DEPARTMENT OF ENVIRONMENTAL QUALITY

**RESCISSION OF DEPARTMENT POLICY AND PROCEDURE**

Subject: Dredge Sediment Review

Number: 09-018

Rescinded Date: April 13, 2018



Department of Environmental Quality (DEQ) Policy and Procedure No. 09-018, Dredge Sediment Review, dated March 19, 2013, is rescinded.

The policy is no longer consistent with the DEQ's authority under Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and the Water Resources Division (WRD), Waste Management and Radiological Protection Division, and Remediation and Redevelopment Division, in consultation with the Department of Attorney General, have concluded that the WRD lacks authority to include conditions related to upland disposal of dredged material in permits issued under Part 301, Inland Lakes and Streams; Part 303, Wetlands Protection; and Part 325, Great Lakes Submerged Lands, of the NREPA, and that elements of Policy and Procedure No. 09-018 dealing with development of such conditions is inappropriate. The WRD has a continuing need for a policy on sediment testing for dredging projects and has issued a new division policy and procedure, WRD-048, Sediment Testing for Dredging Projects. The rescission of the DEQ policy and procedure and its replacement with a WRD policy and procedure was approved by Environment Deputy Director Amy Epkey on May 27, 2017.

Approved: C Heidi Grether

C. Heidi Grether, Director

DEPARTMENT OF ENVIRONMENTAL QUALITY
POLICY AND PROCEDURE

Subject: Dredge Sediment Review

Number: 09-018

Original Effective Date: March 19, 2013
Revised Date:
Reformatted Date:



Category: ☐ Internal/Administrative ☐ External/Non-Interpretive ☒ External/Interpretive

*A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.*

This policy and procedure supersedes the former Land and Water Management Division Policy and Procedure Number 301-99-01, "Dredge Sediment Review," dated January 26, 2009.

**ISSUE:**

Identify when proposed dredging requires testing under this policy and procedure when processing applications for permit under authority of Part 301, Inland Lakes and Streams; Part 325, Great Lakes Submerged Lands; and Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and proposed placement of dredge spoils is upland.

Unless the project is located in an area of known or suspected contamination, this dredge policy and procedure shall not apply to the following:

- ponds,
- wetlands,
- new creation of: inland lakes or streams, artificial waterways, canals, ditches, lagoons, or similar waterways.

**DEFINITIONS:**

1. "CIWPIS": The Coastal and Inland Waters Permit Information System, used by Water Resources Division (WRD) staff to electronically record permit file information such as locations that are cross-referenced against spatial information stored in multiple databases.

2. "Area of known or suspected contamination": Either a facility, as defined in Part 201 (may show up as Act 307 on CIWPIS), Environmental Remediation, of the NREPA, or any site which has known or suspected contamination as determined by DEQ staff or the applicant.

3. "Designated Test Area": An area listed in CIWPIS Special Interests database as containing contaminated or polluted sediment.

4. "Saginaw Bay Dioxins and Furans Test Area": The portion of Saginaw Bay that lies between the mouth of the Saginaw River and a line drawn between the tip of Fish Point and the tip of the unnamed point east of the lakeward end of East Pinconning Road, which shall also include dioxins and furans testing

5. "On-Site Disposal": Upland property in the same ownership as the dredge location and contiguous to the dredge location.

6. "Clean Cover": Six (6) inches of uncontaminated soil that can support vegetation.

**PROCEDURES:**

1. WRD field staff receiving the initial application marks all files with a dredging component as administratively incomplete, per Joint Permit Application (JPA) guidance. Projects involving dredging may require sediment testing and will not be considered administratively complete until the DEQ determines that either:

   - testing is not required, or
   - the required testing results have been received.

2. WRD field staff reviews the dredge project dredge volume, location, and designated test areas to determine if contamination is likely to be present. If the project volume is more than 2,000 cubic yards total, the project is in a designated test area. If the applicant indicates there is contamination on-site, or if field staff believes contamination is likely, the file is marked as requiring testing. WRD field staff coordinates with appropriate Remediation and Redevelopment Division field staff and/or Office of Waste Management and Radiological Protection (OWMRP) field staff to determine appropriate testing criteria if field staff believe it should be different than the standard criteria listed in Step 6b, below, (please see the attached Dredge Sediment Review Flow Chart for a simplified decision tree).

