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May 9, 2002

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Re: F- 2001-0246 (formerly F-98-0173)
Federal Energy Regulatory Commission
Docket No. CP 98-150
U.S. Army Corps of Engineers/Buffalo District Permit
Application # 97-320-0003(2)
U.S. Army Corps of Engineers/New York District Permit
Application # 1999-00640

Dear Mr. West:

The Department of State has completed its review of the above-referenced proposal and the consistency certification provided for it.

Pursuant to 15 CFR Part 930.63, the Department of State objects to the consistency certification for this proposed activity. As a result of this objection, the Federal Energy Regulatory Commission and the U.S. Army Corps of Engineers cannot, pursuant to the consistency provisions of the federal Coastal Zone Management Act, authorize this activity unless this objection is overruled on appeal to the U.S. Secretary of Commerce.

Subject of the Review

The Millennium Pipeline Company, L.P. (Millennium) has requested authorization from the Federal Energy Regulatory Commission (FERC) to construct and operate an approximately 442 mile long natural gas pipeline from an interconnection in Lake Erie at the United States and Canadian border, traversing Lake Erie in Pennsylvania and New York to a landfall in the Town of Ripley, Chautauqua County, New York, continuing through several counties along much of the length of the State to the Bowline Point area in the Town of Haverstraw in Rockland County on the west side of the Hudson River, crossing the Hudson River through Haverstraw Bay to a landfall near the Franklin D. Roosevelt Veterans Administration Hospital (VA Hospital) in the Town of Cortlandt, and thence continuing southerly to the City of Mount Vernon in Westchester County. The pipeline would transport 700,000 dekatherms (7 million cubic feet) of natural gas per day. For most of its route, the pipeline will be installed in existing utility corridors and easements. The proposed activity is the subject of an Environmental Impact Statement (EIS) prepared by FERC pursuant to the National Environmental Policy Act.

The FERC final EIS indicates that the pipeline would cross 507 waterbodies consisting of wetlands, streams, and rivers constituting navigable waters of the United States. Therefore, the proposed activity also requires authorization from the U.S. Army Corps of Engineers (Corps) pursuant to the federal Rivers and Harbors and Clean Water Acts. Millennium has requested that authorization.

The proposed pipeline is subject to the consistency provisions of the federal Coastal Zone Management Act (CZMA), because portions of the project are in the coastal area of New York State, and the project requires authorization from FERC and the Corps of Engineers. The statutory provisions of the CZMA limit the consistency requirements to activities that affect natural resources or land and water uses in New York's coastal area. For the proposed pipeline, this includes Lake Erie and the Hudson River and adjacent lands, an approved Local Waterfront Revitalization Program (LWRP) in the Village of Croton-on-Hudson and the pipeline affects the water supply of New York City which is in the coastal area.

In Lake Erie, the pipeline would extend a distance of approximately 93 miles from Port Stanley, Ontario, Canada to its landfall in New York State at Ripley. In New York State's portion of Lake Erie, the pipeline would extend a distance of approximately 3 miles. For most of that distance, the pipeline would be installed by barge in a trench 9 to 11 feet deep and 30 feet wide excavated by a mechanical jetting sled using water under high pressure. Approximately 0.8 mile of the trench would be excavated by blasting, ripping or cutting the rocky subsurface. At Ripley, directional drilling would be used to install the pipeline 30 to 50 feet below the land surface and lake bed for a distance of between 3,500 feet to 3,900 feet from shore to avoid damage to the pipeline from the high energy shoreline environment and ice scour.

The pipeline would cross the Hudson River through Haverstraw Bay, a State designated Significant Coastal Fish and Wildlife Habitat, for a distance of approximately 2.1 miles. A trench, 10 to 20 feet deep and 70 to 150 feet wide at various locations along its length, would be excavated using a closed bucket dredge. The dredged material would be placed in barges, and after the installation of the pipe using a lay barge method, the dredged material would be placed back into the trench. The final EIS for the pipeline project indicates that Millennium proposes to excavate and backfill the trench in Haverstraw Bay between September 1st through November 15th.

In December 2001, DOS was advised by the U.S. Army Corps of Engineers that 400 feet of the trench near the eastern shoreline of Haverstraw Bay would involve blasting. Blasting would be used to fracture the underlying rock to allow it to be removed by closed bucket dredge. Dredging, trenching, and placing the pipe would follow the methods used in the rest of the river.

From the VA Hospital in Westchester County, the pipeline would extend inland a short distance to Route 9 and then follow a southerly route, crossing wetlands and waterbodies in the Town of Cortlandt and Village of Croton-on-Hudson, continuing southerly through the county and terminating in the City of Mount Vernon.

The proposed routing of the pipeline in the upland areas of Westchester County changed during the FERC staff review of Millennium's application and the preparation of a draft, supplemental draft, and final EIS by FERC, and after the Department of State (DOS) receipt of Millennium's initial consistency certification. Millennium's consistency certification to DOS includes a document prepared by its consultants, Lawler, Matusky & Skelly Engineers LLP, dated March 2001 and entitled "New York State Coastal Zone Consistency Determination," and an "Addendum" prepared by the same firm, dated July 2001. Those documents were submitted in support of two upland routes through Westchester County, referred to as the Route 9/9A and Con Ed Offset/Taconic Parkway (Con Ed Offset/Taconic) alternative routes. The final EIS addresses both upland routes. By letter dated November 28, 2001, Millennium's attorneys asked that the consistency certification

be limited to the Con Ed/Taconic Offset in Westchester County. FERC's December 19, 2001 interim order states that "... the final EIS finds that the Con Ed/Taconic Parkway Alternative is preferable to the 9/9A Proposal." Therefore, DOS has evaluated only the consistency of Con Ed offset/Taconic route.

