



**Division of Surface Water
Response to Comments**

**Project: Cleveland Harbor Dredging 2015, 401 Water Quality Certification
Ohio EPA ID #: 144574**

Agency Contacts for this Project

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Ohio EPA held a public hearing on February 24, 2015, regarding an application by the U.S. Army Corps of Engineers (USACE) to perform maintenance dredging in the Cleveland Harbor and Cuyahoga River federal navigation channels. This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on March 3, 2015.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

Comment 1: **Several commenters were concerned about the potential for additional PCB loading into Lake Erie.**

Response 1: Open-lake disposal of dredged material from the Cuyahoga River and Cleveland Harbor has the potential to increase PCB loading into Lake Erie; therefore, Ohio EPA is requiring all the material be disposed in confined disposal facilities (CDFs).

Comment 2: A number of people commented about Lake Erie as an important resource to the region in terms of industry, recreation, tourism and especially as a source of fresh clean drinking water. They support efforts to protect Lake Erie and oppose open dumping of contaminated dredged material.

Response 2: To protect Lake Erie, Ohio EPA will continue to work with our local, state and federal partners to ensure that dredged material is managed responsibly.

Comment 3: A number of comments were received regarding beneficial reuse of dredged material (i.e., treat the material as a commodity).

Response 3: Ohio EPA has been working with the Cleveland-Cuyahoga County Port Authority, USACE and other partners to find beneficial uses for dredged material. For example, the Port Authority intends to install bed load interceptors upstream of the shipping channel to capture clean sediment before it moves downstream and reaches the shipping channel. A pilot study indicated nearly 45,000 cubic yards of material could be recovered annually prior to it reaching the federal navigation channel.

Beach nourishment is another option being considered. Due to contamination levels in newly-dredged sediment, Ohio EPA does not support using that material for beach nourishment. However, cleaner material from other dredging projects along Lake Erie has been placed into the littoral drift for beach nourishment. While dredged material from Cleveland Harbor does not meet the criteria for unrestricted beneficial use (the residential standard), the material is clean enough to be used for commercial or recreational applications. The Port Authority has demonstrated there is a market for this material and will begin implementing a reuse plan this year.

Ohio EPA will continue to work with our partners to explore other potential uses of dredged material.

Comment 4: One commenter suggested Ohio should employ a beneficial reuse strategy for the Cuyahoga similar to the Duluth model.

Response 4: Ohio EPA, the Port Authority and other partners are employing a beneficial use strategy that is similar to the Duluth model.

Comment 5: One commenter suggested the contamination originates upstream of the area dredged each year.

Response 5: Past sampling indicates most of the contamination is downstream of Big Creek and within the shipping channel. Ohio EPA supports the Port Authority's plan to place bedload interceptors upstream of the shipping channel. The interceptors could capture nearly 45,000 cubic yards of clean sediment annually. This is material that could be put to good use elsewhere.

Comment 6: **One commenter requested the Ohio Department of Natural Resources' (ODNR) in-water work restriction be lifted so USACE could begin dredging earlier than mid-May. The commenter suggested the in-water work restriction was put in place about 10 years ago and that forced USACE to start dredging later in the spring. "If you're going to dig the material up and say it's that bad, then dig it up in the spring before the first ship hits, so the ship doesn't stir the bottom up and deposit that stuff out in Lake Erie."**

Response 6: USACE works with channel users to determine a start date for annual dredging. The recent target start date of May 15th was established to balance the demands of dredging with the benefits realized from dredging after spring storms have flushed sediment into the channel. Dredging too early could result in significant shoaling after the contract is completed. Dredging too late could significantly impact the carrying capacity of vessels in the channel.

Comment 7: **Does Ohio EPA agree with USACE's assertion that open-lake disposal will not impact fish or impact limits on consumption of Lake Erie fish?**

Response 7: Ohio EPA does not agree; therefore, the Agency will not allow dredged material from the Cuyahoga River and Cleveland Harbor to be open-lake disposed.

Comment 8: **Does Ohio EPA agree with USACE's assertion that open-lake disposal will not cause or contribute to harmful algal blooms in Lake Erie's central basin?**

Response 8: At this time, Ohio EPA does not have enough information to make such a determination.

