at the Pentagon on September 11, as it would for any fire in any one of these three jurisdictions. Providing high quality, safe, and affordable water to the approximately one million consumers in these areas, particularly in light of the September 11 attack on this country, is one of my highest priorities.

The Washington Aqueduct's manager works under my general supervision. The Washington Aqueduct is a unique Federal institution. While much of the Federal Government is totally or largely dependent upon congressional appropriations, the Washington Aqueduct operates as a business. It receives the funds it needs to operate by way of the fees it charges its three local government customers for the water it supplies. Capital improvements are also funded by the customers. At the same time, like all of the other drinking water production facilities, the Washington Aqueduct is regulated by the terms of the Safe Drinking Water Act and the Clean Water Act. The Washington Aqueduct takes its compliance responsibilities seriously. It operates in accordance with the National Pollutant Discharge Elimination System (NPDES) permits issued to it by both the State of Maryland and by Region 3 of the Environmental Protection Agency (EPA).

To respond to the issues you raise, let me clearly state that all water treated by the Washington Aqueduct comes from the Potomac River and that approximately 95% of the sediments the Washington Aqueduct discharges back into the Potomac River are Potomac River sediment. Treatment is a three-step process that includes sedimentation, filtration, and disinfection. The large volume of sediment that is naturally transported by the Potomac River and drawn into the treatment process must be removed. In the case of the Washington Aqueduct, sediment removal begins in an initial settlement basin, then occurs more actively in six large basins with the aid of a coagulant. The coagulant currently used by the Washington Aqueduct is aluminum sulfate. This is typical of the water industry.

Periodically, these six sedimentation basins must be cleaned of the sediment build-up. When that occurs, the contents, which include raw water, i.e. river water, the accumulated sediments, and the accumulated coagulant, are flushed to the Potomac River in accordance with the terms of the NPDES permit issued by EPA Region 3. Approximately 95 percent of the sediments discharged are naturally occurring sediment transported by the river before the water was drawn into the treatment process. We estimate that about five percent of the solids of any discharge are attributable to the coagulant. At the last stage of the basin cleaning, some finished water (i.e. drinking water) is used in fire hoses to flush out the last of the sediments. That drinking water does contain chlorine, but the physical action of the water on the walls and bottom of the basin volatizes some of that chlorine. The remaining chlorine content of the drinking water used for this purpose reacts with the sediment effectively using up all free chlorine potential.

To put the discharges into perspective, the current permit allows discharge only when the flow of the Potomac exceeds 3.5 billion gallons per day. Normally a discharge event from one of the sedimentation basins will be completed in a 24-hour period. From the most often drained basins, the volume of the discharge would be in the range of 12 to 18 million gallons, which as a maximum is about one percent of the flow of the river during that 24-hour period. The volume of solids discharged to the Potomac River from the six sedimentation basins is only about one half of the total volume of solids that were removed from the water taken from the River. That other half remains in the initial sedimentation basin which acts as a pre-sedimentation basin before the raw water is dosed with a coagulant in the formal treatment process.

With respect to the C&O Canal National Historic Park, the Washington Aqueduct, in accordance with EPA and State of Maryland permits, conducts two types of discharges. They are the just-described routine sedimentation basin discharges that occur approximately 16 to 20 times a year and infrequent discharges of raw or partially treated water to allow for maintenance of Washington Aqueduct infrastructure.

The routine water treatment solids, i.e., sediment, discharges use three conduits to get those solids to the Potomac River. One of those conduits is a closed pipe that runs underground through the Park's property and discharges into the Potomac River approximately 12 to 16 times per year. A typical discharge lasts 12 hours. These discharges are in accordance with the EPA NPDES permit. At the point of discharge, the sediment enters the Potomac River below water level from a concrete structure slightly offshore. No sediment is deposited within the C&O Canal National Historic Park at that location.

The other two conduits discharge onto Park property approximately 75" from the shore of the Potomac River and follow a channel into the River. These discharges are also in accordance with the EPA NPDES permit and occur approximately 4 to 6 times per year for approximately 12 to 18 hours. The closed discharge pipes at those locations run underground from the sedimentation basins and end in a headwall about 50 to 75 feet from the river. A small channel a few inches deep at each location extends from the headwall, traveling perpendicular to the river, and transports the liquid and the solids until they enter the River and are mixed and carried downstream. During a discharge, the sediment is confined to that channel and does not otherwise affect the surrounding land. There is no build- up of residue from the sediment discharges on Park land.

With respect to the non-routine discharges to accomplish plant maintenance, the State of Maryland, under a Maryland General Discharge Permit, allows the Washington Aqueduct to discharge raw water into streams and on lands which cross Park property. These discharges are infrequent, approximately once a year. In only one location where infrequent discharge occurs is there the potential for chlorinated water to leave the Washington Aqueduct treatment plant and enter the waters of the State of Maryland. This may occur approximately 5 to 6 times per year for a few hours at a time. In that instance, a dechlorination station is used to properly dechlorinate the water before it leaves the treatment plant.

EPA has also issued Washington Aqueduct an NPDES Permit (DC0000329) that allows discharge of raw water dosed with coagulant should maintenance be required on a major conduit. The path of this discharge is open and crosses Park property. Discharges of this nature occur infrequently, approximately once every two years, for approximately six hours. There are two other points allowed under this permit. One is to drain ground water from under sedimentation basins. That water goes directly to the Potomac River. The other is to drain water from another large conduit to Rock Creek. That discharge might occur only once in 10 years and would be clear unchlorinated water.

All of our discharge points or outfalls are properly regulated by and comply with NPDES permits. Where other private or public properties are crossed, proper land usage rights have been obtained.

At this time, there are no known adverse effects on C&O Canal National Historic Park property as a result of these discharges.

The next issue associated with the Washington Aqueduct's sediment discharges that the committee has asked me to discuss is the impact of the discharges, if any, upon the shortnose sturgeon. That particular question is the subject of current litigation brought by the National Wilderness Institute against a number of the Federal agencies testifying here today. My testimony is therefore somewhat constrained so as not to compromise the Government's ability to present a sound defense in this litigation. In accordance with the Endangered Species Act, consultation among the Federal agencies regarding the shortnose sturgeon is ongoing at this time.

At the request and direction of the Environmental Protection Agency, the United States Army Corps of Engineers contracted for two significant scientific efforts to study the impacts, if any, of the sediment discharges upon the aquatic life of the Potomac River. The first effort was a study completed by Dynamac Corporation in 1993. This report concluded that there were no apparent water quality effects from the release of the discharges. The second effort, based upon a study plan coordinated with the United States Fish and Wildlife Service and approved by EPA Region 3, was a study conducted by EA Engineering, Science, and Technology, Inc., which has just been completed. Washington Aqueduct provided the report for that study to EPA Region 3 on October 5. This report is based upon accepted scientific procedure and analysis. Based upon the results of the study and other information available to EPA, it appears to us at the Corps that the sediments have a negligible effect upon the Potomac River. The executive summary from the report is attached as an exhibit to my testimony. EPA is in the process of determining whether to reissue the Washington Aqueduct's current NPDES permit for the sediment discharges, and, if so, under what conditions.

In conclusion, the United States Army Corps of Engineers continues to work closely with the EPA and all of our other Federal agency partners both to do what is best both for the environment and to ensure the availability and safety of the drinking water we supply to this region.

Again I thank you for the opportunity to be here this morning to apprise the subcommittee of the operations of the Washington to Aqueduct and to respond to your questions.

Mr. RADANOVICH. Thank you, Col. Fiala.

Mr. Gordon.

STATEMENT OF ROB GORDON, DIRECTOR, NATIONAL WILDERNESS INSTITUTE, ALEXANDRIA, VIRGINIA

Mr. GORDON. Thank you, Mr. Chairman, Committee members. Thank you for holding this hearing to investigate the damage done to the flora, fauna and habitat and the natural and cultural values of the C&O National Park from the Washington Aqueduct's discharges.

Mr. Chairman, you have seen the massive black plume and tons of chemically treated sludge seep down the Potomac. According to the Corps, it is the equivalent of dumping 15 dump-trucks a day into the Potomac.

Mr. RADANOVICH. Mr. Gordon, I hate to be in the practice of interrupting opening statements but I just wanted to draw people's attention to the picture over there. The light brown color is the high water turbidity, normal turbidity of the Potomac River. Especially after rains, you will notice how it is. The black plume down there is the actual discharge of sediment from the basins into the river. That is black sludge there.

I believe we have little packets on your desk there that shows you exactly. We do not have enough for every member; I am sorry, but that is what the sludge looks like and that is the contrast of it happening in the Potomac River there near the C&O Canal.

The other picture there is a nighttime picture of the foam. There is a green stick in the water there; that is an oar and that is rowing through the sludge as it is being dumped into the river at nighttime. Then the other picture to the right there is the foam on the Potomac River after the dumping the night before.

So in reference to the plume and the effect of it on the Potomac, those are visual examples of what is going on there. Thank you.

Mr. GORDON. Do I get an extra minute?

Mr. RADANOVICH. Yes, you get an extra minute.

Mr. GORDON. According to the Corps, the dumping that you have just seen the photographs of is the equivalent of 15 dump-trucks a day into the Potomac. The Park Service would never tolerate this in Yosemite or Yellowstone.

As recently as August, the Corps discharged into Little Falls Branch with chlorine levels that exceeded Maryland's limit by five times, a limit below which chlorine is used to kill aquatic life that might otherwise grow in nuclear power plant cooling water intakes.

Rather than fix these problems, you are hearing today from agencies that defend the practice, stating that what you are seeing is not really what you are seeing and that the standards somehow do not apply here and that although they have had studies, draft permits, hearings and more studies and another draft permit, you should trust that they will work it out, even though the dumping really is not bad or getting any special treatment.

The Corps has stated that the sludge is from the river and includes a little alum. Little means 10,000 tons, almost three 10-ton dump-trucks a day all year long. How long would it take for the average American to be indicted, convicted and imprisoned for dumping just one dump-truck of alum into a pond outside the Beltway?

The Corps discussed diverting its sludge to a D.C. sewage facility 30 years ago and its 1989 permit called for provisions for a sludge-handling system. A later EPA consent order required design work for a dewatering facility so sludge could be hauled off-site, and EPA draft permits had limits that would have required a treatment facility. These permits were delayed until the question of transferring the facility was resolved, which the Army decided not to do. Then, rather than solve the problem, yet another study was undertaken. This study, too, argues it is okay to dump without any limits. It, however, makes conclusions that cannot be substantiated and even in a reading most favorable to the Corps, finds that alum is discharged at rates that exceed EPA's criterion and itself recommends terminating discharges for a third of the year and extending one discharge pipe several hundred feet to dilute now-toxic discharges to nontoxic levels.

Why has the dumping been allowed? Corps and EPA documents express concern about "trucking through an affluent neighborhood" or "high-value areas" and the "political nature of the neighborhood" and worry that ratepayers oppose an increase. One EPA official remarked about wholesale customers who "worked over" public officials who are "shocked" to learn of the dumping. And, of course, there have been letters, memos, and meetings with Senators, Representatives and other officials.

The Corps defends its practice, stating that it has been doing this since 1927. How many other big point source polluters can tell you that the Clean Water Act has had no effect on them? How many can tell you it is okay with the EPA and the National Park Service and the National Marine Fisheries Service to dump in a national park and habitat considered the primary, if not only spawning ground of a Federally endangered species that is considered to be generally present? The answer is none.

Please listen carefully to the testimony and the comments you will hear today and then contact the agency heads represented

here and ask them if, in fact, their agencies policies were accurately represented because when you strip away the parsing, here is what you are being told.

NPS: It is okay to dump tens of millions of pounds of chemically treated sludge and tens of thousands of gallons of water with chlorine levels that exceed state standards by fivefold into a national park and to dump sludge that is toxic to aquatic life and threatens the survival of fish species of concern on NPS-controlled river bottoms.

Corps: It is okay to dump into U.S. waters in direct violation of an NPDES permit and with more than 83 percent of the discharges above Chain Bridge having concentrations of total suspended solids that are greater than the effluent found to be acutely toxic to fish in its own study and to do so at night to intentionally obscure the discharges' effects.

NMFS: It is okay to discharge hundreds of thousands of tons of chemically treated sludge into suitable spawning habitat for an endangered fish it considers present generally so long as no study following NMFS's protocol has been taken or so long as one can argue that any endangered fish that is killed without an incidental take statement may have come to this river from another.

And EPA: It is okay to dump into an American Heritage river and a tributary of the Chesapeake Bay with total suspended solids concentrations in the tens of thousands and to routinely exceed an EPA pollutant criterion and to allow this, at least in part and in spite of the EPA administrator's focus on environmental justice because the neighborhood around the facility is affluent.

Each of the agencies represented here today and charged with protecting our nation's resources actions are consistent with the positions I have just described. Exactly, I am not sure why but it is my hope that you will find out and help fix the problem. Thank you.

[The prepared statement of Mr. Gordon follows:]

Statement of Rob Gordon, Director, National Wilderness Institute

Mr. Chairman:

Thank you for holding this hearing to investigate the damage done by discharges from the Washington Aqueduct to the flora, fauna and habitat and the natural and cultural values of the Chesapeake and Ohio National Historic Park. Sadly these discharges are conducted by the Corps and permitted by EPA.

For years, the discharges from the Washington Aqueduct have harmed this National Park that otherwise retains tremendous natural beauty near the heart of a major metropolitan area and is built around one of the greatest American Heritage Rivers, the Potomac River, an irreplaceable symbol flowing through our Nation's Capital. Sections of this unique park were surveyed by our first president. The Potomac is enormously popular with fishermen, paddlers or other recreationalists because of its unique physical characteristics from the majesty of Great Falls to the spawning grounds below Little Falls that may be the primary if not only spawning grounds of a highly endangered fish.

This EPA permitted dumping by the Corps clearly violates numerous Park Service Rules, the Clean Water and the Endangered Species Act and is an offense to those who appreciate this park.

When the Corps dumps a massive black plume with a rotten stench clouds the Potomac as its seeps through the center of the Park. Millions of pounds of sediment with alum are dumped into the Potomac within a matter of hours.

According to the Corps of Engineers itself, it is the equivalent of dumping 15 dump trucks a day, every day all year into the Potomac. Let me repeat that—15 dump trucks a day, every day all year into the Potomac. The National Park Service would never—never—tolerate this in the Grand Canyon, at Glacier, at Yellowstone

or the Everglades. This single undisputed fact, I think, would seem to the average American all the rationale that is necessary for this hearing to conclude that this practice is wrong, should have stopped years ago and must be immediately addressed. It is disgraceful and deeply disturbing that agencies charged with stewarding our nation's treasures and protecting our natural resources are party to this.

As recently as August of this year this same facility was found to be discharging treated water into Little Falls Branch in the National Park having chlorine levels that exceed Maryland state standards by 4 and 5 times.

But rather than fix these problems, you are hearing today from officials who have been actually telling people that what you have seen really isn't that bad, and whatever standards exist somehow what they do does not violate them and that they should just given more time to work it out.

