

**DRAFT: Applicability of Statute 292 and NR 700 Administrative Rule Series to
Contaminated Sediment
Sediment EAC Issue Papers
02-02-2017**

Issue: Does Wis. Stats. § 292 apply to response actions taken to investigate and remediate contaminated sediment? If so, does chs. NR 700 to NR 754, Wisconsin Administrative Code (Wis. Adm. Code), series apply to actions taken to investigate and remediate contaminated sediment?

Background:

In 1994, Wis. Admin. Code § NR 700.03 was promulgated which defines the following:

(18) “environment” to mean any plant, animal, natural resource, surface water **(including underlying sediments)** and wetlands), groundwater, drinking water supply, land surface and subsurface strata, and ambient air within the state of Wisconsin or under the jurisdiction of the state of Wisconsin.

(31) “Long-term monitoring” means systematic evaluation of the selected remedial or interim action option through collection and inspection of soil data, groundwater data, surface water data, **sediment data**, and other relevant data.

(33) “Media” means air, surface water, groundwater, **sediments** and land surface and subsurface strata, including soil.

(54) “Sediment” means particles in surface waters or wetlands that are derived from the erosion of rock, minerals, soils and biological materials, as well as chemical precipitation from the water column. Sediment particles are transported by, suspended in or deposited by water.

The RR program has for many years investigated and cleaned up a number of contaminated sediment sites (e.g., manufactured gas plant facilities) in accordance with Wis. Stats. §292 and the NR 700 rule series.

In 2013, the legislature added a reference to “sediment” in the off-site exemption provisions of Wis. Stats. §292.13. In 2016 the legislature added a definition of “sediment” to Wis. Stats. §292.01; it also modified Wis. Stats. §§ 292.12 to reference “sediment” with respect to listing sites with residual contamination on the DNR’s database. Finally, the explicit exemption provided in s. 292.15, Wis. Stats., regarding contaminated sediment in a Voluntary Party Liability Exemption situation seems to solidify the fact that ch. 292, Wis. Stats., and chs. 700 to 754, Wis. Adm. Code, apply to sediment, as an environmental media.

Decision:

DNR's legal services has determined that Wis. Stats. §292 and the NR 700 administrative rule series applies to response actions taken by responsible parties and/or the DNR to address hazardous substance discharges or environmental pollution that have contaminated the waters of the state, including contaminated sediments.

Based on components of each of the above definitions and other provisions in state law, ch. 292, Wis. Stats., and chs. NR 700 to 754, Wis. Adm. Code apply to contaminated sediment.

Additionally, unless exempted by rule or statute, all or portions of chs. NR 700 to 754, Wis. Adm. Code, apply to the following parties, acting pursuant to chs. 289 or 292, Wis. Stats., to address discharges of hazardous substances or environmental pollution: (a) a Responsible Party taking the actions, (b) a Voluntary Party taking the action(s) under Wis. Stats. §292.15, (c) DNR taking the action as a Responsible Party, and/or (d) DNR using state funds to pay for all or a portion of taking the action because a Responsible Party is unable or unwilling to take the action. When actions are taken by any of these parties, pursuant to chs. 289 or 292, Wis. Stats., DNR has legal authority to apply these NR 700-related actions to different types of environmental media, including contaminated sediment, except where there are explicit exemptions.

DRAFT: Numeric Sediment Clean-up Guidelines
Sediment EAC Issue Papers
02-2-2017

Recommendation: Establishing Numeric Sediment Clean-up Guidelines for NR 700 Clean-up Actions

Background:

Wis. Stats. § 292 provides the DNR with authority to compel response actions at situations involving a discharge of a hazardous substance or the presence of environmental pollution impacting the air, lands or waters of the state.

The DNR has the following authority to address contamination that is impacting the air, land or waters of the state:

Soil: Presently, there are soil cleanup standards established by administrative code in Wis. Admin. Code § NR 720. These promulgated standards are protective of both direct contact and the groundwater migration pathway. The direct contact standards rely on a land use classification of industrial and non-industrial. Wis. Admin. Code § NR 720 also allows the responsible party to: (1) establish a site-specific cleanup number; (2) utilize a performance standard (e.g., engineering control); or (3) conduct a risk assessment if approved by the DNR.

Groundwater: For groundwater contamination situations, Wis. Stats. § 160 and Wis. Admin. Code § NR 140 apply to response actions. This is clearly stated in Wis. Admin. Code NR § 722.09(2)(b).