3. Sediment testing is required for any of the following:

   a. Dredging more than 2,000 cubic yards as a project total;

   b. Dredging in designated test areas; or

   c. Dredging in areas where DEQ staff requires testing, including, but not limited to: maintenance dredging in areas where the historical dredge area has been expanded vertically and/or horizontally into areas of suspected contamination, new dredging in areas of historical known and/or suspected contamination, or any dredging in areas where designated uses are currently impaired due to contamination.

4. Sediment testing may be waived if one of the following conditions is met:

   a. The material is disposed of in a municipal solid waste landfill or a U.S. Army Corps of Engineers Confined Disposal Facility (USACE CDF).

   b. The material remains in an upland area on-site (i.e., outside of waterbodies, wetland, or floodplain areas), with clean cover, and the applicant signs a Declaration of Restrictive Covenant to prevent movement of the dredge material off-site as well as any other restrictions that OWMRP Lansing staff deems necessary.

   c. The applicant can supply approved previous test data from the site, or from a site immediately adjacent to the site within 100 feet, collected and analyzed within the last ten (10) years that demonstrates the dredge materials are below the criteria listed in the OWMRP Review Criteria and Method Detection Limits (i.e., test data that demonstrates the material is inert). This data must be representative of the dredge area, including depth. For projects on the Tittabawassee River downstream of the city of Midland, on the Saginaw River downstream of the Tittabawassee River, or in the Saginaw Bay Dioxins and Furans Test Area, dioxins and furans testing is required and previous test data must show dioxins and furans below criteria or that portion of testing will still be required.

   d. The total dredge volume is less than 2,000 cubic yards, is not within a designated test area, DEQ staff has not required testing, disposal location is in an upland area outside of a waterbody, wetland, or floodplain area, and:

      i. the applicant wishes to keep the material on-site, or

      ii. the applicant wishes to dispose of the material off-site and the final permit includes CIWPIS standard paragraph Not Classified as to Contaminant Status.

5. If testing is not required, WRD field staff marks the application file in CIWPIS as administratively complete and continues processing the application file outside of this policy and procedure. If testing is required, the file remains incomplete and WRD field staff continues processing per this policy and procedure, continuing to Step 6, below.

6. WRD field staff sends the Sediment Testing for Dredging Projects letter to the applicant if the proposed sediment dredging meets any one of the criteria listed above in Steps 3a-c and provides the OWMRP District Supervisor with a copy of the application and letter, which contains the following guidance:

   a. Applicant may opt to conduct sieve grain analysis test for sand content, or move to Step 6b if material is believed to be less than 90 percent sand. For all sieve grain analysis testing of dredging projects of less than 10,000 cubic yards, applicant shall sample sediments from six (6) discrete locations within the proposed dredge area. If more than 10,000 cubic yards of dredging are proposed, at least one additional sample shall be obtained and analyzed for each 10,000 cubic yards of additional material proposed for dredging. Typically, each sample will consist of a composited

subset of a core taken to full project depth. DEQ field staff may mandate specific sampling criteria, locations, and/or depth intervals, based on their site specific knowledge. Applicant conducts a sieve grain size analysis on the sediments using U.S. Standard Sieve Number 200 sieve. Applicant reports the results for each of the six (or more) discrete sample locations as a mass percentage of retained sediments. If the average mass percentage retained on the Number 200 sieve is 90 percent sand or greater, no additional sediment testing is required, unless the project is located on the Tittabawassee River downstream of the city of Midland, on the Saginaw River downstream of the Tittabawassee River, or in the Saginaw Bay Dioxins and Furans Test Area, in which case dioxins and furans must also be analyzed. The sieve grain analysis test is a pass/fail test. If the average mass percentage of sand is less than 90 percent, then the material must be analyzed according to Step 6b, below, for at least six (6) discrete sampling locations.