Documents show the Corps actually discussed diverting this discharge to D.C.'s Blue Plains sewage treatment facility about three decades ago and the Clean Water Act permit issued in 1989 called for provisions for a "sludge handling system." A consent order issued by EPA after the Corps violated water quality standards related to the safety of drinking water required the Corps to actually conduct much of the design work of a dewatering facility so that the tons of pollution could be hauled offsite. Around that time EPA draft permits would have placed limits on the discharges resulting in the requirement that a treatment facility be constructed. These new permits were delayed until the question of transferring ownership of the facility was resolved. The Army reviewed transferring ownership but then decided it would not transfer ownership of the facility. Rather than solve the problem yet another study was undertaken.

The Corps' newest study is yet another excuse to further delay addressing the problem and continue the dumping into the Potomac without any limits whatsoever on total suspended solids and alum. The new study, however, makes conclusions that cannot be substantiated with the data generated. The Corps own recommendations call for terminating discharges for a third of the year and extending one discharge pipe several hundred feet into the river to sufficiently dilute discharges so that they will not be toxic in the future.

This practice—the midnight dumping of millions of pounds alum tainted sludge that measures in the 10,000 of milligrams of suspended solids per liter—is not reasonable or common. The Corps has, somewhat amazingly, defended their practice by stating that it has been doing it this same way since 1927. How many other enormous point source polluters can tell you unabashedly that the Clean Water Act has had no effect on the way they dump? How many can tell you they don't have to change their practices even though they dump in and through a Untied States national park and into habitat considered the primary if not only spawning ground of a Federally endangered species that regulatory agencies say is "present generally." The answer is no other facility in the entire country and it is time for this facility to stop harming a national park, an American Heritage River, our Nation's Capital and an endangered species, abide by the policies, standards, and laws applied to the rest of America, and join the modern world.

Mr. RADANOVICH. Thank you, Mr. Gordon.

Mr. Leisch, welcome.

STATEMENT OF GORDON LEISCH, FIELD BIOLOGIST, FORMERLY OF THE DEPARTMENT OF THE INTERIOR, OFFICE OF ENVIRONMENTAL POLICY, ARLINGTON, VIRGINIA

Mr. LEISCH. Mr. Chairman, thank you for holding this hearing and giving me the opportunity to testify.

My name is Gordon Leisch. I have a bachelors degree in biology, a masters degree in biology and ecology. From 1970 until 1974 I was employed by the U.S. Army Corps of Engineers Omaha District where, as a field biologist, I wrote environmental impact statements and I wrote the environmental protection section to civil work contracts. From 1974 until I retired in 1997, I was in the Department of Interior and I worked in the Office of Environmental Policy.

I have been an avid fisherman in the Potomac River all my life. I grew up close to Little Falls. I still fish there today. I am on the river almost every day of my life. I have witnessed the effects that these discharges have upon the Potomac River and can tell you from firsthand experience that they are causing serious harm. As soon as the discharge hits the main body of the Potomac River, all feeding activity ceases. All feeding and chasing of the fish either goes to the D.C. side or it just totally disappears. You can see fish avoiding the area. The cormorants leave. The great blue herons leave. They go to other places. If you look above the outflow upriver, everything is normal. Fishing goes on.

I can recall during my high school days in the early 1950's there were infrequent discharges from Dalecarlia Reservoir into Little Falls Branch and the old spillway which is now the service road to the emergency pumping plant. Today the discharges are more frequent, more intense and more offensive.

If you happen to be on the platform area of the emergency pumping plant when a discharge occurs you will see the effluent skirt two feet high out of the bolt holes in the metal plates. I have seen the discharge shoot across the Potomac River to the Virginia shoreline. It depends on the river stage how far it will shoot but the muddy sediment persists until Key Bridge.

This year, beginning in February, heavy dumping occurred frequently well into June, more than any previous year that I have observed. It would be a miracle if any fish spawn survived the spring in the area of the Little Falls. Sediment can be very harmful to fish, especially when it interferes with spawning, and these discharges occur in the spawning grounds of rockfish, shad, perch and many other fish. The endangered shortnose sturgeon is known to be in the Potomac and Little Falls is the only suitable spawning grounds in the river.

I have seen sediment that was six to eight inches deep after a discharge. On the D.C. side where the river is slower and shallower I have seen sediment several inches deep all the way to Chain Bridge. The sediment covers the river bottom until it is flushed away by heavy rains or high water. The sediment could easily smother any eggs or larva that are in the area.

Normally the discharge is clay-colored, foamy and heavy with sediment. Some of the discharges this year were soupy, dark gray in color and had the odor of an open septic tank. The stench from a discharge that occurred May 22 was so powerful that it could be smelled a mile downriver from the point of discharge. Fishermen, including myself, often refer to Little Falls Branch as "stinky creek" because of the chemical smell from the discharges. Some fishermen have told me that they were almost overcome by the chlorine fumes and they had to leave the area. Aquatic insects and plants present in other creeks nearby are not found in Little Falls Branch below the discharges. From the point where the discharges come from outfall 5, Little Falls Branch is devoid of life. I have seen dead eels, bluegills, perch, shad and even a turtle that apparently entered the creek between discharges.

At times a root beer-colored foam covers the river from shore to shore and that was that one picture that you had up there and the

one little bit of green was the green paddle from the rowboat. This foam is not naturally occurring.

In summary, I wish to make three points that I believe are beyond dispute. The first is that the discharges of this size affect fish behavior in a critical spawning and nursery area. I am uncertain whether the fish leave, whether they go deep, whether they suspend, but there is no doubt that the sediment has an effects on the behavior of the fish feeding, migrating and spawning. Even fish-eating birds leave during a discharge. I know from 50 years of fishing in this area that spawning conditions for all species of fish has never been worse.

The second is that these discharges cause mortality to fish and wildlife and destroy habitat in the park and in the Potomac. A few years ago I accompanied a Fish and Wildlife Service biologist on a survey of the river bottom affected by the discharges. He found only two specimens of submerged aquatic vegetation at five snorkeling locations. These locations were downstream from the outflow.

The third point is that these discharges are highly offensive. They have a revolting smell. They look horrible. They despoil a prime outdoor recreation area used by joggers, paddlers and fishermen. These discharges should not be permitted anywhere and certainly not in a national park.

Thank you, Mr. Chairman, for permitting me to testify. I would be happy to answer any questions.

[The prepared statement of Mr. Leisch follows:]

Statement of Gordon Leisch, Field Biologist, Formerly of the U.S. Department of the Interior, Office of Environmental Policy

My name is Gordon Leisch. I have a bachelor's degree in biology and a master's degree in biology and ecology. From 1970 through 1974 I was employed by the Army Corps of Engineers writing environmental impact statements, serving as a field biologist and writing the environmental protection section for civil works projects. From 1974 through my retirement in 1997 I was employed by the Department of Interior in the Office of Environmental Policy.

I have been an avid fisherman of the Potomac for all my life, having grown up near Little Falls and fishing regularly there from childhood through today. I am on the river almost every day of the year.

I have witnessed the effects the discharges from the Washington Aqueduct are having on the Potomac River and can tell you from careful, direct observation that they are causing serious harm. These discharges are flushed through the C&O Canal National Historic Park into the Potomac River, an American Heritage River. As soon as a discharge hits the main body of water, all feeding activity ceases. All biting ceases. You can no longer see fish feeding or chasing bait. You see fish avoiding the sediment plume. Birds such as the great blue heron and cormorants leave the area. Above the outflow, fish activity goes on, so there is no doubt the dramatic change in fish behavior is caused by the discharges.

I can recall that during my high school days in the early 1950's there were infrequent discharges from the Dalecarlia Reservoir into Little Falls Branch and the old spillway, which is now the service road to the emergency pumping plant. Today, the discharges are more frequent, more intense and more offensive. If you happen to be on the platform area of the Emergency Pumping Plant when a discharge occurs you will see the effluent squirt two feet high out of the bolt holes in the metal plates. I have seen the discharge shoot across the Potomac River to the Virginia shore. Depending on river stages, muddy sediment from the discharge can persist past Key Bridge.

This year, beginning in February, heavy dumping occurred frequently well into June, more than any previous year that I have observed. It would be a miracle if any fish spawn survived this spring in the vicinity of Little Falls. Sediment can be very harmful to fish, especially when it interferes with spawning and these discharges occur in the spawning grounds of rockfish, shad, perch and other fish. The

endangered shortnose sturgeon is known to be in the Potomac and Little Falls is its only suitable spawning grounds in the river.

I have seen sediment that was 6 to 8 inches deep after a discharge. On the DC side where the river is slower and shallower, I have seen sediment several inches deep all the way to Chain Bridge. The sediment covers the river bottom until it is flushed away by heavy rains or high water. The sediment could easily smother any eggs or larval fish that are present.

Normally the discharge is clay colored, foamy and heavy with sediment. Some of the discharges this year were soupy, dark gray in color and had the odor of an open septic tank. The stench from a discharge that occurred on May 22 was so powerful that it could be smelled a mile down river from the point of discharge.

Fishermen, including myself, often refer to Little Falls Branch that flows through the C&O Canal National Park as "stinky creek" because of the chemical smell from the discharges. Some have told me that they were almost overcome by the chlorine fumes and felt they had to flee for their lives. Aquatic insects and plants present in other creeks nearby are not found in Little Falls Branch after the discharges. From the point where discharges from outfall 5 enter it, Little Falls Branch is devoid of life. I have seen dead eels, bluegills, perch, shad and even a dead turtle in the creek. They apparently entered the creek between discharges.

At times a root beer colored foam from the discharges covers the river almost bank to bank. I keep a log of river conditions. The log shows that the foam corresponds almost exactly with the discharges. I took some photographs of the foam and brought enlargements with me to show this Committee. To give you a sense of perspective on how thick the foam is, I can tell you that the green object in the foreground is an oar. The pictures were taken near Fletcher's Boat House that is in the National Park. You can see for yourselves that this is not naturally occurring foam.

In summary I wish to make three points that I believe are beyond dispute.

The first is that discharges of this size and nature affect fish behavior in a critical spawning and nursery area. I am uncertain whether the fish leave or go deep or suspend, but there is no doubt that their essential behavior patterns of feeding, migrating and spawning are interrupted. Even fish eating birds leave during a discharge. I know from fifty years of fishing the area that spawning conditions for all species have never been worse.

The second is that these discharges cause mortality to fish and wildlife and destroy habitat in the Park and in the Potomac. A few years ago I accompanied a Fish and Wildlife Service biologist on a survey of a section of the river bottom affected by the discharges. He found only two specimens of submerged aquatic vegetation at the five snorkeling locations he sampled downstream from the outfalls.

The third point is that these discharges are highly offensive. They have a revolting smell. They look horrible. They despoil a prime outdoor recreation spot used by joggers, paddlers, and fishermen. These discharges should not be permitted anywhere, and certainly not in a national park.

Mr. RADANOVICH. Thank you, Mr. Leisch.

Just on a programmatic discussion here, I think I am going to give—I have a lot of questions. I have a lot of questions. Dr. Hogarth, we are going to try to accommodate you and your schedule. I hope you will work with ours, too, just to make sure that we do not have to reconvene hearings and do this all over again. At the same time I am sure other members have questions, as well, so I am going to go with 5 minutes and then each member go with 5 minutes of questions and then we will just start it all over again until all the questions are asked and all the questions are answered.

So with that, I think what I will do is Mr. Parsons, if you can help clarify what seems to be a contradiction. You had mentioned that nothing is discharged onto park property, although the Army Corps states that they do discharge onto park property. There are apparently 75 feet of stream or drainage between the pipe outlet and the actual shore of the river that is actually C&O property,

that it does not discharge—it is not underground apparently, under the C&O park. Can you clarify this for me?

Mr. PARSONS. I did not mean to imply that it did not discharge onto park land. That is, there is a pipe—well, there are seven different circumstances but in any event—

Mr. RADANOVICH. Because there are seven different outlets?

Mr. PARSONS. Yes. One, for instance, the one we spent the most time talking about here, comes down Little Falls Branch, which passes through the park. There is no doubt about it. It is not an engineering work; it is a natural stream that comes through there or creek. But in the case of the pipes that discharge, they are discharging into a runnel or trench as some have called it that is about 75 feet from the Potomac.

Mr. RADANOVICH. So it does actually discharge into the park?

Mr. PARSONS. Yes, it does.

Mr. RADANOVICH. Can you clarify something for me, too? It was my understanding that the actual bottom of the Potomac River, is that national park property? I know C&O may not go into there but isn't that National Park Service jurisdiction that goes into the Potomac River itself?

Mr. PARSONS. In the District of Columbia only. I guess I should clarify that. The State of Maryland owns the bed of the river. Unlike most rivers, it is not divided down the thread of the stream; it is to the highwater mark in Virginia. So when the District of Columbia was established we took from the State of Maryland that jurisdiction, not only the District of Columbia itself but within its boundaries the bottom of the Potomac River.

Now it is not included in the National Park System. We manage it as a miscellaneous property, the Interior Department. In other words, it has never been designated as a unit of the National Park System, the bed of the river, even though many of the shoreline properties are under our jurisdiction.

Mr. RADANOVICH. Do you implement any programs on the Potomac River because of that jurisdiction you have over it or is it basically ignored by the National Park Service?

Mr. PARSONS. What we generally do is issue permits for construction activities, such as the Woodrow Wilson Bridge, the various bridges that cross the Potomac and Anacostia Rivers. The Anacostia is included in this, as well.

Mr. RADANOVICH. What is the relationship with the National Park Service and the implementation of the Endangered Species Act? Do you have a concern about that or if, for example, in Yosemite or Yellowstone or somewhere where there was a threatened endangered species would the National Park Service have any concern about that or would they implement programs to guarantee the protection of that endangered species?

Mr. PARSONS. We are certainly protective of endangered species within the boundaries of a national park, absolutely.

Mr. RADANOVICH. Dr. Hogarth, I want to begin some questions for you. One, if you can, explain to me in chronological order what consultation actually NMFS has conducted with the National Park Service, EPA and the Army Corps of Engineers since the listing of the sturgeon, which was in 1967.

Dr. HOGARTH. I do not know if I will go back as far as you want. I will check when I go back to the office to make sure, but my understanding is we started basically in about 1998, as far back as I am familiar with now, that we had consultations with EPA on discharges. Then in January 2000 we signed a memorandum of agreement with the EPA to improve coordination of the Clean Water Act and ESA where we are looking at 45 pollutants that they have; we are looking at those as to how they are affecting the aquatic life.

But now we are waiting for the EPA pollutant report and we will continue our consultation based on the report that she mentioned was completed in October. We will review that and, if necessary, we will do a "formal" consultation and a biological opinion. So far, there has not been a formal consultation on this particular action that I am aware of. I just started a few months ago so I will go back and check.

Mr. RADANOVICH. Can you tell me, it seems to me that there was some disagreement about how far the shortnose sturgeon was appearing up on the Potomac River. Some say a little further downstream and no farther than where the Wilson Bridge is being constructed.

Are you quite certain and can you say today that the shortnose sturgeon is obviously up into the area of the Potomac where the discharges are occurring and that also according to biological surveys, the best spawning ground is upstream as far as you can go on the Potomac until you hit some type of dam structure or barrier, and that is exactly where the dumping is occurring? Can you concur with that?

