United States
Environmental Protection
Agency

EPA Proposes Cleanup for Area 2 of Kalamazoo River

Allied Paper/Portage Creek/Kalamazoo River Site

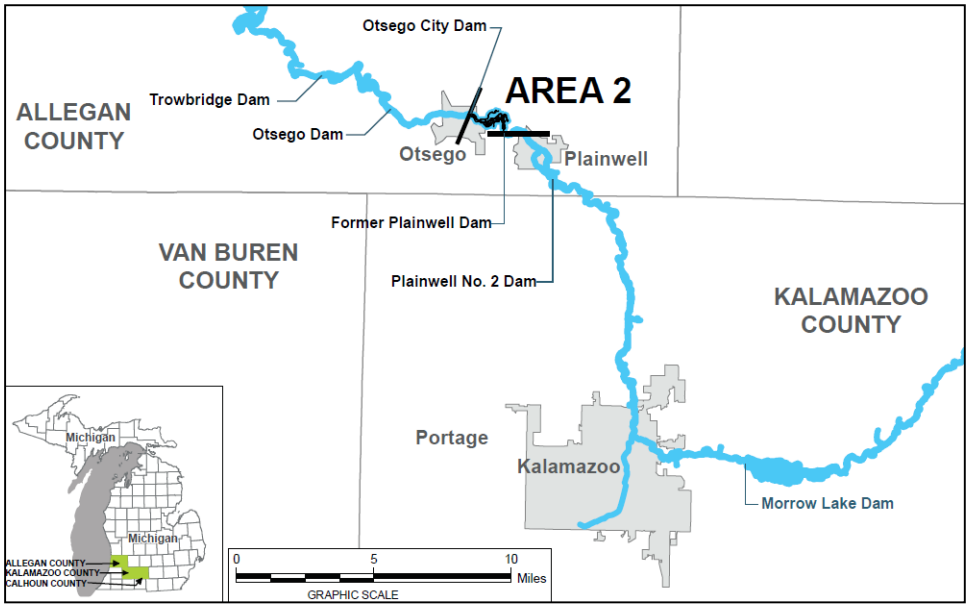
Kalamazoo, Michigan June 2017

U.S. Environmental Protection Agency, with the Michigan Department of Environmental Quality, plans to clean up PCB contamination in the part of the Kalamazoo River known as Area 2 *(see map, below and on Page 3)*. Area 2 is a 1.9-mile stretch of the Kalamazoo River between the former Plainwell Dam to the Otsego City Dam.

Your comments are needed

EPA will accept comments on the proposed cleanup plan from July 1 through Aug. 30, 2017 (*see box, left*). This fact sheet provides background information, describes cleanup options and explains EPA's recommendations.[1] You can find more details at www.epa.gov/superfund/allied-paper-kalamazoo and at the information repositories listed on Page 2.

EPA will review all comments before making a final decision on a cleanup plan and will respond to comments in a document called a responsiveness summary. This will be part of the final cleanup plan called the record of decision.



Map showing Area 2 of the Kalamazoo River.

You are invited

EPA invites you to discuss the proposed cleanup plan for Area 2 of the Kalamazoo River site.

EPA will hold a public meeting **Tuesday, July 25, at 6 p.m.**, at Otsego District Public Library, 401 Dix St. EPA representatives will present details of the plan and accept written comments while oral comments will be recorded by a court reporter.

Public comment period

You may comment on the proposed plan from July 1 through Aug. 30, 2017.

There are several ways to offer comments:

- Fill out and mail the enclosed comment form to the following address: **1300 Bluff St., Suite 140 Flint, MI 48504**
- Attend the public meeting on **Tuesday, July 25, 6-8 p.m., at Otsego District Public Library**, and submit a written or oral statement.
- Go to: www.epa.gov/superfund/allied-paper-kalamazoo.

EPA may modify the plan or select another solution based on new information or public comments, so your opinion is important.

[1] *Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, known as the Superfund law) requires public notice about this proposed cleanup plan through a meeting, comment period and newspaper announcement. This fact sheet summarizes information contained in the feasibility study and other documents that can be reviewed at the information repositories listed on Page 2.*

Background

Starting in the 1950s, several paper mills along the Kalamazoo River and Portage Creek recycled various types of paper stock. This included carbonless paper that contained polychlorinated biphenyls, or PCBs, that were released into the mills' waste streams and eventually to the Kalamazoo River.

