

## Enclosure 1: Sediment Sampling Protocols

As part of Congressionally-authorized maintenance of Federal Navigation Channels, the U.S. Army Corps of Engineers (Corps) partners with Federal and State agencies to develop testing and sampling methods and strategies that identify the necessary characterization of sediments and develop conservative screening values for any potential contaminants of concern. These sampling efforts are independent of Corps projects and are designed to cover large areas of the Federal Channel so that samples are available for projects throughout Duluth-Superior Harbor in a timely manner. Sampling occurs on a 3-5-year basis to ensure that up-to date information and analyses are available as part of the determination of suitability. This means that all materials in the Duluth-Superior Harbor are sampled and analyzed by the Corps **before** they are considered for a project, including dredging and beach nourishment projects.

The Corps is responsible for these sampling efforts and follows the procedures and guidelines outlined within the Great Lakes Dredged Material Testing and Evaluation Manual (USEPA/Corps 1998; <https://greatlakesdredging.net/wp-content/uploads/sites/38/2016/12/1998-usace-dredged-material-testing-manual-all.pdf>). In coordination with state agencies, the Corps sediment material testing plan also meets the sampling and testing requirements in accordance with the St. Louis River Area of Concern Quality Assurance Program Plan for Minnesota Based Projects (MPCA, 2015; <https://www.pca.state.mn.us/sites/default/files/p-eao2-20.pdf>), and with the WDNR Consensus Based Sediment Quality Guidelines, Wisconsin Water Quality Standards in Chapters NR 102, 103, 104 and 105, Wis. Admin. Code, and soil direct contact levels in ch. NR 720, Wis. Adm. Code. The Corps conducts quality assurance/quality control (QA/QC) on all data to ensure the appropriate procedures and guidelines were properly employed and produced quality data that is actionable. We share these data regularly with State agencies so that independent evaluations can be conducted and the suitability of material can be determined based on project objectives and considerations.

In 2018, the Corps, Detroit District submitted a request to the MPCA for a Clean Water Act 401 Water Quality Certificate (401WQC) for the placement of approximately 1,000,000 cubic yards of dredge materials over a 5-year period. The proposed placement area to be covered by the 401WQC was Minnesota Point beach along Lake Superior. This would achieve the objectives of removing critical shoals from the Federal Navigation Channel and help restore beach and dune habitat of Minnesota Point. The Corps received the 401WQC from MPCA in March 2019 and it is valid through 2024. One condition of the 401WQC is that the Corps coordinate its dredge operations annually with the MPCA. As part of this annual coordination, the Corps submits details for that year's planned dredging operations, including:

- Areas identified to be dredged;
- Estimated volumes to be dredged from each area;
- A list of relevant sediment samples (samples either from within the dredge area or a sampling area that overlaps with the dredge area);
- Sediment grain size data for the dredge areas;

- A brief overview of any contaminants of concern and measured concentrations from sediment sampling data;
- Typical sediment boring logs from relevant samples, and;
- A list of potential Best Management Practices (BMPs) for the contractor to use during operations to prevent the violation of State water quality standards or 401WQC conditions.

We submit all relevant documents, figures, and data (including laboratory reports) as part of this annual submittal to the MPCA. The objectives of this annual coordination are to ensure that the Corps remains aware of the conditions of the 401WQC and water quality standards, communicates this information to the contractor, and enforces approved methods or BMPs. The MPCA is, in turn, given the relevant information for that year's placement, specifically highlighting samples and laboratory results that best represent the material to be dredged. Both agencies review this information prior to any contracts being issued by the Corps for the dredging and placement.

Once a contract is awarded, Corps staff ensure that the contractor is aware of the 401WQC standards and BMPs, and also verifies they are being properly employed throughout operations. There is an agreed-upon process for monitoring compliance and steps to take if compliance is not being met, which is the responsibility of the Corps to follow and communicate to the MPCA should any issue arise.

Throughout this process, from sediment sampling and laboratory analysis, through planning and coordination with the MPCA, to contract award and execution, the Corps is committed to obtaining the best information and sharing it with partner agencies in a transparent manner. The Corps continues to review and update this process to best reflect state of the art science, water quality standards, and construction practices, in coordination with state and local partners.