



APPENDIX 3: REGULATIONS

Regulatory Requirements

Cultural Resources Review

The archaeological survey conducted in 2013 recorded a documented cultural resources site which will be impacted by the creation of the Grand Trunk seiche wetland. The Allis Pond shipwreck, pieces of a lapstrake wooden boat constructed ca. 1920-1970, was observable on the ground surface. The archaeological team reported that the boat was likely the result of fill refuse, rather than an actual shipwreck. These findings will need to be reviewed by the state DNR archaeologist to determine whether further study of the Allis pond site is needed and ultimately whether the site can be disturbed.

Wetlands and Waterways

Chapter 30 is the Wisconsin statute governing navigable waters, harbors, and navigation. Subchapters I (General Provisions) and II (Navigable Waters and Navigation in General) contain language on alterations to waterways including installation of structures such as culverts and piers, use of shoreline areas, changes to water courses such as realignment and dredging, and permitting procedures.

There are at least three permits from DNR that are expected for this project: wetland restoration and/or wetland disturbance (discussed below), dredging (likely an individual permit), and culvert replacement (general permit). Normally, this type of project would require a permit for a connected enlargement, but connected enlargements are exempt in Milwaukee County, so a permit for this activity will not be necessary.

Dredging (Administrative Code 347)

The excavation required in the channel below the high water line is considered “dredging” and, consequently, Administrative Code NR 347 applies. It is recommended that a new ordinary high water mark determination be made to ensure accuracy.

A WI DNR Ordinary High Water Mark Determination Application will need to be filed with the WI DNR to determine the new high water line.

The purpose of NR 347 is 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. As stipulated in this rule (Chapter NR 347.05), a preliminary application is required before a formal application can be submitted to DNR. This application should be submitted as soon as possible to avoid delays in design development. The preliminary application consists of the responses to the seven points below.

- The name of the waterbody and the location of the project
- The volume of material to be dredged
- A brief description of the dredging method and equipment
- A brief description of proposed disposal method and location and, if a disposal facility is to be used, size of the disposal facility.
- Any previous sediment sampling (including field observations) and analysis data from the area to be dredged or from the proposed disposal site
- A copy of a map showing the area to be dredged, the depth of cut, the specific location of the proposed sediment sampling sites and the bathymetry of the area to be dredged; and
- Anticipated starting and completion dates of the proposed project.

Following the preliminary review, the project team will work with the WI DNR to determine appropriate steps for sediment testing and necessary remediation of dredged sediment.

Wetland Impacts (Ch. 30)

In order to complete the project as designed, the Wisconsin Department of Natural Resources would require City of Milwaukee to obtain a permit for the wetland impact (and corresponding restoration). There are two permitting mechanisms the DNR can use to authorize the coverage for a project: a **General Permit (GP)** or **Individual Permit (IP)**. Chapter 30.2065 outlines the procedure for general permitting for restoration activities.

In order to qualify for the GP, all conditions of the permit must be met for the Department to authorize the coverage of that particular (categorized) permit to the applicant. For this project, the wetland restoration permit can be found on the DNR webpage (http://dnr.wi.gov/topic/wetlands/documents/NR-353_GP_Application.pdf). The benefit of the GP is that there is a shorter review period (30-days), no public involvement, and no wetland mitigation required.

For projects that are unable to meet all the standards of the GP, a project may be permitted through the IP process. Due to the fact that IPs are generally larger in scale and typically involve more complex designs and issues, a more thorough review process is necessary for the Department to determine a decision. The timeline for such a review process is 105-135 days. This process also requires the project to go through public notice (with potential of a public hearing) and mitigation for the wetlands impacted. The DNR Statewide Mitigation Coordinator would negotiate the terms of the mitigation (balancing temporary and permanent impacts) with the applicant once the amount of impact has been avoided and minimized to its greatest extent and agreed upon by the Water Management Specialist.

If possible, it is recommended that the design phase of the project be tailored to fit the guidelines for a GP due to its simplified permitting process. Despite this project tailoring, it is still possible that site specific issues which arise later in design or construction will merit moving into the IP process.

Stormwater Discharge Permits (Ch NR 216/Ch 30)

The purpose of NR 216 is to establish criteria defining those storm water discharges needing WPDES storm water permits and to implement appropriate performance standards. This chapter seeks

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to minimize the discharge of pollutants carried by storm water runoff from certain industrial facilities, construction sites and storm sewer systems.