The Con Ed Offset/Taconic route follows the Con Ed transmission line right-of-way through the Town of Cortlandt, Village of Croton-on-Hudson and the Town of New Castle to the Taconic State Parkway and follows that roadway to the Saw Mill River Parkway. In this route, the pipeline would cross the Croton River via open cut "dry" trenching in the river's substrate, and traverse a portion of the Village of Croton-on-Hudson's domestic water supply well field and a portion of the Jane E. Lytle Memorial Arboretum, a Village park. It would cross the Croton River about one mile upstream from the northern limit of the State designated Croton River and Bay Significant Coastal Fish and Wildlife Habitat. Thereafter, the pipeline would cross the Catskill "Aqueduct" at the juncture of the Bryn Mawr Siphon and the watershed of the New Croton Reservoir, components of the New York City public water supply system.

The entire Village of Croton-on-Hudson, through which the pipeline would cross, is in the New York State coastal area. This part of the coastal area is covered by the Village of Croton-on-Hudson's State and federally approved Local Waterfront Revitalization Program (LWRP). For activities that require federal agency authorization and affect land or water uses or resources in the coastal area covered by the Village's LWRP, such local program is used by DOS in its determination of consistency.

Millennium revised its consistency certification for the pipeline in March and July 2001, reflecting changes in the pipeline routing and providing other information, data and material to support its certification. Those revisions and information include Millennium's responses to comments from DOS and the Village of Croton-on-Hudson concerning the consistency of the proposed activity with the CMP and the Village's LWRP. DOS considered these responses from and other documentation submitted by Millennium including the Blasting and Mitigation Plan dated April 15, 2002 and the Impact Assessment and Mitigation Plan for Blasting dated April 16, 2002. DOS also considered comments from the general public, state and local agencies and other public comments during its review of this proposed project. DOS considered the comments submitted by the Public Service Commission with regard to the routing of the pipeline in Westchester County and its potential effects upon the Con Ed transmission lines and the supply of electrical power to New York City. DOS considered the comments of the NYC Department of Environmental Protection concerning the risk to the drinking water supply of New York City and several Westchester communities. DOS also considered the 401 Water Quality Certification issued by DEC in December 1999 for the proposed pipeline and the conditions contained in that authorization which are applicable to the coastal area. Finally, during the course of its consistency review, DOS met with representatives of Millennium on numerous occasions to discuss concerns about the proposed project.

A draft, supplemental draft, and final EIS were prepared by FERC. The final EIS was received by DOS on October 5, 2001. On December 19, 2001, FERC issued an interim order authorizing Millennium's proposal, subject to conditions. Among these conditions is "Millennium cannot be constructed until it receives a consistency determination from NYS DOS." (Interim Order, page 58) Due to Millennium's late notification to the Army Corps and this agency of its intention to conduct blasting in Haverstraw Bay, FERC required Millennium to certify whether blasting in the significant habitat is consistent with the NYS CMP. FERC stated that "[T]he potential blasting will also affect the ongoing permitting process for the COE ... and the New York State Department of State. Millennium must obtain its section 10 and section 404 permits before project construction can begin."

Project Purpose: Construct and operate a natural gas pipeline.

Applicable Policies: The applicable New York State CMP policies are policies 18, 38, 7, 35, and 44, the policies and purposes of the CMP as expressed in the Village of Croton-on-Hudson LWRP which include policies 18, 38, 7, 7G, 35, 44, and 44A, and the land and water use plan in the LWRP.

Policy Analysis: The applicable CMP and Village of Croton-on-Hudson LWRP policies state:

POLICY 18: TO SAFEGUARD THE VITAL ECONOMIC, SOCIAL AND ENVIRONMENTAL INTERESTS OF THE STATE AND OF ITS CITIZENS, PROPOSED MAJOR ACTIONS IN THE COASTAL AREA MUST GIVE FULL CONSIDERATION TO THOSE INTERESTS, AND TO THE SAFEGUARDS WHICH THE STATE HAS ESTABLISHED TO PROTECT VALUABLE COASTAL RESOURCE AREAS.

CMP AND LWRP POLICY 38: THE QUALITY AND QUANTITY OF SURFACE WATER AND GROUNDWATER SUPPLIES, WILL BE CONSERVED AND PROTECTED, PARTICULARLY WHERE SUCH WATERS CONSTITUTE THE PRIMARY OR SOLE SOURCE OF WATER SUPPLY.

The proposed pipeline route crosses the Village of Croton Wellfield, the Catskill Aqueduct at the Bryn Mawr Siphon and the water supply land located in the New Croton Reservoir Watershed.

The documentation submitted by Millennium in support of its consistency certification and the FERC final EIS indicate that the Con Ed Offset/Taconic alternative pipeline route would traverse the Village of Croton-on-Hudson's wellfield, which is the Village's primary source of domestic water supply. This wellfield is within the Croton River gorge.

The final EIS indicates management practices and monitoring efforts would be undertaken to help ensure the wellfield and water supply is protected. However, the management practices were not described nor evaluated in the final EIS. Thus, it cannot be confirmed that these practices would achieve their intended purpose. Monitoring efforts were also not described in the final EIS.

The Village enacted a local law identifying and protecting this water supply area. The law prohibits all systems, facilities, and activities except public water supply and pumping and treatment facilities and controls in the Zone 1 Wellhead Protection Area. These standards advance and implement this CMP and LWRP policy. Since the pipeline would traverse Zone 1 of the Wellfield Protection Area where it is a use that is not allowed and given the absence of management practices and monitoring activities that would be undertaken to protect the Village's water supply, constructing and operating the pipeline in this area would not be consistent with this CMP and Village LWRP policy to conserve and protect the quality and quantity of surface and groundwater supplies.

The proposed pipeline would also traverse the Catskill Aqueduct of the New York City Watershed and thereby impact locations in the coastal area which are dependent on the water supply.

In a November 6, 2001 letter to FERC, the City of New York's Department of Environmental Protection (DEP) stated:

> "Comments on the FEIS were necessitated by both FERC's failure to consider seriously the implications of the Millennium pipeline on one of the nation's largest public water supply infrastructure components and the need to correct a number of crucial errors...DEP vehemently opposes the pipeline route and rejects the findings of the FEIS..."

