The attached draft guidance entitled "**Engineering Requirements for Placement of Great Lakes Coastal Structures**" was developed to help Department of Natural Resources staff understand and apply consistent requirements for permit submittal information for large coastal projects

The Department is proposing that information submitted as part of a Ch. 30 individual permit application for placing shore protection structures on the coast include engineering calculations (stability analysis, wave force analysis, sediment budget, etc.) and modeling that predict the impact of placing a structure on public lakebed and to the properties of adjacent riparian owners. This requirement is proposed to be in place in order to help the Department properly make a finding that the project won't be detrimental to the public interest and impact adjacent riparian owners. The Department has also proposed not requiring specific engineering calculations for small-scale projects and has identified when that would be applicable.

By identifying up front the requirement for the appropriate engineering information, the Department can more quickly review projects without needing to go back and forth with applicants or consultants during the review process which adds time to the permit process and could delay projects being implemented.

This draft guidance was developed by staff from the Department's Bureau of Watershed Management and has been reviewed internally. The Department is now soliciting comments from external stakeholders. Once the 21 day notice period is complete, the Department will consider all comments, revise the guidance if needed, and make a copy of the final guidance available to the appropriate internal and external stakeholders.

Comments related to this draft guidance should be provided to Martye Griffin via e-mail at dnrwywrzguidance@wisconsin.gov .

BUREAU OF WATERSHED MANAGEMENT
PROGRAM GUIDANCE

Waterway Wetland Protection

Engineering Requirements for Placement Great Lakes Coastal Structures

Effective Date: Date
Guidance #: WW-2016-007

Notice: This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

APPROVED:

_____ _____

Pam Biersach, Director Date
Bureau of Watershed Management

A. Statement of Problem Being Addressed and Scope of Guidance

When conducting a shore protection project on the Great Lakes, placing rock or other fill material onto lake bed and on the bank could have the potential to impact water quality and fish habitat due to the fact that many great lakes sites have complex geology, drainage issues, wave conditions, etc. Failure to properly construct a shore protection structure, even over a period of time, may result in unwanted sediment loads that may threaten existing water quality, and may even result in damage to fish spawning habitat.

Requiring that submitted plans specify the site's elevations, dimensions (like crest and toe elevations), and the structure's materials, etc. when an application is submitted gives assurance to both the property owner and to the Department that the work has adhered to appropriate design standards, is not detrimental to the public interest in navigable waters, and safeguards life, health and property. By ensuring that these public interest factors were given careful consideration and planning when designing the project, the Department can properly assess the project's compliance with the statutory standards.

Additionally if the project requires grading, the additional statutory standard pertaining to adjacent riparian owner riparian rights under 30.19(4)(c)4. must be evaluated. In order to assess the project proposal to determine if the project will impact the adjacent riparian owners, it is necessary to ask the applicant to provide information related to waves, current, and longshore transport environments, and the coastal processes at the project site to determine of how structure will impact neighbors adjacent to and down drift of the project location.

The Department is proposing that this information could take the form of engineering calculations (stability analysis, wave force analysis, sediment budget, etc.) and modeling that predict the impact of placing a structure on public lakebed to the properties of adjacent riparian owners. Without this information the Department cannot properly make a finding that the project won't impact adjacent riparian owners (i.e. that the statutory standard under 30.19(4)(c)1. has been met).

The hope is that by identifying up front the requirement for the appropriate engineering information, the Department can more quickly review projects without needing to go back and forth with applicants or consultants during the review process which adds time to the permit process and could delays projects being implemented.

