Lake Erie Permitting

Tips for Submitting Better Applications

David Denk, DEC Region 9, Regional Permit Administrator
Great Lakes 101: Better Permit Applications
December 5, 2022
DEC Lake Erie Permitting Options

- General Permit 0-20-004
  “Great Lakes Erosion Control General Permit”
- Individual Permit
- Emergency Authorization
General Permit 0-20-004

- Repair and in-kind replacement of existing functional erosion protection structures. The repair or replacement of these structures must not extend waterward of the pre-existing footprint, except where the Department accepts an applicant’s demonstration that minor deviations are necessary for the stability of the structure. Increase in structure height may be approved if appropriate. Replacement structures must be adequately sized and designed.

- New sloped rock revetments (≤100’) along CEHA bluffs or non-CEHA areas that are necessary for the protection of existing and functional dwellings. Slope and height limits apply.

- Repair or reconstruction of existing public roads, bridges, utilities and other public infrastructure.

- Emergency repair of functional concrete or steel vertical breakwalls along bluffs and non-CEHA areas by installation of sheet piling immediately adjacent to lakeward vertical face.
General Permit 0-20-004 (Continued)

• Minor grading back of scarped bluffs to a stable slope. Project must include approved vegetation plan. Toe stone for stabilization may be allowed in specific circumstances.

• Repair or reconstruction of docks, catwalks and floats that were functional on April 1, 2017.

• Stabilization of existing functional storm-damaged dwellings, decks and walkways with temporary bracing and pilings.

• Repair or reconstruction of elevated walkways or stairways necessary for water access. The stairs and landings shall be a maximum of 4 feet in width and constructed a minimum of 18 inches above grade over the dune/bluff face.

• Removal of channel blockages on Lake Ontario tributaries.

• Removal of debris by use of motorized equipment.
General Permit Application

Submit the following:

• Completed GP-0-20-004 Application
• Submit current photos (historic photos helpful in some cases)
• Project Plans (both a site plan and cross section)
• **If project meets General Permit criteria,** no need to send application to USACE of NYSDOS
Great Lakes Erosion Control General Permit (GP-0-20-004)

Application for General Permit and NYDEC Authorization

Application Information

**Applicant Information**

- **Name of Applicant:**
  - Email: [Insert Email]
  - Phone: [Insert Phone]
  - Mailing Address: [Insert Mailing Address]
  - City: [Insert City]
  - State: [Insert State]
  - Zip: [Insert Zip]
- **Name of Property Owner (if different from applicant):**
  - Email: [Insert Email]
  - Phone: [Insert Phone]
  - Mailing Address: [Insert Mailing Address]
  - City: [Insert City]
  - State: [Insert State]
  - Zip: [Insert Zip]

**Project Location**

- **Location:** [Insert Location]
  - Town: [Insert Town]
  - County: [Insert County]
  - Street Address: [Insert Street Address]
  - City: [Insert City]
  - State: [Insert State]
  - Zip: [Insert Zip]

**Project Description (short description of work proposed and overall dimensions):**

**Required Attachments**

- Project Location Map (with location marked)
- Project Drawing – Overhead view (plan view)
- Project Site Photos
- Project Drawing – Side view (cross-section)

**Type of Project** (check all that apply – continued on page 2)

- Repair and/or replacement of existing functional erosion control structures
- Repair or replacement of existing embankment structures
- New construction of new functional erosion control structures
- Repair or replacement of existing flood control structures
- Repair or replacement of existing water control structures

**Additional Information**

- New erosion control structures
- Additional information

**Application Instructions**

- Application must be filed by the owner or operator of the site.
- Application must be filed within 90 days of the start of work.
- Application must be filed with the Department of Environmental Conservation.

**Certification**

- I certify that the information provided is true and correct.
- I understand that failure to comply with the terms and conditions of this permit may result in penalties.

**Department Authorization**

- Department of Environmental Conservation

**Authorization Conditions**

- Permits issued for this project are subject to the following conditions:
  - All work must be performed in accordance with the approved plans.
  - Permits are valid for 12 months from the date of issuance.

**Contact Information**

- Department of Environmental Conservation
- [Insert Contact Information]

**Applicant Signature**

- Date
- Property Owner Signature

**Permit Application Information**

- Permit Number: [Insert Permit Number]
- Permit Effective Date: [Insert Permit Effective Date]
- Permit Expiration Date: [Insert Permit Expiration Date]
- Authorization Type(s):
  - E 0047 EB, Article 11, Title 1-Preservation of Water Quality Certification
  - E 0047 EB, Article 12, Title 2-Floodway Management

- Permit Conditions:
  - [Insert Permit Conditions]

- Attachments:
  - [Insert Attachments]

**Application Readiness**

- [Insert Application Readiness]

- [Insert Additional Information]
Individual Permit

When are they required?

