

ATSDR Studies on Chemical Releases in the Great Lakes Region: Response to IOM Peer Review and Public Comments

This final report and its earlier drafts have benefitted greatly from multiple rounds of peer review or public comment. Changes previous to this final report have been summarized (<http://www.atsdr.cdc.gov/grtlakes/improving-science.html>). This document summarizes modifications and edits to the final report relative to the penultimate draft in response to review of the penultimate draft by an Institute of Medicine (IOM) panel (http://www.nap.edu/catalog.php?record_id=12476) and public comments. Unless otherwise noted, any comments on the content of the report refer to the final version and the changes discussed are relative to the penultimate draft.

Addressing IOM peer-review committee comments

ATSDR found the committee's input to be very useful in finalizing the final report. The committee's recommendations on how to approach projects such as this one fell into several themes. This document summarizes these broad themes and the ways ATSDR utilized the comments to improve the final report. Additional information relevant to some of the IOM comments is presented in the Preface, Chapters 1 and 7, and several of the appendices.

In summary, the committee recommended that "Future projects should be initiated with a process that begins with identification of the research questions to be answered or the tasks (taking into account the importance of the questions and whether information is available to answer them) and then develops and documents a detailed approach to answering those research questions. The approach would include a thorough literature review, definition of the project scope (for example, criteria for inclusion and exclusion of literature, datasets, and chemicals to be

considered), evaluation of possible analyses and methods, and the rationale for the choice of analyses and methods to be used. Any other entities suitable as partners, such as other federal agencies or state governments, would be engaged as early in the process as possible. Review comments and the agency's responses to them would be documented.”

ATSDR has addressed those themes as follows.

Purpose, scope, and rationale of the final report

In the final report, ATSDR addressed the request from the International Joint Commission (IJC), which stated

the Commission would request that ATSDR provide to the Commission information on public health assessments that it has conducted on hazardous waste sites located within any of the 33 [*sic*] United States AOC's. It would be most helpful if ATSDR could identify evaluated sites with each AOC, the Hazard Category assigned to each site, any relevant demographic information available to ATSDR concerning populations at risk, completed exposure pathways identified, and the priority substances following these pathways.

Geographic focus of the report

The geographic focus of the final report is on “Areas of Concern” (AOC) defined by Annex 2 of the Great Lakes Water Quality Agreement (GLWQA) as a geographic area that fails to meet the General or Specific Objectives of the Agreement where such failure has caused, or is likely to cause, impairment of beneficial use or of the area's ability to support aquatic life. Chapter 1

provides additional detail on impairments of beneficial use and provides a map showing the 26 U.S. AOCs, which are the focus of the final report.

Contaminant focus of the report

As defined by IJC, critical pollutants are chemicals that persist in the environment, bioaccumulate in fish and wildlife, and poison humans and animals. The IJC has identified critical pollutants as the focus for efforts to reduce pollutants in the Great Lakes. Because of these pollutants' toxicity, the Great Lakes Binational Toxics Strategy identifies them as requiring immediate priority and targets them for virtual elimination (<http://www.epa.gov/bns/>). Chapter 1 identifies the 11 critical pollutants that are the primary focus of the final report. The report includes data sources that provide information about critical pollutants . It is expected that the final report will have audiences in addition to the IJC. Therefore, when a source is included in this report and provides information on pollutants other than those which are deemed critical by the IJC, ATSDR has provided information on these additional pollutants.

Methods and data

The GLWQA calls on the U.S. and Canada to define “the threat to human health from critical pollutants” found in the Great Lakes region. In its December 2001 request, the IJC asked ATSDR to review those health assessments it conducted on hazardous waste sites within AOCs on the United States side of the Great Lakes region. The IJC stated further that

It would be most helpful if ATSDR could identify evaluated sites within each AOC, the Hazard Category assigned to each site, any relevant demographic information available to ATSDR concerning the populations

at risk, completed exposure pathways identified, and the priority substances following these pathways.

This request was more complex than it appeared. AOCs do not correlate well geographically with the waste sites that ATSDR has evaluated. Some waste sites occupy small parts of an AOC while others may be only partly contained within the AOC. Sources of contamination may lie close to but not within an AOC while still contributing to environmental pollution within the AOC. Many sources of contamination in AOCs have not been evaluated by ATSDR. Finally, many sites that ATSDR has evaluated have since been remediated and thus do not provide current information on environmental contamination in the AOCs.

Therefore, in an effort to provide more complete and up to date information about current environmental contamination in AOCs, ATSDR scientists considered whether additional data sources might be useful in answering the request. ATSDR surveyed many sources of data on environmental exposures and human health (see Appendix 3 of the report for the environmental and health data considered). At the core of the final report are the ATSDR site assessment/public health assessment data from hazardous waste sites in the AOCs or in the 54 counties that are in or are in close proximity to the 26 U.S. AOCs. ATSDR updated those assessments with additional information from the U.S. Environmental Protection Agency (EPA) and other sources to reflect remediation efforts since the time of the initial assessment. In addition, to provide a more complete and holistic picture of ongoing chemical inputs into the Great Lakes AOCs and add value to the final report, ATSDR provided examples of data from three other major U.S. EPA data sources, including U.S. EPA 2001 chemical release data from its Toxic Release Inventory (TRI), U.S. EPA 2004 data on pollutant discharges into water from its National Pollutant Discharge Elimination System (NPDES), and data on “beneficial use impairments,”

such as wildlife and drinking water advisories, from each of the Great Lakes states. These data are presented in text, tables, and Geographic Information System-based (GIS) maps created by ATSDR for each of the 26 U.S. AOCs and the 54 AOC counties.

ATSDR included these datasets because it believed them to be relevant to the request. ATSDR was also able to assure the scientific quality of the datasets, and summarize the data within the time and resources available for this project. The list is not all-inclusive; ATSDR included data only for selected years. Because of limitations in time and resources available for updating, the list does not reference all datasets that could have been included (Appendix 3 provides a list of those considered) and also does not include less well-defined contamination sources, e.g., atmospheric deposition and urban/agricultural runoff. The datasets do, however, provide a somewhat more inclusive picture of chemical inputs into the Great Lakes region than would a report limited only to ATSDR-evaluated sites. Chapter 1 contains much more information than previous drafts of the report on details of what information was included from each of the data sources and why the information was included.

Consistent with the original IJC request, ATSDR included—when such information was available—relevant demographic data about populations (e.g., children, women of childbearing age, the elderly) who, if exposed to toxic substances, may experience higher than usual exposures or greater than usual health consequences. For some sites in Chapters 2–6, ATSDR provided data regarding numbers of children, women of child bearing age, and elderly persons living in close proximity (i.e., within 1 mile) of that site. Wherever possible, ATSDR has updated demographic information relevant to the specific site health assessments. ATSDR did not provide general demographic information for AOC counties because it is not possible to determine which populations might have had exposures to environmental toxins.

ATSDR also considered whether available health data would permit linkages between environmental contamination in the region and human health concerns. ATSDR concluded that because available environmental and health data are not generally well matched by place and time, ATSDR could not draw firm conclusions about the threat to human health from critical pollutants across the Great Lakes region. Further multi-agency research must address this essential public health concern.

Limitations aside, a principal value of this report is that it compiles, for the first time in one place, information on 146 ATSDR site assessments conducted between 1982 and 2007 in the Great Lakes region and also provides updated information on their status. In addition, ATSDR illustrated other chemical inputs into the Great Lakes region from publicly available datasets.

References

The bibliography in this report is not intended to be exhaustive; ATSDR has however, included in Appendix 3 several references specifically recommended by the committee.

Scientific bases for conclusions

The final report has been revised to help assure that the conclusions and recommendations are supported by the data presented.

Work with stakeholders

This report reflects considerable collaborative work with key stakeholders including the U.S. EPA and health and environmental agencies from the affected states.

Documentation of responses to review and comment

This document, along with additional history of the scientific improvements over time to the

final report, is summarized on the Great Lakes Program Web site

(<http://www.atsdr.cdc.gov/grtlakes/>). They reflect ATSDR's efforts to incorporate respectfully ATSDR responses to the comments received.

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Appendix A. St. Clair River Binational Advisory Council, St Clair AOC, Friends of the St. Clair River Watershed 101 Response to Public Comments

During the Public Comment Period, we received eight sets of comments. Some comments we will respond to collectively, others we will reproduce verbatim and provide a specific response.

Michigan Department of Community Health

One member of the Michigan Department of Community Health submitted the following comments:

Comment 1

We are concerned that site-specific data provided in the draft document is sometimes outdated and may provide faulty information to the public. MDCH encourages ATSDR to fully examine the most current information for each site discussed rather than rely on outdated ATSDR generated reports that may not reflect current site conditions.

ATSDR Response

Site-specific data have been updated with U.S. EPA and state-partner information current as of the report's release.

Comment 2

ATSDR should state whether or not the report fulfills the request from the International Joint Commission and list how the report may be useful and to whom.

ATSDR Response

These subjects are covered in the Director's Preface, the Executive Summary, and Chapter 1 Background and Methods.

Comment 3

The word "selected" in the title of the Report may cause some to think that the report is incomplete and that ATSDR is intentionally withholding information that may be of interest and value. MDCH suggests simply deleting the word "selected"

ATSDR Response

The title of the report has been changed in an effort to make it clearer and more understandable, thus making the specific comment moot. In addition, the methods have been more clearly explained to address scope issues.

Comment 4

There are inconsistencies in formatting, grammar, and acronym use throughout the draft document. For example:

- a. "EPA" vs. "USEPA"
- b. "Data" is a plural noun and requires an appropriate verb.
- c. Discussion of individual hazardous waste sites uses both past and present tense, making it unclear if the contamination still exists at concentrations of concern or at all.
- d. Formatting of margin and indentation alignments is inconsistent
- e. MDCH is aware that many people put forth effort in assembling this report. However, the language use between authors differs and can cause the reader some confusion.

ATSDR Response

The form "U.S. EPA." now appears throughout the report and other editorial and formatting issues have been addressed. The site descriptions have been reviewed and edited to ensure that past and current conditions are clearly stated.

Comment 5

ATSDR should provide a list of abbreviations near the beginning of the document.

ATSDR Response

The final report now includes a glossary.

Comment 6

ATSDR should standardize section headings in each site-specific discussion.

ATSDR Response

We agree, and this has been done.

Comment 7

MDCH suggests that it may be more helpful to provide direct links to site-specific information rather than the generic National Priority List (NPL) webpage. This is especially true if the site name used in the report differs from that used by the USEPA. Also, some of the links in the Report begin with [www.usepa.gov/...](http://www.usepa.gov/) whereas the correct URL should begin with "[www.epa.gov/....](http://www.epa.gov/)"

ATSDR Response

After updating all of the NPL and non-NPL sites with the most recent information from U.S. EPA Web sites and from CERCLIS, we have now, where possible, provided site-specific links for each **IJC Critical Pollutants Identified** section.

Comment 8

Many sites can have more than one Hazard Category after a single assessment addressing multiple environmental media. It would be helpful to show all the hazards determined for a site for each document and discuss these more fully in the text.

ATSDR Response

This report includes all sites at which ATSDR identified any environmental media posing an Urgent Public Health Hazard, a Public Health Hazard, or an Indeterminate Public Health Hazard. Only recently has ATSDR assigned hazard categories to specific environmental media and associated pathways rather than a single category for the entire site. Site narratives include information on the environmental media posing the greatest threat to human health. Those sites with multiple evaluations and health hazard categories are identified in both tables and text. Our review did not show any site with more than one hazard category after a single assessment. ATSDR's practice is not to characterize a site with more than one health hazard category in any given health assessment or consultation. Several of the sites in the report do, however, show revised health hazard categories after reassessment or after a subsequent health consultation.

Comment 9

All known sites of contamination in the Areas of Concern should be discussed in the report, regardless of ATSDR's involvement at the site. This would impress upon the public and

policy makers that a very real chemical threat to the environment and public health still exists and may shift legislative priorities to prevention, compliance, and cleanup.