"The pipeline would cross the Catskill Aqueduct at the critical juncture of the Bryn Mawr Siphon. Millennium proposed construction with approximately two-foot separation between the gas pipeline and the Bryn Mawr Siphon. Due to the FEIS's failure to provide any documented evidence that such a precarious design is feasible without risk to the water supply aqueduct, DEP is entirely opposed to a pipeline crossing in this area."

"The Bryn Mawr Siphon is a critical component of the Catskill Aqueduct and the City's water supply infrastructure because it is the portion of the aqueduct that is pressurized...it is only three feet below the ground surface...If the siphon pipes were subjected to deformation from a blast or soil displacement, it would cause fracturing of the rivets and a separation of the plates...If a rupture occurred at Bryn Mawr, soil displacement around the siphon would create a crater leaving the siphon suspended and unsupported. Since the siphon was not designed to be self-supporting, the siphon sections would pull apart, resulting in complete failure."

"Any siphon failure would be catastrophic due to the resulting release of an enormous amount of water. The release would include the approximately 1 million gallons contained in the fourteen miles of pipe from the Kensico Reservoir to Hillview Reservoir plus the volume of water that would continue to flow into the aqueduct from both reservoirs until control valves could be closed."

"The lengthy process to repair the siphon would include the shutdown of about 40% of the City's water and a complete shutdown of water for all the communities supplied from the aqueduct. Some of the...municipalities that could no longer receive water from the Catskill Aqueduct...include Valhalla, Hawthorne, North Tarrytown, Tarrytown, Greenburgh, Elmsford, New Rochelle, Scarsdale, Yonkers, and Mount Vernon."

"The DEP has consistently maintained...that there should be no risk to the integrity of the siphon.'

DEP also raised concerns about the impacts of the proposed pipeline construction and operation on the watershed lands that supply New York City's public drinking water. DEP states,

"In addition to the aqueduct crossings, the recommended pipeline route would include construction activity on pristine water supply lands located in the New Croton Reservoir Watershed...the water supplied by the New Croton Reservoir, like all City reservoirs, is unfiltered before it is consumed. Therefore, watershed protection efforts are the sole practice used to ensure that water quality is maintained at the highest levels...all efforts should be taken to see that the pipeline route is rerouted to avoid this sensitive watershed land."

"The proposed mitigation fails to eliminate the risks to both the water supply and the water supply infrastructure and also neglects the mitigation that would be needed in the event that no acceptable crossing at the Bryn Mawr Siphon is found."

The City of New York's New Croton Reservoir and Catskill Aqueduct provide a primary source of water supply to the City of New York and many other municipalities. The New York City water supply system serves over 9 million people and supports significant economic development activities in the region. Ensuring the quality and continued flow of water to the metropolitan region is of vital economic, social, and environmental interest to the State of New York. Given the water supply system's importance to the City of New York and other municipalities and that the proposed routing of the pipeline poses significant risks that have not been

adequately addressed by Millennium, the project, as proposed, is not consistent with the State's Coastal Policies 18 and 38.

CMP AND LWRP POLICY 7: SIGNIFICANT COASTAL FISH AND WILDLIFE HABITATS WILL BE PROTECTED, PRESERVED, AND WHERE PRACTICABLE, RESTORED SO AS TO MAINTAIN THEIR VIABILITY AS HABITATS.

LWRP POLICY 7G: SUCH ACTIVITIES SHALL NOT CAUSE DEGRADATION OF WATER QUALITY OR IMPACT IDENTIFIED SIGNIFICANT FISH AND WILDLIFE HABITATS.

Haverstraw Bay

The proposed pipeline would cross the Hudson River in the northern half of the State designated Haverstraw Bay Significant Coastal Fish and Wildlife Habitat. This habitat was designated by the Secretary of State in November 1987. The principal purpose for designating Haverstraw Bay as a Significant Coastal Fish and Wildlife Habitat is to protect, preserve and where practicable restore the habitat in order to maintain its viability.

The habitat documentation for Haverstraw Bay constitutes a public record of the habitat's significance and basis for its designation, provides a description and map of the area designated, and includes a summary of the habitat's important elements, functions and values, ecosystem rarity, irreplaceability, and important human uses of and associated with the designated habitat. The documentation also provides information, guidance, and direction for planning, developing, designing, and undertaking activities to ensure that they will be consistent with CMP policy relating to the protection, preservation, and restoration of designated significant coastal fish and wildlife habitats.

"The Hudson River estuary is one of New York's outstanding natural resources...and vital as part of the Atlantic coastal ecosystem." (NYS DEC, 1998 Hudson River Estuary Action Plan) Haverstraw Bay is a significant part of the estuary. The habitat documentation for Haverstraw Bay states that the "...Bay possesses a combination of physical and biological characteristics that make it the most important fish and wildlife habitat in the Hudson River estuary. The regular occurrence of brackish water over extensive shallow bottom creates highly favorable conditions for biological productivity within the estuary, including submergent vegetation, phytoplankton and zooplankton, aquatic invertebrates, and many fish species." (Emphasis added)

The habitat documentation indicates that in terms of ecosystem rarity, the bay is the "... most extensive area of shallow estuarine habitat in the lower Hudson River..." The documentation indicates that: shortnose sturgeon, an endangered species, regularly occur in the bay; the habitat contributes to recreational and commercial fisheries throughout the northeastern United States; the bay is a major spawning, nursery, and wintering area for various estuarine fish species (e.g. striped bass, American shad, white perch, Atlantic sturgeon, blue claw crab) and that their population levels are unusual in the northeastern United States; and the habitat is irreplaceable. The bay also serves as a foraging area for the threatened bald eagle. The documentation further indicates that "Haverstraw Bay is a critical habitat for most estuarine-dependent fisheries originating from the Hudson River..." and "...contributes directly to the production of in-river and ocean populations of food, game, and forage fish species." Commercial and recreational fisheries throughout the North Atlantic, therefore, "... depend on or benefit from these biological inputs from the bay."