b. If the result of the mass percentage retained on the Number 200 screen is less than 90 percent sand, on average, or the applicant opted not to conduct sieve grain analysis, additional testing is required. For all analytical testing of dredging projects of less than 10,000 cubic yards, applicant shall sample sediments from six (6) discrete locations within the proposed dredge area. If more than 10,000 cubic yards of dredging are proposed, at least one additional sample shall be obtained and analyzed for each 10,000 cubic yards of additional material proposed for dredging. Typically, each sample will consist of a composited subset of a core taken to full project depth. DEQ field staff may mandate specific sampling criteria, locations, and/or depth intervals, based on their site specific knowledge. The default analytical parameters include seven (7) heavy metals [arsenic, cadmium, copper, lead, mercury, selenium, and zinc] and polynuclear aromatic hydrocarbons. Default analytical parameters also include polychlorinated bi-phenyls if the project is on one of the following bodies of water: Detroit River, Rouge River, Raisin River, Kalamazoo River, Saginaw River, Saginaw Bay, and Manistique Harbor, or canals that connect to any of the listed bodies of water. Additions or deletions to this list can be made on a project specific basis if field staff or the applicant has additional information related to the project. For projects on the Tittabawassee River downstream of the city of Midland or on the Saginaw River downstream of the Tittabawassee River, or in the Saginaw Bay Dioxins and Furans Test Area, dioxins and furans must also be analyzed. For the purposes of dredging and dredge spoil disposal, default background concentrations of arsenic have been developed. Those areas currently include a statewide default background and three specific areas identified as L.P. Southwest Area, L.P. Southeast Area, and U.P. West Central Area (please see attached figure "Arsenic Information to Support Dredging Material Decisions"). A site specific background analysis is also allowed for arsenic if the applicant wishes to pursue that option.

c. Levels of detection required are reflected in the OWMRP Review Criteria and Method Detection Limits.

d. If sediment results show PCB and/or mercury concentrations greater than 1 PPM, or metals data and/or PNA data greater than the probable effect concentration as defined in MacDonald *et al.*, 2000 (MacDonald *et al.*, 2000. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems. Arch. Environ. Contam. Toxicol. 39. 20-31), additional sediment testing will be required to evaluate the newly exposed sediment quality. This sediment testing data will be used to evaluate potential impacts to surface water designated uses from the newly exposed sediment, as defined in Part 4, Water Quality Standards, promulgated under Part 31, Water Resources Protection, of the NREPA. If this additional testing is required, WRD field staff will forward sediment data analyzed under this part to the Lakes Erie, Huron, and Superior Unit Chief, WRD, DEQ, for review, analysis, and further direction.

7. The applicant forwards the sediment analysis results to WRD field staff.

8. WRD field staff forwards the sediment analysis data for review as follows:

   a. From Steps 6a-b, above, to Duane Roskoskey, OWMRP, DEQ, Constitution Hall, Lansing, Michigan.

   b. From Step 6d, above, to the Lakes Erie, Huron, and Superior Unit Chief, WRD, DEQ, Constitution Hall, Lansing, Michigan. The WRD Unit Chief will instruct WRD field staff as to the next steps based on the test results.

9. OWMRP Lansing staff evaluates the data from Steps 6a-b, above, and determines disposal requirements as one or more of the following and notifies WRD field staff of the disposal requirement options:

   a. inert and suitable for unrestricted upland disposal

   b. on-site disposal with clean cover and Restrictive Covenant

   c. municipal solid waste landfill or USACE CDF

10. If the proposed dredge project is permittable, WRD field staff drafts the permit with the disposal requirement options and other requirements needed to be protective of designated uses and forwards to the applicant, and updates CIWPIS.

11. The applicant selects a disposal option, countersigns the draft permit, and returns to WRD field staff for issuance. If the disposal option is on-site with Restrictive Covenant, WRD field staff will withhold final execution of the permit until a recordable Declaration of Restrictive Covenant form is received. If another disposal option is selected, WRD field staff issues the permit if the proposed project is permittable. As applicable, WRD field staff forwards the recordable form to Duane Roskoskey, OWMRP, DEQ, Constitution Hall, Lansing, Michigan.

12. Where applicable, OWMRP Lansing staff executes the recordable Declaration of Restrictive Covenant and forwards a copy to WRD field staff for CIWPIS update and to the appropriate county government office for final recording. Once the recorded form has been returned, OWMRP Lansing staff retains the original and forwards a copy of the recorded form to WRD field staff for CIWPIS update.