Dr. HOGARTH. We feel very confident that at Little Falls, for example, that would be a good habitat for spawning (based on indications in other rivers throughout the system). We have not documented spawning taking place at Little Falls. Shortnose sturgeon go from Canada to Florida, basically. In looking at habitat in other areas you would compare with this, you would think it would be a good spawning area.

As far as fish are concerned, shortnose sturgeon themselves, most of the sampling or most of the documentation has been below the aqueduct, 55 miles or something below it. There are some indications that there are a few fish in the general vicinity.

The discharge, as I think one of the tables stated, a discharge would potentially drive the fish back downriver, so it depends on how the sampling is taking place and that I am not sure of. We did develop some protocols in the last couple of years to be used for shortnose sturgeon sampling so that we would be consistent throughout its range, since it is endangered. It does seem to be recovering much better in the northern range than it is in the southern range.

Mr. RADANOVICH. Southern range of what?

Dr. HOGARTH. Of the species, the shortnose. It seems to be recovering much better in the Hudson and the Northern Delaware up than it is from the Chesapeake Bay south. The recovery rate seems to be much better.

Mr. RADANOVICH. I am out of time but did want to ask one more quick question if I can before I pass on to other folks.

When an endangered species is discovered, according to law, formal consultation needs to occur right then.

Dr. HOGARTH. Right.

Mr. RADANOVICH. So you are saying that there has been no consultation?

Dr. HOGARTH. Basically what we did when this was listed was that it appeared that the main problem with the shortnose sturgeon came from recreational and commercial fishing, so we put a prohibition on any fishing for shortnose sturgeon. It is illegal to take any shortnose sturgeon or Atlantic sturgeon. It appeared to us at the time that was the primary problem with sturgeon, was the tremendous effort for the species because it had a lot of value for caviar and this type of thing, that there was tremendous fishing pressure and we prohibited any fishing pressure.

Mr. RADANOVICH. All right, thank you very much.

Ms. Christensen?

Mrs. CHRISTENSEN. Thank you, Mr. Chairman.

I guess I would direct my first question to Mr. Parsons from the Park Service. Just clarify for me what authority the Park Service has to control anything that is happening in the aqueduct.

Mr. PARSONS. Excuse me. Happening where?

Mrs. CHRISTENSEN. Authority, does the Park Service have any authority over the aqueduct in any way?

Mr. PARSONS. Oh, not that I am aware of, no.

Mrs. CHRISTENSEN. When the C&O Park was being established were there any concerns such as this raised at that time, the time of the establishment of the park?

Mr. PARSONS. Not that would appear in any of the congressional records. There certainly was a concern by the State of Maryland that we would in some way prohibit taking of water from the Potomac and others who had permits across the C&O Canal, which is 185 miles long, and that is why the law provided that any existing pipelines or rights would be honored by the Park Service. We could not shut off their water.

Mrs. CHRISTENSEN. Right.

Dr. Hogarth, you said something in response to the last question from the Chairman about the difference in the recovery periods in the Chesapeake and the Hudson, and so forth, I guess for the sturgeon. Would the Section 7 consultation that is now going on, would that answer some of those questions that you might have? Or might that clarify what the difference is?

Dr. HOGARTH. The results of the studies could give us an indication of things that were impacting in the Chesapeake Bay or particularly the Potomac River, why the population is not as robust or not increasing to the extent you would expect it based on other populations.

Mrs. CHRISTENSEN. And that consultation will determine where we go from here in terms of setting the regulations for the discharges, et cetera, Miss Gleason?

Ms. GLEASON. Yes, it will.

Mrs. CHRISTENSEN. Mr. Gordon, I understand that there is litigation going on at the present time over this?

Mr. GORDON. Yes, ma'am.

Mrs. CHRISTENSEN. Who are the litigants? What stage is that right now?

Mr. GORDON. As regards the Endangered Species Act, we filed the notice of intent in October, last October over this issue and we are now in the process of discussing discovery. We have also filed a notice of intent regarding Clean Water Act violations.

Mrs. CHRISTENSEN. So the intent of the legislation is—what are you seeking? What would you be seeking?

Mr. GORDON. That the law be followed, that the discharges that harm shortnose sturgeon or their habitat be considered in terms of the jeopardy consultation process, that biological assessments, biological opinions be done. There is a whole host of things. There are numerous charges we have made in our notice of intent and our complaint that has been filed in U.S. District Court.

Mrs. CHRISTENSEN. Maybe I have not been serving on the Committee long enough but as I listen to the testimony from EPA, Army Corps of Engineers, National Marine Fisheries and the Park Service—well, the Park Service really does not have too much to do with this but it seems to me that this was a really good example of laws being followed and agencies working in collaboration and there is a big gap between what the agencies said and what Mr. Gordon said.

I saw Miss Gleason taking some notes. Let me give you an opportunity to maybe respond to some of the issues that were raised in the other testimony. It seemed to me that the agencies were following the law and that there was a lot of coordination between the agencies in Section 7 but yet when I listen to the other testimony there seemed to be a real disconnect. Is there something that you would want to respond to that?

Ms. GLEASON. I would just like to say that we were following the law and continue to follow the law. We have been actively engaged for several years with the National Marine Fisheries and Fish and Wildlife on a number of permits, water quality standards within the District of Columbia, so they are no strangers to us and we are very involved related with the shortnose sturgeon and other endangered species in the District and have actively engaged and discussed—in fact, we have permit language in our permits in the District of Columbia that we have issued over the last couple of years that address their needs and concerns and actually require the permittee to submit annual reports, including data on discharges to the services to make sure that everyone is aware of what is going on and being discharged in these water bodies in the District.

Mrs. CHRISTENSEN. If I have time for maybe at least one more question?

Mr. RADANOVICH. Sure.

Mrs. CHRISTENSEN. Then I will probably come back again.

Mr. Leisch, since you fish in the area frequently, after the discharge goes into the river and the fish move away, do they come back?

Mr. LEISCH. Yes, they will return, probably the next day or the day after. As soon as they start dumping all fishing stops. You may as well pack your bag and go somewhere else.

Mrs. CHRISTENSEN. And you have been fishing there for a long time?

Mr. LEISCH. Over 50 years.

Mrs. CHRISTENSEN. Once the discharge has moved away and the fish come back, the fishing is as good as it has always been?

Mr. LEISCH. Actually, the Potomac River has sensational fishing almost everywhere but in that section. You can almost call that the dead zone.

Mrs. CHRISTENSEN. I think my time is up. I will perhaps have other questions.

Mr. RADANOVICH. Mr. Kildee?

Mr. KILDEE. Thank you, Mr. Chairman.

I address my questions to the colonel. Colonel, my son is a captain in the Army, a Ranger, and he has worked with the Corps of Engineers both in Korea and I think in Bosnia, doing some things over there. So I have great respect for the Corps, including back home.

Let me ask you this question. What alternatives have you looked at for disposal? What do other water suppliers do to dispose of the sludge? I ask that because we are so concerned about the Chesapeake. I am so concerned. I have a home—of course I live in Michigan but I have a home out in McLean, Virginia, also, and for about 3 years I have had some solvents and some paints that I have stored in my garage because I am back in Michigan every weekend but my son, the captain, by the way, was home and I had him Saturday take that small amount, not even a truckload, not even one truckload, out to the Fairfax County hazardous disposal site because I was so concerned to make sure it did not get into the Potomac and into the Chesapeake.

Have you considered alternatives and what do other water companies do, water suppliers do with the sludge?

Col. FIALA. Sir, first off I hope your son is enjoying the Army and finds it as exciting as I have for 22 years.

Mr. KILDEE. He finds it very exciting. The two sons are captains, by the way.

Col. FIALA. That is great, sir. It really is.

In our by-law process to go through the process of renewing our permit we have looked at other alternatives and there are at least two that my staff has told me that are feasible.

Now I remind the Committee that our operating costs and our capital improvement costs come from our customers. Just because it is operated by the Corps of Engineers, the money does not come from the Corps of Engineers budget.

So two alternatives that we have looked at is the construction and operation of a dewatering facility. This dewatering facility would be built on our Dalecarlia area, our Dalecarlia plant area. The cost we estimate at $70 million with a $4.5 million annual operating cost.

Now I do not want to get into the debate of the environmental impacts of that but we estimate 15 truckloads a day of the material leaving the plant that would have to transit out of the plant operation down there at Dalecarlia. We also have then the issue of what to do with this material once we cart it out from the plant. In other words, then you have to identify a disposal area, probably a landfill someplace.

The second alternative is to move it down to Blue Plains to be processed down there. Now those of you that know the Washington, D.C. area know that Blue Plains is pretty close to their maximum capacity right now with the growth of the Washington, D.C. area, so that creates other environmental problems and other operating problems for Blue Plains.

We are receptive to those alternatives. They come at a cost. There is an environmental impact to those alternatives and the process we are going through right now, in the permitting process we are going through right now, by law, requires us to look at all that.

Mr. KILDEE. I would hope so. I would hope that you would look at really environmentally sound alternatives. I think having been down here in this area with my second home for 25 years, I am really concerned about the Potomac and the Chesapeake and I think government has to set the example. I think it is very important. We ask the private sector; we ask even homeowners to be very careful and I am very cautious on that. I think that government should set the example. I think we pass the laws and those who are the government should really even be ahead of the curve, maybe showing the latest state-of-the-art of how to protect our environment and dispose of those things that can be harmful to the environment. So I would commend you that you pursue alternatives, Colonel.

Thank you very much.

Mr. RADANOVICH. Ms. McCollum.

Ms. MCCOLLUM. Thank you, Mr. Chairman.

To the EPA, chlorine discharges are four to five times higher than the state standard. Is that concerning to you?

Ms. GLEASON. It is concerning to us. Chlorine typically volatilizing. It does not stay in the water. There is data that shows that the water that is discharged meets standards in the District of Columbia.

Ms. MCCOLLUM. It meets standards but—

Ms. GLEASON. Water quality standards.

Ms. MCCOLLUM. Water quality standards but yet there is documentation and you are aware of the fact that four to five times the state level of chlorine is routinely discharged.

Ms. GLEASON. I know some of the issues related to that are upstream in Maryland. I know that Maryland Department of Environment, actually, and the Corps of Engineers are talking about that and sharing information and data.

Ms. MCCOLLUM. So we know a state law is being broken.

I ask the Park Service, sir, even though you do not have any jurisdiction, and this is my first term on the Resources Committee, I have noticed from reading some of the park plans that one of the things that the park, when they are going through their redevelopment or any changes that they are making at all, they talk about the appearance, preserving appearance, having the visitor have something that is pleasing to the eye.

Looking at these photographs and hearing the smell described, do you think that the Park Service is being well served by the appearance of this particular part of the stream, river?

Mr. PARSONS. That is a very difficult, good question. Many of these discharges are used so infrequently, annually, for instance, that there is little residue or impact once the discharge has occurred.

So visitors—I call your attention to the culvert over there with the redbud in the picture. That is Little Falls Branch. The people walking along the canal then walk along that piped railing and during a discharge I am sure that it is not—I have never seen one myself—it is not something aesthetically that the visitors would enjoy, to get to your point.

So we have never addressed that on the C&O Canal as to the impact on the visitors of the intermittent discharges that occur in this park.

Ms. MCCOLLUM. But if you were to be putting together a reupdate of the visitors' comments and all, that would be something that—I would assume that we would hear a lot of testimony about that if you were doing a visitors park reapplication permit?

Mr. PARSONS. Yes.

Ms. MCCOLLUM. To the Army Corps, why do you dump at night?

Col. FIALA. There are a couple of reasons for that. Number one, we are not hiding anything. Despite what the newspaper says—

Ms. MCCOLLUM. I have not read the newspaper. I am just asking a question.

Col. FIALA. There is that accusation in the newspapers.

We dump or we discharge the sediment based on the highwater flows in the Potomac. Sometimes that is at night. Sometimes that is during the day. It is a 12- to 16-hour operation. We typically like to start that operation at night so that when daybreak comes it is a little bit easier to finish cleaning out the basins. I put our government employees down into the basins to clean them out and there are some safety issues there. I would rather be doing that final clean-up during the day than at night.

In addition, because of how quickly the discharge dissipates in the Potomac River, if we are able to dump at night, by the time daybreak comes dissipation is away and we are impacting very little the fishing that goes on out there.

So that is why we do that. Sometimes we will start the discharge during the day, sometimes in the evening hours.

Ms. MCCOLLUM. Mr. Chairman, just a quick follow-up.

So you admit that it impacts the fishing. Those were your words. So you are less likely to impact fishing and maybe a visitor's enjoyment by discharging at night. So in other words, there is a problem with fishing. There is a problem with, if I am a visitor who is visiting that area and I hit it during a discharge, I am more likely if you discharge during the night than during the day to have a better aesthetic adventure at the park, correct?

Col. FIALA. Let me clarify when I say we impact fishing. You heard several testimonies here that talk about the fish that are in and around these areas. Our discharge temporarily provides a very minor impact to the fishing. And our studies, our water quality studies, both in the '93 study and the study we just finished up here in October lay that out scientifically. So it is temporary and it is very minor in nature.

Ms. MCCOLLUM. Mr. Chairman, but if I am fishing that day and I have a brown root beer foam, I am not very likely to put my boat in the water. Thank you, Mr. Chairman.

Mr. RADANOVICH. Thank you, Ms. McCollum.

Dr. Hogarth, I have a question regarding the sturgeon and I want to get your opinion on this. Do you think that sediment dumping is negatively affecting the recovery of the sturgeon? I think in your previous testimony you had mentioned that it is done in the presence and that sturgeon are still present but we are talking about a listed endangered species where it is NMFS' responsibility to make sure that they recover. Do you think the sediment dumping is affecting the recovery of the endangered sturgeon?

Dr. HOGARTH. But I do not think we have enough data to support or refute that. We do think that if they are in the area, they would probably be moved out of that area during the discharge time. They would leave the area.

Mr. RADANOVICH. Do you realize how that does not incredibly fly anywhere else in the United States of America, that statement? When you are charged with habitat protection of the endangered species, you can say well, the fish disappear when you dump into their habitat? It is your job to make sure that the recovery of the species is guaranteed and anything that affects the recovery of that species has to be stopped at all cost. That is the way the law reads.

Dr. HOGARTH. That is correct.

Mr. RADANOVICH. So you cannot say the fish are okay because when we dump they leave. You are violating the law when you talk like that.

Dr. HOGARTH. What we have said is we have not been able to document fish in the area of the discharge, since the evidence in the early 1800's or late 1800's, but since 1996 we have seen some in the Potomac River but not in the vicinity of the discharge.

Mr. RADANOVICH. So the species was listed in 1967 and in 1983 you were given a permit to dump into the river. At that time formal consultation is required. To my knowledge there has been absolutely no formal consultation on the species since 1983. Why is that? I mean these are answers that you should have had 20 years ago.

Dr. HOGARTH. You have a good point. We are doing the consultation at this time. That is why we asked for the studies. Based on this consultation, we will decide if we believe that the discharge is impacting the sturgeon. Then we will take appropriate action and a biological opinion, if we feel we have to do a formal consultation based on the data that we get from the studies that were just undertaken.