The habitat documentation for Haverstraw Bay includes an impact assessment and impairment test that must be met in order to protect and preserve the habitat. The impairment test states that land and water uses or

development shall not be undertaken if such actions would destroy the habitat, or significantly impair its viability. The impact assessment for the habitat describes the range and types of activities that would destroy or significantly impair the habitat, and identifies when habitat disturbances would be most detrimental, stating:

> "Any activity that would substantially degrade water quality, increase turbidity or sedimentation, or alter water salinities or temperatures in Haverstraw Bay would result in significant impairment of the habitat. Any physical modification of the habitat or adjacent wetlands, through dredging, filling or bulkheading, would result in a direct loss of valuable habitat area"

With regard to the statement above, DOS in its April 7, 2000 letter to the Secretary of FERC stated that this "...narrative language has the effect of creating a presumption that certain activities, such as dredging, are incompatible with the Haverstraw Bay habitat." The letter further stated that this "...presumption may be rebutted by the provision of appropriate and necessary information..." After reviewing and evaluating all of Millennium's submissions and FERC's final EIS, DOS concludes that the presumption of habitat impairment was not rebutted. In fact, FERC conceded in the Executive Summary of its final EIS that the project would cause adverse and unavoidable impacts in Haverstraw Bay, including direct and indirect impacts on the endangered shortnose sturgeon.

Given its designation as a Significant Coastal Fish and Wildlife Habitat, Haverstraw Bay is accorded higher ecosystem values and protection by New York State than the other alternative crossing locations evaluated by FERC in the final EIS. Certain activities that might be undertaken in the river, but outside of the Haverstraw Bay habitat, such as the dredging of new navigation channels and basins, in-water blasting, or filling of undisturbed in-water areas, should not be undertaken in the designated habitat. As a result, the significance of the effects of new dredging, filling, blasting, and other disturbances in the designated Haverstraw Bay habitat, compared to other areas that are not designated habitats, is more substantial. The impact assessment in the Haverstraw Bay habitat documentation recognizes that difference and was developed to identify activities that, because of their adverse effects on the habitat, should be avoided.

The proposed pipeline project involves dredging more than 200,000 cubic yards of river bottom in the bay to excavate a trench in which the 24 inch gas pipeline would be placed via the lay barge method of construction. Blasting may occur in the shallow water area on the eastern shoreline of the Hudson River.

The lay barge construction method would result in an open trench of about 1300 feet at any given time. The trench would be 10 to 20 feet deep and 70 to 150 feet wide, for approximately 2.1 miles through the northern half of Haverstraw Bay. The trench would be backfilled with the material excavated from the trench, which will be stored on barges until the material is needed for backfilling. As required by DEC's 401 Water Quality Certification (WQC), the backfilling of the trench "...must be performed accurately..." and, the "...final riverbed elevation must be within +/- 1 foot of the original elevation as determined by pre- and post-construction surveys." The dredging would be performed by 6 and 22 cubic yard closed buckets that, according to DEC's 401 WQC, must have the "...capability of meeting the following water quality performance standards: (a) Suspended solids not to exceed 25 mg/l over background at 25 m (75 ft) from operation when ambient levels are lower than 100 mg/l, and (b) Turbidity not to exceed ambient levels by more than 30% at 25 m (75 ft) from operation." The 401 WQC also prohibits any overflow of dredged material from the barges. The 401 WQC conditions respond to DEC's concern over the effects on water quality and fisheries caused by turbidity and suspended sediments that would result from the proposed dredging and backfilling. Millennium plans to perform the proposed dredging during the period starting on September 1 and ending on November 15, but this would require a revision to DEC's 401 WQC, which has not yet occurred.

Except for the existing 600+/- foot wide federal navigational channel that traverses Haverstraw Bay in a north-south direction, dredging and backfilling along more than 11,000 feet of the proposed pipeline route would occur in areas that have not been previously dredged. A visual survey of the proposed pipeline route was conducted on November 13, 2000 by divers hired by Millennium. The survey did not reveal any areas with aquatic vegetation nor any major disturbances to the bay bottom, except for the dredged federal navigation channel and some trees and limbs sticking out of the mud in the channel. The survey generally confirmed the undisturbed nature of the bay bottom along the proposed pipeline route. (See report on Hudson River Sampling Program prepared by Lawler, Matusky & Skelly Engineers, dated December 2000)

The dredging and backfilling would result in direct, short and long term adverse effects on 17 to 20 acres of the substrate which is part of the important shallow estuarine benthic habitat in Haverstraw Bay. The FERC final EIS for the pipeline indicates on page 5-59 that the proposed dredging on any given day would affect an area ranging from 0.06 acre to 5.23 acres, and that "Periodic impacts involving about 9.18 acres would occur during backfill of the deepwater component." The total area impacted by the proposed crossing would be 4,724,000 square feet (108.5 acres), which will cause a significant disturbance to the habitat.

During dredging and backfilling, sediments would be suspended in the water column and carried considerable distances north and south of the trench, where they would be redeposited on the substrate. In its May 2, 2001 comments to the Buffalo District of the Corps of Engineers, NMFS stated "[S]ediments in the Bay can generally be characterized as silty/clay-like material which may stay in suspension longer than other types of sediments." The final EIS indicates on page 5-59 that a visible plume of sediments would range from 60 feet to 90 feet in width and 35 feet to 460 feet long during dredging, and from 90 feet to 500 feet wide and 170 feet to 400 feet long during backfilling.