Surface Water and Wetlands: Wis. Admin. Code § NR 722.09(2)(c) and (3) apply to sites undertaking a response action to address a hazardous substance discharge or environmental pollution impacting surface water or wetlands.

Air/Vapor: Air discharges – both within a building and into the environment – must be addressed in accordance with Wis. Admin. Code § NR 722.09.

Sediment: Wis. Admin. Code § NR 722.09(2)(c) and (3) allow the DNR to require the cleanup of contaminated sediment that has been impacted by a discharge of a hazardous substance or environmental pollution. Presently, DNR does not have promulgated, sediment cleanup standards, but does have authority to establish those on a site-by-site basis, in Wis. Admin. Code §§ NR 722.09(2)(c) and (3).

In 2003, the Department published guidance entitled “Consensus-Based Sediment Quality Guidelines: Recommendations for Use & Application (DNR Publ. # WT-72-2003. The guidelines assist in making initial evaluation of sediment sampling results, but are not intended as clean-up numbers. The guidelines are one line of evidence along with other information and data to support sediment management decisions for a site in a weight of evidence approach.

Proposal:

Using its authority in Wis. Admin. Code § NR 722.09(2)(c) and (3), DNR plans to develop guidance that would have numeric cleanup guidelines that responsible parties could elect to use for more simple or straightforward sediment cleanups. These numbers would be based in guidance and would not be enforceable. The numeric guidelines developed would be analogous to the Wis. Admin. Code § NR 720 residual cleanup levels for soil or NR 140 enforcement standards for groundwater, as far as those are clean-up levels.

Also potentially available to responsible parties would be other options that may address Wis. Admin. Code § NR 722 obligations, such as engineering controls, sediment covers or development of a site-specific numeric standard under Wis. Adm. Code § NR 722.09(2) and (3). It is important to consider that any action taken in a waterway must be reviewed and permitted under Wis. Stats. §30.

Further, the DNR will not be developing the following types of numeric guidelines as part of this effort:

- numeric guidelines pursuant to Wis. Admin. § NR 706 for “reportable” concentrations of hazardous substance or environmental pollution. Reporting to the Department will be determined on a case-by-case basis as it is for other contaminated media involving historical spills or environmental pollution.
- numeric guidelines for what concentration of contaminants in sediment trigger a Wis. Admin. Code § NR 716 site investigation. The DNR will use the criteria established in Wis. Admin. § NR 716.05 to determine the necessity of a site investigation, based on the complexity of the situation.

**DRAFT: Sediment Investigations Under Wis. Admin. Code
§§ NR 347 and NR 716
Sediment EAC Issue Papers
02-02-2017**

Issue: NR 716 and NR 347 Investigations Are Not Equal

Both Wis. Admin. Code §§ NR 716 and NR 347 contain provisions which call for the sampling and analysis of sediment, if warranted. The purposes of the two administrative codes are different. This paper spells out when each of the codes may apply to investigations or assessments of contaminated sediment.

Background: Wis. Admin. Code § NR 347, “Sediment Sampling and Analysis, Monitoring Protocol and Disposal Criteria for Dredging Projects”, was promulgated “...to protect the public rights and interest in the waters of the state by specifying definitions, sediment sampling and analysis requirements, disposal criteria and monitoring requirements for dredging projects...” (Wis. Admin. Code § NR 347.01 (1)). In addition, the code states “It is department policy to encourage reuse of dredged material and to minimize environmental harm resulting from a dredging project.”

Wis. Admin. Code § NR 347 requires the collection of information on a given project including, where necessary, collection and analysis of sediment from the project site. This information can then be used by various Department programs to evaluate appropriate actions, including permit conditions, which are necessary to manage potential environmental risk.

Wis. Admin. Code § NR 716 spells out the requirements for the investigation of sites regulated under chs. 289 and 292 Wis. Stats. Its purpose is to ensure that site investigations provide the information necessary to define the nature, degree and extent of contamination, define the source or sources of contamination, determine whether any interim actions, remedial actions, or both are necessary at the site or facility, and allow an interim or remedial action option to be selected that complies with applicable environmental laws.