ATSDR Response

As noted in more detail in Chapter 1 of the report and above in the responses to IOM's review, this report answers the original IJC request: summarizing public health assessments that ATSDR conducted on hazardous waste sites located within any of the United States AOCs as well as providing examples of data from three other major U.S. EPA data sources, including U.S. EPA 2001 chemical release data from its Toxic Release Inventory (TRI), U.S. EPA data on pollutant discharges into water from its National Pollutant Discharge Elimination System (NPDES), and data on "beneficial use impairments," such as wildlife and drinking water advisories, from each of the Great Lakes states. Given the time and resources available for this project, we were not able to further increase its scope.

Attachment I

Three members of the Michigan Department of Community Health submitted the following comments:

"Improving the Science in the Draft Report" paper

Comment 1

In the first paragraph, the IJC request is quoted. The request is also quoted in Chapter 7 of the AOC report, in the first paragraph under "Conclusions" (Section 7.1), but with additional verbiage. This additional verbiage should also be in the "Improving the Science..." paper.

The request is paraphrased in the Executive Summary (page vi) of the AOC report. If the request was ever formalized in writing, then the written version should be added as an appendix to the AOC report.

ATSDR Response

We have now quoted the request at greater length and consistently throughout the report. The full letter has been published in the IOM review of the Great Lakes reports which is available at (http://www.nap.edu/catalog.php?record_id=12476).

Comment 2

Pg 1 paragraph 1, line 8 — Selected Information? What information is being left out and why?

ATSDR Response

Chapter 1 and Appendix 3 provide detailed information on the information considered and the information included.

Comment 3

In the second paragraph, it is stated that the 2007 draft became public “before ATSDR had finished reviewing and finalizing it.” MDCH was on a conference call with ATSDR and other AOC-containing Great Lakes states in July 2007 and was of the understanding that ATSDR felt ready to release the report. During the July 2007 conference call, MDCH and others stated their concerns that the report was flawed and would not be helpful to the public and that the media would present the report’s conclusions in an alarmist way. Therefore, the

statement quoted above should be rephrased to more accurately depict ATSDR's decision-making process.

ATSDR Response

The statement that the 2007 draft report—a report which by definition was not ready for release to the public—was in fact released before all of the review and clearance procedures were complete, is accurate.

Comment 4

Footnote 1 of this paper has a typographical error on the second line: “LaSee” should read ‘Lakes.’ See....’

ATSDR Response

This change has been made.

Comment 5

“Both Chapters 1 and 7 present more and better information on the strengths and limitations of the compilation.” – More and better information is very awkward and it is used multiple times.

ATSDR Response

The language has been adjusted.

Comment 6

On page 3, the HAZDAT dataset is mentioned for the first time. Many readers will not understand what this dataset is.

ATSDR Response

Appropriate definitions are now included in the report glossary.

Comment 7

“ . . . not relevant environmental data – Beach closings, Should Beach Advisories still be included if it isn’t bacterial?”

ATSDR Response

Pollution-driven beach closings—as opposed to bacterial beach closings—are a factor in determining Beneficial Use Impairment and are therefore included as relevant environmental data.

Comment 8

Pg 4 bullet point 3: Change to - Many, if not most, of the indicators in the Community Health...

ATSDR Response

ATSDR concludes the language in the text is appropriate.

Comment 9

On page 5, second paragraph, the heading “Scientific review:” should be bolded.

ATSDR Response

Noted and addressed.

Table of Contents and Executive Summary

Comment 1

There should be an abbreviations and acronyms list.

ATSDR Response

The final report includes a glossary.

Comment 2

In the Preface, page iii, the last complete paragraph, the word “residua” should be “residues.”

(If “residua” is considered a word, it is not common.)

ATSDR Response

“Residua” is an appropriate noun.

Comment 3

Preface, Pg iii, second paragraph: Change “have found their way into the air, water, land, and biota, and even into people’s bodies.” (people are biota)

ATSDR Response

For some readers, use of “biota” alone would not call attention to the fact that many of these pollutants have entered people’s bodies.

Comment 4

Preface, Pg iii, second paragraph: present status of cleanup is included in the report?

ATSDR Response

The final report includes the current clean-up status of each site.

Comment 5

Preface, Pg iii, fifth paragraph: mention 4 kinds of data, please describe or remove

ATSDR Response

The data are now identified.

Comment 6

Preface, Pg iii, fifth paragraph: mention that environmental data only provides a partial picture, describe why

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current language is appropriate at this point. This issue is more fully explained later in the report.

Comment 7

Preface, Pg iii, the next to the last line of the page, omit the word “not.”

ATSDR Response

The word has been omitted.

Comment 8

Preface, page iv, first line, the term “held up” should be replaced with “stopped.” (“Delayed” should not be used.)

- a. change to ‘stopped release of the report to correct deficiencies.’

ATSDR Response

We have adjusted the wording of the sentence to improve clarity.

Comment 9

Preface, page iv, first full paragraph, change “misinterpreted,” which puts blame on the reader, to “interpreted.” Also, add the following to the sentence that closes this paragraph:

“...during the revision of the 2007 draft report.”

a. “Several important points became clear” during what?

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 10

Preface, page iv, paragraph starting “First...”, the sentence “All of us...believe in wholesome, healthy [delete comma after ‘healthy’] environments, and believe that accurate, timely information will help us get there” implies that our environments are neither wholesome nor healthy. I would suggest stopping the sentence after “environments” and deleting the rest of it.

a. Dislike phrasing, makes it sound like most people are not concerned with these things:

“That shared concern is a precious resource.”

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 11

Preface, Pg iv, fourth paragraph: “It confirms that the Great Lakes basin is contaminated with toxic chemicals, that we lack sufficient information about human exposure to these chemicals, that we are therefore unable to draw solid conclusions about their health impact across the region, and that we need better information.” – Was there question about the presence of the contamination? (also, very awkward)

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 12

Preface, Pg iv, fifth paragraph: “More importantly, we need to apply that understanding, by taking effective action to protect people now and in the future, and to sustain a healthy ecosystem.” – Aren’t these two things beyond the scope of the ATSDR?

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 13

TRI and NPDES data do not indicate whether people are actually exposed to those chemicals is a good point to make. However, some readers will be aware of NHANES and other biomarker-study data and will wonder why those data were not referenced. Also in this paragraph, the last sentence implies that ATSDR intentionally omits exposure data in

assessments. Suggest this language: "...exposure pathways, but cannot necessarily determine how much exposure actually occurs."

ATSDR Response

NHANES is a nationally representative database but does not necessarily represent local conditions and thus is not germane to the main purpose of this report. ATSDR does not agree with the commenters' interpretation of the last sentence as it appears in the text.

Comment 14

Executive Summary, page vi, next to last bullet, change "analytic" to "analysis."

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 15

Executive summary, Pg v, first paragraph: a request to do what?

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 16

Executive summary, Pg v, second paragraph: mention upfront that the 26 AOCs are in the US; "Much of the available data pertain to counties, and not to AOCs."- why not, those are the areas needing remediation?

ATSDR Response

Some of the available data are collected by county or by facility, not by AOC. Chapter 1 now discusses more fully the challenges of matching available data—which are not collected by AOC—with the boundaries of the AOCs themselves.

Comment 17

Executive summary, Pg v, third paragraph: bioaccumulate in wildlife; people and wildlife; what are the 12 categories of critical pollutants?; ...existing data), but also ...

ATSDR Response

When people eat the contaminated fish and wildlife, they ingest the bioaccumulated toxins. The 11 classes of IJC-critical pollutants are listed.

Comment 18

Executive summary, Pg v, third bullet point: "...discharges into water from EPA's..."

ATSDR Response

This change has been made.

Comment 19

Executive summary, Pg v, fourth bullet point: "...use impairments," such as ..."

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 20

Executive summary, Pg v, sixth paragraph: Can “health assessment products” be changed to something the public can easily understand (i.e. reports)? At least provide a description early on.

ATSDR Response

The glossary now includes a definition of “health assessment products.”

Comment 21

Executive summary, Pg v, sixth paragraph: define health data due to the statement that “this report does not include other health data” and there are county registries; I don’t really understand the statement, “Except as noted in the context of ATSDR health assessment products, no currently available health data meet these needs; thus this report does not include other health data.”

ATSDR Response

As noted in the Executive Summary, although other health data may be available that are useful for some purposes, they were not considered as meeting the needs of this report and are therefore not included.

Comment 22

Executive summary, Pg vi, first paragraph: contradictory statements - “Many, (add comma) but not all, (add comma) of these sites have been remediated. The TRI and NPDES data reveal ongoing releases of pollutants in or near almost every AOC.” It doesn’t really sound like the problem has been fixed permanently.

ATSDR Response

ATSDR has now provided site updates for each of the 146 sites in the report for which such data are available. The data show that in fact many of the sites have been fully remediated. However, some sites have not been remediated and some ongoing releases continue; thus problems remain.

Comment 23

Executive summary, Pg vi, third paragraph: change to "...information on the *presence* of environmental pollution provides..."

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 24

Executive summary, Pg vi, fifth paragraph: "...impossible at this time to conclusively/definitively/completely define ..." Previous conclusions give some information, provide qualifications

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 25

Executive summary, Pg vi, first bullet point: pathways of human exposure/pathways that people are exposed

ATSDR Response

The bullet point has been rewritten.

Comment 26

Executive summary, Pg vi, second bullet point: Increased biomonitoring, previously stated that there was a biomonitoring program

ATSDR Response

The presence of a biomonitoring program does not preclude the need for additional biomonitoring. ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 27

Executive summary, Pg vi, fifth bullet point: need description of data linkage

ATSDR Response

The bullet point has been rewritten.

Comment 28

Executive summary, Pg vi, sixth bullet point: change foregoing to abovementioned, definition of confounders or rephrase to confounding variables; change sophisticated to something that provides information; change analytic to analysis

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 29

Table of Contents, page vii, line for 2.1, remove the “1” following “NY.”

ATSDR Response

Noted and changed.

Comment 30

Table of Contents, page viii, line for 5.8, “Menominee” is spelled correctly here but misspelled on the website.

ATSDR Response

Noted and changed.

1.1. Background and Methods**Comment 1**

Pg 3, first paragraph: need punctuation at the end of the last sentence

ATSDR Response

Done.

Comment 2

Pg 3, second paragraph: It would be great, if this is really supposed to be readable for the public, to have the quoted phrases translated into layperson-speak (or there could be a glossary at the end – more than just this paragraph).

ATSDR Response

The final report includes a glossary.

Comment 3

Pg 3, third paragraph: use of the word “selected” again – there hasn’t been a definition of what selected means in this context or a description of how items were selected

ATSDR Response

Chapter 1 and Appendix 3 provide a detailed discussion on the information considered and the information included.

Comment 4

Pg 3, fourth paragraph: please define public health assessment products; change “...54 counties in geographic proximity to one or more...” to ‘54 counties that impact one or more of the 26’ – something to explain that those counties are relevant, not just mentioned because they are close

ATSDR Response

Public health assessment products have now been defined in the Glossary. ATSDR thanks the commenters for their additional suggestions but concludes the current language is appropriate.

Comment 5

Pg 5, top paragraph: “...Michigan AOCs in Chapter 5, (add comma) and Lake Superior AOCs...”

ATSDR Response

A comma has been placed in the appropriate position.

Comment 6

Pg 5, footnote: is this Canadian report equivalent to this one? If so, why was it published in 2001 and only 2 pages for 12 AOCs?

ATSDR Response

Although they addressed similar issues, the scope and methods of the two reports differed significantly accounting for differences in size and timing.

Comment 7

Pg 5, third paragraph: "...bioaccumulate in wildlife, and are toxic to people and other animals (or wildlife)

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current language is appropriate.

Comment 8

Pg 5, Table 1-2: list 2 & 3 first, then indent and describe 2 and 3

ATSDR Response

The IJC-critical pollutants are listed in order of their IJC tracking number precedence.

Comment 9

Table 1-2, footnotes: the footnote discussing the “*” was split from the rest of the table and placed on the subsequent page. Please correct.

ATSDR Response

This has been addressed in the final report.

Comment 10

Pg 6, Section 1.3, first paragraph: again, use of the word selected, but no mention of the criteria used to select the items

ATSDR Response

ATSDR refers the commenter to the response to comment 3, at page A-11, above.

Comments 11 and 12

These comments relate to style and usage.

ATSDR Response

ATSDR thanks the commenters for their suggestions but concludes the current language is appropriate.

Comment 13

Pg 7, section 1.4, paragraph below Table 1-3: finally a definition of health assessment products – already used that term multiple times without a definition

ATSDR Response

The final report includes a glossary.