In its May 2, 2001 comments to the Buffalo District of the Corps of Engineers regarding the proposed pipeline and the Haverstraw Bay crossing, the National Marine Fisheries Service (NMFS) stated:

> "Numerous studies have assessed the impact of turbidity/suspended sediment on fish... Elevated levels of sediment can cause displacement, disruption of spawning migrations and foraging behavior, and mortality..."; and,
>
> "Dredging can also result in indirect effects to shortnose sturgeon by elevating levels of suspended sediment, thus altering and/or limiting distribution... Dredging will also cause the destruction of the benthic habitat and prey resources, thus altering and/or limiting foraging patterns and distribution."

The sedimentation resulting from the dredging and backfilling would change environmental conditions in the areas near the trench by destroying benthic organisms, and have short-term and possible long-term adverse effects on other aquatic organisms, the water column, and its chemistry in more than 108 acres of this important shallow estuarine habitat. Certain organisms in the sediment and the water column that could not leave the area would be physically destroyed. Other organisms that ordinarily rely on the substrate and water column in and adjacent to the trench would migrate from and avoid the area and not use it during the dredging and backfilling operations, and for a period of time afterwards while turbid conditions exceed turbidity levels normally tolerated by those species. This would result in temporary and long-term ecological alterations that reduce the carrying capacity of the habitat, change its community structure, reduce its productivity, and increase mortality in the habitat.

In its May 2, 2001 comments to the Buffalo District of the Corps of Engineers regarding the proposed pipeline and the Haverstraw Bay crossing, the NMFS stated:

> "Habitat use of the Haverstraw Bay reach of the Hudson River by species of concern is extensive and complex... Construction activities such as those proposed for the Hudson River crossing would create a direct loss of habitat for these species and subject them to increased mortality".

The NMFS' September 14, 2001 Section 7 Endangered Species Act biological opinion letter to FERC states:

> "Since dredging requires the removal of material from the bottom of the bay down to a specified depth, it causes severe disruption to the benthic community. Disruption of the benthos may affect shortnose sturgeon foraging and migration behavior given that they are benthic omnivores. Dredging has also been known to cause temporary displacement, injury and/or mortality, which may also affect the ability of the Hudson River DPS [Discrete Population Segment] or recovery unit to recover"; and,
>
> "Dredging operations can cause indirect impacts to shortnose sturgeon in the action area. The most notable indirect impact is the destruction of the benthic habitat and prey resources"; and,
>
> "Given that dredging will likely destroy all prey resources in the action area, shortnose sturgeon foraging habitat will be reduced."

The one construction method that would significantly minimize or possibly avoid increasing turbidity and suspended sediment conditions and destroying habitat in the bay is horizontal directional drilling. One page 5-57 of the final EIS, FERC indicates that Millennium did not find this method to be feasible or reasonable, because of unsuitable soil conditions and lack of adequate staging space on the west bank of the river; lack of a level area for staging of equipment ont he east bank; the need to discharge drilling muds at the exit holes in the river; and, the greater amount of time required to complete the in-water work. Other methods of construction evaluated included: (1) hydraulic dredging, which produces high levels of turbidity and requires a disposal area for dewatering and excavated material prior to its placement in the trench or numerous barges to hold the material during excavation and pipelaying; (2) conventional open cut, buttom pull construction, which involves stockpiling the dredged material on the sides of the trench, continuous in-water work over a three month period, and high levels of turbidity and sedimentation on the bay bottom; and (3) the proposed open cut lay barge construction, which incorporates the use of closed buckets to reduce turbidity and suspension of sediments during dredging, restoration of the bay bottom and pre-construction conditions, and limiting in-water work at any one time to 1300 foot sections of the bay bottom.

FERC, in the final EIS, contends that the proposed construction method would have temporary adverse effects on the habitat. However, NMFS and the U. S. Fish and Wildlife Service indicate that the adverse impacts on the habitat will be long term. NMFS, in its letter dated March 22, 2001, to FERC stated the following:

> "Our primary concerns with the lay barge technique are with impacts to sediments and associated species. For example, our experience with other utility crossings in the Hudson River and elsewhere indicate that crossings cause benthic disturbances that take much longer than anticipated to recover, if recovery takes place at all. This is an important consideration for [Essential Fish Habitat] because the proposed dredging would constitute new work in healthy river bottom habitat. Similarly, given the normal distribution patterns of fish in the

> Hudson River, it is logical to assume that motile life stages will be affected during project construction. Organisms that may be smothered by the plume of material suspended during dredging should be considered in the EFH assessment."
>
> "Based on our experience with subaqueous crossings for other pipeline projects in the Hudson River region and elsewhere, we expect that project construction would physically modify and significantly impair the Haverstraw Bay habitat. This would occur to the detriment of aquatic resources, including estuarine-dependent fisheries."

The effects of blasting in the Hudson River were not considered in FERC's final EIS. On December 14, 2001, this agency informed Millennium that blasting in Haverstraw Bay was a project change "which may have effects on the coastal zone of New York State." In its letter, DOS requested information regarding the conduct of blasting in Haverstraw Bay, including "[A] detailed description of the possible alternatives to blasting;" and "[A]n assessment of potential impacts to fish and wildlife."

In a letter dated January 25, 2002, Millennium outlined its proposed blasting program, including proposed mitigation measures to reduce impacts on fish. These mitigation measures include use of sonar prior to blasting, smaller blasts to scare fish if necessary, and the use of bubble curtains during blasting. Attached to this letter was Millennium's response to the December 11, 2001 data requests by the U.S. Army Corps of Engineers which described possible alternatives to blasting by noting that "...if mechanical techniques will not be totally effective, the fracturing of some rock with blasting techniques will be required to facilitate rock removal to the desired trench depth." Thus, the only alternative considered to in-water blasting was mechanical, which Millennium acknowledges may not be effective.