Wis. Admin. Code § NR 347 Wis. Adm. Code spells out a process to evaluate material/sediment that is proposed to be removed and disposed of as part of a permitted dredging project under Wis. Stats § 30.20. The code describes the process the Department will use to evaluate the risk associated with a proposed dredging project and the information to be gathered by the project applicant in the dredging application. Factors to be considered under Wis. Admin. Code § NR 347.05 (2) include:

- Potential that contaminants may be present

- Previous test of the material at the dredging site or from other projects in the vicinity
- The possibility of past introduction of contaminants from land runoff
- Spills of toxic or hazardous substances
- Introduction of contaminants from point sources
- Sources and previous use of material used or proposed to be used as fill
- Natural deposits of minerals and other natural substances
- Any other relevant information available to the department

The purpose of Wis. Admin. Code § NR 716 is to ensure that the site investigation provides the information necessary to define the nature, degree and extent of contamination and to determine whether any interim actions or remedial actions are necessary at the site. The authority for conducting a site investigation is derived from Wis. Stats. 292. Application of Wis. Admin. Code § NR 716 is triggered by the discharge of a hazardous substance to the environment. Wis. Admin. Code § NR 716.07 requires that the site investigation consider:

- History of the site or facility
- The type and amounts of the contamination
- History of previous hazardous substance discharge
- Environmental media affected
- Location of the site or facility and proximity to other sources of contamination
- Need for access property owners on adjacent and nearby properties
- Potential or known impact on receptors
- Potential impacts to
 - Species, habitat or ecosystems sensitive to the contamination
 - Wetlands and areas of special natural resource interest (NR 103.04)
 - Outstanding and exceptional resource waters NR 102.10 and 102.11
 - Sites or facilities of historical or archaeological significance
- Potential interim and remedial actions
- Immediate or interim actions taken or in progress
- Other items that may affect the scope or conduct of the site investigation

Wis. Admin. Code § NR 716.13 addresses sampling and analysis requirements. Information collected is submitted to the department in a report per Wis. Admin. Code § NR 716.15.

Proposal/Decision:

While there are similar processes the purpose of the two codes is different.

Wis. Admin. Code § NR 347 is:

- Tied to an application process associated with the removal and disposal of sediment.
- Limited in scope to the geographic area covered by the application.

- Focused more on the management of the sediment material.

The sampling and analysis conducted under Wis. Admin. Code § NR 347 could result in notification of the Department of a release and trigger additional investigation under Wis. Admin. Code § NR 716.

Wis. Admin. Code § NR 716 is:

- Triggered by the notification or discovery of a discharge of a hazardous substance to the environment or presence of environmental pollution.
- Requires the investigation of the degree and extent of the impact of the contamination.
- The investigation under Wis. Admin. Code § NR 716 is more extensive than the requirements of Wis. Admin. Code § NR 347, potentially going beyond the project /application area.

If an interim or remedial action is proposed that involves dredging of contaminated sediment the responsible party would need to follow the Wis. Admin. Code § NR 347 process and obtain a permit required under Wis. Stats. §30.20.

It is also possible to use the sampling and analysis data collected under either the Wis. Admin. Code § NR 347 or NR 716 processes to supplement information required under the other code.

DRAFT: The NR 700 Series Regulation of Contaminated Sediment
Sediment EAC Issue Papers
2-1-2017

Issue: In the event that contamination is discovered in sediments, when is a person required to take appropriate actions under Wis. Stats. § 292 and Wis. Admin. § NR 700 rule series?

Background:

The Department may become aware of the presence of contaminated sediment in a number of ways. One way the Department may become aware of contaminated sediments is when a person undertaking a dredging projects as part of a Wis. Admin. § NR 347 approval conducts sampling of the sediment prior to dredging. Another way contamination is discovered is when a person is undertaking due diligence as part of a property transaction or where a responsible party takes sediment samples as part of an ongoing NR 700 response action, and finds the sediment impacted by a discharge of a hazardous substance or environmental pollution.

Responsible Parties:

In the situation where a discharge of a hazardous substance or environmental pollution has impacted sediments, Wis. Stats. § 292 and the Wis. Admin. § NR 700 administrative rule series apply to the person who caused, possesses or controls the contamination, unless that person is eligible for one of several exemptions in Wis. Stats. §292. (See exemption section below for persons not considered in possession or control of a hazardous substance.) Thus, not everyone is considered a responsible party if they have discovered contaminated sediment as part of a dredging project, due diligence or other discovery method.

Exemptions:

A person may be in possession (i.e. own a property) or control of contaminated sediment but be otherwise exempt from taking certain actions pursuant to both Wis. Stats. 292.11 and Wis. Admin. § NR 700 rule series.