In 1990, the site was added to the National Priorities List, or NPL, due to the presence of PCBs in the sediment, fish, and surface water of the Kalamazoo River. Since then, the paper mill companies have completed several investigations of the Kalamazoo River. The NPL is a roster of the nation's most contaminated waste sites eligible for cleanup under EPA's Superfund program.

In 2007, Georgia-Pacific and Millennium Holdings LLC agreed with EPA to conduct additional studies to determine the nature and extent of contamination and determine potential cleanup options for the site.

Contact EPA

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For more information

You can read documents related to the Allied Paper/Portage Creek/Kalamazoo River site at www.epa.gov/superfund/allied-paper-kalamazoo, or at these information repositories:

U.S. EPA Record Center
77 W. Jackson Blvd., 7th Floor
Chicago

Charles Ransom Library
180 S. Sherwood
Plainwell

Kalamazoo Public Library
315 S. Rose
Kalamazoo

Allegan Public Library
331 Hubbard St.
Allegan

Otsego District Library
219 S. Farmer St.
Otsego

Saugatuck-Douglas Library
10 Mixer St.
Douglas

Waldo Library
Western Michigan University
1903 W. Michigan Ave.
Kalamazoo

Current conditions

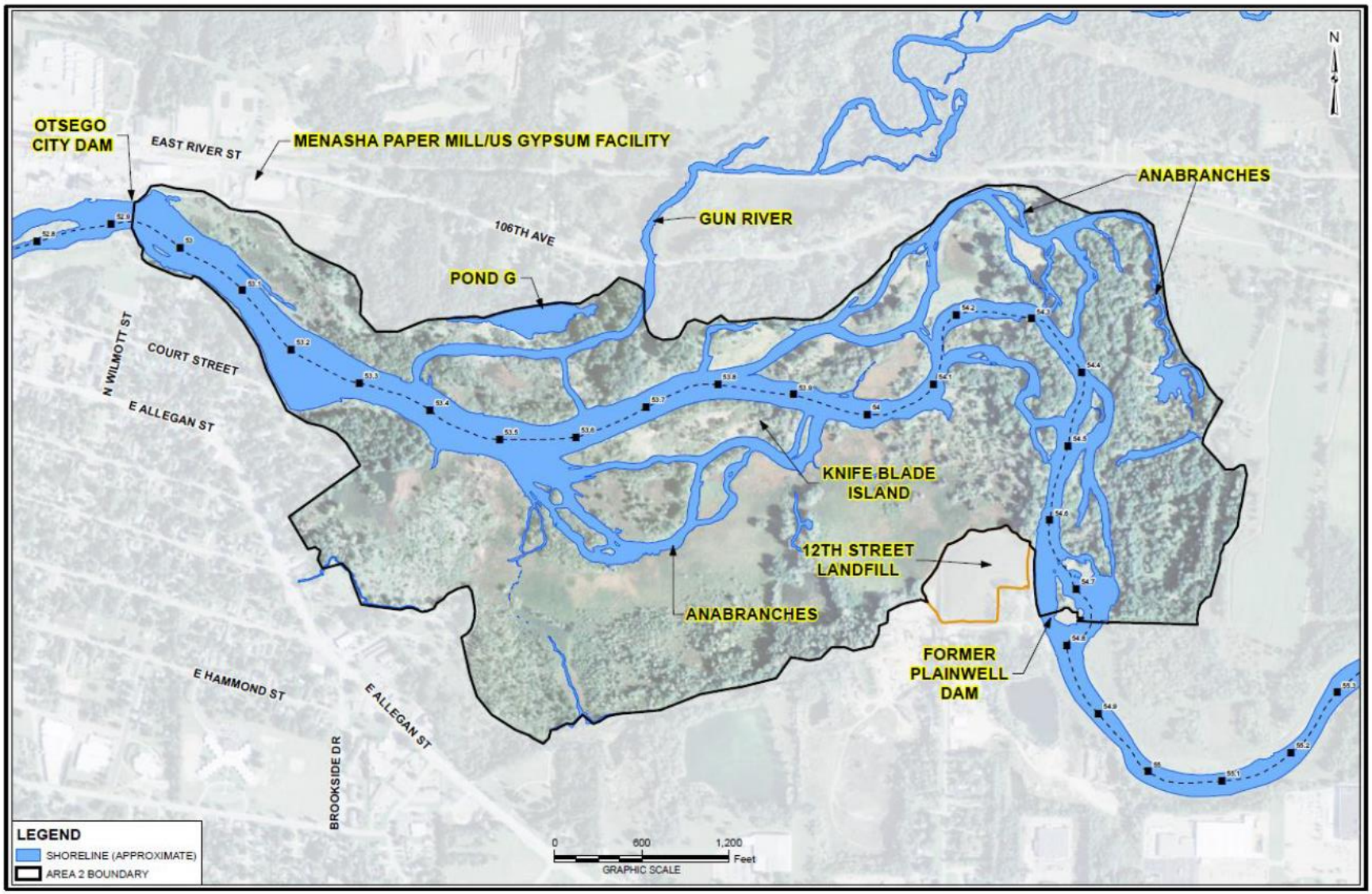
Since 1998, EPA has conducted several cleanups at the site to control the PCB sources. So far, the Agency has removed nearly 450,000 cubic yards of contaminated material and cleaned up and restored nearly 7 miles of the river and its banks.