B. Background and Discussion

In Wisconsin, a permit is needed to place a structure or deposit on the bed of a navigable waterway. New and modified revetments rip rap, and other shore protection structures placed below the ordinary high water mark (OHWM) are included in this permit requirement. Certain exemptions[1] and general permits[2] are available for aspects of shore protection projects generally, but these do not currently apply on the Great Lakes[3]. This means any shore protection structure placed on the bed of the Great Lakes needs to be authorized by an individual permit. The standards for evaluating an individual permit proposal to place a structure in public waters are outlined in 30.12(3m)(c), Wis. Stats,:

> *30.12(3m)(c) The department shall issue an individual permit to a riparian owner for a structure or a deposit pursuant to an application under par. (a) if the department finds that all of the following apply:*
>
> ***1.** The structure or deposit will not materially obstruct navigation.*
>
> ***2.** The structure or deposit will not be detrimental to the public interest.*
>
> ***3.** The structure or deposit will not materially reduce the flood flow capacity of a stream.*

In addition, Wis Stats 30.19(1g)(c) **requires a permit in certain circumstances to "**Grade or remove topsoil from the bank of any navigable waterway where the area exposed by the grading or removal will exceed 10,000 square feet". Most shore protection projects on the Great Lakes require some degree of bank sloping or bank preparation. If the placement of a shore protection structure on the Great Lakes also requires grading authorization , the standards for evaluating an individual permit proposal to grade on the bank of public waters are outlined in 30.19(4)(c) Wis. Stats,:

> *30.19(4)(c)The department shall issue an individual permit pursuant to an application under par. (a) if the department finds that all of the following apply:*

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[1] The statutes, under ss. 30.12(1g)(i) and (j), Wis. Stats., allow for exemptions to the permit requirement by allowing the repair or replacement of rip rap without a permit. However, this exemption does not apply in waterbodies designated as Areas of Special Natural Resource Interest (ASNRI) under s. NR 1.05(2), Wis. Adm. Code. Currently Lake Superior and Lake Michigan are designated as ASNRI waters, which mean that the repair or replacement or rip rap is not exempt on the Great Lakes.

[2] The current general permit for shore protection under Wis Adm. Code Ch. NR 328 is restricted to inland water locations. Under s. 29.001(63), Wis. Stats., the Great Lakes are considered to be outlying waters. However, Wis. Stat. s. 30.12(3)(a)3r. gives the Department the authority to create a statewide general permit for the placement of rip rap up to 300 continuous feet on a Great Lakes waterbody. .

[3] As a result of the most recent legislative session, 2015 WI Act 387 (published April 26th, 2016 but effective Sept. 1st, 2016) makes certain changes to the definition of ASNRI in s. 30.01(1am). Under these changes, there is a potential that portions of the Great Lakes will no longer be considered ASNRI, and so the limited exemptions in s. 30.12(1g)(i) and (j) for rip rap (only) replacement could be available on the Great Lakes in the future.

1. *The activity will not be detrimental to the public interest.*

2. *The activity will not cause environmental pollution, as defined in s. 299.01 (4).*

3. *Any enlargement connected to a navigable waterway complies with all of the laws relating to platting of land and sanitation.*

4. *No material injury will result to the riparian rights of any riparian owners of real property that abuts any water body that is affected by the activity.*

When evaluating an individual permit proposal in order to determine if the project meets the statutory standards outline above [specifically to the s. 30.12(3m)(c)2. Standard "the structure or deposit will not be detrimental to the public interest; and if grading is involved specific to the s. 30.19(4)(c)1. Standard "the activity will not be detrimental to the public interest], the DNR permit review process is often a balancing test so that riparian property owners are allowed to protect their property but impacts to the lakes, including cumulative impacts of repeated projects, are minimized.

C. Guidance

In order to undertake that balancing test the statutes outline a permit process under s. 30.208 which dictates the form and manner for which an applicant can apply to the department for authorization to place a structure in public water. S. 30.208(2) requires that a person who seeks to obtain an individual permit submit an application to the Department, and allows the Department to request additional information from the applicant if it is determined that additional information is needed to evaluate a project against the statutory standards. In the case of Great Lakes shore protection structures, the Department has determined that it will need specific information regarding engineering calculations in all cases in order to determine if the project will meet statutory standards, so the Department requests the information on the front end of the process in order to facilitate an expeditious review process. Alternatively, the Department could ask for this information for every project after the application has been received, but this process may lead to delay and potentially dismissed or denied applications where the proper information is not received from the applicant in timely fashion.

