

## Urban Environmental Equity Field Report 4: Responding to Stakeholder Uncertainty in the Milwaukee Estuary AOC

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### Overview

This research brief seeks to illustrate specific areas of interest that may benefit from additional outreach material and efforts associated with remediation and restoration in the Milwaukee Estuary Area of Concern (AOC). To accomplish this, we examine indications of uncertainty expressed by respondents.

The Milwaukee Estuary AOC, which includes segments of the Milwaukee, Kinnickinnic, and Menomonee rivers and their tributaries, is impacted by 11 out of 14 beneficial use impairments as defined by the International Joint Commission, indicating that the health of the aquatic ecosystems is heavily compromised (US EPA 2013). With the help of the EPA, WDNR, and other governmental and community organizations, Milwaukee has worked to clean the river of the heavy metals, polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), and other contaminants deposited in river sediment by industrial and municipal operations in the past. Although sediment dredging projects along Lincoln Creek and the Milwaukee River have reduced these risks in specific parts of the AOC, remaining pollutants in untreated areas continue to limit the quality of the aquatic ecosystem (US EPA 2013).

To learn more about local perceptions of the ongoing remediation process and how environmental changes affected the community, the Urban Environmental Equity Project conducted a series of interviews from February 2014-February 2015. Interviews included questions about knowledge and perceptions of the environmental restoration projects along Milwaukee's rivers.

In analyzing interview data collected from Milwaukee, Wisconsin, on EPA's ongoing sediment remediation projects and riparian restoration, a number of themes emerged with regard to how much interviewees knew as well as how much they *didn't* know. For the purposes of this brief, we consider uncertainty to be expressed through responses such as "I don't know," "I'm unsure," and other similar phrases in response to interview questions, as well as participants posing questions of their own to the interviewers in an attempt to seek clarification or new information. While all 35 respondents indicated elements of uncertainty about the cleanup projects and their impacts at some point in their interviews, 9 of the respondents talked about these elements at length and asked clarifying questions of their own. Themes of uncertainty about the health of the waterways, public perception of the waterways, environmental governance, and blind spots in communication were identified.



## **Interview Procedures**

In an effort to uncover more about local perceptions of the ongoing remediation process and how environmental changes impact communities in Milwaukee, the Urban Environmental Equity Project conducted a series of interviews from February 2014-February 2015. Interviews lasted from 30-60 minutes and included questions about how long respondents had lived or worked in Milwaukee, their perceptions of change in their community over time, their use of waterways and open spaces, and their knowledge and perceptions of the environmental restoration projects along Milwaukee's rivers.

In subsequent analysis of the collected interview data, a number of themes emerged with regard to how much interviewees knew about the remediation projects and the state of the region's waterways – as well as how much they did *not* know. For the purposes of this brief, we consider uncertainty to be expressed through responses such as “I don't know,” “I'm unsure,” and other similar phrases in response to interview questions, as well as participants posing questions of their own to the interviewers in an attempt to seek clarification or new information.

## **Findings**

While all 35 respondents indicated elements of uncertainty about the cleanup projects and their impacts at some point in their interviews, 9 of the respondents talked about these elements at length and asked clarifying questions of their own (Appendix A). Themes of uncertainty about the health of the waterways, public perception of the waterways, environmental governance, and blind spots in communication were identified. This research brief seeks to illustrate specific areas of interest that may benefit from additional outreach material and efforts in the future.

### ***Uncertainty concerning health of the waterways***

Over the course of their interviews, many participants expressed uncertainty about the current state of the river and the technical aspects of remediation work. Their knowledge bases varied widely, but almost all participants indicated uncertainty about some aspect of the river, whether it was how clean it “really” was to more specific questions about contaminant content and monitoring. 7 of the participants had not heard of any specific remediation projects occurring in the AOC at all, and most of the remaining 28 who had described them in relatively vague terms. Specific questions posed to the interviewers included:

- Are fish populations improving?
- Are the cleanups still occurring?
- Are more contaminants still coming downstream?
- By how much has the public health risk from contaminants been minimized?
- Will the ecosystem ever be completely cleared of these contaminants?
- How long will it take for fish populations to recover and be safe for consumption?
- What kind of monitoring will be done on the project sites once work is completed, if any?

### ***Uncertainty concerning perceptions of contamination***

General perceptions of the health and quality of waterways in the AOC were mixed, with some interviewees noting marked improvement over the course of their time in Milwaukee but others acknowledging that the rivers were still heavily impaired. A number of stakeholders spoke not only for themselves when addressing perceptions of contamination, but for their fellow residents -- the knowledge base and safety habits of fishermen were the source of much speculation in particular. Even if interviewees themselves did not make frequent use of the rivers, they acknowledged that other members of their community did for fishing and recreation, and a few individuals expressed particular concern over how much (or how little) those utilizing the waterways knew about the dangers of the contaminants lingering in both the sediment and the fish. Questions posed to the interviewees included:

- To what degree are long-standing stereotypes of the river being contaminated and minimally useable still true?
- What do stakeholders, particularly fishermen, really know about the contamination?
- Do fishermen know how to safely process the fish they catch, and if so, do they actually follow those guidelines?
- How can educators communicate with stakeholders about the contamination without scaring them away from using the river entirely?
- Are the impacts of the remediation work visible to stakeholders?