To satisfy these requirements, an erosion control plan, materials management plan, dewatering plan, and sequence of work plan need to be developed according to the following project checklist provided by the WI DNR:

- **Erosion Control Plan**

Project Description: Briefly describe the project applicable to the erosion control plan.

Erosion Control Methods and Materials: The types of erosion control methods that will be used during project construction to protect disturbed areas. Include, where applicable:

- Soil and slope stabilization
- Seeding and mulching
- Matting, tracking pads, inlet filters, silt fences, drainage swales, sedimentation basins, stockpile protection
- Dewatering-related erosion control
- Channel protection
- Outfall protection
- Any other appropriate erosion control measures
- Details and typical section drawings of all the erosion control methods utilized.

- **Erosion Control Measure Site Plan**

Include a site plan view and typical drawings illustrating:

- Construction site boundary
- The location of all erosion control measures
- Location of stockpiled soil
- Vehicle and equipment access sites
- Areas of disturbance
- The drainage area configuration
- Surface water diversion measures
- Pre- and post-construction drainage patterns
- Methods of collecting, transporting, and



dispersing storm water flow

- Topography
- Existing floodplains and wetlands
- Location of trees and unique vegetation
- **Sequence of Erosion Control Measures**
List and give a detailed description of the sequence of erosion control measures that will occur (i.e. placed, relocated, and replaced) during all phases of construction including:
 - Clearing and Grubbing
 - Concrete removal
 - Material installation
 - Channel construction
 - Revegetation processes
 - Seeding and mulching/matting
 - Maintenance

Note the erosion control sequence to be followed for each event of the project.

- **Off-site Diversion Methods**
Identify off-site contributions of water effecting the project site, methods of controlling off-site water contributions, and include site plan indicating:
 - Where the off-site water is originating from

- Locations of diversion measures on-site
- **Computations**
The following computations should be submitted if applicable to the project:
 - Designed erosion control measures
 - Sediment trap efficiency
 - Runoff volumes
 - Contributing watershed area to each erosion control measure
 - On-site watershed area
 - Off-site watershed area
 - Peak discharge and velocities
 - Direction and destination of flows
 - Ditch and Drainage easement sizing

- **Provisions for Inspection and Maintenance**

- **Document the provisions for:**

- The regular inspection of all erosion control efforts
 - Who will perform the inspections
 - When will the inspections occur
 - Any special circumstances initiating an inspection
- The regular maintenance of all erosion control efforts
 - Who is responsible for the maintenance
 - How often will the site be maintained
 - Corrective action if the site is not maintained according to provisions

Materials Management Plan (Ch 30/NR 216 Permits)

The following checklist serves as guidance in the completion of the Materials Management Plan necessary to meet the requirements of the Chapter 30 and NR 216 Permits. The Materials Management Plan shall contain at minimum, specific details on all of the following components.

- **Access Point Locations**

- List the locations that will be used to gain access to the work site
- Include a plan view of all access points



Dredging equipment used by the USFWS as part of a river restoration project

www.fws.gov/midwest/es/ec/nrda/GrandCalumetRiver/2011Accomplishments.html

- **Haul Routes**

Include a haul route diagram indicating haul route location. Indicate how and where hauled materials will be routed, including:

- Inbound materials
- Outbound materials
- Clean fill materials
- Contaminated materials
- Others
- Alternate locations if necessary

- **Stockpile Areas**

Provide a plan view diagram indicating stockpile area locations. List and describe:

- Material to be stockpiled
- Where material will be stockpiled on-site
- Measures to protect stockpiled areas if applicable

- **Equipment Staging Areas:**

- Where equipment will be stored on-site
- Include a plan view of equipment storage areas on-site

- **On-site use and Placement of Equipment**

- Spill control and kits on-site

- **Field Screening Protocol for Contaminant Testing**

If contaminated materials (i.e. soil) are encountered on-site, indicate:

- How the materials will be screened
- Where the materials will be tested
- What protocols will be followed
- How work will be impacted

Notify WDNR and Solid Waste of contaminated material encountered on-site.