Most new erosion protection structures including:
• Rip Rap/Revetments
• Stepped Block Walls
• Fill within regulated wetlands
• Structures with CEHA

What is required?

Joint Application
Environmental Assessment Form
Photos
Project Plans
Copies are submitted by the applicant to:
• NYSDEC
• NYSDOS
• USACE
Emergency Authorization

- Issued in accordance with 6 NYCRR Part 621.12 (UPA)
- Must be immediate threat to life, health, general welfare, property, or natural resources.
- Department can only authorize the minimum work necessary to overcome the emergency
- Authorization valid for 30 days
- What is needed?
Article 15 Protection of Waters Permit

All Protection of Waters Permit applications must meet the following standards:

- the proposal is reasonable and necessary;
- the proposal will not endanger the health, safety or welfare of the people of the State of New York; and
- the proposal will not cause unreasonable, uncontrolled or unnecessary damage to the natural resources of the State, including soil, forests, water, fish, shellfish, crustaceans and aquatic and land-related environment.
Article 24 Wetlands and Part 182
Endangered/Threatened Species Permitting

• Avoid and minimize impacts
• Evaluate alternatives
• Demonstrate this is the only practicable alternative
• Mitigate unavoidable impacts
Thank You

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Article 34 Coastal Erosion Management Permit

Purpose and intent is to:
- Promote and preserve the natural protective features
- Limit development

A permit can only be issued provided that the proposed regulated activity:
- Is reasonable and necessary
- Considers alternatives to the proposed activity
- Will not likely cause a measurable increase in erosion
- Prevents or minimizes adverse effects
Coastal Erosion Hazard Areas

- Nearly all activities conducted within a mapped Coastal Erosion Hazard Area require permits from DEC

All Coastal Erosion Hazard Area maps can be downloaded at https://www.dec.ny.gov/fs/projects/coastal/
Erosion Protection Alternatives
Alternatives

Non-structural erosion protection

Nature-based erosion protection

Hard structural erosion protection
Permit Application Requirements
Information to Include:

1) Permit application form (General Permit or Joint Application Form)
2) Location map and aerial photo (Google Maps or Bing Maps)
3) Stamped and signed survey
4) Project description
5) Written description of how you meet permit issuance standards
   a) Why is the project needed?
   b) Have you considered reasonable alternatives?
   c) Will your project cause a measurable increase in erosion at the proposed site or at other locations?
6) Recent photos of project site
Information to Include (continued):

7) Description of construction methods and materials
   • Access route
   • Debris/structure removal prior to work commencement
   • Quantity of material to be removed and disposal location
   • Material placement methods
   • Equipment
   • Quantity of material to be used above and below MHWL

8) Project plans (site plan and cross-section plan)
9) Planting plan
10) Long-term maintenance plan
Permit Application Example
Location Map, Aerial Photo, and Survey
Project Description

There is an existing 3 ft high concrete wall that will be replaced with a 11 ft high stone revetment. The remaining top of bluff will be graded and planted with vegetation. The stone revetment will sit slightly closer to the bottom of bluff then the existing concrete wall and all new material placed will be above Mean High Water.
Permit Issuance Standards

**Justification:** The property has an existing concrete wall that has been overtopped and undermined due to high water and wave action. Prior to 2017, there was 28 ft of land between the house and edge of bluff. The high water has cause substantial erosion and has put the house at risk. The bluff is now near vertical and there is only 14 ft of land between the house and the top edge of bluff. The stone revetment is needed to protect the house from damages caused by erosion.

**Alternatives:** Due to limited space on the lot and the increased erosion rates, moving the structure landward was not considered a viable alternative. Nature-based solutions that were evaluated included bluff planting, slope grading and a single row of toe stone. These alternatives were evaluated but given the current lake level and recent storm events, these alternatives alone would likely not last long-term. Given the proximity of the house to the eroding edge and the amount of erosion that occurred, a stone revetment along the bottom of bluff with vegetation planted above the stone is the preferred alternative.