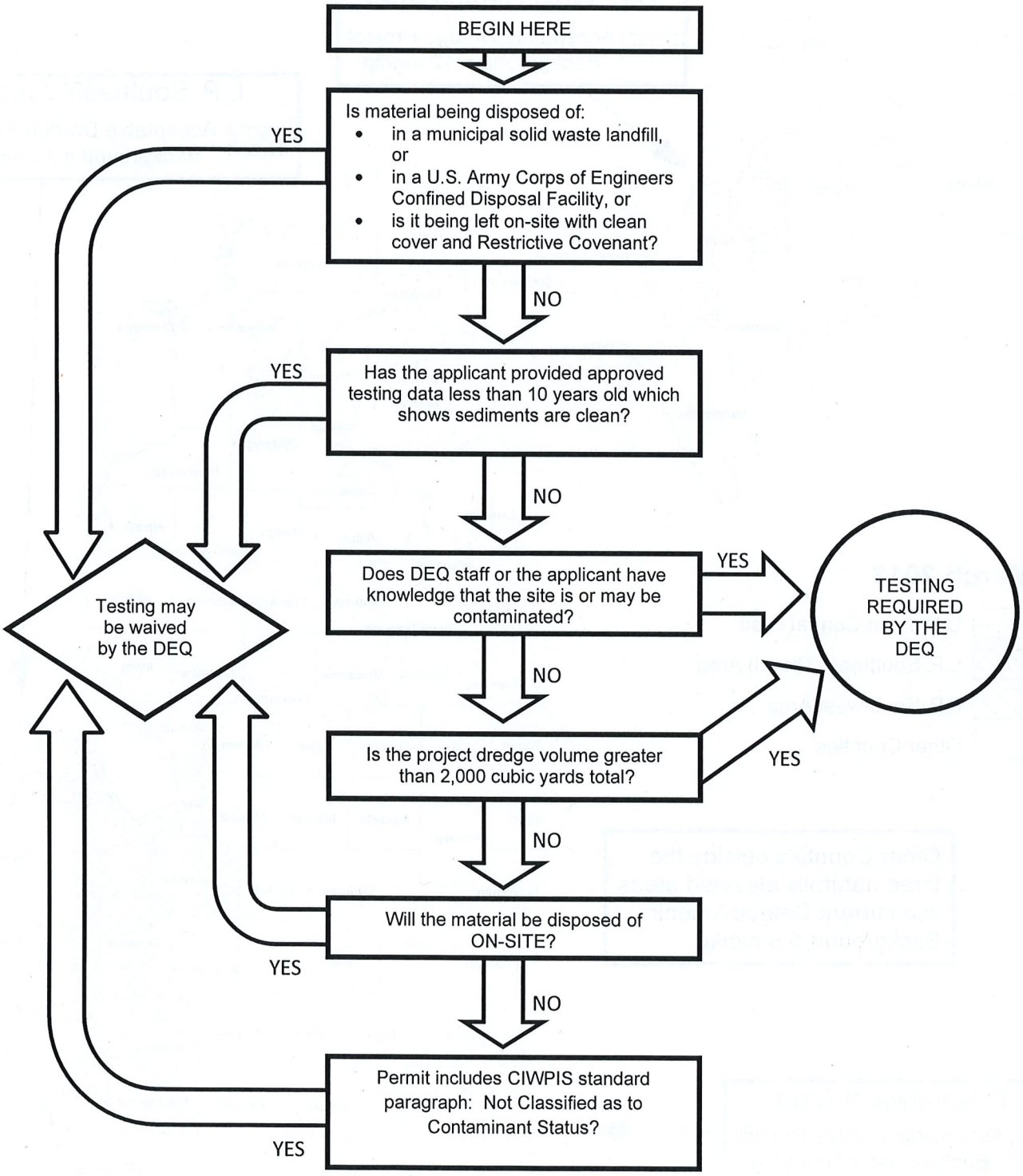
13. Where applicable, the WRD updates CIWPIS that an executed and recorded Restrictive Covenant was received, where applicable, and adds the hard copy to the file.

