

# Contaminated Sediment External Advisory Group Update to Brownfield Study Group

February 10, 2016

# Sediment Cleanups

Clarified that NR 700 and Chapter 292 apply 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 sediment

# Numeric Sediment Clean-up Guidelines

- Wis. Admin. Code §NR 722.09(2)(c) and (3)  
Allows DNR to require the clean-up of contaminated sediment impacted by a discharge/release
- Do not have promulgated standards
- Authority to establish sediment cleanup standards on a site-by-site basis.

# Numeric Sediment Clean-up Guidelines

## Approach

- Develop guidance that would have numeric cleanup guidelines that the RPs could elect to use
- Guidance is not enforceable
- Similar to approach to
  - NR 720 residual cleanup levels for soils and
  - NR 140 enforcement standards for groundwater

# Numeric Sediment Clean-up Guidelines

- DNR will not develop numeric guidelines associated with
  - Reportable concentrations of hazardous substances per NR 706
    - Reporting is determined on a case by cases basis similar to other media
  - Triggering a NR 716 investigation
    - The criteria in NR 716.05 will be applied to determine the necessity of conducting a site investigation

# Numeric Sediment Clean-up Guidelines

- RP will have options to
  - Develop site specific standards
  - Rely on other options under NR 722
    - Engineering Controls
    - Site specific
    - Sediment covers

# Clarifying Sediment Investigations Under NR 347 and NR 716

NR 347 Sediment Sampling and Analysis, Monitoring Protocol and Disposal Criteria for **Dredging Projects**  
purpose

- Protect public rights and interest in the waters
- Sediment sampling and analysis requirement
- Disposal criteria
- Monitoring requirements
- Encourage reuse of dredge material
- Minimize environmental harm from a dredging project

# Clarifying Sediment Investigations Under NR 347 and NR 716

NR 347 applies to:

Material/sediment that is proposed to be removed and disposed of as part of a permitted dredging project under Wis. Stats. §30.20

# Clarifying Sediment Investigations Under NR 347 and NR 716

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.

# Clarifying Sediment Investigations Under NR 347 and 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. Wis. Stats. § 292
- 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.

# Clarifying Sediment Investigations Under NR 347 and NR 716

## NR 716 Site Investigations purpose

- Define the nature, degree and extent of contamination
- Define the source(s) of contamination
- Determine whether interim and/or remedial actions are necessary

# Management of Sediment

- Applicability of NR 718.15 treated as other solid waste
- Allows for placement at site where it was excavated as part of a response action site under NR 700-754 with approval
- Exempt from Wis. Stats. §289 and NR 500

# Sediment Cover and Engineering Cap

- Developed a comparison table for guidance in applying the definitions in Act 204
- Detailed guidance will be developed by this summer

### Sediment Cover and Engineered Control (Cap) Comparison Table

*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.*

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
		Not a distinguishing characteristic	

# OHWM Determinations

- Commitment from WMSs to review and process determinations on a timely basis
- Evaluating whether fees will be charged

# Future Issues

- When a site investigation enters water
- Coordination with other programs within DNR and with EPA/GLNPO Legacy Projects
  - Permits and applications
  - Cleanup goals/remedial action objectives
- Risk assessments
- Engineering control guidance
  - long term monitoring off ramps
  - Addressing structural impediments

# Future Issues

- Sediment tracking
  - Ordinary High water Mark Determinations
- Sediment clean-up numbers/guidance