Comment 9: **A number of commenters asked whether dumping dredged material in the lake at CLA-1 (the proposed disposal location for 2015) would have an impact on Cleveland's drinking water intakes.**

- Response 9:** USACE's proposed open-lake disposal site, CLA-1, is approximately six miles from Cleveland's drinking water intakes. USACE modeling showed dispersion or settling would not be an issue at this distance. Ohio EPA is not permitting open-lake disposal. There will be no impact to the city's drinking water intakes.
- Comment 10:** One commenter asked why we go through the 401 application and public participation process every year.
- Response 10:** Ohio EPA's review of USACE's application and the authorization of the 401 Water Quality Certification occur annually. Soliciting input from the public is an important part of the process.
- Comment 11:** One commenter asked Ohio EPA to take all measures to resist the Corps' move regarding cost sharing of Cuyahoga dredge.
- Response 11:** USACE has not adequately demonstrated that dredged material from the Cuyahoga River and Cleveland Harbor meets the criteria for open lake disposal; therefore, Ohio EPA maintains they should manage all the dredged material in the CDFs at full federal expense.

USACE submitted the remaining comments 12-17.

- Comment 12:** In Ohio Environmental Protection Agency's (OEPA's) opening remarks, OEPA emphasized that the bioaccumulation of polychlorinated biphenyls (PCBs) in fish resulting from the discharge of Upper Cuyahoga River Channel dredged sediment in the open-lake waters of Lake Erie was their primary concern. Pursuant to Section 404 of the Clean Water Act and USACE responsibilities to administrate and determine compliance of dredged material discharges with the Section 404(b)(1) Guidelines developed by the U.S. Environmental Protection Agency (USEPA), USACE is required to evaluate and determine whether the discharge of dredged sediment at a specified disposal site would result in unacceptable adverse effects to the affected aquatic ecosystem. This process explicitly requires USACE to evaluate the potential bioaccumulation of sediment contaminants of concern (COC) which in this case includes PCBs. OEPA did not mention USACE's technical evaluation of PCB bioaccumulation pursuant to Clean Water Act Section 404(b)(1) Guidelines (40 CFR 230.11 [d]) as addressed in the 2013 dredged material evaluations and subsequent correspondence. As OEPA is aware, USACE believes that OEPA has misinterpreted our evaluation of this biological

measurement endpoint, particularly with respect to bioaccumulation in fish such as walleye.

Response 12: USACE is required to and has evaluated bioaccumulative contaminants in the harbor sediments. Ohio EPA continues to disagree with USACE's evaluation process and the conclusions reached regarding PCBs in the harbor sediments. Ohio EPA remains open to communications on this matter to ensure all agencies understand each other's positions.

Comment 13: **Under Section 401 of the Clean Water Act, discharges of dredged material authorized under Section 404 are subject to certification from the state that the discharge complies with applicable state water quality standards (WQSs) after consideration of dilution and mixing. With respect to PCBs, OEPA did not mention in its opening remarks that the proposed discharge of Upper Cuyahoga River Channel sediment in the open-lake would meet applicable numeric water quality criteria which are likewise applied to other PCB discharges to Lake Erie, including those regulated under Section 402 of the Act.**

Response 13: The nature of WQSs is another area of disagreement between agencies. USACE appears to consider numerical water quality criteria (WQC) to be the only applicable WQS; however, U.S. EPA and the joint U.S. EPA/USACE guidance define WQS to include WQC as well as antidegradation rules. Ohio EPA believes USACE has failed to meet the antidegradation rule, per our interpretation of the 404(b)(1) guidelines, which is an applicable WQS.