Mr. RADANOVICH. When might you have that data?

Dr. HOGARTH. The report, they finished in October. It was submitted to us in the last few days. We have not received the report yet from EPA.

Mr. RADANOVICH. Thank you.

Mrs. Gleason, in a letter to the EPA expressing concerns about ending the discharges of sludge from the facility, the Corps officially states that the material would have to be picked up at Dalecarlia and trucked to any suitable site we might obtain. Due to local restrictions on various roadways in the area, these trucks

would have to go south on leaving the plant, requiring them to travel through high-density, "high-value areas" of D.C.

There is a real concern about trucking sediments through a residential community, in my opinion, that has high value as opposed to low income. Is it not acceptable Corps practice to alter these policies based on the affluence of the area?

Ms. GLEASON. Let me step back for a minute. We were in the process during the time that those letters were written, probably in '96, '97, '98, of making a determination and trying to find out if the sediment is charged with having an impact on the river, so it was premature to even get into any debates about trucking. There were issues that the residents were raising relative to trucks because they were concerned. We knew the issues of the fishermen. We knew the issues of the services. We were trying to sort out through scientific data, through these studies, whether indeed the sediments could continue to be discharged the way they were or discharged in a different manner, whether they were a problem or not.

Mr. RADANOVICH. So would it have been done in a different manner had this been a low-income neighborhood as opposed to a high-income neighborhood? Why was there even a mention of a high-value neighborhood?

Ms. GLEASON. People write letters with all sorts of things in it to us.

Mr. RADANOVICH. Is it EPA's practice to discharge in a different manner in a low-income neighborhood than a high-income neighborhood?

Ms. GLEASON. When I mentioned different manner I meant if there were any ways that the current discharge could be, instead of in a certain time frame, over a longer period of time, whether that would help the recovery that NMFS was speaking about, whether Fish and Wildlife were interested certainly in enhancing the Potomac River.

Sediments in the Potomac are an issue for the entire Potomac. There are sediments in the river coming from the Maryland portions of the Potomac, from West Virginia. There are deforestation issues. We are trying to take a full watershed approach and deal with the entire sediment issue.

The Chesapeake Bay is definitely impacted by sediments. The aqueduct pulls sediments into its plant from the Potomac. They do not create these sediments. They do add alum; we know that. We have done studies that were just completed that show that there is no impact, as far as we can determine scientifically at this point, of the alum in the river. We are trying to take a large watershed approach and draw in other groups to solve the overall sediment problem in the Potomac.

Mr. RADANOVICH. I am out of time but if I could ask—

Mrs. CHRISTENSEN. Of course, Mr. Chairman.

Mr. RADANOVICH. Thank you, Ms. Christensen.

A water quality study in the vicinity of the Washington Aqueduct that was prepared by the Army Corps of Engineers states that the primary risk from deposition of suspended sediment on eggs and larvae of the endangered species would greatly affect its survival. So it is the deposition of suspended particles.

Whether it is perfectly legal to draw water out of a dirty river and clean it up and put the dirt back into the river, I do not argue with that, but this practice is in direct violation of the Endangered Species Act and recover of an endangered species that you have known is there since 1967. That is the problem that I have and I think that you have known about this. Apparently it is in the study, the study has been released, and there has unfortunately been no enforcement of that act.

With that, I will switch to Mrs. Christensen.

Mrs. CHRISTENSEN. I probably just have a couple of questions. I guess to Colonel Fiala, what occasioned the Army Corps to start looking at other alternatives? Why did you start pursuing other alternatives?

Col. FIALA. Why did we? We are always working at the aqueduct to figure out how to provide better service in a cost-effective manner and in line with our permits that we have to operate. We have, as I testified before, we have produced two different studies on water quality and as we work toward a new permit or a draft permit that the EPA will issue, that will drive the debate on other alternatives. That debate will be open, it will be open to the public, and it will be in accordance with the law. It will be a process that we will consult with the other Federal agencies and any other stakeholders and players in the region.

Mrs. CHRISTENSEN. You indicated that it would be about $4.5 million operating costs annually. What is the operating cost of what you are doing now?

Col. FIALA. Ma'am, that is $27 million right now. $27 million a year is our operating budget annually.

Mrs. CHRISTENSEN. I see. Well, I guess the other question I would ask is how would you pay for a new facility if that was the alternative, the $70 million facility, if that was the alternative that you chose?

Col. FIALA. We have to go to our customers and work an agreement to create a capital fund, like we are doing right now. We are currently upgrading certain parts of the aqueduct operation right now through a capital fund. So we would go to our customers and work their rates or work some other financial arrangement to construct the dewatering plant.

Mrs. CHRISTENSEN. I guess my last question would be to Miss Gleason, Dr. Hogarth and Mr. Parsons. Do you consider the present arrangement workable or would you prefer to see an alternative put in place? Is this workable? Do you consider what is being done now the optimal way of dealing with the situation or would you yourselves recommend that we look for an alternative way?

Mr. PARSONS. I am not sure I am qualified to answer that. On the one hand it is an aesthetic issue and on the second, it is a cost factor.

There is one point—I would like to take this opportunity just to clarify one thing. There has been some testimony today that the discharge smells like sewage and I will fess up to another problem on the C&O Canal. We have a 96-inch sewer line that comes from Dulles Airport. It was put into the canal in the 1960's and has vents in this area. I am certain that if there is any concern about

that, that is its source, certainly not the discharge that comes from the Dalecarlia Reservoir.

Dr. HOGARTH. Well, just to clarify one thing, we have only seen four shortnose sturgeon in the Potomac River between 1996 and the year 2000. We have seen others in the Chesapeake Bay throughout its range. We are not sure, due to the timing of when the research took place. We issued about 41 research and enhancement permits since 1992 to look at shortnose sturgeon enhancement activities up and down the coast. We will have to look at the data that the EPA sends us and determine if it is having an impact. Then what we would do is in the biological opinion we give, what is called reasonable prudent alternatives. We would talk about not having the discharge during certain times when the fish migrate into the river to make sure it is not, or if the eggs are in the river, to make sure of that.

So we would look at it from the standpoint of the impact on the various life stages and when they migrate in. We would have to look at that data. But under the ESA we have no choice but to make a determination on what is best for the shortnose sturgeon and that is what we will do when we review this data and do the biological opinion.

Mrs. CHRISTENSEN. Miss Gleason?

Ms. GLEASON. We are at a point now, since the study has just been completed, that we are looking for various options. We are developing them to address the concerns that we are aware of, the concerns that the study points to, as well as the concerns that the other agencies and the public have. So we are drafting a permit and it will be out for public comment by the end of this calendar year.

Mrs. CHRISTENSEN. If I could just ask one more question, it should be a real short answer.

Mr. RADANOVICH. Sure.

Mrs. CHRISTENSEN. You in your testimony said and the Chairman raised the issue again of the sediment and the possibility of smothering the spawning of the fish. Have you looked at that sediment and if you have, is the make-up of the sediment suggestive that it is just coming from the discharge or is it a mix?

Ms. GLEASON. Through this recently completed study there was a lot of modeling done that looked at the river natural conditions, as well as the discharge, where the solids go, how it migrates, what is deposited and what size, where. So we have probably the best data that we have ever had in the Potomac of how the solids in the river naturally move and how they move during these discharge periods. So I think we will have some really good information to evaluate our options.

Mrs. CHRISTENSEN. So you do not know now but you will know based on the studies that you are doing and the information that you have

Ms. GLEASON. The studies are completed. We are going through them right now. We are doing some overlays with submerged aquatic vegetation and seeing if there is any line-up with deposition patterns of the solids in the river.

Mrs. CHRISTENSEN. Thank you, Mr. Chairman. It has been a very informative hearing. I am still not sure. We do not have much

jurisdiction over any of the agencies here but it has been an informative hearing.

Mr. RADANOVICH. Thank you, Ms. Christensen.

Dr. Hogarth, I am aware that you are going to need to take off and just have one more question. And I want to thank you, even though the testimony is not some of the most pleasant stuff, I think.

In 1997 there was a flood in California and a levee broke and killed three people. What makes it, I think, relevant to this hearing is the fact that it happened to be the habitat of the elderberry longhorn beetle. The habitat on the levee was that. So they had to go through NMFS, go through a 6-year process to get permission to go and repair a weakened levee, even though they knew it was weakened for 6 years, and apparently did not get it in time for the flood. The flood happened and the levee broke and three people died. It was the habitat of the elderberry longhorn beetle. There was no evidence that it was present.

In the Klamath River Basin, as you know, the water is being shut off to a whole valley of farmers up there, 1,200 of them because of the presence of some sucker fish—I am not even sure what the biological name is—not that it is present but it is the habitat of one that is known to be an endangered species.

Why is that not the case here? You know that there is an endangered shortnose sturgeon on the Potomac. You know that that is the habitat of that and may very well be the ideal and probably only breeding ground. Why is it that you can shut—that NMFS or the U.S. government can allow these things to happen—people die, farmers go bankrupt—and yet when it happens here, what is your explanation for why that has not happened here?

Dr. HOGARTH. I think here several things—the different behavior of different species. The sucker is more of a stationary animal. It stays in the area. It does not migrate great distances. Shortnose sturgeon, as we said, is an anadromous species that will spend a great deal of its life in the lower reaches, in the ocean, in the saltwater and goes up to freshwater. It will go great distances, 130 miles, to spawn. That is why we lack the information to see the distance it is migrating up the river, so what impact it would have.

Is it spawning in the Potomac River, based on four fish? We do not have the information that we have on the others. We have a lot better information, for example, on salmon on the West Coast, their patterns and all, than we have here on the Potomac.

Now the Potomac has improved tremendously in the last 20 or 30 years. I worked on it, in fact, back in the 1970's when I was in graduate school. We found virtually nothing in the Potomac except white perch and there has been a great clean-up campaign.

I am not saying that we do not have a problem with shortnose. I am saying we have to go through this consultation. We stopped what we thought were the activities that were impacting sturgeon. It has worked, it seems, everywhere except in the Potomac River and we do not have a lot of information to say what level was the population in the Potomac to begin with. Now we have to focus in on chlorine in the discharge to see, since we are recovering it in other areas, if that may be something that is happening here. That

is why we will use the consultation process very carefully to look at the Potomac River, the impacts.

Mr. RADANOVICH. But you know that that area of the Potomac is the habitat of a listed species, the endangered shortnose sturgeon, correct? You know that that is the habitat.

Dr. HOGARTH. Yes, Little Falls, we feel like is the similar habitat of the shortnose sturgeon that is in other rivers, yes, sir.

Mr. RADANOVICH. And the law reads that if you know that that is the habitat of a shortnose sturgeon, you are obligated to protect that habitat at any cost. That is the way the law reads.

Dr. HOGARTH. Yes, we have said similar habitat but we do not have any data that shows the presence of it in that area.

Mr. RADANOVICH. You do not need data. You have the presence of the endangered species in that area.

Dr. HOGARTH. That is correct.

Mr. RADANOVICH. You know that is the habitat and you have selectively enforced the Endangered Species Act. At least in California you have done it to the extreme. Here you have completely ignored the law for almost 30 years, probably more.

Thank you for coming. I do appreciate you being here. If you need to go, I wish the others would stay because I still want to—

Dr. HOGARTH. In closing, I do appreciate it because I do have another hearing at CEQ. As I said, I just started in this job in this administration about 2 months ago. We will look at this very carefully, as we do all consultations. There is no selective enforcement or implementation of ESA.

Mr. RADANOVICH. Oh, there is. There is, sir.

Dr. HOGARTH. I try not to.

Mr. RADANOVICH. That law, I think the evidence clearly shows it today. But thank you very much for being here.

Dr. HOGARTH. Thank you.

Mr. RADANOVICH. Mr. Gordon, would you care to recreate this scene in an ideal situation since 1967, since the appearance of an Endangered Species and explain to me how things maybe should have happened and what should have been allowed, maybe what should not have been allowed?

Mr. GORDON. Yes, sir. I think it is quite simple. The law says if a species may be present, then if there is a government action going on in that area that may affect it, you must do a biological assessment. These discharges constitute an action that is going into habitat that Federal biologists have determined is the primary, if not only, spawning ground of the endangered shortnose sturgeon, yet no biological assessment has been done.

Mr. RADANOVICH. When should that biological assessment should have occurred?

Mr. GORDON. I would argue that at least they should have started the process back in 1996 when the first specimen turned up in the river, which brings up another important question. You have heard that gee, there were only four and we have looked for these fish, according to the National Marine Fisheries Service, but we cannot identify whether they are in the Upper Potomac or not and the four we found were downriver.

The four that were found were caught by commercial fishermen, not by the National Marine Fisheries Service or the Fish and

Wildlife Service, and they were brought in through a reward program. The fact of the matter is, however, that commercial fishing is illegal in the District of Columbia so you would not turn up any in D.C. waters.

Additionally, back in 1999 the National Marine Fisheries Service stated that there was going to be an assessment done to determine the presence of the shortnose sturgeon in the Upper Potomac and stated that this assessment would be critical to their assessment of the presence of the fish in the river. That assessment has never been done. So when you hear today that gee, we are not sure if it is there or not, the reason people are not sure if it is there or not is basically hiding behind studies that have not been done that should have been done. Additionally, there is substantial anecdotal information and historical information that would indicate that this species is present.

If I could, I would like to address several things that have been said that are just not accurate. First, I have been down there. I took that photograph of the discharge and that location is nowhere near the sewer line. The sewer line runs along the C&O Canal itself and this is hundreds of yards from it. And I have smelled it there; it is not from sewage.

Secondly, I am sad that Ms. McCollum left because I think there are some questions that she raised that were important, one being does the Park Service have some authority over some of these things?

The discharges into Little Falls Branch of chlorine that exceeded Maryland state standards are into the national park. Little Falls Branch is in the national park and the Park Service has an obligation to protect the park resources.

And as concerns chlorine there are numerous problems I would like to just bring up. On October 9 of this year the Corps received a letter from the D.C. Department of Environmental Health Administration that states the following. "It is our understanding that the final step in the process is the use of finished potable water to flush the remaining solids. If finished water is used in the flushing process, the discharge contains chlorine, presently in the form of chloramine used in the disinfection process. The existing NPDES permit—that is Clean Water Act permit—for the two reservoirs contains no provision for the discharge of chlorine in any form. We are requesting that you immediately initiative action to ensure that no chlorine is discharged in the Potomac River." So there is a serious concern about that.

Additionally, I believe Colonel Fiala said that any harm that is done from their discharges is temporary and I would beg to differ. The report that the Corps produced, given the most favorable reading, says that it may pose a moderate risk to the survival of a species of concern, and that is the deposition of the sediments with alum, which has some toxicity to fish eggs and larva. That is the report's conclusion and the report actually recommends suspending discharges for 4 months of the year, which is not quite as significant a recommendation as the panel put together and sponsored by the EPA. Their number one recommendation was to terminate discharges. This panel was composed of representatives from the Fish and Wildlife Service, the National Marine Fisheries Service,

Maryland Department of the Environment, D.C. Fisheries and the Potomac Commission.