Approved: Dan Wyant

Dan Wyant, Director

Michigan Department of Environmental Quality

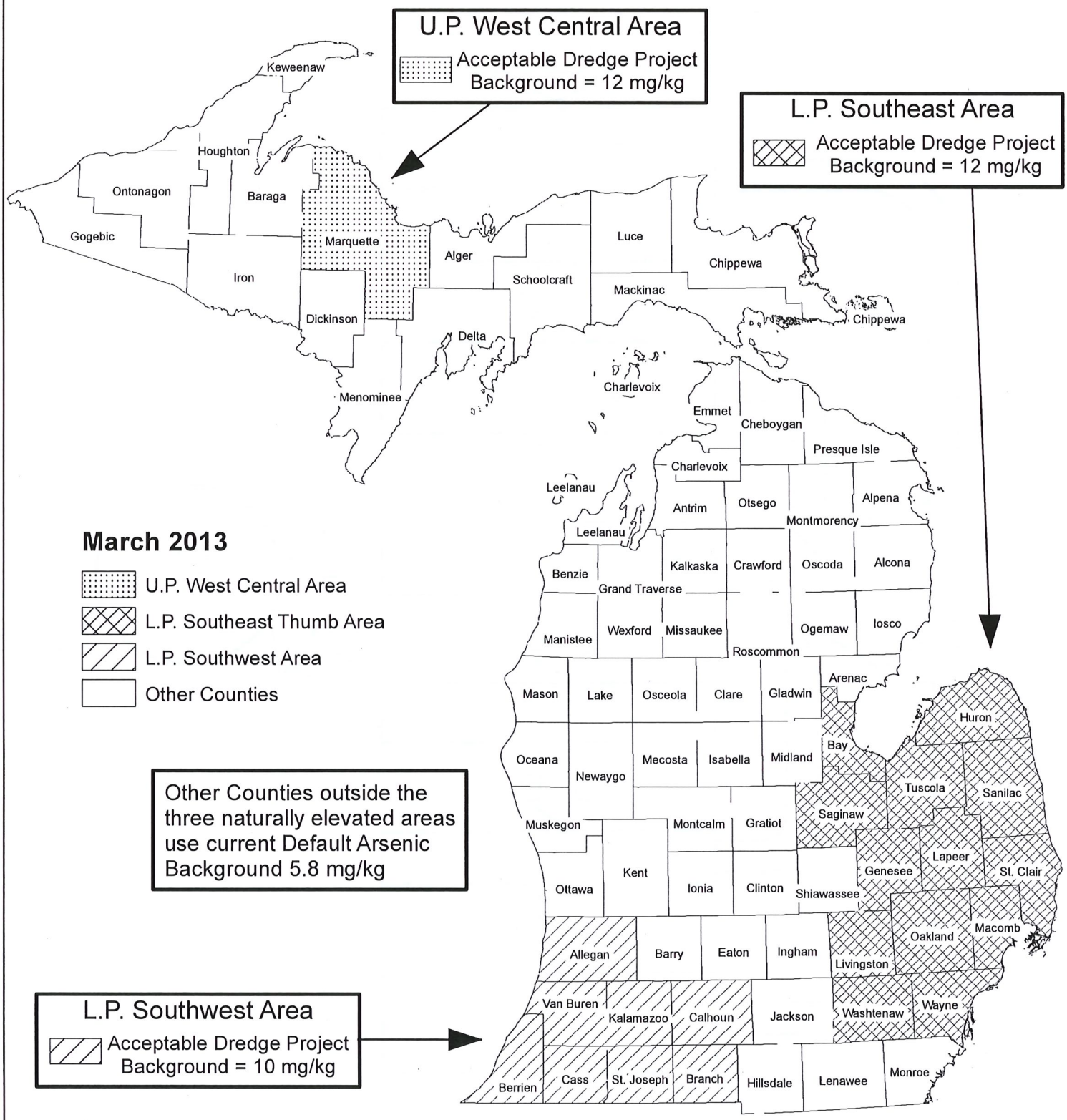
# DREDGE SEDIMENT REVIEW FLOW CHART




March 2013

# Arsenic Information to Support Dredging Material Decisions

Based on Assumed Natural Arsenic Concentrations in Stream Sediments & Soils

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