- **Contaminated Materials Management Protocol**
(Will obtain from DNR)

- **Estimated Types, Concentrations and Volumes of Contaminated Materials**

If contaminated materials are known to exist on-site, list and describe:

- The type of contaminant
- Where the contaminant is located on-site
- Media in which the contaminant is located within (i.e. soil, water, etc.)
- The estimated concentration of the contaminant
- The estimated volumes of the contaminant

- **Excavation Methods**

List and describe:

- What materials will be excavated
- Where the excavated materials are located
- How the materials will be excavated and removed
- How excavated materials will be exported from site
- Where excavated materials will be exported to

- **Methods for Dewatering of Excavated Materials**

If free water is found present in excavated materials, list and describe:

- What methods will be used to correct the situation (i.e. how water will be removed)
- Where these methods will take place on-site

- **Estimated Volumes of In-channel and Upland Excavated Materials**

- Volume of Dredged Materials (cubic yards)
-Excavation from bed and bank of waterway

-Excavation from wetland

- Volume of Upland Materials (cubic yards)
 - Excavation from areas outside of waterway and wetlands
 - Total Volume of Materials (cubic yards)

- **Estimated Volumes and Location of Re-used In-Channel and Upland Excavated Materials**

- Reuse of Dredged Materials
 - Total Volume of Reused Dredged Materials (cubic yards)
 - Location
 - *Indicate on project plans OR
 - *Provide off-site address, property owner, site map drawn to scale
 - *Purpose of Dredged Materials (i.e. grading, trench backfill, etc.)
- Reuse of Upland Materials
 - Total Volume of Reused Upland Materials (cubic yards)
 - Location
 - *Indicate on project plans OR
 - *Provide off-site address, property owner, site map drawn to scale
 - *Purpose of Upland Materials

- **Off-site Disposal Plans for Contaminated Materials and Non-contaminated Materials**

- Disposal of Dredged Materials
 - Total Volume of Disposed Materials (cubic yards)
 - Disposal Site Location
 - *Type of Disposal Site (i.e. confined disposal facility, landfill, etc.)
 - *Disposal Site name and address
- Disposal of Upland Materials
 - Total Volume of Disposed Upland Materials (cubic yards)
 - Disposal Site Locations
 - *Type of Disposal Site (i.e. confined disposal facility, landfill, etc.)
 - *Disposal Site name and address
- Solid Waste Program Approvals

Dewatering Plan (Ch30/NR 216)

The following checklist serves as guidance in the completion of the Dewatering Plan necessary to meet the requirements of the Chapter 30 and NR

216 Permits. The Dewatering Plan shall contain at minimum all of the following components:

- **Dewatering/Diversion of Flow**

- Provide detailed plans for the dewatering I diversion of flow/ standing water removal
 - Typical dewatering I diversion measure plans
- Provide specifications for the dewatering I diversion of flow/ standing water removal
 - Methods employed to dewater I divert flow/ treat water (if applicable)
 - How will methods be employed
 - Where will methods be employed
 - Capacities and capabilities

- **Downstream Impact Minimization**

List and describe:

- Methods of minimizing downstream impacts during high flow conditions

- **Analysis of Possible System Overload Scenarios**

Provide the following information if the stream is overloaded:

- Estimated volume of system overload (i.e. what rainfall overloads the system)
- Estimated frequency of system overload (i.e. how often will the system be overloaded)
- Actions taken if stream is to be overloaded

- **Impacts of System Overload on Construction Activities and Water Quality**

List and describe:

- Anticipated number of lost work days
- Possible water quality impacts
- Methods of deterring adverse changes in water quality

- **Discharge Locations**

Indicate the following regarding the discharge of water:

- Where the water will be discharged to
- How the water will be discharged
- Provide a site map indicating discharge locations

- **Details of a Back-up System**

If a back-up system becomes necessary, indicate:

- What type of back-up system will be used (include backup and standby equipment/power supply)
- Conditions when the system will be needed
- How the back-up system operated
- Where the system will be located

- **High Flow Plan**

When flooding is likely to occur, list and describe the following:

- How the water will be removed from the site
 - Methods of water removal (i.e. pumping)
 - Methods of minimizing water contamination (i.e. treatment methods)
- Protocol for evacuating materials from the flood conveyance channel including:
 - List of materials that would require evacuation during high flow periods
 - How the materials will be evacuated from the flood conveyance channel
 - Where the materials will be temporarily placed on-site
 - How the materials will be transported
 - Methods of protecting the materials
 - Include a site map indicating the location of temporary placement
- Protocol for evacuating machinery from the flood conveyance channel including:
 - Type of machinery that would require evacuation during high flow periods
 - How the machinery will be evacuated from the flood conveyance channel
 - Where the machinery will be temporarily placed on-site
 - Include site map indicating possible locations of temporary machinery placement

- **Contaminated Water**

List and describe what measures will be taken if contaminated water IS found on-site including:

- Methods of isolating the contaminated water
- Methods of analyzing the contaminated water
- Where the water will be tested
- Methods of removing contaminated water from site

- How the water will be treated and/or disposed of

Sequence of Work Plan Checklist

The following checklist serves as guidance in the completion of the Sequence of Work Plan necessary to meet the requirements of the Chapter 30 and NR 216 Permits. The Sequence of Work Plan shall contain at minimum all of the following components, all which should be closely related to the Dewatering, Erosion Control, and Materials Management Plans:

- Sequencing of Construction
 - Include a detailed description of the planned step-by-step events that will take place during construction including:
 - Construction Stage Activities
 - Demobilization
 - Clearing and Grubbing
 - Erosion control measures
 - Concrete removal
 - Material installation
 - Channel construction
 - Revegetation processes
 - Seeding and mulching/matting
 - Maintenance
- Project schedule indicating description of work and anticipated start and finish date for each activity, including erosion controls, dewatering, and materials management



A brush cutter is one type of equipment used to clear a site of unwanted vegetation.

Soil Regulations and Environmental Assessment

The WIDNR defines a discrete multi-phase process for projects with contaminated sediment. These projects proceed through seven phases, beginning with screening level assessment and ending with remediation monitoring. A brief description of these phases follows below.

Phase I: Screening Level Assessment (NR 706 and 708)

A Phase I study is done as a result of routine monitoring or other program processes, such as fish sampling. Typically a few sediment samples have been collected and elevated concentrations have been detected. The contamination of concern could be legacy or emerging pollutants.

The Grand Trunk Property Phase I report write by Giles Engineering and Associates in 2003 should be sufficient to satisfy Phase I screening requirements because the research team in conjunction with the WIDNR has already determined that more screening will be necessary.

Phase II: Assessment of Extent of Contamination (NR 716)

Based on the discovery of contamination in sediment from Phase I, projects with phase II completed have had a detailed assessment conducted to define horizontal and vertical extent and severity of contamination. Initial source investigation has been carried out. Primary responsible parties if any have been identified.

The Grand Trunk property has been through a Phase II soil assessment but more data needs to be collected to update and augment the these studies. A Phase II assessment should be done to assess the extent of contamination, as described in NR 716. This assessment will define the horizontal and vertical extent and severity of the contamination.

Phase III: Feasibility Study (NR 722)

A Phase III may include additional site characterization if needed. This information should be made available for a remedial design. That includes the following necessary evaluation:

- Potential risk assessment if required

- Remedial action criteria
- Remedial alternatives
- Selection of an alternative for design
- A decision tree for implementation including post remediation verification sampling and contingency plans
- Disposal options if removal is chosen as the alternative
- Public acceptance
- Evaluation of cost and effectiveness
- Permits identified and application initiated
- Funding secured

Giles Engineering and Associates completed a Phase III Feasibility Study following their Phase II Environmental Assessment. However, this study was conducted to address development of the site as a traditional industrial area. A new Phase III study should be conducted using data collected in an updated Phase II assessment which evaluates the site's potential as parkland and for development as commercial offices or industrial facilities.

Phase IV: Remedial Design (NR 724)

Based on the Feasibility Study and the remedial action plan options presented in this master plan, develop design plans and specifications should be developed for remedial design. These plans and specifications should include operations, maintenance and long term monitoring.

Phase V: Implementation of Remedial Action (NR 724)

In this phase the remedial action is carried out as designed. Modification of the design is expected to accommodate complications that may arise during implementation.

Phase VI: Post Remediation Monitoring (NR 724)

Upon completion of implementation, additional monitoring maybe needed to demonstrate the recovery of the system. Pending an additional discussion, follow up action may be needed for delisting of the site.