



STATE OF NEW YORK  
**DEPARTMENT OF STATE**  
ONE COMMERCE PLAZA  
99 WASHINGTON AVENUE  
ALBANY, NY 12231-0001

DAVID A. PATERSON  
GOVERNOR

LORRAINE A. CORTÉS-VÁZQUEZ  
SECRETARY OF STATE

January 26, 2010

Todd J. Skobjak  
2949 West Lake Road  
Wilson, NY 14172

Re: F-2009-0460  
U.S. Army Corps of Engineers/ Buffalo District  
Permit Application - NYS DEC # 9-2942-  
00204/00001  
Construct 128' rock revetment and grade bluff to  
1:3 slope.  
Lake Ontario, Town of Wilson, Niagara County  
**Objection To Consistency Certification**

Dear Mr. Skobjak:

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 because it is not consistent with Policies 12, 14, and 17 of the New York State Coastal Management Program (CMP). As a result of this objection, the consistency provisions of the federal Coastal Zone Management Act (CZMA) prohibit the U.S. Army Corps of Engineers from authorizing the proposed activity unless this objection is overridden on appeal to the U.S. Secretary of Commerce.

**Subject of the review**

You have requested authorization from the U.S. Army Corps of Engineers/ Buffalo District to cut and regrade a bluff face to a 1:3 slope and construct a 128-foot long rip rap revetment along the Lake Ontario shoreline at 2949 West Lake Road, in the Town of Wilson, Niagara County.

**Project Purpose:**

The stated purpose for the proposed activity is to reduce the rate of shoreline erosion.

### **Factors Relevant to this Review:**

The proposed activity, which requires authorization from the U.S. Army Corps of Engineers, is subject to the consistency provisions of the CZMA and is required to be consistent with the enforceable policies of the CMP.

The proposed activity would be undertaken in a State designated Coastal Erosion Hazard Area (CEHA), designated and mapped in accordance with Article 34 of the State Environmental Conservation Law and its implementing regulations in 6 NYCRR Part 505. A coastal erosion hazard area is an area of the coastline which is either a "Natural Protective Feature Area" (NPFA) or a "Structural Hazard Area" (STHA) (see 6 NYCRR Section 505.2(o)). A natural protective feature area is a land and/or water area containing natural protective features, the alteration of which might reduce or destroy the protection afforded other lands against erosion or high water, or lower the reserves of sand or other natural materials available to replenish storm losses through natural processes (see 6 NYCRR Section 505.2(z)). A structural hazard area means those shorelands, located landward of natural protective features, and having shorelines receding at a long-term average annual recession rate of one foot or more per year (see 6 NYCRR Section 505.2(nn)). The official New York State Department of Environmental Conservation (DEC) Coastal Erosion Hazard Area Map Photo Number 185-800-79 sheet 2 of 7, designates the beach, bluff, and nearshore area where the activity is proposed as a NPFA, and the shorelands landward of the NPFA is designated as a STHA. The purpose of the designation and the regulation of activities within the designated area is to minimize or prevent damage or destruction to property, natural resources, natural protective features, other natural resources, and protect human life and property from flooding and erosion hazards by limiting structures and requiring setbacks.

The documented rate of erosion according to CEHA Map Number 185-800-79 sheet 2 of 7 is 1.5 feet per year. However, information submitted with your consistency certification indicates that the shoreline has eroded approximately 15 feet within the past 3 years, equivalent to approximately 5 feet per year. Information obtained from staff at the Town of Wilson and the DEC indicates that the upland property was cleared and the upland residence was constructed within the past 5 years. Orthophotography taken in April of 2005 confirms the information from the Town and DEC and shows that not only was the house constructed after the imagery was taken, but that the upland property was densely vegetated at that time. Because of the importance of vegetation in maintaining soil stability, removal of vegetation from upland areas is generally a major cause of bluff erosion. Development activities, such as clearing vegetation, and the construction of an upland residence and septic system often leads to hydrological changes to both surface and groundwater flow, which exacerbates existing or may trigger new erosion<sup>1</sup>.

In addition to the increase in erosion experienced as a result of the removal of vegetation, the severity of erosion is often accelerated when clay soils are disturbed. The information submitted with your consistency certification and the information obtained in conversations with staff from the DEC indicates that the soil in the vicinity of the bluff consists largely of clay. Such soils are highly susceptible to the compaction which can occur from heavy machinery use required for the

---

<sup>1</sup> Department of Ecology. State of Washington. Managing Vegetation on Coastal Slopes. Retrieved January 12, 2010 from <http://www.ecy.wa.gov/programs/sea/pubs/93-31/chap1.html>

construction of a new house<sup>2</sup>. Information provided by staff from the DEC supports the assertion that the clearing, excavation, and construction of the house are the reasons why the recently documented rate of erosion exceeds that of the CEHA documented rate measured prior to the house's construction. Therefore, the recent clearing of the property and construction of the upland residence is a likely reason for the observed increase in the rate of erosion along the property's shoreline. In fact, staff from DEC suggested that given time for the soils to settle, vegetation to establish, and provided there are no more significant upland disturbances of the property, the long-term rate of erosion can be expected to return to the CEHA documented rate.