Comment 14: **In OEPA's opening remarks, OEPA implied that USACE had reviewed OEPA's new 2014 data on the Upper Cuyahoga River Channel sediments, which according to OEPA indicate that the sediments are substantially more contaminated than as described in the 2013 dredged material evaluation. The USACE has not yet received most of OEPA's 2014 data. However, we have reviewed a graph based on some of the polycyclic aromatic hydrocarbon (PAH) data through an OEPA letter to USACE dated February 20, 2015. While we will be unable to specifically comment on the 2014 data until we receive them along with the corresponding sampling information, we are concerned that some conclusions regarding PAH contamination may be speculative at this time.**

Response 14: Ohio EPA continues to work with USACE to more definitively answer the question of heterogeneous contamination in the harbor

sediments. Ohio EPA has requested USACE conduct additional sampling and analysis on the harbor sediments to answer this question with more certainty. In the absence of such sampling and analysis, Ohio EPA must rely on its own sampling results to address this question.

Comment 15: In OEPA's opening remarks, OEPA stated that walleye migrate throughout Lake Erie. While USACE agrees, not all walleye migrate throughout the lake, and many individuals may stay within their basin of origin. Nevertheless, this spatial point made by OEPA is directly germane to the bioaccumulation exposure modeling presented in the 2013 dredged material evaluation thoroughly reviewed by OEPA in 2013. The home range of 51.8 square miles used for walleye in that modeling was highly conservative and the reasons for such are discussed on pages 31-32 of the dredged material evaluation. For example, the estimated 51.8 square mile home range represents 0.8 percent of the approximately 6,250 square mile Central Basin of Lake Erie. Home range is one of a number of factors in exposure modeling that can be used to gauge PCB bioaccumulation in fish. The USACE respectfully requests that OEPA consider this acknowledgement of a substantially larger home range for walleye and its ramifications on bioaccumulation exposure to PCBs in the dredged sediment.

Response 15: Ohio EPA has requested U.S. EPA review these specific concerns. If U.S. EPA's conclusions differ substantially from Ohio EPA's, we will consider that in our deliberations. Ohio EPA has also suggested USACE meet with ODNR about the points of disagreement with fish tissue modeling and interpretation. To date, that has not occurred. Ohio EPA would welcome continued discussions on these difficult issues.

Comment 16: In OEPA's opening remarks, OEPA pointed out that PCBs adsorb to sediments. In other words, PCBs are hydrophobic. USACE views sediments as serving as both a source and sink for contaminants such as PCBs. At environmental concentrations such as those observed in the Upper Cuyahoga River Channel sediments, bottom sediments in deeper waters like those at open-lake areas CLA-1 and CLA-4 function more as a sink rather than a source for PCBs because flux is relatively low due to the general lack of erosive forces allowing resuspension. Hydrophobicity and flux are just some of the other factors in exposure modeling that can be used to gauge potential PCB bioaccumulation in fish such as walleye. The

USACE respectfully requests that OEPA consider these factors when assessing the potential of PCBs in the dredged sediments to bioaccumulate in walleye.

Response 16: In Ohio's experience, sediments are often a major source of fish tissue contaminants; however, we recognize Lake Erie is a complex ecosystem which may vary substantially from other ecosystems we have studied. Ohio EPA is open to reviewing any additional information USACE can provide regarding PCBs in sediment.

Comment 17: **With respect to the dredging environmental window for Cleveland Harbor, there was a question raised and some interagency discussion during the Question and Answer (Q&A) period regarding its technical soundness and overall effectiveness toward protecting fish. As OEPA is aware, USACE completed a field plume monitoring and characterization effort in May 2011, which showed that dredging-induced plumes were spatially and temporally limited such that they would have little potential to adversely affect spawning fish. This investigation was conducted in full coordination with the Ohio Department of Natural Resources (ODNR) and OEPA. These results question the need for an environmental window during dredging of the Upper Cuyahoga River Channel. Nevertheless, current standard practice used to address this interagency difference of opinion is burdensome as USACE must initially plan to commence dredging on July 1, but then request a year-to-year waiver to start by May 15. Further, while USACE believes that scientifically valid dredging environmental windows are an invaluable management tool in protecting fish and fisheries, we reiterate that they do not pertain to the discharge of dredged material or applicable state WQSs, and therefore should not be contained as a condition in Section 401 water quality certifications.**

Response 17: Under antidegradation rules, Ohio EPA's Director considers potential impacts to aquatic life including important commercial/recreational sport fish species. The agency also consults with ODNR on 401 applications. The restriction on dredging remains in place to protect fish species.

End of Response to Comments