

Classification of Sediment & Soil

Contaminated Sediments External Advisory Group Meeting
March 30, 2016

Presentation Goals

- Summarize information presented at the February 8, 2016 meeting
- Identify:
 - Applicable administrative code, guidance, and resources
 - Risk evaluation criteria
 - Restoration and redevelopment considerations
- Sediment management
 - In-situ
 - Ex-situ
- Implementation
 - Example Scenarios

Sediment vs. Soil w/ respect to the Ordinary High Water Mark (OHWM)

WATER's EDGE

(Annual/Seasonal High)

Use CBSQG

or

Pursue site-specific number(s)

TRANSITION AREA

(Between Water's Edge and OHWM)

Use the more protective of CBSQG or NR720

or

Pursue site-specific number(s)

Ordinary High Water Mark

UPLAND - SOIL

(Above OHWM)

Use NR 720 unless NR 716.07(8)(a), (b) and/or (c) apply

Site-specific number(s) may be necessary for sites that meet NR 716.07(8) criteria.



Act 204

(formerly known as SB 545/AB701)

- New law defines:
 - **Contaminated sediment** - sediment that contains a hazardous substance *292.01(1s)*
 - **Sediment** – 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. *292.01 (17g)*

Code, Guidance, and Resources

- Wisconsin Administrative Code
 - NR 700 Series
 - NR 700, NR 716, NR 720, and NR 722
 - NR 140
 - NR 102 – NR 106
 - **NR 347**
- Wisconsin Guidance
 - Consensus Based Sediment Quality Guidelines (CBSQG)
- EPA
 - Guidance
 - Risk assessment
 - Sediment remediation
 - Clean Water Act
- Other Resources/Considerations
 - MacDonald – sediment quality guidelines
 - Multiple lines of evidence, weight of evidence, Triad approach, etc...
 - ITRC documents
 - State of Washington sediment management standards

In-situ Risk Evaluation Criteria (cont.)

- Exposure routes
 - Ecological, human, or both
- Multiple lines of evidence
- Sensitive environments (defined in NR 700.03)
- Fish and/or wildlife public health advisories
- Long-term vs. short-term risk reduction
- Timeframe to achieve the remedial action objective (RAO)

In-situ Risk Evaluation Criteria

- Conceptual site model
- Historical, current, and anticipated future use and zoning of the property
- Contaminant evaluation
 - Known and/or unknown contaminant source(s)
 - Historical and/or on-going release(s) to the environment
 - Media of concern
 - Contaminant characteristics
 - Potential for recontamination
 - Background concentrations
- Physical environment
 - Deposition/scour
 - Drainage patterns
 - Surface water/groundwater connectivity
 - Seasonal variations

Restoration and Redevelopment Considerations

- Habitat and/or resource restoration
- Available funding sources
- Enrolled in the voluntary party liability exemption (VPLE) program
- Acceptable continuing obligations

Sediment Management

- Ideally, want to perform analytical testing on sediment while it is in-situ to determine viable:
 - Disposal options
 - Beneficial reuse options
 - Chapter 30 permit may be required
- Once sediment is removed (i.e. ex-situ):
 - Chapter 30 permit required
 - it needs to be dewatered
 - Note: The dewatering process will require a WPDES permit.*
 - it becomes a solid waste
 - NR 720 soil standards are used as a guide
 - it is managed similar to soil
 - NR 500 Beneficial Reuse
 - NR 718
 - Low hazard exemption

Implementation: Steel Sheet Pile Wall



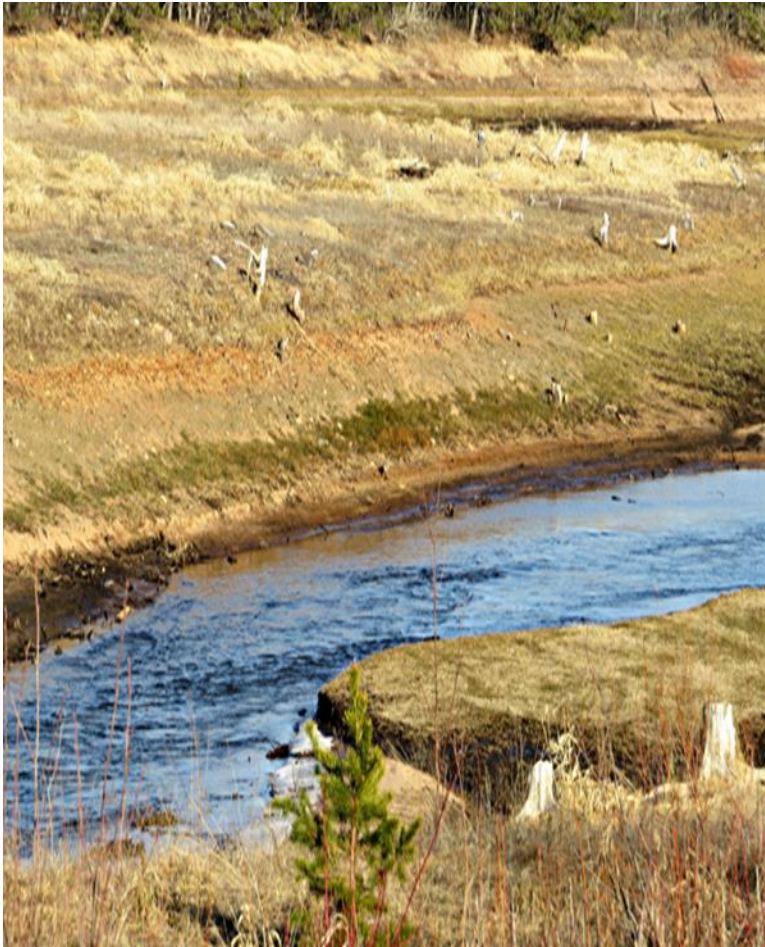
Implementation: Rip Rap



Implementation: Soft Edge



Implementation: Dam – Removal/Drawdown



Implementation: Wetlands



Implementation: Low Gradient Stream



Implementation: Storm event



W A R N I N G

CONTAMINATED SOIL AND SEDIMENT AREA

SOIL AND SEDIMENTS CONTAIN HAZARDOUS SUBSTANCES

**DO NOT DISTURB FLOODPLAIN
SOILS OR SEDIMENTS IN AND NEAR
CRAWFORD CREEK**

**SHOULD OIL OR TAR COME INTO CONTACT WITH SKIN,
WIPE OFF IMMEDIATELY AND WASH WITH SOAP AND WARM WATER
AS SOON AS PRACTICAL**

FOR INFORMATION CALL:

**WISCONSIN DEPT. OF NATURAL RESOURCES: 715-392-0802
DOUGLAS COUNTY DEPT. OF HEALTH & HUMAN SERVICES: 715-395-1304
BEAZER EAST: 412-208-8813**

Questions?

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