The U.S. Fish and Wildlife Service, in a March 5, 2002 letter to the Corps of Engineers, stated that:

> "The Service acknowledged that the proposed mitigation measures would reduce the potential negative impacts, but believes that additional measures are warranted. Specifically, the Service recommends that Millennium assess the possibility of installing portable cofferdams and pumping the water from the area to be trenched, removing and stockpiling unconsolidated materials, and using a rocsaw to dig the trench. After installation, the trench should be backfilled with the stockpiled sediment and the cofferdams removed."

The Service continues: "If the Haverstraw Bay crossing is permitted, Millennium should avoid blasting in Haverstraw Bay and instead do the blasting "in the dry" as described above."

The NMFS notified FERC, in a February 15, 2002 letter, that "... it is necessary to reinstate project review as described below to address blasting and other unevaluated techniques to be used for a Hudson River crossing." NMFS states that "[S]hock waves and pressure effects associated with blasting would introduce ecological impacts that were not anticipated or addressed in the coordination undertaken to date by our respective agencies as well as by other agencies."

Focusing on impacts to the endangered shortnose sturgeon, NMFS stated that:

> "The presence of adults and/or juveniles in the vicinity of the proposed blasting area could result in direct injury and/or mortality."

> "While a study on shortnose surgeon revealed that they also suffer from swimbladder ruptures, more common blast-induced injuries were distended intestines with gas bubbles and hemorrhage to the body wall lining (Moser, 1999). Blasting may also result in indirect effects to shortnose sturgeon by destroying benthic habitat and producing underwater noise, thus altering and/or limiting distribution and foraging patterns. Endangered shortnose sturgeon have the potential to be in the vicinity of the proposed blasting and may be adversely affected by activities and results associated with the blasting."

On April 23, 2002, Millennium's Counsel delivered to the Department: (1) a Blasting and Mitigation Plan for the Millennium Pipeline Project (April 15, 2002) and (2) an Impact Assessment and Mitigation Plan for Blasting on the Millennium Pipeline in Haverstraw Bay (April 16, 2002). These documents supplement previous submissions regarding how blasting would be done and reiterate earlier conclusions that blasting would cause no significant effects on fisheries and other biota.

The blasting plan noted that consolidated rock, primarily mica schist, would be encountered for approximately 185 feet of the easternmost portion of the Haverstraw Bay, necessitating detonation of explosives to fracture the rock.

The blasting plan primarily focuses on the proposed drill pattern, including borehole size, spacing, burden and timing sequence. The second document, the "Impact Assessment and Mitigation Plan," has characterized the impacts on aquatic life as "very small", based upon the localization of the detonation in shallow water. As mitigation measures, the plan indicates that a side scan sonar will be conducted to ensure there are no concentrations of fish in the immediate vicinity of the blast. If the scan confirms the presence of fish, noise generating measures will be employed. To attenuate blast pressure and prevent fish from nearing the blast site, Millennium proposes to use an air bubble curtain. The air bubble curtain is relied upon to keep the range of the blast minimized. Stemming and delays are also proposed as mitigation measures.

Although the applicant characterizes the plan as "site specific" and its mitigation measures as "extensive", neither document contains an analysis of the blasting impacts in the unique Haverstraw Bay environment. The plan generically suggests routine mitigation measures based on studies in other waterbodies, which may or may not approximate the nationally unique habitat of Haverstraw Bay. The Mitigation Plan indeed notes that the swim-bladders of the endangered short nosed sturgeon, among other fish, have been known to be affected by underwater detonation. The shortnose sturgeon has undergone such a dramatic population decline that it has been federally listed as a endangered species. Relying on literature from other states, the authors freely expressed their belief that the air bubble system will protect aquatic species.

The plan ignores the recommendation of U.S. Fish and Wildlife Service (see above) that the work be done, if at all, in a cofferdam.

Blasting, in addition to trenching, would result in other adverse effects in addition to those resulting from trenching alone. Mitigation techniques are proposed to mitigate adverse effects on limited types and numbers of invertebrates and fishes. While they would mitigate to varying degrees direct adverse effects on fishes, they neither avoid nor fully mitigate the destruction of the shallow benthic habitat and invertebrates occupying it, and upon which vertebrates rely. There would be indirect adverse effects through trenching and blasting activities and other physical changes to the nearshore habitat and the designated Significant Coastal Fish and Wildlife Habitat. The mitigation includes replacing fractured rock and sediments in the dredged trench. However, that mitigation serves only to reduce the degree of destruction of valuable nearshore habitat by trenching, blasting, removal of materials, and replacement of them in the excavated trench. It does not avoid

the destruction of valuable habitat in the designated Significant Coastal Fish and Wildlife Habitat. Nothing has been provided by Millennium that factually demonstrates the original characteristics, functions, and values of the shallow nearshore habitat could be fully restored. This is especially important given the impact assessment and habitat impairment test in the documentation for the designated Significant Coastal Fish and Wildlife Habitat which states:

> "In order to protect and preserve a significant habitat, land and water uses or development shall not be undertaken if such actions would: destroy the habitat; or, significantly impair the viability of a habitat."
>
> "Habitat destruction is defined as the loss of fish or wildlife through direct physical alteration, disturbance, or pollution of a designated area of through the indirect effects of these actions on a desingated area. Habitat destruction may be indcated by changes in vegetation, substrate, or hydrology..."
>
> "Any physical modifications of the habitat...through dredging, filling... would result in a direct loss of valuable habitat area."

Blasting, with the mitigation measures proposed by Millennium, would have adverse affects on the Significant Coastal Fish and Wildlife Habitat of Haverstraw Bay. For this reason, it would not be consistent with Policy 7 of the CMP and Policies 7 and 7G of the Village of Croton-on-Hudson LWRP.