Comment 14

Pg 8, section 1.4, last paragraph: delete “These too are incorporated in this report.” – It’s not necessary.; “...revised Hazard Category. Thus, (add comma) if conditions...”

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current language is appropriate.

Comment 15

Pg 8, section 1.5, second paragraph: If “Facility releases include discharges to air, water, and land.” is the start of a new paragraph, the line spacing needs to reflect that.; remove (s) on includes; “...is recorded as “releases onto land, (move comma)” the amount...”; last sentence in that paragraph, what does the “they” refer to? (“...compared to where they may have been previously located in the environment.”)

ATSDR Response

The suggested changes have been made.

Comment 16

Pg 9, section 1.5, second paragraph: change to - The TRI data reporting the year 2001 releases were obtained from the USEPA, which released those data in June 2003

ATSDR Response

The suggested changes have been made.

Comment 17

Pg 9, section 1.6, third paragraph: remove “only” – “...the database to identify (removed only) those facilities...”; last sentence – the results were tabulated - where?

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current language is appropriate.

Comment 18

Section 1.6, third paragraph, regarding “...IJC-noncritical pollutants...”: Rephrase this to read “...non-IJC-critical pollutants...”, since the IJC likely does not generate a list of pollutants it takes to be noncritical.

ATSDR Response

These sentences have been rewritten.

Comment 19

Pg 10, section 1.8, first paragraph: “ATSDR produced two maps, one set located in Chapter 2-6 and the other set located in Appendix 1, for each of the ...” - move the descriptions for the two sets of maps closer to the first paragraph

ATSDR Response

Changes in the maps have made this comment moot.

Comment 20

Pg 10, section 1.8, second paragraph: areas of interest to the EPA: watersheds, sources AOCs, or expanded study areas

ATSDR Response

The suggested changes have been made.

Comment 21

Section 1.9, last sentence, delete “and”.

ATSDR Response

The suggested change has been made.

Comment 22

Pg 11, section 1.10, end of only paragraph: “However, (add comma) data about numbers of ...”; change “...children, women of child bearing age and...” to “...children, women of childbearing age, (add comma) and elderly living in closest proximity (within 1 mile) are included in Chapters (change c to C) 2-6 for some sites.”

ATSDR Response

The suggested changes have been made.

Comment 23

Pg 11, section 1.11, only paragraph: font is different in Web address

ATSDR Response

The formatting has been corrected.

1.2. Lake Ontario (not read; no Michigan sites)**1.3. Lake Erie (only sections regarding AOCs in Michigan were reviewed)****Comment 1**

Section 3.7. Omit second paragraph. This paragraph is essentially repeated in 3.7.1.

ATSDR Response

Noted and changed.

Comment 2

Section 3.7.1, first paragraph: “Another industrial facility [Visteon?]...and two hazardous waste sites...” are not identified. If these are sites that were not part of an ATSDR evaluation, that should be stated.

ATSDR Response

ATSDR only evaluated Consolidated Packaging; it did not evaluate the other three sites referenced in the site narrative. ATSDR has amended the narrative accordingly.

Comment 3

Section 3.7.1, next to last paragraph: Why is Visteon discussed here when this site is Consolidated Packaging Corporation? If Visteon was one of the facilities mentioned earlier (see previous comment), information about it should be parenthetical or omitted.

ATSDR Response

Visteon, Inc. was a site in the immediate vicinity of Consolidated Packaging that contributed to pollution in the AOC. It was the subject of investigation by the U.S. EPA, and the information regarding this site is taken from the most current U.S. EPA documents.

Comment 4

Section 3.7.1, last paragraph: The specific PAHs are abbreviated. The lay public will not know what these chemicals are. It would be better to say “several PAHs....” *This happens in numerous hazardous-waste site discussions. Also, here and throughout the document at a majority of these paragraphs* (“IJC Critical Pollutants Identified....”), the phrase “as well as other contaminants previously discussed” is used, but no other contaminants were discussed previously in those particular sections. Perhaps only the IJC-critical pollutants should be identified in this paragraph, in keeping with its heading.

ATSDR Response

PAHs are defined in the glossary, which has been added to the report. If in the site narrative “other contaminants” were not previously discussed, that phrase has been deleted.

Comment 5

Sections 3.7.4.2 and 3.7.4.3 are essentially repeated from sections 3.7.2 and 3.7.3, respectively. *This happens in numerous AOC discussions.* These paragraphs should be more concise in the Summary and Conclusions section. Presenting them in table form, referring the reader to the more detailed TRI and NPDES tables, may be an alternative.

ATSDR Response

The report has been revised to eliminate the separate TRI and NPDES sections within each AOC.

Comment 6

The first table following the map for the River Raisin AOC is a landscape orientation of the table that follows it. Delete the landscape-oriented table.

ATSDR Response

The landscape-oriented table has been deleted.

Comments 7 through 9

These comments relate to the table numbers in the table captions.

ATSDR Response

The suggested table number changes have been made.

Comment 10

Table 3.8-A: There is an error in Document Type for the Lower Ecorse Creek Sump site (1993) – “HV” should either be “HA” or “HC.” Also, delete the “r” in “Finishers” for “Michigan Industrial Finishes.” The footnotes should include definitions for Hazard Categories 1 and 2 as well. The Globe Brownfield site (Category 3) is missing from the table and discussion.

ATSDR Response

“HV” is a “health advisory.” The footnote at the bottom of Table 3.8-A has been amended to include that definition. After receiving a site update from MDCH, the Globe Brownfield site has been added to the report.

Comment 11

Section 3.8.1.8, page 150, first paragraph: The term “imminent” implies that the Hazard Category for the site should have been 1; however the text states earlier that the Category was 2. Delete “imminent.”

ATSDR Response

The term “imminent” does not appear in the first paragraph of section 3.8.1.8. The term did appear in the third paragraph, and has been deleted.

Comment 12

Section 3.8.1.10, second paragraph: Please change the first sentence to read, “In 2005 ATSDR concluded that this site posed an Urgent Public Health Hazard (Category 1) because of the physical hazards.

ATSDR Response

The commenter could have referred to Michigan Industrial Finishes, which at the time of the Public Comment release was section 3.8.1.10, and was the subject of a 2005 health consult that referred to physical hazard on the site. The text in the Michigan Industrial Finishes narrative, which is now 3.8.1.11, has been changed to reflect the commenter’s suggestion.

Comment 13

Section 3.8.10, page 151, first full paragraph: Replace “environmental” with “physical” and “MDCH” with “MDEQ.”

ATSDR Response

The suggested changes have been made.

Comment 14

Section 3.8.1.11, page 152, paragraph beginning “Residential indoor exposure...”: Delete the sentence that begins, “A small but potential risk...” as this statement is made in the previous paragraph.

ATSDR Response

The suggested changes have been made.

Comment 15

Section 3.8.1.12, page 153, paragraph beginning “The FWS...”: Replace “MDCH” with “MDEQ and COE”.

ATSDR Response

The suggested changes have been made.

Comment 16

Section 3.8.1.14, “ATSDR Conclusions” paragraph: In the sentence beginning with, “Weathering...”, delete “in the soil.”

ATSDR Response

The suggested changes have been made.

Comment 17

Section 3.8.1.15, first paragraph: The sentence that begins, “Data on human consumption...” is awkward and should be modified to state the information clearly.

ATSDR Response

The wording has been modified.

Comment 18

Section 3.8.1.15, next to last paragraph: Add “data” after “fish.”

ATSDR Response

The suggested changes have been made.

Comment 19

Section 3.8.1.16, “Demographic Data” section: The text is poorly displayed. Please correct it.

ATSDR Response

The suggested changes have been made.

Comment 20

Table 3.8-B: Correct font size in heading of last column.

ATSDR Response

The suggested changes have been made.

Comment 21

Section 3.8.1.18, “ATSDR Conclusions” paragraph: Correct spelling of “Indeterminate” and change “Category 2” to “Category 3.”

ATSDR Response

The suggested changes have been made.

Comment 22

Section 3.8.1.21, “ATSDR Conclusions” paragraph: see previous comment.

ATSDR Response

The suggested changes have been made.

Comment 23

Section 3.8.1.22, “IJC Critical...” paragraph: PCBs were mentioned in the previous paragraph. If they were identified during ATSDR’s assessment, then they should be included here.

ATSDR Response

The site text has been edited. PCBs are not referenced in either the site narrative or in the IJC paragraph.

Comment 24

Section 3.8.4.1, first paragraph: It is unclear what is meant by “One of the new sites added...” (second sentence). Was the site excluded in the 2007 Draft Report and added to the current draft? Also, in the sentence beginning, “The extent of lead...”, the text indicates that

there has been removal of lead, but early discussion of the site stated that the removal was off-site only.

ATSDR Response

This language was eliminated from the final report.

Comment 25

Section 3.8.4.1, third paragraph, second sentence: Replace “MDCH” with “MDEQ.”

ATSDR Response

The suggested change has been made.

Comment 26

Section 3.8.4.1, flow from page 163 to page 164: There does not appear to be a smooth transition.

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current format is appropriate.

Comment 27

Section 3.8.4.4, first sentence: Add “beneficial uses” at end of sentence.

ATSDR Response

The suggested changes have been made.

Comment 28

Table 3.8-C: Column headings are missing.

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current format is appropriate.

Comment 29

Table 3.9-A: For the Ten Mile/Lange/Re Drainage System Site, another health consultation was issued in 2007 (Category 4). Please see further discussion on this site below (for section 3.9.1.4, general). If this consultation is added to the table, add Category 4 to the footnote description.

ATSDR Response

ATSDR has updated the site narrative to include the latest U.S. EPA data, including the 2007 health consultation.

Comment 30

Section 3.9.1.1, “ATSDR Conclusions” paragraph: “RI/RS” should be “RI/FS.” Move “Construction on the cleanup remedy began...” to after the sentence that currently follows it.

ATSDR Response

That text has been deleted and replaced with a U.S. EPA site update.

Comment 31

Section 3.9.1.4, last line on page 179: Delete the “s” in “Reverse.”

ATSDR Response

The suggested change has been made.

Comment 32

Section 3.9.1.4, general: The Ten Mile Drain 2003 consultation had two Hazard Categories – Category 4 for PCB exposure, and Category 3 for exposure to arsenic in residential soil.

Follow-up soil characterization for the Category 3 issue resulted in a Category 4 (no follow-up health consultation, but DRO-Region 5 collected this information in site recommendation follow-ups). New discovery of PCBs affecting the drain led to residential soil removal by USEPA, resulting in the 2007 health consultation (Category 4) that was omitted from Table 3.9-A.

ATSDR Response

The site narrative has been updated and the 2007 health consultation has been included in Table 3.9-A.

Comment 33

Section 3.9.2: This section should be deleted, and information on TRI and NPDES releases should be inserted. The Summary and Conclusions are currently in section 3.9.3. (Adding TRI and NPDES data will shift numbering.)

ATSDR Response

Section 3.9.3 has been eliminated from the final report.

Comments 34 through 36

These comments refer to Section 3.9 table numbers.

ATSDR Response

The suggested changes have been made.

1.4. Lake Huron

Comment 1

Section 4.1.1.1, “Public Health Outcome Data” paragraph: Add “data” after “Cancer incidence” in the sentence that begins “Cancer incidence.” Also, this sentence is cumbersome and should be edited to be more reader-friendly.

ATSDR Response

The suggested changes have been made.

Comment 2

Section 4.1.1.4, title: Delete the “w.”

ATSDR Response

The suggested changes have been made.

Comment 3

Section 4.1.1.6, “ATSDR Conclusions” paragraph: It appears that the font size changes about midway through this paragraph.

ATSDR Response

That text has been deleted and replaced with a U.S. EPA site update.

Comment 4

Section 4.1.1.9: Various portions of the narrative from this site are not formatted correctly and appear to have been cut-and-pasted from a database. *This also occurs in Sections 4.1.1.14 and 4.1.1.17.*

ATSDR Response

These comments have been addressed in the referenced sections

Comment 5

Section 4.1.1.9, second paragraph (starting at bottom of page 203 – “To date...”): This paragraph is unnecessary and should be deleted.

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current format is appropriate.