EPA conducted a study of potential risks to public health and the environment. The study evaluated potential current and future risks to people who live nearby or engage in recreational activities near the Kalamazoo River and its floodplains in Area 2. PCBs are the primary contaminant of concern. The study determined that PCB contamination may pose unacceptable risks to people who may eat fish caught from the Kalamazoo River.

Also, potential exposure to high levels of PCBs, dioxin and furans in soil may pose unacceptable risks to residents and those who partake in recreational activities along the river; however, these risks are lower than those for people who eat fish from the river.

Why is a cleanup needed?

EPA has studied the risks to human health and the environment. Based on its studies, the Agency determined PCB contamination might pose unacceptable hazards and risks to people who may eat fish caught from the Kalamazoo River. Fish advisories are currently in place to warn residents and anglers about the risks associated with eating fish from the river. There are currently no restrictions in place to control human exposure to sediment, soil, or surface water.



Map Showing Area 2

EPA's Evaluation Criteria

These criteria guide EPA as it weighs different cleanup alternatives. These criteria are separated into three categories: Threshold, Balancing, and Modifying Criteria. **Threshold Criteria** determine if a cleanup alternative protects human and environmental health and complies with all Applicable or Relevant and Appropriate Requirements (**ARARs**). More generally, ARARs are the federal and state regulations that EPA has to follow during a cleanup. In cases where the federal and state regulations are slightly different, EPA will follow the stricter regulations. **Balancing Criteria** are used to identify trade-offs between cleanup alternatives. **Modifying Criteria** are based on public comments, and can prompt modifications to the preferred cleanup alternative (*see Page 7*).

Threshold Criteria

must be met for an alternative to be eligible.

Balancing Criteria

determines relative strengths and weaknesses among the criteria that meet threshold.