Given the reasonable expectation that the shoreline erosion will soon return the CEHA documented rate, staff from the Department of State contacted you to discuss temporary withdrawal of your consistency certification. Staff indicated that the observed erosion rate over the past several years was likely exacerbated by the recent construction disturbance and could be expected to return to the CEHA documented rate. Considering this, staff urged you to withdraw while continuing to monitor erosion activity along the shoreline. Staff also recommended that you cease mowing the lawn to the edge of the bluff and see if more dense vegetation would help alleviate the severity of the erosion observed at this site. If over time, the monitored rate of erosion did not begin to lessen, you could resubmit your consistency certification. You indicated that you did not wish to withdraw your project.

#### **Applicable Policies:**

**POLICY 12: ACTIVITIES OR DEVELOPMENT IN THE COASTAL AREA WILL BE UNDERTAKEN SO AS TO MINIMIZE DAMAGE TO NATURAL RESOURCES AND PROPERTY FROM FLOODING AND EROSION BY PROTECTING NATURAL PROTECTIVE FEATURES INCLUDING BEACHES, DUNES, BARRIER ISLANDS, AND BLUFFS.**

**POLICY 14: ACTIVITIES AND DEVELOPMENT, INCLUDING THE CONSTRUCTION OR RECONSTRUCTION OF EROSION PROTECTION STRUCTURES, SHALL BE UNDERTAKEN SO THAT THERE IS NO MEASURABLE INCREASE IN EROSION OR FLOODING AT THE SITE OF SUCH ACTIVITIES OR DEVELOPMENT, OR AT OTHER LOCATIONS.**

The explanation for Policy 12<sup>3</sup> indicates that natural protective features include bluffs. The proposed revetment would be constructed at the toe and on the face of a bluff. Bluffs protect coastal lands and properties, as well as human lives from wind and water erosion by absorbing the often destructive wave energy of open water, and are of greatest value during times of storm-induced high water. Construction of the revetment would eliminate the benefits of the bluff as a

---

<sup>2</sup> Ibid.

<sup>3</sup> The State Coastal Policies are contained within the State of New York Coastal Management Program and Final Environmental Impact Statement as amended in the New York State Coastal Management Program Routine Program Change of 2001. A copy of the State Coastal Policies, along with the explanations of policy can be found at <http://www.nyswaterfronts.com>.

natural protective feature by replacing the toe and face of the bluff with a solid structure. This would result in scour and erosion of the nearshore area waterward of and adjacent to the proposed revetment during storms, which would negatively impact the sediment budget along the entire shoreline leading to accelerated loss and erosion of the adjacent unarmored shoreline and the shoreline downdrift. This would not be consistent with Policy 12, the purpose of which is to minimize damage to the protective features like bluffs, nor would it be consistent with Policy 14, the purpose of which is to avoid measurable increases in erosion of adjacent areas.

The impacts of bulkheads and revetments on coastal resources as stated in Policies 12 and 14 are supported by scientific research. The scientific research and reports<sup>4</sup> conclude that bulkheads, revetments, and other structural shore protection have well recognized impacts, including:

1. Reflection of wave energy off of seawalls, bulkheads, and revetments accelerates beach and nearshore erosion. This results in loss of the beach and loss of habitat above and below the water line.
2. Such structures result in accelerated erosion of adjacent beaches and loss of the natural movement of sand from the bluffs to nearby beaches.
3. Increased turbulence in front of bulkheads increases turbidity in the water column with impacts on adjacent habitat.
4. The ecosystem costs resulting from bulkhead impacts are typically borne by the public, not by the property owner.

The properties immediately adjacent to the proposed revetment remain in their natural state and do not currently contain any shoreline protection structures. Placement of the proposed rip-rap revetment in front of one property within this reach will cause unprotected land to erode at a faster rate. Observations of similar structures along Lake Ontario by staff from the Department of Environmental Conservation and the above research indicate that the proposed revetment will result in increased wave energy reflecting off of the revetment causing accelerated erosion of the adjacent unarmored shoreline.