Comment 6

Section 4.1.1.12, “ATSDR Conclusions” paragraph: The end of the paragraph states that remediation was completed in 2005, which conflicts with the statement earlier in the paragraph, beginning “More recently in 2006...” Please clarify.

ATSDR Response

The revised site narrative eliminates any perceived conflict in dates.

Comment 7

Section 4.1.1.13, “ATSDR Conclusions” paragraph: Delete the parentheses (but not the text within them) in the sentence that begins, “Most of the TEQ concentration data...”

ATSDR Response

Noted and addressed.

Comment 8

Public Health Outcome Data, third paragraph: The report should not present the Dow Cohort mortality study results without a discussion of more recent studies that included an analysis of blood dioxin levels in affected workers. These more recent studies indicate that workers were incorrectly categorized into “exposed” and “unexposed” groups and that many highly exposed tradesmen were mistakenly included in the supposedly unexposed control group.

ATSDR Response

References to the cohort mortality study have been excised from the Public Health Outcome Data paragraph.

Comment 9

Section 4.1.1.14, opening paragraph: Correct the section number on line 7 to Section 4.1.1.13. Also, at the bottom of page 209, the text indicates that the PEI was conducted in 2007. Rather, the report for the PEI was released that year, with the investigation being conducted in 2004 and 2005.

ATSDR Response

Corrections noted and entered.

Comment 10

Section 4.1.4.3, second paragraph: Table 4.1-F should be Table 4.1-E.

ATSDR Response

Section 4.1.4.3 has been removed from the report. The correct table number has, however, been noted and entered.

Comment 11

Section 4.1.4.4, first paragraph: Correct italicized “Bat” to “Bay.”

ATSDR Response

Section 4.1.4.4 has been removed from the report.

1.5. Lake Michigan**Comment 1**

Section 5.1.1.1, first paragraph: In next to last sentence, “1996 public health assessment” should be “1996 public health consultation.” (Similarly, see first paragraph in “ATSDR Conclusions” in this section.)

ATSDR Response

Correction noted and entered.

Comment 2

Pg 229, Section 5.1.1, heading, the use of the word relevant: There are other hazardous waste sites that are not relevant? How were they deemed relevant?

ATSDR Response

“Relevant” has been changed to “within.”

Comment 3

Section 5.1.1.1, “ATSDR Conclusions,” third paragraph: This is the first mentioning of “Operable Units (OUs)” in this report (at least for Michigan sites). This term might confuse a reader and should be defined here (*and for other site discussion where the term is used*).

ATSDR Response

“Operable Unit” is now defined in the glossary.

Comment 4

Section 5.1.1.3, “IJC Critical Pollutants” paragraph: Thiocyanate is not an IJC critical pollutant.

ATSDR Response

Correction noted and entered.

Comment 5

Section 5.1.1.6, “ATSDR Conclusions,” second paragraph: Correct the spelling for “N-nitrosodiphenylamine.”

ATSDR Response

Correction noted and entered.

Comment 6

Section 5.1.1.8, “ATSDR Conclusions,” page 237: Italicize “Indeterminate Public Health Hazard.”

ATSDR Response

Correction noted and entered.

Comment 7

Pg 237, Section 5.1.1.8, first paragraph: Ruddiman Pond is closer to Muskegon Lake than the drain area appears to be on the map.

ATSDR Response

All the maps in the document have been revised to reflect current watershed boundaries as well as other relevant boundaries.

Comment 8

Section 5.1.1.10: Bold the type for “Public Health Outcome Data.”

ATSDR Response

Correction noted and entered.

Comment 9

Section 5.1.3: Table 5.1-F should be Table 5.1-E. This table is missing from the report.

ATSDR Response

Noted and addressed.

Comment 10

Section 5.1.4.3: See previous comment.

ATSDR Response

Noted and addressed.

Comment 11

Section 5.1.4.4: This is the first time (for Michigan sites) that this heading was used. Should it be used for all counties that are discussed? Why use county demographic data here but data for a 1-mile radius in other areas of the report?

ATSDR Response

ATSDR used the data referenced in the health assessment documents.

Comment 12

Section 5.1.4.5: Are the BUIs specific only to the Muskegon Lake AOC or also to the White Lake AOC? This should be clarified.

ATSDR Response

The site narrative has been revised.

Comment 13

Pg 241, Section 5.1.4.5, Beneficial Use Impairments: Where is this table, what is the table number?

ATSDR Response

In the final report, BUIs were discussed in text rather than tables.

Comment 14

Page 244, map for White Lake AOC: The whole watershed for White Lake is shown as being the AOC, whereas only the lake itself should be such. Remove the line marking the watershed.

ATSDR Response

All the maps in the document have been revised to reflect current watershed boundaries as well as other relevant boundaries.

Comment 15

Table 5.1-B: Column headings are missing.

ATSDR Response

Correction noted and entered.

Comment 16

Table 5.2-A: The Former Miro Golf Course is a Non-NPL site type.

ATSDR Response

Correction noted and entered.

Comment 17

Section 5.2.1, page 251: The font size at the top of the page should be corrected.

ATSDR Response

Noted and addressed.

Comment 18

Section 5.2.1.2, first paragraph: The final sentence (“According to the USEPA...”) should be moved to after the first sentence in this paragraph. Where it is now confuses the reader.

ATSDR Response

Change noted and entered.

Comment 19

Section 5.2.1.2, “Public Health Outcome Data,” second paragraph: Does the MDEQ Risk Assessment report contain actual health outcome data or is it risk assessment only? If it does not contain health outcome data, it should not be discussed in this section.

ATSDR Response

The site in question, Allied Paper/Portage Creek/Kalamazoo River, is section 5.2.1.1 in the final report. The relevant text states in part:

The risk assessment also found that although dermal exposure to PCB-contaminated floodplain soils presented a health risk to people, recreational activity such as swimming, boating, and wading in the Kalamazoo River did not pose a similar PCB-related public health risk.

Consequently, although the cited MDEQ Risk Assessment Report is a risk assessment, the conclusions stated therein renders the report appropriate for inclusion in this site narrative.

Comment 20

Section 5.2.1.2, “ATSDR Conclusions,” second paragraph: Delete the sentence that starts, “USEPA reported....” It is unnecessary.

ATSDR Response

Noted and changed.

Comment 21

Section 5.2.1.6, “ATSDR Conclusions,” second paragraph: Correct the spelling for “1,1,1-trichloroethane.”

ATSDR Response

Noted and corrected.

Comment 22

Section 5.2.1.7, second paragraph, second sentence: Replace “It” with “The Remedial Investigation” to clarify.

ATSDR Response

Change noted and entered.

Comment 23

Section 5.2.1.7, “ATSDR Conclusions:” Rephrase the first sentence to read, “In 2005 ATSDR concluded that indoor air inhalation presented an *Indeterminate Public Health Hazard* (Category 3).”

ATSDR Response

ATSDR thanks the commenters for their suggestion but concludes the current language is appropriate.

Comments 24 through 27

These comments refer to table citations in sections that have since been removed from the report, thus obviating the necessity of a response.

Comment 28

Section 5.2.4.4: The sentences in this paragraph appear to conflict with each other. Please clarify.

ATSDR Response

No section 5.2.4.4. appears in the report.

Comment 29

Page 259, map for Kalamazoo River AOC: The whole watershed is shown as being the AOC, whereas only the river itself should be such. Remove the line marking the watershed.

ATSDR Response

All the maps in the document have been revised to reflect current watershed boundaries as well as other relevant boundaries.

Comment 30

Table 5.2-B: Column headings are missing.

ATSDR Response

Noted and addressed.

Comments 31 and 32

Alignment needed. These comments refer to table citations in sections that have since been removed from the report.

ATSDR Response

Noted and addressed.

Comment 33

Page 359, map for Menominee River AOC: The whole watershed is shown as being the AOC, whereas only a short section of the river should be such. Remove the line marking the watershed.

ATSDR Response

Noted and addressed.

Comment 33

Alignment needed. Table 5.8-B: Column headings are missing.

ATSDR Response

Noted and addressed.

1.6. Lake Superior**Comment 1**

Section 6.1.4.4: This is the second time (for Michigan sites) that this heading was used.

Should it be used for all counties that are discussed? Why use county demographic data here but data for a 1-mile radius in other areas of the report?

ATSDR Response

ATSDR used the data that were available in the health assessment documents.

Comment 2

Page 374, map for Deer Lake AOC: The whole watershed is shown as being the AOC, whereas only Deer Lake, Carp Creek, and Carp River should be such. Remove the line marking the watershed.

ATSDR Response

All the maps in the document have been revised to reflect current watershed and other relevant boundaries.

Comment 3

Section 6.2, opening paragraph: Add “in” to the phrase in parentheses, “Michigan’s upper peninsula.” The Keweenaw Peninsula is part of Michigan’s U.P., not the entire geographic region.

ATSDR Response

Noted and changed.

Comment 4

Pg 379, Section 6.2, only paragraph: The text mentions the watershed, but there is no watershed on the map.

ATSDR Response

All the maps in the document have been revised to reflect current watershed and other relevant boundaries.

Comment 5

Table 6.2-A: Correct the formatting of the text at the bottom of the table. Also, the former Quincy Smelter site, which is a part of the Torch Lake NPL site, was evaluated in a health consultation dated 2006 for recreational asbestos exposure. While there was No Apparent Public Health Hazard (Category 4), since it is part of the total NPL site, ATSDR might want to consider including it in the table and this section's discussion.

ATSDR Response

The 2006 Quincy Smelter health consultation was not included in the table because its health hazard category meant it did not meet the report's inclusion criteria. However, U.S. EPA discusses the Quincy Smelter site in its June 2008 Fact Sheet for the Torch Lake site. Excerpts from that Fact Sheet have been included in the report's Torch Lake site update.

Comment 6

Pg 379, Section 6.2.1, first paragraph: Change Table 6.2A to Table 6.2-A; Also, there is only one site in the table, change text and table heading to reflect that (sites to site).

ATSDR Response

Table caption change noted and entered. As to the changing "sites" from plural to singular, ATSDR thanks the commenters for their suggestion but concludes the current format is appropriate.

Comment 7

Section 6.2.1.1, "ATSDR Conclusions": In the first paragraph, italicize "Indeterminate Public Health Hazard." In the second paragraph, the last sentence, the text indicated that

“contamination levels are within safety standards,” however, contaminated sediments in Lake Linden, part of the Torch Lake NPL site, were exposed as lake levels dropped, resulting in direct contact concerns and an EPA emergency removal action. ATSDR might want to consider including this issue here, even though no health consultation was produced for the Lake Linden situation.

ATSDR Response

“Indeterminate Public Health Hazard” now italicized in 6.2.1.1. Lake Linden is discussed in the U.S. EPA update for the Torch Lake site.

Comment 8

Section 6.2.3: Please clarify if only one facility had an NPDES permit, as indicated by the headings for Table 6.2-D.

ATSDR Response

Section 6.2.3 has been removed from the report.

Comment 9

Section 6.2.4.1, first sentence: The sentence is awkward. Suggest: “The only hazardous waste site assessed by ATSDR with a public health hazard category of 1, 2, or 3 was the Torch Lake site.”

ATSDR Response

Change noted and entered.

Comment 10

Section 6.2.4.4: The fish advisory for sauger and walleye is no longer in effect. There are other fish advisories for Torch Lake, however.

ATSDR Response

We believe the comment refers to section 6.2.2.4. The change has been entered in that section.

Comment 11

Pg 381, Section 6.2.4.4, Beneficial Use Impairments: Shouldn't the Lake Linden Beach Advisory/closing be included here?

ATSDR Response

U.S. EPA addressed Lake Linden in its 2008 Fact Sheet for the Torch Lake site.

Comments 12 and 13

These comments refer to table captions and column headings for which ATSDR has made those changes it deems appropriate.

1.7. Conclusions and Recommendations**Comment 1**

Section 7.1, second paragraph, final sentence: This sentence is awkward. Suggest: "This report describes each site and addresses the current status of environmental clean up efforts at the site."

ATSDR Response

Noted and appropriate changes made.

Comment 2

Section 7.1, third paragraph: Delete “with ongoing problems”, which has negative connotations.

ATSDR Response

The U.S. EPA reports that currently some sites within some of the U.S. Great Lakes AOCs do have ongoing problems, thus ATSDR deems the current language appropriate.