The engineering information the Department requests from the applicant is necessary to determine if a project will meet the statutory standard, i.e. whether the project will not be detrimental to the public interest. Wisconsin court case law has determined the public interests that are protected by Article IX, Section 1 of the Wisconsin Constitution, and Ch. 30, Wis. Stats. Most pertinent to shore protection structures, these include: the protection of water quality, fish and wildlife habitat, and aquatic plants and invertebrates, both from the individual project proposed and when considered cumulatively with other like projects.[4].

[4] See *Sterlingworth v. DNR*, 205 Wis. 2d 702, 721-22 (cumulative impacts), 728 (fish spawning and nursery activity, aquatic plants and fauna), 729 (water quality, natural scenic beauty) (Ct. App., 1996); *Village of Menomonee Falls v. DNR*, 140 Wis. 2d

Recognizing that some shorelines are not as complex as others the Department has taken the common sense approach to this requirement and will allow the applicant in certain circumstances to work with the Water Management Specialist (WMS) and Water Management Engineer (WME) to waive the PE requirement for small-scale projects.

Currently, the proposed permit process requires that when applying for an Individual Permit to place a shoreline erosion control structure on a great lakes waterbody the applicant is informed that:

> The plans, drawings, etc. shall be stamped, signed and dated by a a Professional engineer (PE) licensed by the state of Wisconsin as appropriate <u>This requirement may be waived by the Water Management Specialist (WMS) in certain cases such as small scale projects</u>. Contact the Water Management Specialist for your county prior to submitting your application to determine if your project is small scale.

To ensure a consistent application of this waiver requirement for small-scale projects, the following is guidance to WMS/WME when determining what projects **will not be granted the waiver** of a PE stamped design. In other words, the following projects are NOT considered small-scale and would always require the submittal of a PE stamped design. In addition to the site criteria listed below, the WMS/WME can also decide on a case-by-case basis if the proposed site/project needs a PE stamp.

<u>Site criteria where a PE stamp will ALWAYS be required and thus not eligible for the PE stamp waiver:</u>

- ✓ *Any site where a primary structure is located within 75' of the OHWM*
- ✓ *Any site where bank grading is needed to access the site*
- ✓ *Any site where the lakeward encroachment of the base of the revetment is proposed to be greater than **10'***
- ✓ *Any site where fill material other than filter stone and armor stone is proposed to be placed against the current slope face.*
- ✓ *Any site where the slope of the final revetment is proposed to be steeper than **1.5:1***
- ✓ *Any site where a shore perpendicular structure is proposed(e.g. groin)*
- ✓ *Any site where an offshore structure is proposed (e.g. wave break)*

The design of great lakes shore protection projects can be complex and should involve engineering analysis of water level changes, wave heights and storm surges, geotechnical analysis of the area to be protected, knowledge of the sediment budget, existing and potential bathymetry, and review of potential impacts to neighboring properties.

579, 607 (natural scenic beauty), 608 (wildlife habitat and food sources) (Ct. App.,1987); <u>*Hixon v. PSC*</u>, 32 Wis. 2d 608 (1966) (cumulative impacts)

The Department is meeting its statutory responsibility and customer service responsibility by making available to the applicant upfront information for Great Lakes erosion control projects in order to guide applicants on information to collect and evaluate general design criteria and information that's needed in an application to allow the state to evaluate proposed shoreline projects under the statutory criteria. The Department is within its authority to ask for this information. The hope is that by identifying up front the need for the appropriate engineering information, the Department can more quickly review projects without needing to go back and forth with applicants or consultants during the review process.

DRAFT CREATED: May 16th, 2016

Martin Griffin, Statewide Waterway & Wetland Policy Expert — June 9st, 2016
Creator, Title — Date

DRAFT APPROVED:

Shelley Warwick — June 2nd , 2016
Section Chief — Date

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