



WISCONSIN DEPARTMENT OF NATURAL RESOURCES NOTICE OF FINAL GUIDANCE & CERTIFICATION

Pursuant to ch. 227, Wis. Stats., the Wisconsin Department of Natural Resources has finalized and hereby certifies the following guidance document.

DOCUMENT ID WT-19-0005

DOCUMENT TITLE NATURAL CINDER USE FOR DAM INSPECTION AND MAINTENANCE ACTIVITIES

PROGRAM/BUREAU WATERWAYS PROGRAM

STATUTORY AUTHORITY OR LEGAL CITATION WIS STAT 30.12(1); WIS STAT 31.18(1); WIS ADM CH NR 102.04

DATE SENT TO LEGISLATIVE REFERENCE BUREAU (FOR PUBLIC COMMENTS) 8/26/19

DATE FINALIZED 10/21/19

DNR CERTIFICATION

I have reviewed this guidance document or proposed guidance document and I certify that it complies with sections 227.10 and 227.11 of the Wisconsin Statutes. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is not explicitly required or explicitly permitted by a statute or a rule that has been lawfully promulgated. I further certify that the guidance document or proposed guidance document contains no standard, requirement, or threshold that is more restrictive than a standard, requirement, or threshold contained in the Wisconsin Statutes.

A handwritten signature in black ink, appearing to read 'Michael C. [unclear]'.

10/11/19

Signature

Date



BUREAU OF WATERSHED MANAGEMENT PROGRAM GUIDANCE

Waterway Wetland Protection

Natural Cinder Use for Dam Inspection and Maintenance Activities

Effective Date: February 14, 2018
Guidance #: 3200-3400-3500-2017-01

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:

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2-14-18
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12/5/17
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A. Statement of Problem Being Addressed

Dam inspection and maintenance activities are required pursuant to s. 31.18(1), Wis. Stat. Natural cinder material such as lava rock are used to help block small gate or lock cracks to achieve dry conditions for these activities. Cinder materials are placed upstream of the gates/locks so that the existing water flow can distribute the cinder material to the problematic areas within these structures. The cinders are then released in the water column once the gate or lock is opened and normal dam operation recommences. It is economically and technologically infeasible to gather the cinder materials before the locks or gates are opened. Typically cinder materials are used in the summer for inspection purposes and in the fall for maintenance activities. Actual use of this product will vary depending on the size of the dam and the inspection and maintenance needs for any given year.

Section 30.12(1), Wis. Stat., requires permitting for any material deposited on the bed of a navigable water. This guidance describes the legal authority to regulate natural cinder use and the process for regulating the use of these materials between the Dam and Floodplain, Waterway and Wetland, Wastewater, and Water Evaluation Sections.

B. Background

Dams have been placing cinder material to plug small structural gaps during maintenance and inspection activities since the 1920s. Cinder ash has been the most common historic product that has been used because it has been a readily available waste product from coal production. Solid waste has an exemption to authorize this use so Chapter 30 and WPDES permitting have not historically been required. Refer to "Guidance on Use of Bottom Ash (Cinders) at Dams" (DNR Publications WA-609-05-REV) for additional information about regulating coal ash.

As coal generating power plants in Wisconsin have become less prevalent, the availability of cinder ash has dwindled and dam operators have been switching to more natural cinder materials called lava rock. These natural cinders are less toxic compared to cinder ash and act like fine silt particles within the water column. Natural cinder use has the potential to trigger several regulations including:

- *Section 30.12(1), Wis. Stat.: Unless an individual or a general permit has been issued under this section or authorization has been granted by the legislature, no person may do any of the following: (a) Deposit any material or place any structure upon the bed of any navigable water where no bulkhead line has been established.*
- *Section NR 102.04, Wis. Adm. Code: Substances will cause objectionable deposits on the shore or in the bed of a body of water, shall not be present in such amounts as to interfere with public rights in waters of the state.*
- *Section. 31.18(1), Wis. Stat.: The grantee of any permit shall maintain and operate all such dams and all other equipment required by the department for the protection of public rights in such waters, and for the preservation of life, health and property, in good repair and condition, and shall not willfully, or otherwise, injure, remove or destroy the same, or any part thereof.*

C. Recommendation

To date, there has been no observable deposit of natural cinders on the shore or the bed of a waterbody downstream from a dam. This is likely because the cinders are released in a single event, are suspended in the water column for some time before deposition occurs (due to the small particle size of this material), and are chemically inert. It is also noted that cinder use does not have the potential to significantly increase the sedimentation rates downstream of dams compared to background sedimentation rates absent

cinder use, making natural cinder observations on beds and shores less likely. For these reasons, the Department finds that there is limited environmental risk associated with using these materials. Section 31.18(1), Wis. Stat., requires and regulates the maintenance and operation of dams to ensure that these structures are in good repair and condition in order to protect public rights and for the preservation of life, health and property. Because natural cinder use is part of dam maintenance and operation activities, it can be regulated under s. 31.18(1), Wis. Stat., and does not require additional waterway permitting pursuant to s. 30.206(6), Wis. Stat. In general, the Department also does not require a WPDES permit for this activity.