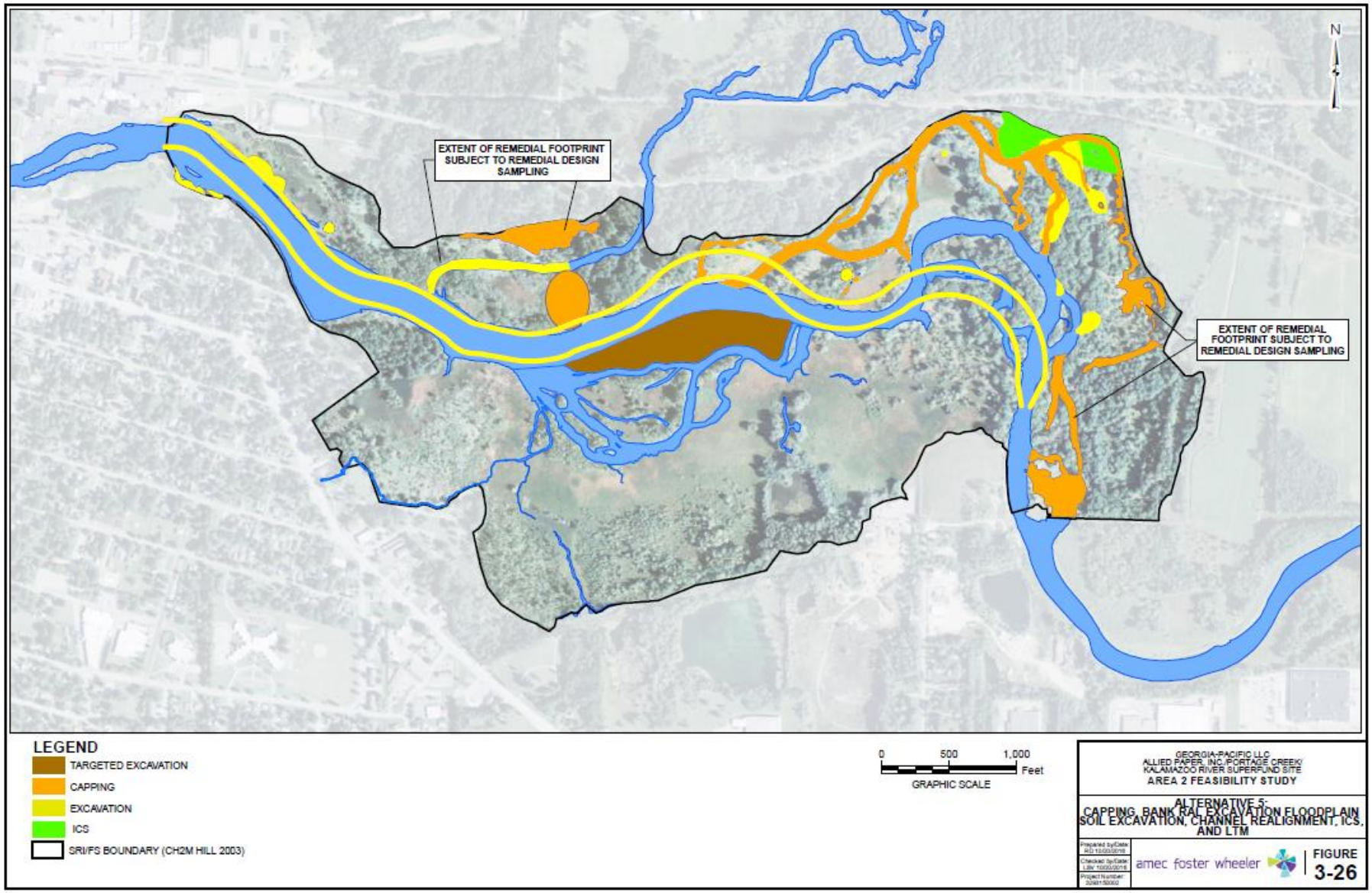
Modifying Criteria

implemented once all public comments are evaluated. They may prompt modifications to the preferred alternative to achieve the end result of a preferred alternative for cleanup in which EPA and the community can be confident.

Cleanup Alternatives Comparison Table

Cleanup Alternatives	Description	Protection	Years to reach cleanup goals	Short-term Impacts	Total Cost (in millions)
A-1: No Action	Natural processes. Required by EPA to compare with other alternatives.	No	35	N/A	**$0**
A-2: Monitored Natural Recovery, or MNR; Institutional Controls, or ICs; and Long-term Monitoring, or LTM	No physical cleanup; relies on natural processes and site restrictions.	No	35	Bed and bank erosion following dam removal	**$12.5**
A-3: Capping; Channel Realignment; Gun River Excavation; Knife Blade Island, or KBI, Targeted Excavation; ICs; and LTM	Capping, channel protection in the northeast anabranches, Pond G, and floodplain soil exceeding RAL of 20 mg/kg PCBs; main river channel realignment to stabilize channel and protect floodplains.	Yes	32	Erosion prevention, temporary impact to habitat areas	**$43.8**
A-4: Capping; Channel Realignment; Bank Remedial Action Level, or RAL/Gun River Excavation; KBI Targeted Excavation; ICs; and LTM	Same as A-3 with addition of bank soil excavation above a RAL.	Yes	32	Erosion prevention, temporary impact to habitat areas	**$44.4 - $45.2**
A-5: Anabranch Capping, Channel Realignment, Bank RAL/Floodplain Soil/Gun River Excavation, KBI Targeted Excavation, ICs, and LTM	Same as A-4 except floodplain soils above RAL 20 mg/kg will be excavated.	Yes	32	Erosion prevention, temporary impact to habitat areas	**$45.6 - $46.4**
A-6: Floodplain Capping, Channel Realignment, Bank RAL/Floodplain Soil/Anabranch/Gun River Excavation, KBI Targeted Excavation, ICs, and LTM	Same as A-4 except anabranch areas will be excavated.	Yes	32	Increase frequency of flooding and erosion; more extensive impact to habitat and wildlife	**$66.9 - $67.7**
A-7: Floodplain, Anabranch, Bank RAL Excavation, Channel Realignment, Gun River Excavation, KBI Targeted Excavation, ICs, and LTM	Excavation with backfilling to restore grade and riparian habitat restoration in: former anabranches, Pond G, floodplain soil > RAL 20 outside channel realignment footprint, and soil > 2.5 mg/kg on the private parcel in the northeast portion of the area.	Yes	32	Same as A1-A6, plus more difficult to implement	**$74.5 - $75.3**
A-8: Area-Wide Aggressive Excavation, ECs, ICs, and LTM	Area-wide removal of sediment and floodplain soil exceeding 0.33 mg/kg, achieving the sediment PRG throughout the floodplain and without channel realignment.	Yes	40	Substantial impact and lengthy recovery time to habitat and wildlife	**$325**