Now just two other things if you will bear with me but I have been sitting here listening to these things and I wanted to address them. I would like to just read one sentence from a letter from the former chief of the aqueduct that states, "We would like to discharge the basins at night to minimize the impact on any river activities." So I think it is fairly straightforward why the discharges occur at night.

And finally, Mrs. Christensen asked a question about sediment and whether it was the sediment from the discharges or the sediment that was naturally occurring in the river that actually affected the fish. The study that was done by the Corps mapped and measured specifically those sediments that come from the discharges and the recommendation that the discharges be terminated for 4 months of the year and the statement that these discharges pose a moderate risk to the survival of species of concern is based specifically on these sediments, the chemically treated sediments and the alum that comes with them that is discharged by the Corps, not the ambient sediments in the river.

Mr. RADANOVICH. Thank you.

Col. Fiala, I want to ask you a question. Just so you know, my big concern is that I think the Endangered Species Act is poorly written and because of that, it is being subjectively implemented all across the United States. It is my opinion that if the ESA was enforced in urban areas the way it is enforced in rural America where we do not have the votes to change it in the Congress, people would not tolerate it.

I have an instance in my part of the country in California where they are trying to site a tenth campus for the University of California. It has been designated in a place called Merced, California. They have gone through a site selection process and they have identified a nice site. It is at the base of the Sierra foothills at an elevation of about 1,000 feet and it is rolling terrain. Of course, when the rainy season hits in California the water table fills up and there are little enclaves of water that are there until the dry season comes and basically they drain off. They have been given this name of vernal pools and in them is a listed species by the name of a ferry shrimp.

The reason I bring this up is because you had mentioned previously in your testimony that there have to be environmental consequences on the decisions that you make with regard to, in this instance, the dumping into the Potomac, where in this instance in UC-Merced that is not, at least according to the law and at least according to the way that they are implementing the Endangered Species Act in that case, there is absolutely to be zero consequence to the environment, and all else must wrap itself around that, which provides a contrast to the way that this is being handled, the dumping of the sediment into the Potomac River and your statement that there are environmental consequences.

Is that the way you view your implementation of the Endangered Species Act?

Col. FIALA. Sir, in this case specifically, the Washington Aqueduct and the Corps of Engineers are an applicant to the EPA for

its discharges. Therefore I would defer that question to the EPA and would caution that we are getting close to some issues that Federal agencies before you are in litigation over, so I want to make sure we know the limits as to—

Mr. RADANOVICH. Maybe you can answer a general question for me. Then do you believe in the implementation of the Endangered Species Act? The law reads that if an endangered species is discovered that the species itself and the habitat must be protected at all cost, period. Do you believe that that is the case? Because you are charged with implementing the Endangered Species Act. Do you believe that or not?

Col. FIALA. We are operating under the rules and regulations and the laws of our government. We have a permit. We have asked for renewal of that permit. There is a process for that permit renewal; we are following that process. We have been asked through our permitting process to provide studies on water quality; we have done that in two separate occasions. We have brought good science and engineering to this debate and we feel in the consultation process that is on-going with EPA and our other Federal agencies here that we will come to a solution that the Washington Aqueduct will move out sharply and execute.

Mr. RADANOVICH. Then in your opinion, there are environmental consequences to the actions that you take. Is that what you sought in the permit that you received from the EPA or were you seeking strict enforcement?

I understand that you are under permit from the EPA but your testimony says that there are environmental consequences to every action that you take when you need to enforce it, and that is not according to the law basically in the Endangered Species Act. You certainly must have a concern about that because you are charged with enforcing the Endangered Species Act in this case and yet you are being permitted by the EPA not to, basically.

Col. FIALA. We are under the consultation process under the Endangered Species Act and study is part of that and we are working toward a solution under the law, under the Endangered Species Act, so we are following the letter of the law.

Mr. RADANOVICH. Okay.

Mr. Gordon, did you have the opportunity to read the October 4, 2001 report prepared by the Army Corps of Engineers entitled "Water Quality Studies in the Vicinity of the Washington Aqueduct"? If so, can you give me some of your opinions on its conclusions?

Mr. GORDON. Yes, sir. I have reviewed it and we have toxicologists and chemists and such reviewing it at this time, as well. We found that there were a lot of missing elements and lacking elements, that the breadth of the study was not really quite sufficient and that a lot of the conclusions drawn from the study were not supported by the data it contains.

Let me give you a few examples of things that struck me particularly strange. When you hear testimony today that the discharges are not particularly toxic, we compared the concentration of, for example, total suspended solids that they used to test the toxicity with the historical average of the total suspended solids discharged by the facility and you will find that more than 85 percent of the

discharges from the Washington Aqueduct have a maximum total suspended solids that exceeded the test concentration at which the report found chronic growth toxicity to aquatic invertebrates and that some of those exceeded the toxicity level by as much as 3 times; about 30% of them; so quite significant.

This graph over here shows basically the total suspended solids level in different discharges from the aqueduct from the reports that the aqueduct submits to the EPA and those are ranked from highest to lowest since 1992, discharges above Chain Bridge, and the yellow lines are the level of the solids in the effluent samples used to measure toxicity and you can see that they are well below the average of the total suspended solids included in the effluent.

There are numerous other problems with the study. The study was supposed to incorporate a study on striped bass, given that they are more sensitive. Those studies failed. There was supposed to be an aspect of it to determine the density and diversity of aquatic invertebrates. That did not generate reliable data because the devices filled up with too much sediment.

The discharge point studied at that outfall that is indicated by that chart, the samples were actually taken 520 meters downstream. The notion presented was that the river is too narrow there and it is somewhat dangerous. Sometimes that is true but I can tell you I was there 2 weeks ago at that outfall and you could reach around the rocks and find sediment that is clearly this kind of stuff because it had the same gelatinous consistency to it, that was several inches deep.

The plume modeling for the sedimentation used an estimated concentration of 10,000 milligrams per liter to determine how much sediment accumulation there would be. Well, clearly many, many of the discharges from the aqueduct occur at levels way above that.

Those are just a few of the problems and there are many. But even given that, you find that this report itself concludes that the discharges should be discontinued at least during the spawning season and that actually the discharges from one of the outfalls was toxic enough that it would require extending the pipe 200 feet further into the river to dilute it to the point where it no longer would be toxic.

I think those things are all significantly different than the notion that has been presented to you here today that gee, there is not really any problem with them; they are not too toxic, they are not that bad for fish; maybe there is a minor risk from sedimentation or whatever risk is presented goes away after we discharge. That notion cannot be backed up by this study and is absolutely contrary to empirical, real-world experience. All the fishermen that go there will tell you that fish disappear, that the beds are affected by sedimentation, that the creeks that flow through the park, particularly Little Falls Branch, are devoid of life below the discharge point. So I do not place a lot of credence in the study.

Mr. RADANOVICH. Okay, thank you very much.

Miss Gleason, I have a number of questions that I would like to get on the record, if I could. Would you please clarify for me why the EPA continues—there seems to be an issue on the permit—why the EPA continues to allow the Corps to go forward with the dumping when it stated on the record that it would not extend the

permit for a period of more than 6 months? Apparently EPA has gone on record that you would not allow the dumping and because of that, would not extend the permit for more than 6 months.

Ms. GLEASON. I am not quite sure what that means, Mr. Chairman. Perhaps you might be referencing the spawning period in the river that is about a four- to 5-month period?

Mr. RADANOVICH. This was in reference to a memo on April 4, 1996. It says, "We cannot, however, delay indefinitely and anticipate issuing the draft permit no later than the end of the fiscal year," which was at the end of 1996, and yet the permit has been reissued. This was stated in an EPA memorandum to Congressman Jim Moran where it stated in here that you would not extend the permit based on the dumping and yet you have extended the permit in addition to that. It is a contradiction and EPA stands on the issue, I think.

Ms. GLEASON. The permit, once it expired in '94 since the Corps had submitted a timely reapplication, the permit under law administratively extends indefinitely until EPA issues a renewed permit.

I am not sure. I would have to get back to you on that letter. I am not quite sure.

Mr. RADANOVICH. Okay, we can certainly provide you with a copy. It was an April 4 letter written by W. Michael McCade, the regional administrator, to Congressman Jim Moran, which basically said you are not going to allow this to continue for the end of the fiscal year, which was—

Ms. GLEASON. I would have to read the context. I am not quite sure.

Mr. RADANOVICH. We are happy to provide you with it.

Are there no limits for alums or solids or irons on the Corps' Washington Aqueduct permit? Do you have ceilings set for those types of discharges?

Ms. GLEASON. No, there are no limits. Monitoring only.

Mr. RADANOVICH. Why is that if you are concerned about habitat for endangered species, that you have not set limits for toxic elements of discharge into the river?

Ms. GLEASON. It would be the 1989 permit. When that was written it was not thought at the time that limits were appropriate. There were no impacts known at that time, based on the record that we have on the issuance of that '89 permit. So you would not put limits in a permit if you did not need them.

Mr. RADANOVICH. Even though there was habitat for endangered species present?

Ms. GLEASON. We were not aware of that at the time.

Mr. RADANOVICH. It has been listed since 1967 but you were not aware of it?

Ms. GLEASON. We were not aware that there was habitat that was considered critical habitat under the ESA.

Mr. RADANOVICH. Are there any limits on any permits that you issue?

Ms. GLEASON. Oh, absolutely.

Mr. RADANOVICH. But no limits on this one?

Ms. GLEASON. No.

Mr. RADANOVICH. This is an unlimited permit, basically.

Could you please name for me any other water treatment facility in the United States that discharged chemically treated water into National Park and National Heritage rivers? Are you aware of any?

Ms. GLEASON. I can tell you other facilities around the country that have similar discharges—

Mr. RADANOVICH. Into National Parks or Heritage rivers?

Ms. GLEASON. I am not sure if—I would think that maybe some of the properties that they cross over, considering there are discharges into the Missouri and Mississippi Rivers. I would think there are some parklands, whether they are state parks or national parks. I would have to get back to you on that, particularly where the pipes cross, but there are other facilities around the country that discharge similar to the aqueduct.

Mr. RADANOVICH. Are there discharges into rivers where there are known endangered species that require formal consultation?

Ms. GLEASON. Around the country?

Mr. RADANOVICH. Yes.

Ms. GLEASON. I am not aware of whether there are any endangered or listed species. I would have to get back to you on that.

Mr. RADANOVICH. Okay, thank you.

Mr. Parsons, if you can answer to me if you know that they are discharging actually into the C&O National Park, cannot you just say no? Is it not within the National Park Service's authority to say you cannot do this anymore? Do you have the power to stop this?

Mr. PARSONS. Not that I am aware of.

Mr. RADANOVICH. Would you have it in any other park, do you think? Is it because it is the C&O Canal National Park or do you not have the authority as the superintendent there?

Mr. PARSONS. I do not see that we have the authority to do that. Little Falls Branch is a natural stream that we happen to have intruded on by passing over it with a canal. It is not as though we are managing a lake below that has swimming or something that is part of our resource. I am not sure we have any authority to do that.

Mr. RADANOVICH. I just do not understand because if there was chlorine being dumped into the Little Yosemite Creek that runs over Yosemite Falls do you think that the Park Service might have the authority to stop that?

Mr. PARSONS. I do not know. I can certainly research this and get back to the Committee.

Mr. RADANOVICH. Interesting.

Mr. Parsons, do you believe that the Army Corps' actions, specifically the discharge of sludge into the canal, does it impair park resources at all or the visitor's experience? Can you answer that question for me?

Mr. PARSONS. Well, our limited understanding of this is if it is an impairment, it would be visual. That is, we have not found any evidence that there is any impairment to resources or species in the park.

Mr. RADANOVICH. But apparently there has been a Park Service official that has filed a number of reports regarding the discharge of sludge from the canal into the park. What action has been taken to address these reports? I mean it is obvious that an officer within

the National Park Service has filed reports saying that this is—the Park Service sign says "Please report any listed activities on National Park Service properties," and one of those includes dumping of water waste. That is part of the charge of the National Park Service and yet you think it does not impair the visitor experience in this national park or does not cause disruption to the visitors there?

Mr. PARSONS. Well, I am not familiar with the reports that you are speaking of. My expertise goes to land resources, not the operational side of things. But I will certainly talk with our superintendent, Mr. Ferris, to see if those reports have been made available to him.

Mr. RADANOVICH. But I think those reports were filed to him so you might want to check and see.

Mr. PARSONS. I will, absolutely.

Mr. RADANOVICH. Because the person filing the reports was just doing his job, as required of a National Park Service employee.

Mrs. Christensen, did you have any other questions?

Mrs. CHRISTENSEN. No.

Mr. GORDON. Mr. Chairman, I would like, if I could, to just offer something else on that point as regards effects on the national park and the reports.

National Park Service police officers have filed several reports and I would like to read just a paragraph from a report, a follow-up report produced by the EPA regarding their visit with one of the National Park Service police officers following his report.

It states, "On January 30, 1999 Chris Lay, a Park Service employee, saw a discharge along the Potomac shoreline in the District of Columbia. The discharge was described as black, foul-smelling and coming five feet up in the drainage channel. The channel runs approximately 30 feet to the river. As the flow subsided there were dead eels in the channel bed and fishermen in the area observed dead fish in the river. Officer Critchfield visited the same location a couple of days later and saw soap suds coming out of the same pipe. A call to Woody Peterson, representative of the Washington Aqueduct, confirmed that the Georgetown Basin was dumped at about the time that Chris Lay made his observations. Due to the recent drought in the Potomac watershed, the solids were held in the basin 11 months instead of the normal 4 months. Since the solids are under anaerobic conditions, this would probably account for the noxious odor of the discharge. Mr. Peterson also confirmed that soap suds may have discharged from the pipe as they use a cleaner after flushing the solids from the basin."

Officer Critchfield then took the EPA official to the location that is permitted under the Maryland Department of Environment known as outfall 5 and it has been mentioned several times today as regards chlorine going into Little Falls Branch. It says that Officer Critchfield showed the inspector this discharge and then it says, "The area was fenced off and drops down about 50 feet. The estimated flow was 100 gallons per minute. According to the Park Police officer, this discharge is always flowing whenever he comes by this location. The location, as shown on picture 4, had a strong smell of chlorine from a distance of about 50 feet above the discharge."

Mr. RADANOVICH. Thank you, Mr. Gordon.

One final question for Col. Fiala, if you would. You have stated that the chlorinated water is used to wash out the basins and in your testimony you stated that the chlorine is effectively used up.

What measurements do you have to validate this conclusion? And if so, why did the D.C. Environmental Health Administration state in a letter dated October 9, 2001 that the discharge contains chlorine and demand that immediate action be taken to ensure that no chlorine is discharged?

Col. FIALA. We operate under a permit, so therefore we have no responsibility to sample the discharge. However, the science will tell you that chlorinated water very quickly gives up its chlorine residue when it becomes volatized as it strikes a wall or strikes a basin.

In addition, the organic matter that is contained in the sediment will react very quickly with the chlorine material that is in the finished water and consume it well before that sediment is discharged into the Potomac River.