### ***Uncertainty concerning leadership and governance***

Another set of key questions from interviewees focused on the organizations behind the remediation projects throughout Milwaukee: which agencies were responsible for what elements of the work in different areas of the AOC, and to what extent they were involved. This study's questionnaire specifically mentioned "EPA-funded cleanup projects" along local waterways, and while all participants were thus informed of the main governmental group involved in the work, many wondered if any others were involved, and to what degree. For some interviewees, this mention of EPA was the first instance they'd heard of a specific group being identified with the cleanup work. A few individuals were interested in the specific funding sources for the restoration work, with some wondering if the federal dollars spent on the projects might not be put to better use somewhere else but others acknowledging that the remediation would need to be funded regardless. Some specific questions posed to interviewees included:

- In what capacity is EPA involved in the work on the Milwaukee, Menomonee, and Kinnickinnic rivers, respectively?
- What other groups, if any, are involved with the remediation work?
- How is this work being funded?
- What percentage of project funding comes from the federal government?
- Where can this information be found and shared?

### ***Uncertainty concerning communication***

The heart of these issues of uncertainty lies in effective communication and outreach strategies, a topic that many interview participants had questions about in and of itself. Interviewees asked about the best ways to stay up to date about the remediation work and how it was progressing, and what venues this information was being shared through, whether digital, print, or word-of-mouth within the affected communities. Some local residents mentioned the Great Lakes Legacy Act kiosks featuring information on the cleanup posted in Lincoln Park, with mixed reviews: one interviewee pointed out that even though the kiosks contained relevant and up-to-date project information, they were unsure of how many people took the time to stop and read them. Other interviewees expressed interest in helping with the restoration work if possible, but were unsure if there were ways for residents to get involved in any element of river stewardship related to these projects. Finally, some participants involved with environmental governance or NGOs discussed the need for better inter-organization communication with regards to project updates and community outreach in order to reduce the risk of redundancy or blind spots in educational material for other stakeholder groups: as one respondent put it, “things are happening so quickly, and what I worry about is that we're tripping over each other, and that we may be doing so at the cost of our own goals just because we don't know everything that's going on” (Interviewee #3). Specific questions posed to the interviewees included:

- How can stakeholders stay abreast of project updates?
- Are the multiple groups involved with remediation work communicating with each other effectively?
- Is cleanup information being disseminated through anything other than the GLLA park kiosks?
- Is the kiosk information relevant and up to date?
- Are community members actually engaging with the kiosks and other outreach material?
- Is there any way for interested stakeholders to get involved with elements of restoration work themselves?

### **Conclusion**

While almost all respondents expressed some degree of uncertainty in response to interview questions about ongoing environmental remediation projects in the Milwaukee Estuary AOC, it is interesting to note that all seven interviewees who responded with extended questions of their own were parts of non-governmental organizations and environmental groups, or otherwise served in a leadership capacity in their communities. Aside from two interviewees who worked for environmental governance organizations themselves, the rest were unsure of the best sources to turn to for answers to their inquiries. Connecting these individuals with resources such as EPA's Milwaukee Estuary website and fact sheets and the GLLA park kiosks and outreach events may serve to answer some of their questions, but expanding upon this content and improving its accessibility will be necessary for continuing successful outreach to both community leaders and local stakeholders in general.

## **References**

US EPA. (2013, January 30). *Milwaukee Estuary | Great Lakes*. Retrieved from <http://www.epa.gov/grtlakes/aoc/milwaukee/index.html>

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## Appendix: Interviewee awareness of remediation and uncertainty-related questions

Interviewee	Occupation	Environmental Background	Aware of Remediation Work	Had Specific Uncertainty-Related Questions
14	Non-governmental organization	N	N	N
1	Community leader	N	Y	N
15	Local government	Y	Y	Y
4	Local government	Y	Y	Y
13	Non-governmental organization	N	Y	Y
2	Local government	Y	Y	Y
16	Non-governmental organization	N	Y	N
17	Local government	N	N	N
18	Community leader	N	Y	N
3	Non-governmental organization	Y	Y	N
10	Community member	Y	Y	N
19	Community member	Y	Y	N
20	Community member	N	N	N
5	Community member	N	N	N
21	Community member	N	N	N
22	Community member	N	N	N
12	Community leader	Y	Y	Y
6	Non-governmental organization	N	Y	N
23	Non-governmental organization	N	Y	N
24	Non-governmental organization	Y	Y	N
7	Non-governmental organization	N	N	N
25	Local government	Y	Y	Y
26	Non-governmental organization	Y	Y	N
8	Non-governmental organization	Y	Y	Y
27	Non-governmental organization	Y	Y	N
28	Community leader	Y	Y	Y
29	Community leader	Y	Y	N
30	Community member	N	Y	N
9	Local government	Y	Y	N
31	Community member	N	Y	N
32	Community member	N	Y	Y
11	Local government	N	Y	N
33	Non-governmental organization	N	Y	N
34	Community member	N	Y	N
35	Community member	N	Y	N