Definitions:
ECs - Engineering Controls **LTM** - Long-term Monitoring **ICs** - Institutional Controls **KBI** - Knife Blade Island
RAL - Remedial Action Level **mg/kg** - milligram per kilogram **MNR** - Monitored Natural Recovery



Graphic showing EPA's preferred cleanup Alternative A-5.

Cleanup alternatives evaluation criteria comparison

Options	Overall protection of human health and the environment	Compliance with ARARs	Long-term effectiveness and permanence	Reduction of toxicity, mobility, or volume through treatment	Short-term effectiveness	Implementability
A-1	Undocumented	Undocumented	Undocumented	○	○	NA
A-2	○	●	●	○	○	●
A-3	●	●	●	○	●	●
A-4	●	●	●	○	●	●
***A-5**	●	●	●	○	●	●
A-6	●	●	●	○	●	●
A-7	●	●	●	○	●	●
A-8	●	⊙	○	○	○	●

● = fully meets criteria ⊙ = partially meets criteria ○ = Does not meet criteria NA = Not applicable

* = EPA's recommended alternative ARARs = Applicable or Relevant and Appropriate Requirements.

Cleanup alternatives

EPA considered eight options for cleaning up Area 2. They are summarized in the table on Page 5. EPA developed these alternatives using combinations of different technologies and evaluated each option in detail against criteria established by federal law *(see Page 4)*.

The last two criteria, state and community acceptance, will not be evaluated until after the comment period and public meeting.

EPA's recommended alternative

Based on the criteria, EPA recommends Alternative A-5. A-5 includes capping, bank excavation, floodplain soil excavation, channel realignment, Gun River excavation, targeted excavation on Knife Blade Island, institutional controls, and long-term monitoring. This alternative has less impact to habitat and surrounding properties than other options, protects against erosion and would help maintain flow in the river channel. It is less costly than alternatives A-6, A-7 and A-8, protects human health and the environment, and provides short- and long-term effectiveness while complying with applicable or relevant and appropriate requirements, known as ARARs.

Next steps

EPA, with input from Michigan Department of Environmental Quality and the community, will make the final decision on what cleanup alternative will be implemented. Public comments are important and could encourage EPA to modify or change its preliminary cleanup decision. EPA will review and compile responses to public comments in a document called a responsiveness summary. The final cleanup plan will be published in a document called "record of decision" or ROD, and available for public review in the site's administrative record. The responsiveness summary and administrative record will be available for review at www.epa.gov/superfund/allied-paper-kalamazoo and at the information repositories shown on Page 2.

Use This Space to Write Your Comments

EPA is interested in your comments on the proposed cleanup plan for the Kalamazoo River, Area 2 site. You may use the space below to write your comments; you may attach additional sheets of paper if you run out of space below. You may submit this at the July 25, 2017, public meeting, or detach, fold, stamp and mail. Comments must be postmarked by Aug. 30, 2017. If you have any questions, please contact Diane Russell directly at 989-395-3493, weekdays 9:30 a.m. – 5:30 p.m. Comments may also be sent via the web at www.epa.gov/superfund/allied-paper-kalamazoo and link to the public comment form. Mail written comments to Diane Russell at **1300 Bluff St., suite 140, Flint, MI 48504**

Name _____

Affiliation _____

Address _____

City _____ State _____ ZIP _____

Kalamazoo River, Area 2 Comment Sheet

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Place
First
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Here

Diane Russell
Community Involvement Coordinator
U.S. EPA Region 5 Superfund Division
1300 Bluff St., Suite 140
Flint, MI 48504

EPA Proposes Cleanup Plan for Area 2; Seeks Public Comments

Public Meeting
Tuesday, July 25
6 p.m.

Otsego District Public Library
401 Dix St.

If you will need special accommodations at the meeting, contact:
Diane Russell, Community Involvement Coordinator, 989-395-3493, russell.diane@epa.gov

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ALLIED PAPER/PORTAGE CREEK/KALAMAZOO RIVER SITE: Proposed Cleanup Plan for Area 2

United States
Environmental Protection
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Community Information Office
1300 Bluff St., Suite 140
Flint, MI 48504