Comment 3

Section 7.1, sixth paragraph, first sentence: How does *fish* monitoring affect *wildlife* consumption advisories? Clarify.

ATSDR Response

Noted and appropriate changes entered.

Comment 4

Pg 399, Section 7.1, fifth paragraph: remove “AOC counties” or move to after counties (...54 counties, AOC counties, impacted...)

ATSDR Response

Noted and appropriate changes entered.

Comment 5

Pg 399, Section 7.1, sixth paragraph: “...consumption in all 26 AOC, (add comma and remove s on AOCs) with the exception...”

ATSDR Response

Noted and appropriate changes entered.

Comment 6

Pg 400, Section 7.1, second paragraph, second sentence: remove the second and third 'to'

ATSDR Response

Noted and appropriate changes entered.

Comment 7

Pg 401, Section 7.2, second bullet point: "...consumption, wildlife consumption, (add comma) or both exist..."

ATSDR Response

Noted and appropriate changes entered.

1.8. Bibliography (not reviewed)**Appendix 1 – AOC Maps (only maps for Michigan AOCs printed out, in color)****Comment 1**

Map legends regarding symbols are not consistent. For example, River Raisin AOC map uses a dashed red line to depict watershed. The Saginaw River and Bay AOC map uses the same symbol for "source areas of concern." White Lake AOC map legend does not show rivers and streams symbol.

ATSDR Response

All the maps in the document have been revised to reflect current watershed boundaries as well as other relevant boundaries.

Comment 2

Some counties in which AOCs are located are not discussed in the text for those AOCs. For example, the Clinton River AOC extends into Lapeer, St. Clair, and Wayne counties but only sites and releases in Oakland and Macomb counties are discussed. Residents of the omitted counties may not understand why their county was not included. The reasoning is not stated in the text of the Report.

ATSDR Response

Early in the report design, a determination was made to focus on the AOC counties defined in the report.

Appendix 2 – AOC and Site Update**Comment 1**

Page 409, bottom: “Ohio Sites located...” should be bold-face and the same font as similar headings.

ATSDR Response

This appendix has undergone extensive revision in the final version of the report, which deals with this issue.

Comments 2 and 3

What is meant by the Maumee River AOC and Saginaw River and Bay AOC asterisks?

ATSDR Response

These asterisks have now been deleted.

Comment 4

Page 418: It is not stated why these sites were eliminated from the 2008 draft of the report. It should be stated here, briefly, and also within the text of the report, under appropriate AOC discussions.

ATSDR Response

The Wauconda Sand and Gravel site in Lake County, IL had been inadvertently included in previous drafts but did not meet inclusion criteria.

Appendix 3 – Great Lakes Human Health Effects Research Program

Comment 1

This factsheet was not reviewed; however the copy quality is very poor. ATSDR should try to provide a better-quality copy or insert a PDF copy.

ATSDR Response

The Great Lakes Human Health Effects Research Program has been expanded to a separate report appendix.

Attachment II

Executive Summary and Lake Huron Sections.

A member of the Michigan Department of Community Health submitted the following comments:

Executive Summary

Comment 1

Page v. Executive Summary, Health Data. We found the description under the section titled “Health Data” to be confusing. This is critical section because its purpose is to explain why no health outcome data is presented in the report. We suggest an alternative statement for your consideration: “No human health surveillance data are currently collected in a manner that allows one-to-one pairing of a given person’s health status and that person’s exposure to unwanted chemical contaminants. This includes populations living near an AOC. Without this type of data collection, evaluating if chemicals from AOC are affecting peoples’ health is not possible. Human health studies are not commonly available, typically due to the high cost of conducting such investigations. Where such human health studies have been conducted, the findings are included in this report.” [Note: HOD data is provided in some sections of the report under “Public Health Outcome Date”. I find this confusing]

ATSDR Response

We thank the commenter for the suggestions. The text has been revised for clarity.

Page v & vi. Executive Summary. Conclusions.

Comment 1

The term “environmental pollution” should be defined such that it refers to chemicals, not other types of pollution.

The second conclusion mentions consumer products and workplaces. It is not clear why these two topics would be included in this report. AOC are not about consumer products or workplace chemical exposures.

The idea behind the second conclusion is that no datasets on releases of chemicals into the environment are explicitly designed to assess a local population’s exposure to those chemical releases. Therefore it is difficult to determine a person's or group of people's chemical exposure within a given region, such as an AOC.

The third conclusion seems duplicative to the second conclusion and seems to restate the same idea with different words.

The fourth conclusion attempts to restate the concept under the section “Health Data”. Both this conclusion and that section should be re-written to more simply say that no system currently exist that combines peoples chemical exposure and their health in manner that allows scientists to investigate if unwanted chemical exposures are harming people’s health.

ATSDR Response

ATSDR has revised the conclusions to address these and other concerns.

Page vi. Executive Summary, Recommendations:**Comment 1**

It is not clear the purpose or connection between each of the recommendations. One could read the current recommendations to say that the effort should be to collect larger quantities of environmental data, human biomonitoring data, and health data in particular areas, but not necessarily have these three datasets matched in a one-to-one basis. An additional approach is to identify highly exposed sub-populations, model the past and current chemical exposure, conduct a biomonitoring study to confirm the model results, and collect health outcome data from the highly exposed population. This additional approach will result in a dataset matching exposure pathway, an indicator of exposure (biomonitoring data), and human health. Further, this approach should result in dataset with less variability, resulting in approach that can resolve more subtle correlations or differences

ATSDR Response

ATSDR has revised all of its recommendations in this report based on these and other concerns.

Chapter 4. Lake Huron**Comment 1**

Bay City Middlegrounds: page 196, 3rd sentence of last paragraph. Sentence states that consumption of fish from the Saginaw River is considered a pathway of great concern. A more accurate statement is that regular consumption of many Saginaw River fish species is a public health hazard.

Berlin and Farro: page 199, Public Health Outcome Data section, last sentence of first paragraph. The following sentence is confusing in reference to statistically, significantly higher occurrence of respiratory symptoms of the population with 2 miles of the waste incinerator. *“This information may suggest that the former industrial activity (incineration of hazardous waste) at the site was potentially linked to health problems, but it does not provide insight into the potential health hazard from waste site-related contaminants.”* Assuming the information in the report is accurate and ATSDR concludes that the *“site was potentially linked to health problems”*, then this significant finding does provide insight into the site being a health hazard for two reasons. First is confirms a completed exposure pathway from the site to the population and the population was having immediate and observable health effects (i.e., health hazard). Secondly, if incineration debris was contaminated with PBTs, then a potential chronic health hazard also exists.

Velsicol Chemical: Page 202 Demographic Data and Public Health Data sections. These consecutive sections seem to inaccurately imply that the residential community near the site were exposed to high concentrations of PBB and may be suffering negative health effects. Several facts need to be clarified. First, although the Velsicol workers and possibly their family members were asked to be part of the registry, the workers were not included in the data analyses, because the workers were occupationally exposed to not only PBB but a long list of hazardous substances. Thus, any findings in the workers are unique to their diverse occupational chemical exposures and do not represent the surrounding community. Secondly, MDCH conducted a blood serum biomonitoring study of the closest residential communities. Approximately 200 individuals participated in study and the resulting PBB blood concentrations were similar to background exposures in Michigan. Any study results from

the PBB cohort do not specifically apply to the residence of St. Louis; because it is not clear they had any more exposure to PBB than the average Michigan citizen. As currently written, this section presents a significant problem, because it perpetuates an unsupported perception that the residents of St. Louis are or were a highly exposed population. The only known exposure pathway that exists today is from regular consumption of fish from the Pine River.

ATSDR Response

We have revised the statements to be more precise.

Dow Chemical Co., Michigan Division, Midland Location: Page 207-209.

Comment 1 — Public Health Outcome Data page 208

In general, the “Public Health Outcome Data sections”, as demonstrated in this section and the Tittabawassee River PHOD section, is not strictly limited to PHOD. For example, this section talks about the Dow cohort mortality study that is an occupational study, with some classification of exposure (see comments below). Cohort or other epidemiology studies that include some level of exposure classification should be in separate section. PHOD does not have one-to-one chemical exposure information. It is likely worth stating this fact at the beginning of every PHOD section. The Tittabawassee River PHOD section does not even include PHOD, but instead discusses exposure information.

ATSDR Response

The Dow occupational study has been removed from the report.

Comment 2

Paragraph 1: The citation “USEPA reported (2006)” is not listed in Appendix 8, the bibliography.

ATSDR Response

The list is a bibliography rather than references. Not all documents cited in the text are listed in the bibliography, and some documents listed in the bibliography are not cited in the text.

Comment 3

Paragraph 2: Mentions a citation of MDCH June 5, 2001, but this citation is not listed in Appendix 8, the bibliography.

ATSDR Response

See response to Comment 2, above.

Comment 4

Paragraph 3: Discusses Dow cohort study. As mentioned above, does not belong in PHOD section. Further, dome discussion of the misclassification concerns regarding the “unexposed” group.

ATSDR Response

The cohort study has been removed from the site narrative.

Comment 5

Paragraph 4. Michigan Birth Defects Registry, it should be noted that no chemical exposure data is provided with this registry, thus it has limited value in assessing the potential effects of dioxin exposure.

ATSDR Response

ATSDR agrees.

Comment 6

Paragraph 5. The USEPA 2006 citation is used again (see comment b, above), for which it says the USEPA sites MI Dept. of Public Health evaluation. Suggest that you seek out the original publication to ensure that the interpretation is correct.

ATSDR Response

See response to Comment 2, above.

Tittabawassee River: Page 209-210.**Comment 1**

The MDCH PEI was conducted in 2002-2003 before the UMDES study and final report was posted in 2004. An updated report, which included response to comments, was released in 2007.

ATSDR Response

The 2007 report is referenced in the site narrative.

Comment 2

“Public Health Outcome Data” is the wrong title for the section because no PHOD is discussed. The information provided is about exposure and not health effects. Change the title, it is incorrect.

ATSDR Response

The language has been revised.

Comment 3

Add citations with specific page numbers for the conclusions being provided about the UMDES study. I have not seen the second bullet point stated about the UMDES study in that way.

ATSDR Response

ATSDR believes the text in the second bullet accurately describes the report language.

**Summary and Conclusions for the Saginaw River and Bay (page 213–214)
Comments regarding Page 213 Section, Hazardous Waste Sites****Comment 1**

4th bullet point says “Tittabawassee River- lack of data on possible exposures” . That is a completely false statement. MDCH has concluded that completed exposure pathways exist for fish consumption domestic animals consumption (i.e., eggs from chickens raised on the flood plain), wild game consumption, and soil exposures

http://www.michigan.gov/documents/mdch/FCS_Final_rpt_061407_199288_7.pdf,

http://www.michigan.gov/mdch/0,1607,7-132-2945_5105_29181-113198--,00.html).

Advisories have been issues on many of these topics. Remove the state of “lack of data on possible exposures”.

ATSDR Response

The text has been revised.

Comment 2,

Paragraph 3 last sentence: Remove the last sentence that states, “The dioxin contamination data were lacking on possible exposures.” Replace with, “Dioxin contamination is widespread throughout the Tittabawassee River and flood plain, Saginaw River, Saginaw Bay and the tissues of fish and wild game living in these areas. Completed exposure pathways are well known and are a public health hazard. Further studies would be beneficial to understand the relationship between human behaviors and the amount of dioxin in people’s bodies.”

ATSDR Response

The text has been modified accordingly.

Comments regarding Page 214 Section, Beneficial Use Impairments

Comment 1

This section is within the Summary and Conclusions section for the Chapter about Lake Huron, but the BUI information is only about the Saginaw River and Bay AOC. Lake Huron could also include the St. Mary’s and St. Clair AOCs.

ATSDR Response

Binational AOCs are outside the scope of this document.

Comment 2

The report 2001 AOC Remedial Action Plan Update about the Saginaw River and Bay (SR/SB AOC RAP report) is cited as a source of information. The ATSDR Great Lakes AOC report inaccurately paraphrased the SR/SB AOC RAP report. The SR/SB AOC RAP report does not draw the conclusions stated in paragraph one of this BUI section. The SR/SB AOC RAP report sets “targeted restored conditions” (i.e., goals to be achieved) and, as such, these statements are not conclusions. Suggest removing any mention of the following statements, because as currently presented in the ATSDR AOC report, they seem to be firm conclusion and not goals for the future.