**Adverse Impacts:** The property to the south has an existing stone revetment that the proposed revetment will tie into. The property to the north has an unprotected, natural shoreline. The revetment will only be placed immediately in front of the house and will not extend to the north property boundary to minimize adverse effects to the north adjacent shoreline. The north end section will be sloped into the bluff to further minimize adverse impacts.
Site Photos

Looking to the North

Looking to the South

Looking to the South
Construction Methods and Materials

The contractor will access the project area from the applicant's property. The contractor will track an excavator down the bluff slope and will conduct work from the beach. First the existing concrete will be broken into small sections and removed from the shoreline. All concrete debris will be disposed of in an approved upland location. Next, geotextile fabric will be placed on the eroding edge and then the toe stone will be keyed in. The setting stone and armor stone will be installed working from the bottom to the top of slope. The large toe and armor stone will be individually placed by the excavator and not dumped down the bluff slope.

The individual toe stone size will be 3-4 ton and the individual armor stone size will be 2-3 ton. Stone will be irregular in shape and the largest stones will be placed on the surface. The armor stone layer will be a minimum of 36 inches thick. The setting stone will be a mix of sizes ranging from 100 to 500 pounds each. The setting stone layer will be a minimum of 1 to 1.5 ft thick.

Once the stonework is complete, topsoil will be installed above the armor stone and seeded with a native steep slope mix.
Site Plan
Cross Section
Planting Plan

The bluff above the armor stone will be seeded with a native steep slope mix. The plantings will be maintained by watering and weeding to ensure they become well established. Planting areas that do not survive will be re-vegetated until they become well established.

Mix Composition

- **31.1%** *Sorghastrum nutans, NY4 Ecotype* (Indiangrass, NY4 Ecotype)
- **20.0%** *Lotus multiflorum* (Annual Ryegrass)
- **14.0%** *Andropogon gerardii, ‘Niagara’* (Big Bluestem, ‘Niagara’)
- **10.0%** *Elymus canadensis* (Canada Wildrye)
- **7.0%** *Elymus virginicus, Madison-NY Ecotype* (Virginia Wildrye, Madison-NY Ecotype)
- **4.0%** *Agrostis perennis, Albany Pine Bush-NY Ecotype* (Autumn Bentgrass, Albany Pine Bush-NY Ecotype)
- **4.0%** *Panicum virgatum, ‘Shawnee’* (Switchgrass, ‘Shawnee’)
- **5.0%** *Panicum clandestinum, Tioga* (Deertongue, Tioga)
- **1.5%** *Echinacea purpurea* (Purple Coneflower)
- **1.3%** *Chamaecrista fasciculata, PA Ecotype* (Partridge Pea, PA Ecotype)
- **1.2%** *Helianthus annuus, PA Ecotype* (Oxeye Sunflower, PA Ecotype)
- **1.0%** *Coreopsis lanceolata* (Lanceleaf Coreopsis)
- **1.0%** *Rudbeckia hirta* (Blackeyed Susan)
- **0.3%** *Monarda fistulosa, Fort Indiantown Gap-PA Ecotype* (Wild Bergamot, Fort Indiantown Gap-PA Ecotype)
- **0.2%** *Asclepias syriaca* (Common Milkweed)
- **0.2%** *Solidago rugosa, PA Ecotype* (Wrinkleleaf Goldenrod, PA Ecotype)
- **0.1%** *Aster interflorus* (Calico Aster)
- **0.1%** *Aster pilosus, PA Ecotype* (Heath Aster, PA Ecotype)
Long-Term Maintenance Plan

The permittee shall periodically inspect the revetment at least once per month and after large storms. Inspections should look for evidence of moved or slipped material, flanking, scour, exposed fabric, or drainage issues. If stones have shifted the permittee shall contact the engineer and contractor to provide required repairs. The DEC shall be contacted prior to making repairs.
Additional Information May be Required

Plan updates

Overhead Plans

Please update the overhead plans to show the proposed revetment, and how it will tie into the neighbor’s rock, and that the northern end will be keyed back into the bluff to prevent waves from flanking the end and creating erosion behind the structure. The pieces of concrete will need to be removed from the shoreline and cannot be buried behind the revetment. Please remove from the plans.

Cross Sectional Plan

Please update the cross section to plan to show the existing bluff face, and the area that will be filled to create a stable slope. Please include a measurement from the toe of the existing slope to the lakeward side of the toe stones. Please indicate the size of rock that will be used for the toe stone, and the rock placed behind it. The pieces of concrete will need to be removed from the shoreline and cannot be buried behind the revetment. Please remove from the plans.

Questions and comments:

How will the shoreline be accessed? If you will be crossing through a neighboring property, please provide landowner consent.

As stated above, the concrete pieces along the shoreline will need to be removed and cannot be buried behind the revetment.

With the house being close to the eroding bluff DEC strongly recommends hiring a Professional Engineer to design and certify the plans. Your contractor will likely have an engineer they can recommend.
Permit Authorization

A permit is issued when all issuance standards are met and when all requested information is submitted.
Thank You

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