The individual and cumulative impact of bulkheads on the shoreline processes and ecosystem of Lake Ontario is a concern. They will eventually alter the properties, composition, and values of the ecosystem that humans depend upon. Research leading up to the 2007 Final Report of the International Joint Commission (Final Report of the International Joint Commission for Managing Lake Ontario and St. Lawrence River Water Levels and Flows, Annex 2, 2006, p. 59) for Managing Lake Ontario and St. Lawrence River Water Levels and Flows found that approximately 50% of the Lake Ontario shoreline is already hardened. Based on Lake Ontario research, the IJC stated: "The bluff shorelines of Lake Ontario have been eroding for thousands of years. This process provides new sand and gravel for the nearshore zone and thus is the source of new material for beach and dune environments around the lake. Without a

---

<sup>4</sup> 1984, Corps of Engineers Shore Protection Manual; 2006 Final report of the International Joint Commission for Managing Lake Ontario and St. Lawrence River Water Levels and Flows; 2006, Hudson River Shoreline Restoration Alternatives Analysis by DEC; 1985, A Guide to Coastal Erosion Processes prepared by NY Sea Grant for Lake Ontario; 2007, Mitigating Shore Erosion on Sheltered Coasts by the National Research Council; 2007, State of the Great Lakes Ecosystem Conference biennial report by EPA and Environment Canada

‘background’ erosion rate, there would be no new sand and gravel to nourish the beaches and dunes along the shore.” (Ibid. p. 60). Aerial photographs of heavily armored shorelines versus unarmored shorelines along Lake Ontario substantiate the loss of beaches where bulkheads are constructed.

**POLICY 17: NON-STRUCTURAL MEASURES TO MINIMIZE DAMAGE TO NATURAL RESOURCES AND PROPERTY FROM FLOODING AND EROSION SHALL BE USED WHENEVER POSSIBLE.**

Policy 17 requires the use of non-structural measures rather than structural measures to minimize damage to natural resources and property from flooding and erosion, whenever possible, where such measures are determined to offer sufficient protection. Construction of the revetment is a structural measure. Non-structural measures include the siting of new and existing development away from natural protective features and flood and erosion hazards, as well as the planting and maintenance of native vegetation.

The information submitted with the consistency certification for the proposed activity indicates that there is currently 85 feet from the residence to the edge of the bluff. It would take approximately 17 years for the erosion to reach the edge of the residence given the stated 5 foot-per-year rate of erosion, or approximately 56 years given the CEHA documented rate of erosion. As noted above, the shoreline recession will likely return to the CEHA documented rate and the shoreline erosion will not reach the residence for approximately 56 more years. Therefore, there are presently no upland structures in jeopardy from flood and erosion hazards, and thus no reason to construct structural measures which would contribute to the degradation of the Lake Ontario ecosystem for the next 17 or more years.

The photographs submitted with your consistency certification also show that the upland property is mowed lawn up to the edge of the bluff. Planting more dense, substantial vegetation (such as woody shrubs instead of the herbaceous vegetation which currently exists) along the bluff and its upland edge would provide a higher degree of protection to the bluff, and is a non-structural measure identified in CMP Policy 17.

**Conclusion**

There are presently no upland structures in jeopardy from flood and erosion hazards.

Properties immediately adjacent to the proposed revetment currently contain no shoreline protection structures; they remain in their natural state.

Since construction of the proposed revetment would result in increased erosion immediately in front of, adjacent to, and generally downdrift of it, and impair sediment transport and the functions of natural protective features; and since non-structural measures like planting native vegetation would minimize erosion at this site, the proposed revetment and the excavation necessary to construct it would not be consistent with CMP Policies 12, 14, and 17.

## **Alternatives**

Pursuant to 15 CFR Part 930.63, the Department of State may identify alternatives, if they exist, which, if adopted by an applicant, may permit the proposed activity to be conducted in a manner consistent with the New York State Coastal Management Program.

As noted above, the upland residence is not in imminent jeopardy from flooding or erosion hazards, and the property may be experiencing unnatural and exacerbated erosion as a result of the recent disturbance and construction on the upland property. Therefore, you could carefully monitor the rate of erosion over the next five years in an effort to determine whether or not the rate has returned to or is approaching the CEHA documented natural rate of erosion. In the interim, there are non-structural steps you might take in order to protect the upland property and reduce the rate of erosion, including planting more substantial, native vegetation along the upland property and ceasing to mow along the edge of the bluff. Such measures would be consistent with the New York Coastal Management Program.

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 (Secretary) 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 Department of State and to the federal permitting or licensing agency. 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 Mr. Fred Anders at (518) 473-2477. If you are represented by counsel, kindly have your attorney contact Mr. Anders for referral to our Legal Division.

Sincerely,

George R. Stafford  
Deputy Secretary of State  
Office of Coastal, Local Government  
and Community Sustainability

c: OCRM – John King  
COE/Buffalo- Amy Krueger  
NYSDEC/Region 9 – Denise Matthews, Rebecca Anderson  
Town of Wilson – Larry Banks