D. Guidance

New Dams

The Department does not believe that additional permit conditions are required to control the use of natural cinders in new dams. However, over time, heavier doses of natural cinder materials are typically required as concrete ages. The Water Management Specialist (WMS) and Engineer (WME) should work with the dam operator to discuss the projected quantity and frequency of use of natural cinder use. This should occur during the planning process pursuant to ss. 31.12 or 31.38, Wis. Stats., if the waterbody has site-specific conditions that make the waterbody more sensitive to natural cinder deposition such as the waterbody having low natural sedimentation rates, threatened and endangered mussel populations, or is listed on the 303(d) impaired waters list for suspended solids. The regional Water Quality Biologist should be consulted to help assess the potential risks of natural cinder in these cases.

The Department does not have evidence to suggest that natural cinders are a potential risk to the environment; however, this could change at new dam locations. If cinders are found to result in objectionable deposits on the shore or bed of a body of water, then the dam permit or an Inspection Operation and Maintenance (IOM) plan should include the following best management practices (BMPs), if relevant, and any others the WMS or WME determines are needed as conditions:

1. Avoidance dates to limit release of cinder materials, except in emergency situations.
2. Reporting requirements including usage and release dates.
3. The operator must provide SDS ecotoxicity test results prior to cinder use.
4. In-stream monitoring requirements.
5. If necessary, clean up measures such as suction dredging or diver assisted suction dredging.
6. No later than 24 hours before gates/locks re-opening after cinder use, the operator must notify the WMS/WME of the location, date, and time that release will occur.
7. The operator must obtain all necessary approvals from County Zoning and U.S. Army Corps of Engineers, if applicable.

Existing Dams

The Department does not have evidence to suggest that existing dams are causing or have caused an objectionable deposit on the bed of a navigable waterway. If in the future data suggests that natural cinders are causing objectionable deposits on the stream or river bed or along the shoreline, or fish and aquatic life are being adversely impacted from the use, the WMS or WME should work with the Water Quality Biologist, the dam operator and other DNR support staff to identify corrective measures. One option is to expand the existing annual operation and maintenance plan submittal requirements to include the relevant best management practices described above, and any other conditions the WMS or WME determines necessary. This will help ensure that the dam is being operated and maintained appropriately into the future.

Complaint Response Strategy

If a complaint is received, the WMS or WME should inspect the site to determine if the dam is following their annual operation and maintenance plan appropriately. If changes are needed to curb native cinder use to avoid future nuisances, those modifications should be factored into the next annual reporting cycle. Voluntary compliance and additional annual reporting requirements are recommended. However, s. 31.25, Wis. Stat., requires abatement by action at the suit of the state or any citizen thereof. It is recommended that regional staff work with Central Office Policy Staff and the Dam Safety Section if further action is needed. It is also possible for citizens to seek corrective action pursuant to 31.25, Wis. Stat. In situations where the deposit of natural cinders does not impact the public interest or cannot be verified by the regional WMS or the regional Water Quality Biologist, it is recommended that the civil process be utilized to seek corrective action to avoid workload escalations for WMS and WME staff.

In the event that temporary releases of cinders are increasing the turbidity of suspended solid concentration in a receiving water, a WPDES permit may also be appropriate. WME, WMS and WW staff should work collaboratively to craft this permit, but in some cases the "Short Duration Discharge" general permit (WI-0059137-4) may be applicable/appropriate.

If natural cinders are discharged to a surface water outside of dam maintenance and inspection activities, the following actions should be taken immediately:

1. Stop the discharge and notify the Department of the spill by calling **the 24-hour spill hotline at 1-800-943-0003**;
2. Contain the spill; and,
3. Document actions taken.

A copy of the DNR spill publication is available at <http://dnr.wi.gov/files/PDF/pubs/rr/RR560.pdf>. DNR staff should work collaboratively through the stepped environmental enforcement process.

CREATED:

Amanda Minks, Policy Coordinator 9/28/17
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APPROVED:

Section Chief

Date

Policy Management Team approved on _____ (date).