- 292.13(1m) Off-site Exemption: A person who otherwise possesses (i.e., owns) or controls a property impacted by a hazardous substance discharge to sediment would be exempt from having to conduct a site investigation or a cleanup if they meet the criteria in the law.
- 292.15 Voluntary Party Liability Exemption: Once a Certificate of Completion is issued pursuant to this part of the Spill law, any contamination that occurred prior to the site investigation being approved would not be the responsibility of the holder of the COC or any subsequent property owner.

- 292.11(9)(e) Local Government Exemption: An entity that meets the definition of local unit of government in Wis. Stats. § 292.11 would not be responsible for sediment contamination found on property that they possess if they meet the exemption provisions in the state law.
- 292.21 Lender Exemption: An entity that meets the definition of lender in Wis. Stats. §292 would not be responsible for a discharge of hazardous substances in sediments on the property they possess or control if they acquired the property and undertake the actions required by them in accordance with that exemption.
- All exempt parties noted above are required by law to notify the DNR of the discharge discovered pursuant to Wis. Stats. §292.11 and Wis. Admin. §NR 706 and properly manage any material that is excavated in accordance with applicable laws.

Site Investigations:

When a person has reported a discharge and is considered the responsible party under Wis. Stats. §292 and Wis. Admin. Code §NR 700.03, the DNR uses the criteria in Wis. Admin. § NR 716.05(1) to make a professional judgment as to whether or not a Wis. Admin. § NR 716 site investigation is needed. If a site investigation is needed, the scope of that investigation should be based on the complexity of the site. In situations where the person who reports a discharge is considered an exempt party under Wis. Stats. §292, the Department will evaluate the situation to determine if a person that otherwise caused the contamination can be identified; however, the exempt party would not be responsible for conducting a full site investigation or cleanup in accordance with the above-referenced exemptions. With respect to sediment contamination and the off-site exemption, some sampling and other information may be required by the Department of the person asserting the exemption. This will vary on a site-by-site basis.

Decision:

Persons undertaking dredging projects and that qualify for one or more of the Wis. Stats. § 292 exemptions noted above are not considered responsible parties under the Wis. Admin. Code §NR 700 rule series. They are required to notify the Department under Wis. Admin. Code § NR 706 of the discovery of a discharge of a hazardous substance/environmental pollution and to properly manage any sediment excavated in accordance with applicable laws. The Wis. Admin. Code § NR 700 rule series regulates decision-making at contaminated sediment sites where there is a “responsible party” as defined in Wis. Admin. § NR 700.03, and when that RP is taking action at a site involving contaminated sediments.

Sediment EAC Issue Papers

DRAFT: Applicability of Wis. Admin. Code § NR 718.15 to Sediment Cleanups
02-03-2017

Issue: Can contaminated sediment be managed as “other solid waste” at a response action site or facility using the authority in Wis. Admin. Code § NR 718.15?

Background:

Contaminated sediments may be excavated from the water body as part of a Wis. Admin. Code § NR 700 response action. The question has been raised as to whether the sediment may be placed on the site or facility from which it originated (i.e., the source property) under the exemption in Wis. Admin. Code § NR 718.15.

Decision:

The Department of Natural Resources (DNR) can treat sediments as “other solid waste” under Wis. Admin. Code § NR 718, therefore sediment can be disposed of as “other solid waste” in accordance Wis. Admin. § NR 718.15.

For DNR purposes, sediment is inherently a type of solid waste as it can be discarded or salvaged material as described in Wis. Stat. § 289.01(33) definition of solid waste. Sediment can fit the broad definition of “other solid waste” in certain circumstances for the following reasons:

“Other solid waste” is essentially solid waste that contains waste other than contaminated soil. See Wis. Admin. § NR 718.15.

Wis. Stat. § 292.01(17g) defines sediment as: particles in the bed of a navigable water up to the ordinary high-water mark that are derived from the erosion of rock, minerals, soil, and biological materials and from chemical precipitation from the water column and that are transported or deposited by water.

Sediment, contaminated or not, containing waste other than only contaminated soil, can be managed as other solid wastes under Wis. Admin. § NR 718.15. If sediment is replaced at the site or facility from which it was excavated, as part of a response action conducted in compliance with all of the applicable requirements in Wis. Admin §§ NR 700 to 754, and the DNR has granted prior written approval for the action, the replacement of that sediment on the site or facility from which it was excavated (presumably within an upland area) is exempt for the requirements of Wis. Stat. § 289, and Wis. Admin §§ NR 500 to 538.