FERC evaluated two alternative crossings of the Hudson River, one north and one south of the designated Haverstraw Bay habitat. The northern alternative is over three miles from the proposed crossing, next to the existing Algonquin natural gas pipelines. The river at that point is about 1 mile wide. To reach that location, the pipeline route in Rockland County would need to be realigned, and would according to Table 6.1.1-1 on page 6-3 of the final EIS increase the overall length of the pipeline by approximately 9 miles. The southern alternative would cross the Hudson in the South Nyack - Tarrytown area, just north of the Tappan Zee Bridge and about 11 miles south of the Haverstraw Bay crossing. This alternative river crossing would be 2.7 miles long. The alignment of the pipeline route in Rockland and Westchester counties would need to be changed for this alternative. FERC states on page 6-7 of the final EIS that this alternative crossing would occur within the habitat for the endangered shortnose sturgeon, but outside of the State designated Haverstraw Bay habitat.

FERC concluded that the alternative crossings of the Hudson River outside of Haverstraw Bay would result in disturbances. However, the U.S. Fish and Wildlife Service in its April 28, 2000 letter to the Corps of Engineers expressed the need for an alternative crossing:

> "Traditionally, Hudson River pipeline crossings have been conducted at narrower river reaches, thereby minimizing impacts in aquatic habitats. The Service believes that there are reasonable alternatives to the proposed project which will enable the applicant to cross the Hudson River at a narrower section, including a potential crossing near the Tappen Zee Bridge."

There are currently no pipelines in this area of Haverstraw Bay. The absence of pipelines has served to advance the efforts to protect and restore its relatively undisturbed natural character. The construction of a pipeline in this area would be precedent setting and could lead to similar proposals to construct other pipelines across inappropriate areas in Haverstraw Bay. If constructed in a similar manner, the cumulative effects of such structures in the wetlands, mudflats, shoals and shallow open estuarine waters in Haverstraw Bay would significantly degrade the quality and integrity of the designated habitat by changing the physical, biological,

and chemical parameters that the habitat and many species using it are dependent upon. The U.S. Fish and Wildlife Service shares this concern over cumulative impacts, for in its April 28, 2000 letter to the Corps, that agency stated "(C)umulative impacts can result from the incremental succession of collectively significant actions taking place over a period of time. Thus, the cumulative impacts of multiple pipelines on Haverstraw Bay is a significant concern and should be considered in the project evaluation." Many adverse effects would result from the increased suspension and resuspension of sediments in shallow areas. The construction and physical presence of pipelines would interfere with the use of portions of the river by species dependent upon the area, including but not limited to, shortnose sturgeon, leading to a decline in the use of the area by the affected species and in the viability of the area as a habitat for these species. Therefore, adverse effects associated with the pipeline and the precedent setting nature of such uses in Haverstraw Bay would not be consistent with this policy.

The above information demonstrates that the designated Haverstraw Bay habitat would be adversely affected by the dredging, backfilling, and blasting activities required for the construction of the proposed pipeline. Those effects would include mortality of aquatic organisms and destruction of habitat within the bay. It is uncertain whether the habitat would successfully recover from the dredging and blasting activities. There is no disagreement that the benthic habitat in the footprint of the trench would be destroyed by the dredging activity. If blasting is necessary, it would result in the destruction of benthic habitat in the bay and may affect other aspects of the significant habitat. Up to 108 acres of benthic habitat areas in the vicinity of the trench may also be destroyed or impaired by the sediments that settle on the bay bottom during and after the completion of the dredging and backfilling activities. Although the bay bottom is to be restored by Millennium to within 1+/- foot of its pre-construction elevation (as required by DEC's 401 WQC), the benthic habitat would not immediately be re-established nor regain its previous functional level. Thus, the proposed project would result in an immediate destruction of a portion of the designated habitat and impair the viability of the designated Haverstraw Bay habitat during and for an unknown period of time after construction of the pipeline in the bay.

Given the preceding information, the proposed blasting, dredging and backfilling through the State designated Haverstraw Bay Significant Coastal Fish and Wildlife Habitat would not be consistent with Policy 7 of the CMP and Policies 7 and 7G of the Village of Croton-on-Hudson LWRP.

POLICY 35: DREDGING AND DREDGE SPOIL DISPOSAL IN COASTAL WATERS WILL BE UNDERTAKEN IN A MANNER THAT MEETS EXISTING STATE DREDGING PERMIT REQUIREMENTS, AND PROTECTS SIGNIFICANT FISH AND WILDLIFE HABITATS, SCENIC RESOURCES, NATURAL PROTECTIVE FEATURES, IMPORTANT AGRICULTURAL LANDS, AND WETLANDS.

The proposed project would require dredging activities in two major coastal waterbodies, Lake Erie and the Hudson River. Of particular concern to DOS is the dredging activity to be performed in the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat in the Hudson River.

The proposed dredging of a trench in the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat, and the deposition of the dredged materials in the trench and on the substrate adjacent to it during dredging and backfilling would not be undertaken in a manner that protects the habitat (see Policy 7). Rather than protecting the habitat, dredging and backfilling a trench through it, in an area which has not been dredged or similarly disturbed before, would result in the immediate direct physical destruction and direct loss of habitat and result in direct adverse effects to approximately 108 acres of the habitat during and after dredging and backfilling operations. The immediate physical destruction of valuable habitat and organisms using, dependent upon, and constituting the habitat during the dredging, and afterwards as sediments are redeposited upstream and

downstream of the trenched and backfilled area, does not protect the Haverstraw Bay Significant Coastal Fish and Wildlife Habitat and, therefore, would not be consistent with Policy 35 of the CMP or the Village of Croton-on-Hudson LWRP. Related to the dredging activity is the disposal of the dredged material which is found to be contaminated or unsuitable for backfilling purposes. The final EIS does not indicate what would be done with this material. It is not known if it will be discharged at an approved disposal site or dumped in Haverstraw Bay and cause additional adverse impacts upon the habitat.

CMP AND LWRP POLICY 44: PRESERVE AND PROTECT TIDAL AND FRESHWATER WETLANDS AND PRESERVE THE BENEFITS DERIVED FROM THESE AREAS.