ATSDR Response

The text has been modified.

Comment 3

ATSDR report says “...PCB and dioxins levels in walleye from Saginaw River and Bay are similar to those found in similar fish from non-AOC areas in the Great Lakes” First, walleye are a bad choice of indicator species, because they migrate long distances. Secondly, if you look at carp data, a better indicator of local contamination, Saginaw Bay and River carp are some of the most contaminated fish in the Great Lakes. The Saginaw River and Bay have some of the most restrictive fish consumption advisories in Michigan waters, because the fish are so abnormally highly contaminated.

ATSDR Response

The text has been modified.

Comment 4

“...indication from studies of caged fish that former sources of contaminant have been effectively controlled and/or remediated” In the original statement in the SR/SB AOC RAP report, they include the phrase “(including sediment)” after the word “sources”. This is goal, not a conclusion. Remember that the EPA as issued emergency response clean-up action orders in 2007 for the Tittabawassee and Saginaw Rivers. Clearly, the sediments are still a major environmental and public health concern in that river and bay.

ATSDR Response

The text has been modified.

Comment 5

“Taste and odor problems in drinking water are cited. The problem in attributed to blue-green algal blooms....” This is an assumption without a provided mechanism of why algal blooms would cause drinking water odor or taste problems. The SR/SB AOC RAP report does not seem to mention other likely reasons, which were volatile organic chemical, primarily phenols that were released into the Tittabawassee River and Saginaw River, likely from chemical manufacturing facilities. Clean Water Act legislation resulted to laws and permits that controlled the release of such chemicals back in the 1980s. Suggest removing this statement because it lacks documentation.

ATSDR Response

The text has been modified.

Comment 6

Recommend a substantial re-write of this section based on verifiable information.

ATSDR Response

The text has been modified.

Pennsylvania Department of Environmental Protection

The Pennsylvania Department of Environmental Protection submitted comments in four categories

Comment 1

My main criticism with the report is that the information it based on is old and in the case of Pennsylvania, no longer accurate as facilities have been cleaned up. I know it is hard to issue a report that is current, but the data used in this report is ten years old or more in some cases. The Toxic Release Inventory data is from 2001. At least one of the facilities listed has been closed for the past five years. This issue is acknowledged in the Preface yet the dated information is still presented in the sections on the individual AOCs. In many cases, those sections of the report are the only part people will read.

ATSDR Response

ATSDR has updated the site narratives by 1) consulting the U.S. EPA Superfund, CERCLIS, and relevant region Web sites, 2) consulting directly with the U.S. EPA regarding the status of various sites referenced in the report, and 3) consulting with state partners on the status of those sites not included within the federal inventory. TRI and NPDES data are provided as examples of ongoing contamination and the dates on those datasets were chosen because they were available to us throughout the production of this report.

Comment 2

A second concern is the decision to look at data from AOC counties. The report's Executive Summary even states that the "Much of the available data pertain to counties, and not to the

AOCs.” No explanation is provided that shows how to connect the county data with AOCs other than the close geographical proximity. This approach has many flaws. There is no discussion of how these discharges impact the AOC. In the discussion on Presque Isle Bay, for example, no connection is made between these discharges in the county and beneficial use impairments in the AOC. I would think that to be critical to the relevancy of the report. Air emissions for the Pennsylvania sites as well as the permitted discharges are within permit limits. The permits are based on federal laws. The implication is that the government is allowing and permitting discharges of critical pollutants in amounts harmful to human health.

ATSDR Response

Chapter 1 now provides a fuller justification for providing examples of environmental contamination not limited to ATSDR site assessments. Because neither environmental nor health data are generally collected by AOC, current data do not allow an ideal or complete view of environmental contamination in AOCS. We believe, however, that potential value exists in providing a broader view of environmental contamination in the AOCs than one limited to ATSDR site assessments.

Comment 3

Finally, the report’s recommendations are a list of data and monitoring needs to accurately assess the current impact on human health. What then is the point of detailing for each AOC possible impacts based on data that is ten to twenty years old?

ATSDR Response

The site narratives are now current to the latest U.S. EPA Fact Sheet or Five-Year Review. If a site is non-NPL, that fact is noted together with any updated information obtained from the U.S.

EPA or from state partners. In that regard, we have included the Presque Isle AOC updates in the site narrative, and we thank the commenter for providing them.

Comment 4

The International Paper facility, which is included in the TRI data, shut down its operations several years ago. Including it in this report paints an inaccurate picture of air emissions. This facility should be removed.

ATSDR Response

The TRI data are from 2001, thus some facilities reported as active at that time may since have ceased operations.

Wisconsin Department of Health and Family Services

The Wisconsin Department of Health and Family Services submitted comments in two categories:

Comment 1

This public comment AOC report is the first document that accurately and comprehensively compiles available data on environmental contamination in the Great Lakes' Area of Concerns. The public comment AOC report accurately acknowledges the limitations of the available environmental data, and that it only provides a "partial picture" of critical pollutant exposures to residents and visitors to the Great Lakes basin. It also recognizes the lack of health data that would allow an appropriate assessment of how this contamination is directly impacting the public.

ATSDR Response

No response necessary.

Comment 2

We suggest that the report add a recommendation (or a commitment) that ATSDR and IJC jointly convene a workshop that will develop a strategic plan to address the data and information gaps identified in the public comment AOC report and move the Great Lakes Region's AOCs toward a strategy to respond to their continuing challenges.

ATSDR Response

The suggestion is under consideration.

U.S. Environmental Protection Agency

U.S EPA's Comments on Draft ATSDR Report "Selected Information on Chemical Releases within Great Lakes Counties Containing Areas of Concern (AOC)"

Note: U.S. EPA's Comments have been edited for brevity. The complete comments are on file at the Agency for Toxic Substances and Disease Registry offices in Atlanta, Georgia, and, on adequate prior written notice, are available for public inspection.

Comment 1

The document would be improved if additional emphasis were placed on current site conditions, and by referencing more detailed and recent EPA documents on site conditions.

ATSDR Response

With regard to each of the near-140 sites identified in the report, we have accessed U.S. EPA Web sites and CERCLIS and worked directly with U.S. EPA Region 5 to obtain current site conditions and to include a description of those conditions in the report. For those sites that appear neither in a relevant U.S. EPA Web site nor in CERCLIS, we have consulted our state partners and others to provide updated site information. Recognizing that site remediation is ongoing and that any description of current site status is subject to change, we have where possible linked the site status in the report to the appropriate U.S. EPA or state Web site, or cited the state official who provided the site update information.

Comment 2

ATSDR is claiming that many sites, such as the examples below, are non-NPL sites. These sites are not in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) and therefore it should not be implied that they are non-NPL sites.

ATSDR Response

We have reviewed the examples as well as all other sites in the report and identified them in accordance with U.S. EPA nomenclature.

Comment 3

Many sites can have more than one Hazard Category after a single assessment addressing multiple environmental media. It would be helpful to show all the hazards determined for a site for each document and discuss these more fully in the text.

ATSDR Response

The IJC asked ATSDR to identify those sites within the 26 Areas of Concern surrounding the Great Lakes that contained identifiable levels of chemicals with which the IJC was concerned. ATSDR screened all the sites within the AOCs categorized as Public Health Hazard 3, 2, and 1. At some sites, after further assessment the Health Hazard category did change; this is reflected in the ATSDR Conclusions section of the site discussion. Consistent with the task assigned to us, the identification of chemicals at the site is primarily confined to those listed as IJC-critical pollutants.

Comment 4

All known sites of contamination in the Areas of Concern should be discussed in the report, regardless of ATSDR's involvement at the site.

ATSDR Response

See response to U.S. EPA Comment 1, above, at page A-42.

Comment 5

In discussions with Michigan Department of Environmental Quality, some of the sites below (only a subset of many listed) are not non-NPL but brownfield sites which were already evaluated and may have already been redeveloped. Some of these sites could also be RCRA sites. None of sites listed below are in CERCLIS. Unfortunately the report has not been set up to permit easy evaluation of site status. While there is a list of sites in Appendix 2 the "ID numbers" are just provided in the appropriate AOC section, making identification very difficult. [site list omitted]

ATSDR Response

The sites included with the comment, as well as other sites that do not appear on the NPL, have been located and, using CERCLIS and state-supplied information, have been updated in the report.

Specific Comments:

Chapter 3 – Lake Erie

3.3. Ashtabula River AOC, Ashtabula County, OH

3.3.1.3 Laskin/Poplar Oil

Comment 1

Please change the following text in the second sentence to read “It is a former waste oil storage site, which had included 37 above-ground, in-ground, and underground oil storage tanks or pits.”

In the conclusion discussion, the exposure assumptions are no longer valid. The site has been capped, eliminating any ingestion or inhalation risks; the capped area has also been dewatered, addressing the threat to nearby surface water; lastly, use restrictions are in place to prevent on-site exposures.

ATSDR Response

The requested change in the site narrative has been made. The ATSDR Conclusions section has been updated by incorporation of relevant text from the U.S. EPA November 2007 Fact Sheet regarding this site.

3.2.1.4. Millcreek Dump

Comment 2

Please change the text to include: The State of Pennsylvania took over the operation and maintenance of the Groundwater Extraction and Treatment System in September 2007.

ATSDR Response

The requested text has been added.

3.5.1.2. Republic Steel Corp. Quarry

Comment 1

On page 107 please omit the following sentences: “Before 1950 this 4-acre site was a sandstone quarry. From 1950 to 1975 the site was used for the disposal of pickle liquor from a steel mill.” Please replace it with the following text: “The site consists of a 4.9-acre water-filled quarry surrounded by 7.4 acres of densely vegetated land. Prior to 1950, the site operated as a sandstone quarry. From 1950 to 1975, Republic Steel Corp. used the quarry as a disposal site for waste pickle liquor consisting of sulfuric acid and dissolved metal oxides, and for rinse water from pickling operations.”

ATSDR Response

The factual information from the requested change has been incorporated into the text.

3.5.4.1 Hazardous Waste Sites

Please change the text to include: The Republic Steel Quarry Site has been remediated by removal of contaminated soil and exposure is prevented by restriction of access. Although

contaminants remain in the quarry sediment, they are below the mixing zone. In the past, this site may have contributed to the environmental burden of the IJC-critical pollutants B(a)P and lead, and it may act as a reservoir for these contaminants.

ATSDR Response

ATSDR has included in the site update relevant excerpts from the U.S. EPA 2007 Fact Sheet.

3.5.1.1. Ford Road Industrial Landfill

Comment 1

Please omit the following lead sentence: “The Ford Road Industrial Landfill has not been adequately investigated.” Please replace it with the following text: “The Ford Road Industrial Landfill is situated on the Black River, and surface water and groundwater flow are toward the Black River. This site may have contributed and may continue to contribute to the Black River AOC’s environmental burden of IJC-critical pollutants, including PCBs. U.S. EPA reported (2008) that a Remedial Investigation and Feasibility Study (RI/FS) and a Record of Decision (ROD) was completed and there will be implementation of the clean up alternatives as outlined in the ROD. This will prevent any further contamination of the Black River by the Ford Road Site.”

ATSDR Response

ATSDR has eliminated the lead sentence from the site narrative. The remaining site update has been excerpted from the June 2006 U.S. EPA Fact Sheet for the Ford Road Industrial Landfill site.

3.9. Clinton River AOC, Oakland and Macomb Counties, MI

Table 3.9 -A Hazardous Waste Sites in Macomb County, MI

Comment 1

Please change Liquid Disposal, "Ind." to "Inc."

ATSDR Response

Noted and changed.

3.9.3.1 Hazardous Waste Sites

Comment 1

Please change the text regarding the Rose Township Dump to: "Complete capture of the groundwater plume is not occurring by the existing remedial system. Installation of additional recovery wells are being considered to augment the effectiveness of plume capture. One residential well is affected. In April 2005, a groundwater treatment system was installed in the basement of this resident. This treatment system has been successful at treating the groundwater concentration to non-detectable levels. A deeper well will be installed at this resident as a permanent solution. The potential remains, however, for other residential wells to be affected in the future."

ATSDR Response

We have incorporated relevant sections of the February, 2008 U.S. EPA Fact Sheet for the Rose Township site.