Mr. RADANOVICH. Are you aware of any aquatic life in the stream below the discharge? To my knowledge, everything is dead beyond that point where the chlorine enters the discharge point.

Col. FIALA. I am not aware of it.

Mr. RADANOVICH. I think it is.

You also mentioned that the chlorine discharge occurs every five to 6 years. I do not expect you to have this answer for me right away but if you can let me know if it did occur on Friday, October 19, I would appreciate knowing that.

Col. FIALA. We will provide that.

Mr. RADANOVICH. Thank you.

Mr. GORDON. Mr. Chairman, on the chlorine I would just note that on the Corps' website it had a discussion of the conversion from chlorine to chloramine, which took place a few years ago and the website stated, "Unlike chlorine, chloramines do not dissipate in the atmosphere by standing or aerating."

And then the notice went on to tell people that you needed to take specific treatment steps. You could not just depend on volatilization of the chlorine when it is discharged. In fact, there was enough of a concern about this that every single customer, at least in Arlington but I believe in other jurisdictions, was sent a notice by the wholesale customers of the aqueduct not to add the water produced by the aqueduct to their fish tank because it was harmful to fish.

Mr. RADANOVICH. Miss Gleason, Col. Fiala stated that the testing requirement was not in the permit that was issued. Why not?

Ms. GLEASON. In 1989 there was not a concern. People were not concerned about that. They were using chlorine at that time. They have recently switched to chloramine.

Mr. RADANOVICH. Okay. Thank you very much. It has been an illuminating hearing. I do have a concern about the environment but I have to tell you, if the ESA was implemented in my area of the state there would be people alive and there would be probably more jobs.

I appreciate the testimony of everybody here and your appearance here but I think that on the Supreme Court it says equal

application of the law and right here in the beltway there seems to be pretty much disregard for the Endangered Species Act and I think it is evidenced by the testimony here today. I hope some day that it can be taken care of legislatively, if not administratively.

But I do appreciate your being here and to the members of the panel, as well, and this hearing is closed. Thank you.

[Whereupon, at 12:07 p.m., the Subcommittee adjourned.]

[The following letters were submitted for the record:]

1. A Letter from the Department of the Army.
2. A Letter from the Environmental Protection Agency.

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

REPLY TO
ATTENTION OF

7 FEB 2002

Honorable George P. Radanovich
Chairman
Subcommittee on National Parks, Recreation
and Public Lands
Committee on Resources
United States House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

I am responding to your two letters dated December 19, 2001, concerning the Washington Aqueduct. In those letters, you question the accuracy of the testimony provided to your Subcommittee on October 30, 2001. You also requested certain information and supporting documents concerning Aqueduct operations.

As you know, the Army takes very seriously its obligation to respond honestly and forthrightly to Congressional inquiries. Accordingly, I was disturbed by your statement that the testimony was false. I have discussed this matter with the Baltimore District Commander, as well as with personnel at the Washington Aqueduct. They have reviewed this testimony and assured me that to the best of their knowledge and belief, the information provided to your Subcommittee was accurate.

Given the technical subject matter and the need to reduce complex scientific discussions into short statements for the Subcommittee, it is apparent that misunderstandings have arisen concerning the testimony. To clear up any misunderstandings that may have developed, I would like to respond to the allegations made in your letters.

First, I will address the issues raised in your letter addressed to me.

(1). "When we last met you indicated that discharges like those from the Washington Aqueduct were commonplace. However, I am advised that the Washington Aqueduct is the <u>only facility in the Chesapeake Bay or within EPA's Region 3</u> that is permitted to discharge hundreds of thousands of tons of chemically treated sludge without any limits for total suspended solids (tss), alum or iron or without providing any sludge treatment facilities...It is an outrageous and indefensible practice."

Every water treatment facility in the country that uses a stream or river for its source of water has to contend with sediments. Sediments must be removed from the intake water in order to turn it into drinkable water. Some plants collect the sediments at additional expense and truck them to a landfill; some plants collect and discharge the

sediments (again at additional expense), to a wastewater treatment facility, which still has to remove the sediments before its water is discharged. Lastly, some plants -- like the Washington Aqueduct -- use some form of direct discharge. Only EPA can address the number of other plants that are permitted to discharge sediments in a similar fashion to the Washington Aqueduct. However, I understand that there are other similar facilities. I agree that they are relatively few in number.

(2). "Most states do not permit such discharges on the grounds that they consider it illegal to issue such a permit under the Clean Water Act. I am informed that with relatively few exceptions — limited to a couple of Midwestern states – state environmental agencies simply do not issue permits for discharges of this nature. Additionally, I am unaware of any facility that discharges its sludge directly into a unit of the National Park System."

The legality of each permit is determined by the Environmental Protection Agency (EPA), or a state, if they have been delegated permitting authority. EPA or the states will have to address whether they have issued permits similar to the one issued to the Washington Aqueduct. However, neither EPA nor the State of Maryland has ever contended that the permits that they issued to the Washington Aqueduct are illegal.

We are not aware of any facility that discharges "sludge" directly into a unit of the National Park System, and that includes the Washington Aqueduct. The Aqueduct does not discharge "sludge" which is the popular term given to byproducts of sewage treatment. The Aqueduct discharges river sediments that are taken up from the river when untreated water enters the facility. Along with naturally occurring sediments, a coagulant (aluminum sulfate in the Washington Aqueduct's case) used to create precipitation of the sediment is also discharged. In regard to the issue concerning Park Service property, solids pass along the right of way of the C&O National Historic Park in channels for a short distance at DC Outfalls #3 and #4. Numerous site inspections have verified that no residual solids remain on parkland; all of the solids end up in the Potomac River.

(3). "...The Corps testimony, given to the Subcommittee on October 30, 2001 was false and misleading..."

At my request, the Corps reviewed the testimony and confirms that it is accurate. We regret that the framework of the Subcommittee hearing did not allow Colonel Fiala to fully describe the complex operations at the Aqueduct. It is difficult to fully discuss and describe in only ten or fifteen minutes a complex water treatment plant which operates sixteen different discharge points, or outfalls, covered by National Pollutant Discharge Elimination System (NPDES) permits issued by both the State of Maryland and the Environmental Protection Agency. It appears that this may have led to misunderstandings.

(4). "Later, Colonel Fiala repeated the same claim that, "All of our discharge points or outfalls are properly regulated and comply with federal and state permits..."

As indicated, we have confirmed that Colonel Fiala's testimony was accurate. I would like to clarify that in stating that we comply with federal and state permits, the Colonel did not mean to suggest that there were never any temporary exceedences of permit standards or requirements. Any exceedences were short term and promptly corrected. At the time of the hearing, all permit requirements were met, and to the best of our knowledge and belief we continue to meet these requirements.

(5). "Just a few weeks prior to the oversight hearing, Maryland's Department of the Environment (MDE) issued an inspection report to the Corps that found the Corps violated the NPDES permit issued by Maryland by failing to take samples, record temperatures, maintain adequate records, retain records and accurately reflect the number and location of discharge points in the pollution prevention plan... "

You are correct that the MDE report raised issues of concern with the Aqueduct. The Washington Aqueduct managers met with a state inspector on September 11, 2001, and agreed to modify some procedures concerning monitoring and record keeping. It was at that meeting that MDE and Washington Aqueduct managers discussed the discharges from Outfall 005 that occurred on August 11 and August 18, 2001. They also discussed the situation at the Little Falls Pumping Station (see item 8 below) regarding the cooling water on the pump bearing boxes. As a result of that meeting at the Dalecarlia Treatment Plant, the MDE inspector sent Washington Aqueduct a report of the inspection. As required, Washington Aqueduct responded with detailed information. The MDE appears to be satisfied with the Aqueduct's response because MDE did not issue a Notice of Violation.

Turning to the issue of temperature reporting, the Washington Aqueduct did not report temperatures before August 11, 2001, because it believed that it was not possible to violate temperature standards under any plausible operational scenario. To the best of our belief, there has been no violation of any temperature standards, nor has Maryland alleged any such violation. However, by August 11, 2001, the Aqueduct recognized that it should have monitored temperature and started doing so. It continues to do so now as it did at the time of Colonel Fiala's testimony. The monitoring that has been conducted since August 11 reveals no violation of temperature standards.

(6). "While the Corps may contend that some of these violations occurred because of a difference in interpretation, the Corps was well aware that this report constituted a finding of non-compliance and even conceded so in its correspondence with MDE. Despite this report, filed prior to the oversight hearing, Col. Fiala testified before the Subcommittee that Aqueduct discharges were in compliance with federal and state permits."

As we have said above, the State of Maryland has not issued a Notice of Violation to Washington Aqueduct for any action taken under its general discharge permit. The MDE permit for this facility does not contain specifically enumerated standards for chlorine. The Aqueduct has assured me that it believes it has properly

complied with the provisions of the permit. However, we are aware, as a result of an inspection of the facility on September 11, 2001, that the inspector has categorized two isolated temporary discharges of chlorine at Outfall #005 as exceedences of Maryland regulations. The Aqueduct did not report this short-lived exceedence of chlorine levels because the permit was silent on chlorine and did not contain a reporting requirement. Based on the meeting with the inspector and reading his report, the Aqueduct later learned that Maryland expected the Aqueduct to report exceedences of chlorine levels. I can assure you that in the future this will be done.

We have explained why the Corps did not monitor temperature before August 11, 2001. We are now accomplishing the monitoring required in the permit. This was true at the time of Colonel Fiala's testimony and continues to be true today.

(7). "Moreover, on October 9, 2001, just prior to Col. Fiala's testimony, the DC Department of Health, Environmental Health Administration, sent a letter to the Corps that warned:

> *"...If finished water is used in the flushing process, the discharge contains chlorine, presently in the form of chloramine used in the disinfection process...We are requesting that you immediately initiate action to insure that no chlorine is discharged to the Potomac..."*

The Aqueduct has 16 outfalls. This issue relates to Outfalls #2, #3, and #4, which are in the District of Columbia. No chlorinated or chloraminated water is discharged with the sediment discharges from DC Outfalls #2, #3 or #4. After the sedimentation basins are drained, finished (i.e., drinking) water from hoses is used to flush the remaining sediment out of the sedimentation basins. Colonel Fiala testified at the hearing that science indicates that chloramine in the drinking water is volatized (evaporated/neutralized) by the remaining sediment. Laboratory tests show that before this water exits the discharge pipe and enters the receiving waters, the chlorine or chloramine either volatizes as it comes in contact with solid objects, or is captured by the organic elements in the sediments. We will be conducting further tests on site to verify the results of the laboratory testing and to ensure that no chlorine or chloramine enters the river.

(8). "Corps documents dated September 25, 2001 reveal that Corps discharges from the Little Falls Pumping Station have included chloraminated cooling water. I am informed that these direct discharges into the Potomac have been occurring without any required monitoring or dechlorination and the Corps has just now modified its "Best Management Practices" to take temporary dechlorination measures until a dechlorination facility can be constructed by the summer of 2002. Furthermore, while Corps records for the morning of October 19th indicate that discharges into Little Falls Branch measured 0.00 chlorine at Outfall 005, three members of the Subcommittee staff who were at the Outfall reported detecting a strong chlorine odor. The strong chlorine smell is not indicative of a 0.00 reading."

This statement relates to two outfalls at the Little Falls Pumping Station, and to Maryland Outfall # 5.

There are two outfalls at the Little Falls Pumping Station. One outfall discharges raw river water from the flow that cleans the screens. The Aqueduct adds no chlorine or chloramine to this water. The other Outfall contains finished (i.e., drinking) water that is used to cool the pump bearings. You are correct that as part of its ongoing effort to undertake best management practices, the Aqueduct manually dechlorinates this cooling water before it is pumped into the Potomac River. This process has been on going since September 2001. Moreover, as part of our continuing efforts to implement best management practices, we are constructing a project at Little Falls Pumping Station that will automatically neutralize chlorine in the water supplied to cool the pump bearing boxes.

As for what the Subcommittee staff smelled on October 19, 2001, Colonel Fiala visited that exact location on the same day and our records show complete dechlorination of the water entering Little Falls Branch. Since no Aqueduct personnel accompanied the Subcommittee staff and we do not know where the staff was standing at the time, we cannot say what they smelled.

(9). "On August 31, 2001, in an effort to refute press stories exposing discharges containing chlorine, Col. Fiala made the carefully phrased statement, "Our solids contain...no chlorine or chloramine." By not mentioning the chloraminated water used to wash the sludge out of the basins, the Corps statement wrongly leads the public to understand that the discharges contain no chlorine. The Corps does use chlorinated water to wash the basins and has been aware, since as early as 1993, that this is a matter for concern. In the letter accompanying the application for renewal of NPDES permit DC 0000019 the Aqueduct Chief noted, "The frequency of basin cleaning is under review. An increase in the frequency of the basin cleaning would not change the quantity of sediment being discharged, but could increase the volume of treated river water discharged." [emphasis added]

The statement of Colonel Fiala was correct. The finished (drinking) water used to flush the residual sediment from the sedimentation basins does contain chloramine. But, as we described in paragraph (7) above, laboratory testing has shown that there will be no measurable total chlorine content of the solids when they enter the Potomac River.

As to the NPDES permit renewal, discussions did not focus on the chlorine issue when the EPA permit renewal application was filed in 1993. The statement of the Aqueduct Chief did not relate to chlorine or chloramine discharges. It addressed the issue of sediment load discharges to the river; that is, whether it would be better or worse to have several discharges with lower sediment levels or continue to make more infrequent releases that contained higher sediment levels.

(10). "More recently, in a March 1999 study of the sediment discharges and the effect they have on anadromous fish by the US Fish and Wildlife Service, National Marine Fisheries Service, Maryland Department of Natural Resources, DC Fisheries, and the Interstate Commission on the Potomac River Basin, a recommendation was made that the Corps use, 'raw water' to flush the sedimentation basins."

This statement involved a proposal to use raw water to dilute and possibly re-suspend the sediments. It is our understanding that it was not made to address the issue as to whether raw versus finished water should be used to finish flushing the basin.

(11). "Prior to the Corps' conversion from chlorine to chloramine, Washington Aqueduct customers received a letter warning them that finished water from the Aqueduct was harmful to fish. A September 25, 2000 letter from the Department of Environmental Services for the City of Falls Church...warned household water users:

> *"Anyone who keeps fish and uses water supplied by the Washington Aqueduct in tanks, aquariums or ponds will need to use water treatment products or processes to neutralize the chlorine before the water is added to the tank. Unlike chlorine, chloramine will not dissipate by letting water stand. Chlorine greatly improves water for people – but is harmful to fish if added to a fish tank, pond, aquarium, or gold fish bowl. [emphasis original]"*

The Corps did switch from use of chlorine to chloramine. There is no question that chlorine and chloramine dissipate differently in *drinking* water. However, when finished (or drinking) water is used to flush the basins, the chloramine reacts with the sediments and the basin walls in a way that neutralizes the impacts of the chloramine. Consequently we believe the use of chloraminated water in the cleaning process causes no harm to the Potomac fishery. Because a fish tank does not contain large amounts of sediment, use of dechloraminating chemicals is recommended for aquarium owners.