LWRP POLICY 44A; WETLANDS, WATER BODIES, AND WATERCOURSES SHALL BE PROTECTED BY PREVENTING DAMAGE FROM EROSION OR SILTATION, MINIMIZING DISTURBANCE, PRESERVING NATURAL HABITATS AND PROTECTING AGAINST FLOOD AND POLLUTION.

The final EIS indicates that the pipeline would cross 673 wetlands in New York, and affect approximately 414.3 acres of wetlands. Most of the wetlands are outside of the coastal area, and many are not regulated by the State Department of Environmental Conservation pursuant to Article 24 of the State Environmental Conservation Law. However, the pipeline would be constructed in and would affect watercourses and wetlands in the Village of Croton-on-Hudson that are regulated by the Village, including wetlands in and near the Jane E. Lytle Arboretum and the Croton River.

Watercourses and wetlands in the Village to which the above policies apply are defined in Chapter 227-3 of the Code of the Village of Croton-on-Hudson, and include: certain standing bodies of water (including the Hudson River and other standing water bodies which exist at least six months of the year and which when wet are customarily more than 5,000 acres in size); any body of flowing water in an identifiable channel or course at least six months of the year; geographical areas of 1/4 acre or more inundated or saturated by surface or ground water at a frequency and duration to support and that under normal circumstances do support certain wetlands vegetation, and including freshwater meadows, inland shallow freshwater marshes, inland deep freshwater marshes, shrub swamps, wooded swamps, bogs, submergent vegetation, certain floodplains, and certain upland drainage areas.

The Village LWRP states that where Village, State, and federal standards for wetlands protection differ, the most restrictive conditions that result in the highest level of protection for the resources will apply.

The Village Code implementing these policies identifies allowable uses of these areas. The Code does not provide for the construction of the proposed pipeline and activities associated with its construction and maintenance. Further, the standards in the explanation of policy for Policies 44 and 44A of the Village LWRP prohibit the issuance of permits unless the following conditions are met:

A. The action is found to be consistent with the legislative intent of Local Law #4 (Chapter 227), Protection of Wetlands, Waterbodies, and Watercourses;

B. There is no practicable alternative; and,

C. The applicant has demonstrated that (a) the proposed activity is not adverse to the general health, safety, economic, and general welfare of the residents of Croton or its neighboring communities; (b) the activity will not degrade the environment or result in any of the adverse impacts listed above; and (c) the applicant will otherwise suffer undue hardship if prevented from undertaking the proposed activity.

The above LWRP standards have not been met.

The legislative intent of the Village of Croton-on-Hudson Protection of Wetlands, Waterbodies, and Watercourses Law, incorporated in Policy 44, includes "...providing for the protection, preservation, proper maintenance and use of its wetlands...by preventing damage from erosion or siltation, minimizing disturbance, preserving natural habitats..." The LWRP policy explanation states that "...the most restrictive conditions that will result in the highest level of protection for the [wetland resources] shall apply" where thresholds for protection differ between local and state laws. The Village's law protects wetlands which are not covered by the State Freshwater Wetlands Law. Certain activities are prohibited unless a permit is issued. These activities include: deposition or removal of material, draining or alteration, construction, point or nonpoint source pollution, clear-cutting, and installation of any pipes or conduits. The proposal will disturb wetlands and habitats by clear cutting and trenching, thus it is inconsistent with this policy.

The final EIS, on pages 6-39 and 7-31, includes FERC staff recommendations that Millennium consult with representatives of the Jane E. Lytle Memorial Arboretum regarding specific measures Millennium ". . . would implement to minimize impact on the arboretum and wetland W08CT [National Wetlands Inventory number for the forested wetland in the arboretum] . . . These measures should include a provision that the pipeline be located to avoid construction disturbance to wetland W08CT and to minimize impact on the drainage swales and streams that supply it . . . Millennium should file with the Secretary the final, site-specific plan that describes measures that would be implemented before and after construction, and includes scaled drawings identifying area that would be disturbed within the arboretum and plans for restoration plantings and reseeding within the construction work area."

The results of any consultation with arboretum representatives were not included in the final EIS or in the consistency documentation submitted by Millennium nor was the final, site specific plan describing the implementation measures. Lacking this information, it is not possible to determine if the standards in the Village's Code will be met. If Millennium cannot design and install the pipeline to meet the standards of the Village's Policy 44 and 44A, the construction of the pipeline and its adverse effects on the wetlands in the arboretum would not be consistent with these policies.

Alternatives

The following alternatives which, if adopted by the applicant, would permit the activity to be conducted in a manner consistent with the CMP and the Village of Croton-on-Hudson LWRP include: terminate the proposed pipeline in the vicinity of Bowline Point in Rockland County on the west side of the Hudson River; route the Hudson River crossing of the pipeline north and outside of the designated Haverstraw Bay habitat, near or adjacent to the existing Algonquin pipeline crossing of the Hudson River and consider existing pipeline rights-of-way that avoid the New York City drinking water supply and delivery system; or use excess capacity in the existing Algonquin pipeline.

Pursuant to 15 CFR Part 930, Subpart H, and within 30 days from receipt of this letter, you may request that the U.S. Secretary of Commerce override this objection. In order to grant an override request, the Secretary must find that the activity is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to the New York Coastal Management Program and to the federal permitting or licensing agencies. The Secretary may collect fees from you for administering and processing your request.

The appeal process can be a lengthy one, therefore, if you would like to continue discussions with this office while pursuing an appeal, please call William Sharp, Esq., of the Department of State's Legal Division, at (518) 474-6740.

Sincerely,

George R. Stafford
Director
Division of Coastal Resources

c: OCRM - Mr. John King
COE/Buffalo - Lieutenant Colonel Mark D. Feierstein
COE/NY - Colonel John B. O'Dowd
NYSDEC/Region 3 - Ms. Margaret Duke, Acting Regional Director
NYSDEC/Region 9 - Mr. Gerald Mikol, Regional Director
Hon. Robert W. Elliott, Village of Croton-on-Hudson