Chapter 4 – Lake Huron

4.1. Saginaw River and Bay AOC, Arenac, Bay, Clare, Genesee, Gladwin, Gratiot, Huron, Iosco, Isabella, Lapeer, Livingston, Mecosta, Midland, Montcalm, Ogemaw, Osceola, Roscommon, Saginaw, Sanilac, Shiawassee, and Tuscola Counties, MI

Table 4.1-A Hazardous Waste Sites in Counties Relevant to the Saginaw River and Bay AOC

Comment 1

Please change Berlin and “Farrow” to “Farro”

ATSDR Response

Noted and changed.

4.1.1.4 Berlin and Farrow

Comment 2

Please change Berlin and “Farrow” to “Farro”

ATSDR Response

Noted and changed.

4.1.1.7 Velsicol Chemical Corporation

Comment 3

Please change site size from 5 to 52 acres.

ATSDR Response

Noted and changed.

4.1.1.8 Hedblum Industries

Comment 4

Please remove the second period in the first sentence under the subheading "IJC Critical Pollutants Identified within ATSDR Documents".

ATSDR Response

Noted and changed.

Chapter 5 - Lake Michigan**5.1. Muskegon Lake AOC and White Lake AOC Muskegon County, MI**

5.1.1.5 Muskegon Chemical

Comment 1

Please change the ATSDR Conclusion text to include the following information.

The third Five Year Review was conducted by U.S. EPA and MDEQ under the Superfund program and completed in April 2008. The remedy is functioning as intended and it is protective of human health and the environment.

Mill Pond Creek is no longer impacted from the Site. The groundwater risk pathway to aquatic benthic life is not a concern. Quarterly monitoring has confirmed that no release to the Pond has occurred since before 1994. Also, Mill Pond Creek was removed from the state's "non-attainment" list in 2003 which is the state's list of impacted surface

waters, based upon results of a macro invertebrate study conducted in the creek in approximately 2001. Last, the fish studies never indicated any site-related problems existed even during the time when the highest contamination was detected at the Site and in the surface water.

Tier 1 soil remedial action goals (RAGs) have been achieved. Tier 1 (Site specific standards for protection of Mill Pond Creek) groundwater RAGs have been achieved through the vast majority of the plume.

ATSDR Response

The site narrative has been updated in accordance with the September, 2006 U.S. EPA Fact Sheet for the Muskegon Chemical site.

5.1.1.11 Whitehall Municipal Well Site

Comment 2

Please change the ATSDR Conclusion text to include the following information.

In 1981, wells were found to be contaminated with tetrachloroethylene and trichloroethylene, and other chlorinated VOCs, but levels were low, and exposure was minimized by reducing the pumping rates, and ultimately by taking the wells off-line. Contamination of the monitoring wells was ~~is~~ sporadic. Although this municipal supply well contributed to human exposure to VOCs, it was not the source of contamination, which remains unknown. It has been taken off-line. Monitoring of the public water supply is conducted by the city.

ATSDR Response

Requested change noted and entered. The Conclusion text has also been supplemented with excerpts from the U.S. EPA April, 2008 Fact Sheet for the Whitehall Municipal Well site.

5.3. Grand Calumet AOC, Lake County, IN, and Cook County, IL**5.3.1.3 Midco I****Comment 1**

Please change the site history text to include the following information.

In 1982, U.S. EPA removed all of the surgical wastes from the Midco I. There were over 5,000 drums left on-site in addition to the 14,000 fire damaged drums. The quantities of wastes removed, can be found in the Region 5 NPL Fact Sheet. At the end of the removal action, EPA placed some clay soil over much of the site.

ATSDR Response

The requested change has been entered.

Comment 2

Please consider the following comments.

ATSDR Conclusions: ATSDR's conclusion that Midco I is a Category 2, Public Health Hazard, is very out of date. The area of contaminated soil and sediment is now fenced, the contaminated groundwater is being contained by a pump-and-treat system, and treatment of contaminated soils and groundwater is ongoing. There is no significant potential for human exposure, other than to on-site workers, who are protected by following a U.S. EPA approved Health and Safety Plan. If lead and cadmium were detected in a residential well, it is

irrelevant to the assessment of Midco I risks because U.S. EPA did not find that Midco I was the source of this contamination. Access to Midco I was first restricted by U.S. EPA in 1981 (not 1998) when U.S. EPA constructed a fence around the site. This fence was extended in 1994 to include the contaminated sediment areas. Deed restrictions were put in place in 1992 – 1993. Air stripping was temporarily part of the groundwater treatment system and does not need to be mentioned. Design and implementation of soil and groundwater treatment has been proceeding since 1993. For more details consult the 2004 Second Five-Year Review Report. Note that the treated groundwater from Midco I is disposed by deep well injection.

ATSDR Response

The requested changes have been incorporated into the site narrative.

Comment 3

IJC Critical Pollutants Identified within ATSDR Documents: Although a number of critical pollutants have been detected at Midco I, these no longer pose a significant threat to human health.

ATSDR Response

This comment has been incorporated into the IJC-Critical Pollutants section of the site narrative.

5.3.1.4 Midco II

Comment 1

Please change the site history text to include the following information.

U.S. EPA removed all surface wastes from Midco II, plus a sludge pit and filter bed between 1984 and 1989. The Region 5 NPL fact sheet has complete site information.

ATSDR Response

The site history has been changed accordingly.

Comment 2

Please consider the following comments.

ATSDR's conclusion that Midco II has a Category 3, Indeterminate Health Hazard, is very out of date. The area of contaminated soil and sediment is now fenced, the contaminated groundwater is being contained by a pump-and-treat system, and treatment of contaminated soils and groundwater is ongoing. There is no significant potential for human exposure, other than to on-site workers, who are protected by following a U.S. EPA approved Health and Safety Plan. Access to Midco II was first restricted by U.S. EPA in 1981 (not 1998) when U.S. EPA constructed a fence around the site. This fence was extended in 1994 to include the contaminated sediment areas. Deed restrictions were put in place in 1992 – 1993. Air stripping was never part of the groundwater treatment system at Midco II. The contaminated residential wells located about ½ miles southeast of Midco II are not relevant to the assessment of Midco II because U.S. EPA did not find that Midco II was the source of the contamination. Design and implementation of soil and groundwater treatment has been proceeding since 1993. For more details consult the 2004 Second Five-Year Review Report. Note that the treated groundwater from Midco II is disposed by deep well injection. Historical releases of critical pollutants from Midco II did not impact Lake Michigan.

ATSDR Response

These comments have been incorporated into the Midco II site narrative.

Comment 3

IJC Critical Pollutants Identified within ATSDR Documents: Although a number of critical pollutants have been detected at Midco II, these no longer pose a significant threat to human health.

ATSDR Response

This comment has been incorporated into the IJC-Critical Pollutants section of the site narrative.

5.3.1.5 Ninth Avenue Dump

Comment 1

Please change the text from “Since disposal operations were discontinued in 1980, drums of wastes, abandoned tanker trucks, and surface soils have been removed.” to “After disposal operations were discontinued in 1980, drums of wastes, abandoned tanker trucks, and some surface soils were removed.”

ATSDR Response

These comments have been incorporated into the Ninth Avenue Dump site narrative.

Comment 2

Please change the site information to explicitly state that the site is fenced.

ATSDR Response

The site narrative has been changed to reflect the U.S. EPA report that the site is fenced.

Comment 3

Please change the text from: "Groundwater is contaminated, and flows north to discharge in Lake Michigan." to: "Groundwater on the site was found to be contaminated. The groundwater flows toward the north, but, for the most part, the contamination in the groundwater has not gone beyond the site boundaries. The Grand Calumet River is approximately 1 1/4 miles north of the site and Lake Michigan is approximately 3 1/2 miles north of the site."

ATSDR Response

These comments have also been incorporated into the Ninth Avenue Dump site narrative.

Comment 4

Please consider the following comment.

Report mentions the 2003 USEPA NPL fact sheet for this site as one of the references. There is a more up-to-date fact sheet available, and that is what will be found if one looks for a fact sheet.

ATSDR Response

The U.S. EPA February, 2007 Fact Sheet for the Ninth Avenue Dump site has been incorporated into the site narrative and a link provided to the Fact Sheet itself.

Comment 5

Please check the following contradiction.

Report has: "In the 1999 health consultation no category was reported." In Table 5.3 of the draft report, for the 1999 HC it lists a "5" for the ATSDR Hazard Category. This should be checked to see which of these statements is correct.

ATSDR Response

The commenter is correct, and the report now indicates that the 1999 HC did not report an ATSDR hazard category.

Comment 6

Please consider the following comment.

Report has: "PCBs, PAHs, VOCs, lead and chromium in on-site soils, food grown in the soil and sediment were of concern. A concern for bioaccumulation into fish (of chemicals such as PCBs) was expressed. If fish in the area were contaminated and eaten, this site may have contributed to environmental burden and human exposure to PCBs, PAHs, and lead." It should be made clear that what is stated here might be the case if the site was not remediated. Because of concerns like these, the site was remediated.

ATSDR Response

This comment has been incorporated into the Ninth Avenue Dump site narrative.

Comment 7

Report has: "Remediation was completed in 1995 with maintenance activities, including the installation of a slurry wall and access restriction, initiated in 2004." We do not know what is meant by ". . . maintenance activities, including the installation of a slurry wall and access restriction, initiated in 2004." Installation of a slurry wall is not a maintenance activity.

Access restrictions have been in place since before 1990 when a fence was installed. We do not know what change was made in 2004 that this is referring to. Replace this sentence with: “Construction of the remedial action was completed in 1995. The remedial action included a slurry wall around the contamination to contain the contaminated groundwater, the removal of much of the light non-aqueous phase liquid that was floating on the groundwater, a multi-layer cap over the contaminated part of the site to isolate the contamination, and a soil-vapor extraction system to further remove contamination left at the site. The site is being maintained.”

ATSDR Response

The excerpts from the February, 2007 U.S. EPA Fact Sheet for the Ninth Avenue Dump quoted in the site narrative speak to the commenter’s concerns.

5.4. Waukegan Harbor AOC, Lake County, IL

Table 5.4-A Hazardous Waste Sites in Lake County, IL

Comment 1

Yeoman Creek Landfill site is listed on the final NPL.

ATSDR Response

The Yeoman Creek Landfill reference has been changed from non-NPL to NPL.

5.4.1.2 H.O.D. Landfill

Comment 1

Please change the citations of NPL fact sheets from 2003 to 2008. The NPL fact sheets for H.O.D. Landfill; Antioch, IL has been updated recently.

ATSDR Response

Relevant excerpts from the June, 2008 U.S. EPA Fact Sheet for the H.O.D. Landfill site have been incorporated into the site narrative.

5.4.1.3 Johns-Manville Disposal Area**Comment 1**

Please consider the following comment.

The 1988 PHA indicated that inadequate air monitoring had been conducted to make a determination of the threat from the site. Air monitoring has been conducted since 1988 during the remedial response activities at the site.

ATSDR Response

The site narrative states that the air monitoring data were inadequate to determine any potential public health threat—not that the air monitoring itself was inadequate. The site narrative has been modified to include the air monitoring start date.

Comment 2

While the document adequately describes most of the response actions taken at the site since the 1988 PHA, it fails to note that response actions are also in progress to address the former wastewater areas and several areas near the site, and focuses more discussion on the results of a PHA written 20 years ago than on current site conditions.

ATSDR Response

The site narrative has been updated to include information from the U.S. EPA Fact Sheet for the Johns-Manville Disposal Area site.

5.4.1.7 Yeoman Creek Landfill

Comment 1

Please change the site history text to include the following information.

The Yeoman Creek Landfill Superfund Site now consists of two capped areas, Yeoman Creek Landfill and Edward's Field Landfill. The creek dividing the east and west portions of Yeoman Creek Landfill is Yeoman Creek, not Yeoman's Creek.

ATSDR Response

These comments and corrections have been incorporated into the site narrative.

5.5. Milwaukee Estuary AOC, Milwaukee County, WI

Table 5.5 –A. Hazardous Waste Sites in Milwaukee County, WI

Comment 1

Please change the table text to include the following information:

The most recent health consult was completed April 2008 for the Solvay Coke Site.

ATSDR Response

ATSDR included only those ATSDR public health documents completed as of FY 2007.

5.5.1.2 Fadrowski Drum Disposal

Comment 1

Please change the site history text to include the following information.