(12). "As regards the discharges from Outfall 005, as far back as March, 1999 an EPA Reconnaissance Report states that a National Park Service Police officer had contacted the Corps with a concern over the Corps's discharges. In addition to reporting to the EPA suds, a foul smelling black discharge filling an NPS channel, dead eels and a fish kill following a Corps discharge, this NPS police officer stated he could detect the "smell of chlorine from about 50 feet."

Regrettably, we are unable to respond to this allegation. The Aqueduct manager did not receive a copy of the Reconnaissance Report from either the National Park Service or EPA at the time. It was not until a 2001 Washington Times article that the Aqueduct manager became aware of the Reconnaissance Report. Because the alleged incident occurred almost three years ago, it may be difficult, at this time, to establish what occurred on that day.

(13). "I remain very concerned by the Corps' misleading testimony to Congress and its representations to the public, as well as by what appear to be repeated violations of the Clean Water Act that have occurred over a span of many years. The President of the United States has made it clear that he intends to carry out the laws as they are written. Giving special exemptions to federal agencies or elite neighborhoods undercuts the President's message."

The information presented to the Subcommittee was accurate. We regret any misunderstandings that may have arisen as a result of our testimony. The Department of the Army and its Corps of Engineers share your concern that the laws are properly implemented. The Aqueduct does not seek "a special exemption" from applicable environmental statutes.

I will now address the issues raised in your letter to Colonel Fiala.

As you are no doubt aware, the United States is currently involved in litigation with the National Wilderness Institute's (NWI) challenge to the operations of the Washington Aqueduct. The questions you posed to Colonel Fiala in your December 19, 2001, letter and the documents you seek involve the same issues as those in the litigation. The U.S. Department of Justice has opposed requests by the Plaintiff for these types of documents and is resisting interrogatories similar to the questions raised in your letter. A motion for a protective order of this nature was filed with the court on January 4, 2001.

I recognize, however, that in the exercise of its oversight role, the Congress is entitled to information from Executive branch agencies that might not otherwise be made public. In turning over this information, the Army reminds you that the information is the subject of disputed issues in litigation and we would be providing it to the Subcommittee on the condition that you will respect the fact that the government is in litigation and instruct your members and staff not to make that information public until the litigation is completed. In addition, with regard to every response in this letter, the Army does not waive any legal or deliberative privilege it may be entitled to assert with respect to any matter pertaining to present or future litigation involving the Washington Aqueduct.

(1). "Under the NPDES permit issued by the MDE, the Corps is required to measure the temperature of its discharges before they go into Little Falls Branch in the C&O Canal NHP to ensure that there is less than a 10 degree difference in the temperature of the water into which it is discharged. In a letter to the Enforcement Division of the MDE, Tom Jacobus, Chief of the Washington Aqueduct writes, "We recognize that we did not comply with the provisions of the permit to record temperatures of discharges." Given that no records exist for these measurements prior to this review, are we to understand that the Washington Aqueduct has continually failed to comply with this provision of the permit since its issuance? If not, please explain how the Aqueduct has been in compliance with this permit provision."

The assertion that the NPDES permit requires a less than 10-degree difference between discharging waters and receiving waters is incorrect. The permit requires that water discharged into the Potomac River does not cause the temperature of the river to rise above 90 degrees Fahrenheit at the end of a 50-foot mixing zone. As stated before, Washington Aqueduct did not report temperatures before August 11, 2001, because it believed that it was impossible to violate temperature standards under any plausible operational scenario. To the best of the Aqueduct's belief, there has been no violation of any temperature standards, nor has Maryland alleged any such violation. The monitoring that has been conducted since August 11, 2001 reveals no violation of temperature standards.

(2). "It is my understanding that the Corps reports that chlorine discharge occurs from outfall 005 only 5 to 6 times a year. What records does the Corps have verifying the annual number of discharges? Exactly how many times has the Aqueduct discharged through outfall 005 since 1989 and what are the dates of those discharges? (Please provide all the discharge monitoring reports or any other monitoring data including field data since January 1989 to the present.) Was there a discharge on Friday, October 19, 2001? How long do these discharges generally last? What is the full range in the time elapsed of these discharges?"

The Aqueduct does not "discharge chlorine" from Outfall #005. The Aqueduct attempts to dechlorinate the *water* that it infrequently discharges to Little Falls Branch. On extremely rare occasions, and for a very short period of time, the water from Outfall #005 may not be completely dechlorinated while the system is being calibrated. This result is infrequent and unintentional. Usually, water is discharged from Outfall #005 only if the plant drain pumping station or the backwash recovery pumping station is out of service for maintenance or repairs, or another equipment failure requires it. Properly dechlorinated water discharges may happen five to six times a year. An inadvertent situation where water is discharged with chlorine remaining happens even less frequently and for extremely short periods of time. It happened twice in 2001 as recorded in field notes. New automatic equipment to catch unplanned overflows will soon be in place in an attempt to reduce that occurrence to zero.

There was a discharge on October 19, 2001, while repairs were performed on the pumps. Dechlorination operations were in place at the time. A discharge during a planned maintenance event may last several hours. An unplanned problem is usually controlled within the hour, and there is a system in place to dechlorinate during this unplanned event. For October 19, the discharge began at approximately 7:15 a.m. and lasted until approximately 1:00 p.m. The readings are as follows:

7:15	0.00 mg/L Cl	11 degrees Celsius
8:15	0.00 mg/L Cl	11 degrees Celsius
9:15	0.00 mg/L Cl	11 degrees Celsius
10:15	0.00 mg/L Cl	11 degrees Celsius
11:15	0.00 mg/L Cl	11 degrees Celsius
12:15	0.04 mg/L Cl	11 degrees Celsius

(3). "Using the Corps' measurements, the discharge on August 11, 2001 exceeded the Maryland chlorine standard by five times the state legal limit. Why did the Corps not implement any immediate changes before discharging again on the August 19, 2001, which again resulted in a discharge exceeding Maryland's legal standard by four times the legal limit? Did the Corps report either of these violations to MDE within the required time frame? If not, why not?"

This situation was not reported because the Aqueduct did not believe the conditions of the permit had been violated. Best management practices were in place on August 11 and August 18, including a contractor on site with dechlorination equipment. The data from those dates shows that the amount of chlorine that inadvertently entered Little Falls Branch was very small. Adjustments at the beginning of the dechlorination process were being made in order to find the right concentration and to avoid overdoses of the dechlorination agent. After the right concentration was found, the data shows the water was properly dechlorinated for the duration of the operation.

(4). " Given that the Corps did not believe that the maintenance of records was a requirement of the permit until following the September 17 MDE's Field Inspection Report, what prompted the Corps to maintain records at outfall 005 beginning with the August 11 discharge?"

Actually, before August 11, NWI raised the issue of temperature monitoring at the Aqueduct as a result of their Freedom of Information Act request. On August 10, the Aqueduct corresponded with MDE to ensure that the Aqueduct understood MDE's interpretation of the temperature provision of the permit. This correspondence was intended to ensure that the planned maintenance of August 11 would be handled properly.

The September 17 MDE Field Inspection Report actually clarified that the Aqueduct should report chlorine discharges from outfall #005, since the permit had no specific chlorine reporting requirement.

(5). "The National Marine Fisheries Service (NMFS) has determined that the endangered shortnose sturgeon (listed in 1967) is generally present in the Potomac River and that the species may be present along the river at or around the discharge points. They also state that evidence indicates the discharges are taking place in what may be the primary, if not only, spawning grounds for this species. Does the Corps agree with the NMFS determinations? If not, what information does the Corps have disputing the NMFS determinations? Under all circumstances doesn't the Corps have statutory obligations under the Endangered Species Act to consult with either NMFS or the Fish & Wildlife Service (FWS) on any action which may affect a threatened or endangered species? Did the NPS enter into consultations with NMFS during the permitting process for the NPDES permits currently held by the Corps? If not, why not?"

The Corps is cooperating with EPA as it proceeds with the consultation required by applicable Endangered Species Act (ESA) law and regulations. The position of the United States with respect to this consultation is set forth in the administrative record and legal briefs filed by the Department of Justice with the D.C. federal District Court in *National Wilderness Institute v. U.S. Army Corps of Engineers, et al.* (No. 1:01CV00273 (TFH)). These documents are a matter of public record.

(6). "In your testimony, you state that the Corps is in the consultation process under the Endangered Species Act and that studies are being conducted. Given that the shortnose sturgeon is listed under the ESA, when and how did the Corps initiate consultation? What studies has the Corps conducted, or is planning to conduct, regarding this species? What specific actions have been taken in consultation with other relevant agencies?"

As indicated, the Corps is cooperating with EPA on the consultations that are required under the ESA and implementing regulations. EPA is responsible for initiating consultation with the relevant federal agencies. Studies completed to date are either in the administrative record of the previously mentioned court case, or were testified about at your October 30, 2001 hearing. Those studies include one conducted by EA Engineering, Science & Technology, Inc. entitled "Water Quality Studies in the Vicinity of the Washington Aqueduct" (October 4, 2001) and another done by Dynamac Corporation entitled "Impacts of Sedimentation Basin Discharges from the Dalecarlia and Georgetown Reservoirs on the Potomac River," (February 2, 1993).

(7). "As mentioned in the hearing, a U.S. Park Police officer filed a report on January 30,1999 regarding a discharge from outfall 005 in which he reported a "strong smell of chlorine from a distance of about 50 feet above the discharge." Did the Corps discharge on this date? Please provide all records relating to discharges from this outfall for five days before and five days following the date of this report."

The Aqueduct does not know if there was a discharge from Outfall #005 on that date. There are no records relating to five days before or five days after the date of this alleged event. It is not clear if this is the same incident addressed in item (12) above, since the date provided in this question is different from the date above.

I hope that this information resolves any misunderstandings that may have arisen from the testimony presented on October 30, 2001.

Sincerely,

Mike Parker
Assistant Secretary of the Army
(Civil Works)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

FEB 27 2002

The Honorable George P. Radanovich
Chairman, Subcommittee on National Parks, Recreation
and Public Lands
U.S. House of Representatives
Committee on Resources
Washington, DC 20515

Dear Representative Radanovich:

Thank you for your letter of January 14, 2002, which included a list of ten questions relating to the Subcommittee's continuing interest in the Washington Aqueduct. In addition to the ten questions, your letter also contained a list of eight categories of documents which the Subcommittee is requesting. The enclosure to this letter is the Environmental Protection Agency's (EPA) response to each of your questions. With regard to the documents, your letter requests what appears to be a large volume of correspondence and other records dating from 1980. EPA staff is working to identify all documents responsive to your request and will furnish them to you under separate cover.

I hope the enclosed information satisfies your request. If you have any questions, please feel free to contact me or have your staff contact Mr. Christopher Ball, District of Columbia Liaison Officer, at 202-260-1687.

Sincerely,

Donald S. Welsh

Donald S. Welsh
Regional Administrator

Enclosure

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United States Environmental Protection Agency Region III
Response to Questions Regarding the Washington Aqueduct
U. S. House of Representatives, Committee on Resources

Question 1: Is it the Environmental Protection Agency's (EPA) position that when a permittee combines chlorimanated [chloraminated] water and organic material that the permittee may operate on the assumption that the effluent when discharged meets numerical chlorine water quality standards? If this is not the EPA's position, how is it that the Corps is allowed to discharge chlorine from the Washington Aqueduct without any monitoring? Does the EPA possess data from the discharges that show chlorine concentrations are below applicable water quality standards?

Response: Permit conditions are based in part upon the information contained in the application. In its permit application for the1989 issued permit and its present permit application, the Corps did not and has not identified chlorine as a potential contaminant in its discharge. At the time that the existing permit for the Aqueduct was issued and at the present time, chlorine was not and is not added to the water processed for drinking water until after it leaves the sedimentation basins. Until EPA learned that it is the Corps' practice to flush the sediments from the basins with finished drinking water (which does contain an incidental amount of chlorine), there was no reason to believe that chlorine is or may be present in the sediment or discharge liquids from the sedimentation basins. Therefore, the 1989 permit does not contain a monitoring provision for chlorine.

EPA has had numerous conversations with Corps staff regarding this matter. It is the Corps' and EPA's belief that any chloramine contained in the finished water which is used to flush the sedimentation basins either evaporates or is exhausted by reacting with organic material. The organic material consists of debris and other matter which is drawn into the plant with the raw water; it is not something that is added during the water treatment process. Because there is only a small amount of chlorine in the finished water and because chlorine is a strong oxidizer which will react with the organic material (having the effect of disinfecting the organic material), we believe it either will have fully reacted with the organic material, or it will have evaporated during the hosing of the sediments. It is not believed to be released into the Potomac in an active form or in excess of District of Columbia Water Quality Standards. The Corps has agreed to verify this by analyzing the effluent for chlorine during its next discharge event; however, due to the prevailing drought conditions in the Mid-Atlantic Region, there have been no discharges from the sedimentation basins since August 2001.

Question 2: The National Marine Fisheries Service (NMFS) has stated that the endangered shortnose sturgeon is 'present generally' in the Potomac River and that the area where EPA permits these discharges is the most likely if not only spawning habitat on the Potomac River. In light of NMFS's assessment, does EPA agree that a "may affect" determination should be made

regarding the shortnose sturgeon and the current discharges from the Washington Aqueduct? Does the EPA concur with the NMFS findings regarding the species?

Response: Recently Christopher Mantzaris of the US NMFS has stated that the endangered shortnose sturgeon is "... present generally in the Potomac River system and potentially present in the vicinity of the Washington Aqueduct." He goes on to state that, "...the habitat at Little Falls is consistent with the preferred shortnose sturgeon spawning habitat in other river systems...shortnose sturgeon usually spawn at the uppermost point of migration within a river, which in the Potomac is probably Little Falls." (See Declaration of Christopher Mantzaris, Civil Action No. 01-273 TFH) EPA has initiated a Section 7 consultation with NMFS regarding the potential effects, if any, of the Aqueduct discharges.

Question 3. How is it that the standards limiting average daily and monthly maximum Total Suspended Solids (TSS) concentrations to levels below 100 mg/l in discharges for water treatment plants in Maryland, Virginia, Delaware, Pennsylvania and West Virginia are not the same water quality standards that are applied to the Washington Aqueduct? What studies have been done to support the limitations for the other treatment plants? Did those studies utilize the same or different criteria used for studies in the Washington Aqueduct? If not, why?

Response: These questions combine two concepts considered in National Pollutant Discharge Elimination System (NPDES) permitting, i.e., technology-based limitations and water quality based limitations. In developing effluent limits for an NPDES permit, the permit writer must consider limits based on both the technology available to treat the pollutants, taking into account economic considerations (technology-based effluent limits) and limits that comply with water quality standards in the receiving water (water quality-based effluent limits).

Technology-based effluent limitations require controls for point sources based upon currently available treatment technologies, taking into account costs, while allowing the discharger to use any available control technique to meet the limitations. Where national Effluent Limitation Guidelines (ELGs) have not been developed (as is the case for drinking water treatment plants) the permit writer must do an analysis of appropriate limits based upon Best Professional Judgment (BPJ). Section 402(a)(1) of the Clean Water Act (CWA) authorizes the EPA Administrator to issue a permit containing "such conditions as the Administrator determines are necessary to carry out the provision of this Act" prior to taking the necessary implementing actions, such as the establishment of ELGs. The NPDES regulations found at 40 CFR §125.3 state that permits developed on a case-by-case basis using BPJ under Section 402(a)(1) of the CWA must consider the following:

- the appropriate technology for the category class or point sources of which the applicant is a member, based on all available information, and
- any unique factors relating to the applicant.