Sediment Cover and Engineering Control (Cap) Comparison Table

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Comparative Metric		Sediment Cover	Sediment Engineering Control (Cap)
Definition 2015 Wisconsin Act 204		“Sediment cover” means a layer of uncontaminated sand or similar material that is deposited on top of contaminated sediment.	“Engineering control” means an object or action designed and implemented to contain contamination or to minimize the spread of contamination, including a cap or, soil cover, or in-place stabilization, but not including a sediment cover.
Function		Enhances natural processes through dilution, dispersion, mixing, and burial	Physical and chemical isolation of contaminants from the sediment surface
Design Criteria	Physical Isolation	Not explicitly designed for but potential by-product of placement	Designed to withstand a site specific water velocity, shear stress, or scour event
	Chemical Isolation	Not explicitly designed for but potential by-product of placement	Design criteria can include advection, diffusion, and ebullition
	Layers	Not typical	Typical to have multiple layered systems that consider intra layer physical and chemical compatibility; erosion protection is a common feature
Typical Thickness		Varies but typically 6 to 12 inches	Varies, but typically 1 to 3 ft
Geosynthetics		None	Can include geosynthetic clay liners (GCL), geogrids, geotextiles, PVC and HDPE liners, reactive core mat (RCM) or a combination of different geosynthetics
Amendments		Not a distinguishing characteristic carbon, organoclay and other amendments can be used in either	
Placement techniques		Typically mixing and displacement of underlying contaminated sediment is not explicitly avoided or controlled	Slow, uniform application that allows the capping material to accumulate in layers, avoiding displacement of or mixing with the underlying contaminated sediment
Verification of placement specifications		Typically required through core sampling, bathymetric survey or other techniques for specified thickness	Required and specific to the engineering control

Sediment Cover and Engineering Control (Cap) Comparison Table

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Comparative Metric		Sediment Cover	Sediment Engineering Control (Cap)
Short Term Monitoring (after construction completion)		Not typically required for the cover (for the thickness)	Typically required specific to the engineering control
Long-term monitoring		Not typically required to ensure the sediment cover is still there, sediment covers are not specifically designed to resist movement.	Typically required specific to the engineering control.
Continuing Obligations		So long as maintenance of the sediment cover is not required, and the sediment cover is not to be imposed as a continuing obligation, chs. NR 726.11(2)(c) and 726.15(2), are not applicable.	Required as applicable under chs. NR 725 and 726, Wis. Admin. Code.
Maintenance		Required as applicable under NR 724 and NR 726 Wis. Admin. Code.	Required as applicable under NR 724 and NR 726 Wis. Admin. Code.
Documentation and notification requirements	NR 722.17 Applicability - Database requirements	Not applicable: NR 722.17 is specific to remedial actions with a continuing obligation. By definition, sediment covers are not an engineering control and therefore cannot have a continuing obligation.	Required, sediment caps are an engineering control by definition and continuing obligation under NR 726.15(2)(m) and NR 722.15(2)(e). Therefore, NR 722.17 is applicable and the department may require the engineering control be placed on the Database.
	NR 725.05(2) Notification Applicability	applicable	applicable

Integrated Sediment Team

DRAFT - Proposed Options for Making Ordinary High Water Mark (OHWM) Determinations for Clean Up Projects (02-03-2017)

Options	Description	Action needed	Pros	Cons
Water Management Specialist (WMS) makes the determination	Determinations done as needed and as WMS workload allows as an informal activity in the WMS workload	<i>Program supervisors will inform staff of the importance of making OHWM determinations under Act 204 in a timely manner</i>	WMS staff already trained; maintain current level of consistency by DNR in making OHWM determinations	If WMS workload is high, may take time for the WMS staff person to get to the determination
Fee charged for review by WMS	Charge a fee for an OHWM determination by WMS	Review and update fee schedule to allow for the charging of a fee which will result in a determination being part of the permit workload "first in, first out" list for the WMS	1) Ensure timely response and generate funding for DNR staff time to make the determinations; 2) Maintain current level of consistency by DNR continuing to complete the determinations	1) There may be other high priority activities or work ahead of the determination in a staff workload which may limit WMS ability to process in a timely manner; 2) Additional workload for DNR staff when workforce has been reduced?