This 20-acre site is located in the city of Franklin, Milwaukee County, WI. The site was operated as a landfill for construction debris and fill dirt from 1970 to 1982. In 1983,

however, excavation for fill dirt on the property revealed barrels of hazardous wastes. Some of the barrels had ruptured during the excavation.

ATSDR Response

The comments have been incorporated into the Fadrowski Drum Disposal site narrative.

5.5.1.6 Moss American Site

Comment 1

Please change the site history text to include the following information.

Significant work to address contaminated soils and groundwater, in addition to sediments has been completed. The contaminants of concern, which formed the basis for the baseline risk assessment, were 8 carcinogenic PAHs (CPAHs). Although dioxin, phenolic compounds, and metals were detected, these other contaminants really had minimal impact on risk at the site, relative to the CPAHs. Sediment sampling of the last segment of the river is underway.

Dredging of contaminated sediments, identified through sampling data, is expected to be completed later this year or early next year

ATSDR Response

The comments have been incorporated into the Moss-American site narrative.

5.5.1.14 Solvay Coke Brownfield, Milwaukee,

Comment 1

Please remove the word "Brownfield" from the section heading and elsewhere in the document.

ATSDR Response

“Brownfield” references noted and removed from this site narrative.

Comment 2

Please change the 3rd paragraph of the site history text to include the following information.

The April 2008 consultation changed the distance to the nearest residential neighborhood to “650 feet” from 1800 feet.

ATSDR Response

Although the 2003 ATSDR health consultation stated the distance to the nearest residential neighborhood was 1800 feet, we acknowledge the U,S, EPA calculates the distance as 650 feet.

5.7 Lower Green Bay and Fox River AOC**5.7.1.3. Fox River NRDA/PCB Releases****Comment 1**

Please change the ATSDR Conclusion text to include the following information.

Initial remediation of PCB-contaminated sediment, dredging began in 1999. Dredging, capping and sand covering is on-going.

ATSDR Response

The requested change from 2000 to 1999 has been made in the Fox River NRDA/PCB Releases site narrative.

5.8.1.2 Marinette Sewage Treatment Plant/Marinette Manufactured Gas Plant Brownfield Remediation.

Comment 1

Please remove the word “Brownfield” from the section heading and elsewhere in the document.

ATSDR Response

“Brownfield” has been removed from the Marinette Sewage Treatment Plant site title.

Comment 2

Please change the ATSDR Conclusion text to include the following information

Planning for the RI/FS is ongoing. No remediation has been selected to date.

ATSDR Response

The requested language has been added to the Marinette Sewage Treatment Plant site narrative.

Comment 3

Please consider the following comment.

The ATSDR Conclusions text discusses a remedial design and talks about potential risk from exposure to dredge spoils and associated contaminants. At one time, before the Superfund settlement, there was a remedial design for sediment removal. That design was never implemented because of concerns over cleanup goals. At this time, the site has no approved design and is in an investigation mode.

ATSDR Response

The requested language has been added to the Marinette Sewage Treatment Plant site narrative.

Chapter 6 - Lake Superior

6.2. Torch Lake AOC, Houghton County, MI

6.2.1.1 Torch Lake

Comment 1

Please consider the following comment.

It may be useful to distinguish the NPL Operable Units (OUs) at the site, or how they related to the AOC. OU1 includes stamp sands and tailings, slag and drums along the western shore of Torch Lake, OU2 includes groundwater, surface water and sediments associated with the site, and OU3 includes several other areas with stamp sands on the Keweenaw Peninsula.

ATSDR Response

This information has been added to the Torch Lake site narrative.

Comment 2

The 1995 Site Review and Update by ATSDR are not referenced in the summary. This report concluded that further analysis and evaluation of site data should be conducted to determine whether follow-up health activities are needed. In reference to the 1998 PHA, EPA's OU1 and OU3 remedial actions included institutional controls to limit exposures to surface contaminants at the site

ATSDR Response

The site history now includes excerpts from the U.S. EPA June 2008 Fact Sheet for the Torch Lake site. Thus any reference to a 1995 Site Review and Update is unnecessary.

Comment 3

Recommend noting that “A removal action is also underway to address asbestos at the Quincy Smelter.” in the second and third paragraphs under ATSDR conclusions.

ATSDR Response

The suggested language has been added to the second *ATSDR Conclusions* paragraph.

Comment 4

Recommend revising the last sentence in the third paragraph under ATSDR conclusions from “This means that all planned remedial activities under the Superfund program have been completed” to “All planned remedial activities under the Superfund 1992 Record of Decision has been completed, however additional activities may be needed in Operable Unit 3 of the site.”

ATSDR Response

The third ATSR Conclusions paragraph has been replaced by excerpts from the U.S. EPA June, 2008 Fact Sheet for the Torch Lake site.

Appendix 1**Comment 1**

The Liquid Disposal Inc. site does not appear on the Clinton River AOC Map. There are two J&L landfills illustrated, perhaps one site is mislabeled. Liquid Disposal is located just east of the county line at 3901 Hamlin Road in Utica, Michigan.

ATSDR Response

This change has been noted and made in the Clinton River AOC map.

Annemarie Vincent, U.S. EPA Cleveland Office, Westlake, OH**Comment**

Spelling inconsistency on page 119 for the Black River. On this page under the chart listing for Lead - Lorain County, OH it lists "Oberland Water Env Protection" with an NPDES listing of OH0020427.

ATSDR Response

Correction noted and entered.

The National Wildlife Federation**Comment 1**

The Draft AOC Report should accurately characterize the policy context.

The Executive Summary of the Report (first paragraph) references the International Joint Commission (IJC) as “the binational organization that works to implement the Great Lakes Water Quality Agreement (GLWQA) between the U.S. and Canada.” In fact, the first paragraph of Article II of the GLWQA states the following:

“The purpose of the Parties is to restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem. In order to achieve this purpose, the Parties agree to make a maximum effort to develop programs, practices and technology necessary for a better understanding of the Great Lakes Basin Ecosystem and to eliminate or reduce to the maximum extent practicable the discharge of pollutants into the Great Lakes System.”

Thus, the principal actors in implementing programs to meet the goals of the GLWQA are the Parties (the governments of the U.S. and Canada), rather than the IJC. Article VII of the GLWQA notes that the IJC “shall assist” in implementation of the GLWQA, including through collection, analysis and dissemination of data, tendering of advice and recommendations, provision of coordinating assistance, and reporting. ATSDR should ensure that the purpose and implementation process of programs through the Great Lakes Water Quality Agreement are correctly specified in the Executive Summary and any other relevant locations in the Draft AOC Report.

ATSDR Response

The parties to, and therefore the principal actors of, the Great Lakes Water Quality Agreement are the U.S. and Canadian governments. Nonetheless, the agreement’s language indicates that the parties have delegated to the International Joint Commission the authority for those scientific tasks necessary to “restore and maintain the chemical, physical, and biological integrity of the waters of the Great Lakes Basin Ecosystem.” Thus the IJC has, in the words of the Executive Summary, the authority “to implement the Great Lakes Water Quality Agreement,” at least within its sphere of responsibility.

Comment 2

In addition, the third paragraph of the Executive Summary states that the GLWQA “defines ‘critical pollutants’...”, but provides a narrative definition that does not capture the exact definition of the term in the GLWQA. We recommend that ATSDR either provide the full definition as written in the GLWQA, or rephrase the sentence to paraphrase rather than imply an exact definition.

ATSDR Response

The Executive Summary defines IJC-critical pollutants as “substances that persist in the environment, bioaccumulate in fish and wildlife, and are toxic to humans and animals.” Annex 2, section 1 of the GLWQA defines critical pollutants as

substances that persist at levels that, singly or in synergistic or additive combination, are causing, or are likely to cause, impairment of beneficial uses despite past application of regulatory controls due to their:

- (i) presence in open lake waters;
- (ii) ability to cause or contribute to a failure to meet Agreement objectives through their recognized threat to human health and aquatic life; or
- (iii) ability to bioaccumulate.

Although the Executive Summary usage does not fully incorporate the complete GLWQA definition, the summary text is adequate.

Comment 3

In addition, the second sentence of the third paragraph of the Executive Summary references “12 categories of critical pollutants.” The Draft AOC Report later discusses 11 critical pollutants. The Great Lakes Water Quality Board identified 11 “critical pollutants” in 1985, and the GLWQA notes that the “Parties, in cooperation with State and Provincial Governments and the Commission, shall designate Critical Pollutants for the boundary waters of the Great Lakes System or for a portion thereof.”

ATSDR Response

The Executive Summary reference has been changed to reflect that the IJC has recognized 11 rather than 12 critical pollutant categories.

Comment 4

The Methods and Data section of the Draft AOC Report (i.e. Section 1.3 and subsequent sections), would benefit by a more thorough explanation of the goal of the project. For example, the Draft AOC Report notes that information on both previous public health assessment products for the region, as well as additional compiled chemical release and other data are provided (Chapter 1, introductory section, fourth paragraph). Both of these elements should be briefly described in Section 1.3 and subsequent sections.

ATSDR Response

As noted above in the section on addressing IOM comments, we have extensively revised Chapter 1 of the report to make the goals, purpose and scope of the report more clear.

Comment 5

Concerning the newer chemical release data (i.e., discussion in Section 1.3), the Draft AOC Report should distinguish between different types of data considered. In particular, it would be helpful early on in this section to distinguish between numeric ambient data (e.g., some of the data provided through the ATSDR Hazardous Waste Site Assessment Data), actual release data (e.g., through the Toxics Release Inventory (TRI) and the National Pollutant Discharge Elimination System databases), and programmatic data (e.g., Impairments of Beneficial Use data, which is obviously based on some type of ambient data).

ATSDR Response

To improve clarity, ATSDR has substantially revised the description of the datasets.

Comment 6

In addition, the Draft AOC Report appropriately identifies some limitations with TRI data, but could also indicate that there are other data sources that could be pursued in identifying chemical releases in or near AOCs, including the U.S. EPA National Emissions Inventory.

ATSDR Response

ATSDR appreciates this suggestion and refers the commenter to Appendix 3 of the report, where additional data sources are cited.

Comment 7

The Draft AOC Report should also include a section summarizing changes made, and rationale, from earlier drafts.

ATSDR Response

This document summarizes changes in the final draft and the rationale for those changes.

The separate document entitled “Improving the Science,” released in 2008, summarizes changes in earlier drafts and the reasons for those changes.

Comment 8

The Draft AOC Report should acknowledge other research efforts examining the relationship between chemical releases and health outcomes in the Great Lakes, including in the context of an overall assessment of critical pollutants.

ATSDR Response

This report is not intended to be a comprehensive summary of all relevant science (see Chapter 1 of the report for a discussion of scope). The final report does contain a new Appendix 4 entitled “Great Lakes Human Health Effects Research Program,” which evaluates findings from that science program that address public health issues associated with exposure to contaminants in the Great Lakes Basin. St. Clair River Binational Advisory Council, St Clair AOC, Friends of the St. Clair River Watershed

Comment

I note with some concern that the Draft 2008 report *Selected Information on Chemical Releases Within Great Lakes Counties Containing Areas of Concern* excludes any information pertaining to the binational Areas of Concern. I am a member of the St. Clair River Binational Public Advisory Council, and we fully recognize that the impairments in the

St. Clair River are bi-national in scope and that chemical releases from both countries impact the health of the river.

I request that the report be expanded to include data for the St. Clair River, Detroit River, and St. Mary's River Areas of Concern.

ATSDR Response

The International Joint Commission's December 5, 2001 letter to ATSDR stated in part:

In its 11th Biennial report, the IJC intends to comment on the hazards posed by the continuing presence of hazardous materials in the AOC's. To this end, the Commission would request that ATSDR provide to the Commission information on public health assessments that it has conducted on hazardous waste sites located within any of the 33 [*sic*] United States AOC's.

Although we agree with the commenter about the importance of the binational AOCs, the scope of this report is limited to US AOCs only. Some information on the binational AOCs is available in the Canadian report.

On page 15 of the report we state that "The binational AOCs have been left to the Canadian report".¹

¹ Elliot SJ, Eyles J, DeLuca P. 2001. Mapping health in the Great Lakes Areas of Concern: a user-friendly tool for policy and decision makers. *Environ Health Perspect* 109(6):817-19.