In analyzing possible BPJ-based limitations, the permit writer must consider the same factors required to be considered by EPA in the development of ELGs which include the following:

- For Best Conventional Pollutant (BCT) control technology (applicable to TSS in the Aqueduct's discharge)
  - the age of equipment and facilities involved;
  - the process employed;
  - the engineering aspects of the application of various types of control techniques;
  - process changes;
  - non-water quality environmental impact including energy requirements;
  - the reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; and
  - the comparison of the cost and level of reduction of such pollutants from the discharge of POTWs to the cost and level of reduction of such pollutants from a class or category of industrial sources.

- For Best Available Technology Economically Achievable (BATEA) requirements (applicable to aluminum and iron)
  - the age of equipment and facilities involved;
  - the process employed;
  - the engineering aspects of the application of various types of control techniques;
  - process changes;
  - non-water quality environmental impact including energy requirements; and
  - the cost of achieving such effluent reduction.

Where water quality-based effluent limits are more stringent than technology-based limits, the water quality-based limits must be included in the permit. Under the CWA, each state, including the District of Columbia, is responsible for developing water quality standards (WQS) for water bodies in the state, consisting of designated uses and water quality criteria to protect those uses. After EPA has approved the WQS, the state agency responsible for issuing NPDES permits (or EPA in some cases such as the District of Columbia) uses the WQS to develop possible permit limits for inclusion in the permit. This was a factor in EPA's decision to encourage the recent water quality studies which looked at the chemical-specific effect of the discharge, the whole effluent toxicity effect and a bioassessment of the discharge on the aquatic species for the purpose of assessing whether water quality-based limits may be warranted.

In summary, because no national ELGs, which establish mandatory technology-based limits, have been promulgated for water treatment facilities, permit writers in Region III and elsewhere must develop technology-based permit limits for these facilities on the basis of BPJ, as well as water quality-based limitations taking into consideration state WQS and site specific water quality studies. Given the variety of information and factors that will inform these determinations, permit limits may vary among facilities.

Question 4: Does the EPA believe that the ecology (i.e., marine life) of the Potomac River at the point where the Corps is permitted to discharge from the Washington Aqueduct is unaffected and unharmed by discharges with TSS concentrations that exceed discharge limits for other Chesapeake Bay Watershed water treatment plants? If so, why?

Response: Available information does not indicate that the ecology of the Potomac River at the point of the Washington Aqueduct's discharge is being harmed. A study completed in 1993 by the Dynamac Corporation found that "there was no evidence of toxicity from either the effluent or the sludge on fathead minnow larvae. In summary, there were no observable impacts from the sedimentation basin discharges on the water quality, sediment chemistry, benthic biota or representative fishes of the Potomac River." *Dynamac Corporation Study* at page E-2.

More extensive water quality studies were conducted from 1999 to 2001 by EA Engineering, Science and Technology (EA), an environmental consulting firm which prepared the report for the Corps. The results are reported in the 2001 *Water Quality Studies in the Vicinity of the Washington Aqueduct* (*Water Quality Studies Report*). Based upon the results of the *Water Quality Studies,* and other information available to EPA, it appears that the sediments from the Aqueduct have a negligible effect upon juvenile and adult fish in the Potomac River. In EPA's opinion, the acute toxicity studies showed that the discharge is not acutely toxic and the chronic toxicity tests, while not conclusive, seemed to support the conclusion that the discharge is not currently affecting juvenile and adult fish. The *Water Quality Studies* did suggest a potential risk of smothering fish eggs and larvae if they are in the River at the time of the discharge. The overall conclusion of the *Water Quality Studies* is that the Washington Aqueduct discharges are neither acutely nor chronically toxic to aquatic species. This is the same conclusion that was reached in the *Dynamac Study*. During the studies that are reported in the *Water Quality Studies*, the test organisms in the laboratory were exposed to the sediments for longer periods of time than they would have been during an actual discharge event.

The EA scientists who conducted the studies suggest that the lack of toxic effect may be due to the fact that the aluminum is bound to the sediments and not dissolved in the river water. The macroinvertebrate portion of the studies is less conclusive; however, the *Water Quality Studies Report* at page 7-6 states the following:

> This tolerant community does not appear to differ based on the present study's upstream versus downstream comparison. Based on our observations during this benthic study, interpretation of existing river and discharge sediment load data, and

> supporting information from past studies, intermittent Dalecarlia and Georgetown discharge events are not expected to have a substantial or cumulative impact on the tolerant benthic community present in this reach of the Potomac River. These results are generally consistent with the Dynamac(1992) study using a different sampling technique but also finding a tolerant benthic community.

The toxicological results should be also be viewed with respect to the actual environmental conditions in the River. The *Water Quality Studies Report* points out that although the Aqueduct's TSS discharge may appear to be very concentrated, if one takes into account the large volume of flow in the River and the sediment contributions from upstream sources, the facility's discharge does not appear significant. In the *Water Quality Studies Report*, EA summarized the situation as follows:

> To put the Aqueduct releases into perspective, daily Potomac River flows and total suspended solids (TSS) loads measured at Little Falls (upstream) were obtained for the 20 year period, 1980 - 1999. The median (natural) suspended load in the Potomac River for this period was 218,000 kg/day. The 25 May 2000 discharge event from Dalecarlia Basin 3 released approximately 17,800 kg of solids, a value which is exceeded on 90 % of the days each year by the daily mass of solids in the Potomac River passing Little Falls. This solids loading from Georgetown Reservoir is exceeded on 55 to 60 % of the days each year by the daily mass of solids passing Little Falls.

In addition to the *Water Quality Studies,* at the request of EPA, EA has recently completed additional studies which modeled the Aqueduct discharges at different river flow conditions. The results of these new studies are interesting because they suggest that the sediments can be safely discharged not only in the Spring when river volume is greatest but at other times of the year when the River is lower.

Because the *Water Quality Studies* and the special fisheries panel convened by EPA (discussed below) suggested a potential for smothering fish eggs and larvae if they are in the River at the time of discharge, EPA is evaluating permit conditions for the draft permit which will better control the time, duration and other circumstances of the discharges.

Question 5: If the EPA accepts the idea that the Washington Aqueduct's discharges are not harmful to the ecology of the Potomac River and the surrounding water bodies, what action is the Agency taking to rescind regulations or urge state regulatory authorities to rescind regulations that have more restrictive TSS and alum limits? If EPA believes that these discharges are harmful, why haven't limitations been developed for the Washington Aqueduct?

Response: As noted earlier, NPDES permit requirements for water treatment plant discharges are based on the use of BPJ for technology-based limits and on the application of state water quality standards. These BPJ limits are subject to review and comment, which affords parties the

opportunity to challenge effluent limits that they believe may be unnecessarily restrictive or that are too relaxed. Water quality-based limits are established on a site-specific basis, implementing state WQS, and taking into account the nature of the discharge sites and dilution. Such water quality based permit conditions may also be challenged and discussed during the permit issuance process and the state standards themselves are subject to triennial review under the CWA. Thus, we believe there are mechanisms in place to address the appropriateness of the requirements.

In 1998, EPA commissioned a special panel of experts to provide recommendations regarding the Aqueduct discharges and their potential effect upon aquatic species. Members of the special panel included fisheries biologists from a number of respected organizations, including the NMFS and the United States Fish and Wildlife Service. The fisheries panel presented its findings in a report to EPA in 1999, and its recommendations were used in the *Water Quality Studies* and are being considered in the development of the draft NPDES permit. The report recommended, among other things, discontinuing the discharge when migratory fish generally spawn, mixing of the flocculent with raw river water, slowing the rate of the discharge, monitoring river water quality daily at the discharge sites to identify a time when water quality is less sensitive to sediment discharges in the river, removing rocks from outfall 002 and creating a panel of stakeholders to assist the Corps with issues relating to the ecosystem.

EPA is in the process of developing a new permit for the Washington Aqueduct which will contain the conditions EPA believes are necessary for protecting the Potomac River. Some of the ideas we are developing are derived from the recommendations made to us by the fisheries panel, the US Fish and Wildlife Service, the National Marine Fisheries Service and the *Water Quality Studies*. The District of Columbia will be asked to certify that the new permit limits meet water quality standards for the Potomac River.

Question 6: Do the current discharges from the Washington Aqueduct meet Washington, DC water quality standards that prohibit offensive odor, color, deposits and turbidity?

Response: Because this question is specific to meeting DC WQS, EPA's answer is limited to discharges within the District. The Corps presently holds two NPDES permits for discharges into District waters. Permit number DC0000019 covers the discharges from the sedimentation basins at Dalecarlia and Georgetown. Permit number DC0000329 covers discharges from the following discharge points: a spring beneath the Dalecarlia sedimentation basins which discharges to the C&O Canal, discharge from beneath the Dalecarlia sedimentation basins which discharges to the Potomac, discharges from the Georgetown Conduit to the Potomac and from the City Tunnel to Rock Creek.

Although the discharges from the sedimentation basins permitted under permit DC0000019 contain a heavy concentration of naturally-occurring sediments which are pumped into the plant along with the raw Potomac River water, the permit only allows these discharges during high river flow conditions (when the River already contains high levels of sedimentary runoff). Therefore, it is EPA's opinion that the permitted discharge does meet DC WQS. Further,

on February 2, 1989, the DC Department of Consumer and Regulatory Affairs, the precursor organization to the DC Department of Health, certified that the terms and conditions of permit DC0000019 met DC WQS. This certification included the narrative conditions which include but are not limited to such things as odor, deposits, color, taste and turbidity.

With regard to permit number DC0000329, which regulates the other discharges described above, no complaints regarding these discharges (color, turbidity, odor, etc.) have been recorded by EPA either in the Region's Emergency Response Center, by EPA Region III Water Protection Division staff, or on the Discharge Monitoring Reports (DMRs) which have been required to be submitted each month for the past seven years. EPA has also been advised by the Corps that since permit DC0000329 was reissued in February 1998, the Washington Aqueduct has not discharged into the Georgetown Conduit nor the City Tunnel. In addition, the pipe to the C&O Canal has been intentionally blocked so there are no known discharges from it. Nevertheless, EPA is continuing to work with the Corps to review discharges subject to this permit and the source of any additional discharges.

Question 7: Was the DC Department of Health, Environmental Health Administration, incorrect in its letter of October 9, 2001, that stated, "If finished water is used in the flushing process, the discharge contains chlorine presently in the form of chloramine, used in the disinfection process?"

Response: EPA has spoken with the DC Department of Health, Environmental Health Administration, and they explained that what they intended to say is that if finished water is used in the flushing process, the discharge <u>may</u> contain chlorine. As noted above in our answer to question 1, it is the Corps' and EPA's belief that any chloramine contained in the finished water, which is used to flush the sedimentation basins, either evaporates or is exhausted by reacting with organic material. During the next discharge event, the Corps has agreed to test the effluent for chlorine.

Question 8: Is it the EPA's best professional judgement that pollution treatment technology that would result in a substantial reduction in pollution and that it is in wide use among-like facilities need not be adopted by the Washington Aqueduct on the basis that it is too expensive?

Response: EPA has not made a final determination regarding the permit limits to be included in a new permit for the Washington Aqueduct discharge. We will make a final decision following appropriate procedures for publishing a draft permit and receipt of the views of the public.

The solids in the discharge are the result of taking sediment-laden water from the River. We are aware of long-term efforts being made to control upstream sources of sediments. EPA and many other groups are working on watershed restoration projects which are intended to reduce the amount of sedimentation to the Potomac River upstream of the Aqueduct. In addition to restoration projects, under the 2000 Chesapeake Bay Agreement, new water quality standards for water clarity are being developed which are intended to be met by the Bay and its tidal tributaries. Sediment load reductions will be calculated for the Potomac River and Tributary

Strategies developed and implemented by 2010. When the upstream controls are in place, the amount of sediment in the raw water flow into the Aqueduct should be significantly reduced.

Question 9: Does the EPA accept the Environmental Assessment studies that found one of the four whole effluent rounds was found to be acutely toxic to the test fish; that two of the four whole effluent rounds were found to be chronically toxic to a test invertebrate; that all four rounds were found to be toxic as regards the growth of benthic invertebrates?

Response: EPA has accepted the results of the *Water Quality Studies Report* in its entirety. That includes the explanation of the results found on page 7-3 of the report which states:

> Interpretation of these effluent toxicity test results is complicated by the fact that these tests continuously expose the test organisms in the laboratory to a series of effluent concentrations for 2 to 10 days (depending upon the test). In contrast, exposure to the Aqueduct plume is a transient phenomenon which lasts perhaps 4 - 8 hours. Using the guidance presented in US EPA's (1991) *Technical Support Document for Water Quality-Based Toxics Control*, the lowest acute value would require a dilution factor of approximately 11:1 to be non-toxic (i.e., to yield 0.3 TUa); and the lowest chronic value would require a dilution factor of approximately 9.4:1. The benthic results would suggest that a dilution factor of 14.5 would result in no effect on organism growth. As discussed in Chapter 2, these dilution factors are easily obtained for Outfall 002, but outfall modification or relocation would be required to achieve these dilution factors for the Georgetown Reservoir discharges from Outfall 003.

As stated in the response to question 4, the overall conclusion of the *Water Quality Studies* is that the Washington Aqueduct discharges are neither acutely nor chronically toxic to aquatic species.

Question 10: Does the EPA believe that 33 U.S.C. 1371 *prohibits* the agency from completing either an Environmental Impact Statement or an Environmental Assessment on the discharge operation of the Washington Aqueduct?

Response: 33 U.S.C. § 1371(c) provides that, except for the issuance of an NPDES permit to a new source and providing construction grant funds for publicly-owned treatment works, EPA actions in carrying out its duties under the CWA are not deemed to be major Federal actions significantly affecting the quality of the human environment under the National Environmental Policy Act (NEPA). Therefore, EPA is not required to prepare an Environmental Impact Statement (EIS) or an Environmental Assessment(EA) when it reissues an NPDES permit to an existing source such as the Aqueduct. The legislative history of this provision shows that Congress was concerned about the potential for impediments in carrying out the purposes of the CWA if EPA were subject to the requirements of NEPA.

However, EPA has taken the position that there may be situations where it should engage in the use of voluntary NEPA procedures. See *Policy and Procedures for Voluntary Preparation of*

National Environmental Policy Act (NEPA) Documents, (October 29, 1998, 63 FR 58045). Because of the cooperative work it has done and anticipates doing on this permit with other Federal agencies, such as the Corps and NMFS, the Wholesale Customers of the Aqueduct and the public, as well as the procedural requirements it must follow in issuing the permit, the Region does not think that a voluntary NEPA review is warranted in this instance. If other Federal agencies do undertake an EIS or EA, the Region is willing to be a cooperating agency and to offer our assistance.