



United States
Environmental Protection
Agency

The Kalamazoo River Dams: Questions and Answers

Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site
Kalamazoo, Michigan

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For more information. . .

on the Kalamazoo River dams,
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Site-related documents may be reviewed at:

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U.S. Environmental Protection Agency has been recently involved in several meetings sponsored by local environmental groups for the Allied Paper Inc./Portage Creek/Kalamazoo River Superfund site. A concern frequently raised at these meetings is the future of the six dams in the 80-mile stretch of the river. Here are the answers to many of those questions.

Has EPA decided whether the dams should stay in place?

No, EPA has not made a decision about whether the dams should stay in place or be removed. EPA recently sent Michigan Department of Environmental Quality a draft Feasibility Study for the first two exposed sediment impoundments on the Kalamazoo River (Plainwell and Otsego City). MDEQ is in the process of reviewing and commenting on this draft. The draft FS included a draft "alternative array," which described seven remedial alternatives being considered for the first two impoundments. EPA will eventually select the remedy for these impoundments from the alternative array after it is finalized. Because the federal and state agencies are still deliberating about the draft FS (including the alternative array), it is not yet available to the public. EPA can assure you, however, that one of the alternatives the Agency is considering for these impoundments involves the removal of the Plainwell and Otsego City dams. After the alternative array is final, EPA will evaluate the alternatives according to the Superfund remedy selection process provided in the National Oil and Hazardous Substances Pollution Contingency Plan, referred to as the NCP.

How does this issue (the dams) fit into Superfund's cleanup plan selection process?

To fully understand the importance of this issue, let's first examine the process EPA uses to choose a cleanup plan. The NCP provides nine criteria to evaluate EPA's options in cleaning up a Superfund site. The first two criteria – called "threshold criteria" – are the most important. Every alternative must meet them in order to be eligible for selection. The first threshold criterion is overall protection of human health and the environment, and the second is compliance with applicable or appropriate and relevant legal requirements. So the question is, must be dams be removed to ensure adequate protection of people and the environment? EPA is studying this question very carefully.

The next five NCP criteria in the cleanup decision process are the "primary balancing criteria." After the threshold criteria are met, these are the most important in comparing alternatives. The five are:

- □ long-term effectiveness and permanence
- □ reduction of toxicity, mobility or volume through treatment
- short-term effectiveness
- implementability
- cost

The question of dams removal is relevant to all of these criteria. EPA must now:

- evaluate whether the dams must be removed to ensure long-term effectiveness of the cleanup
- evaluate the effects of dam and sediment removal on people and the environment
- assess the difficulty of removing the dams
- determine the cost associated with dam removal.

CERCLA (the Superfund law) and the NCP require all cleanups to be “cost-effective,” which means that costs must be proportional to the plan’s overall effectiveness. EPA is studying this issue too. There is more discussion on this point in other answers in this fact sheet.

The last two NCP criteria, called “modifying criteria,” are state acceptance and community acceptance. They’re called “modifying” because EPA can’t thoroughly evaluate them until a proposed plan is issued. In this case, for example, EPA knows that the state and many people in the community favor removing the dams on the Kalamazoo. But since no plan has been proposed and no details on possible alternatives released, EPA cannot know for sure how any of the options will be received. EPA can’t evaluate state or community acceptance until these two important stakeholders have the opportunity to consider all the relevant information.

What has EPA done about dams at other sediment sites?

In some cases, EPA required the dams remain in place, while at other sites, EPA has required the dams to be removed. Every situation is different, and every decision is based primarily on what’s needed to protect people and the environment.

Can EPA implement a cleanup plan without state approval?

EPA always prefers to work with its state partners, so EPA strives to build consensus. But EPA doesn’t necessarily need state approval of a cleanup plan to issue a final decision. There are a few things to remember:

- If Superfund money is to be used to pay for a cleanup, the state in which the site is located must provide certain assurances about cost-sharing and long-term operation and maintenance before work can begin.
- If Superfund money is used, the state is usually required to pay 10 percent of the cleanup costs, and pay for long-term operation and maintenance.
- If a Superfund facility was publicly operated at the time of disposal, the state is potentially responsible for half the cleanup costs.

- If those responsible for the contamination conduct or pay for the cleanup, then work can proceed without state approval. State assurances on cost-sharing are not necessary.

If EPA decides the dams should stay in place, is there anything the state can do to change EPA’s decision?

Yes. Under the NCP, the state can ask EPA to amend its “record of decision,” which is a public document that details the cleanup plan for the site. If EPA agrees that the changes requested by the state are necessary to provide adequate protection of human health and the environment, then EPA will amend its record of decision. If EPA concludes that the state’s requested changes are an “enhancement,” that is, they go beyond what the NCP requires, then EPA may amend the record of decision if the state agrees to pay all additional costs for the changes the state wants.

Is there any way the state can get the dams removed, other than through the Superfund cleanup process?

Yes. The state and other “Natural Resource Trustees,” such as U.S. Department of the Interior, can make a claim for damages to the state’s natural resources as a result of the PCB contamination in the Kalamazoo River. The trustees are assessing those potential damages now. A successful claim can mean substantial payments to the trustees. The money is usually used for restoration projects, and removing dams on the Kalamazoo could be one of those projects.

What is EPA doing to evaluate the dam issue?

EPA is doing a thorough internal evaluation. EPA is also paying for a study by U.S. Geological Survey to determine what would happen to the sediment behind the three state-owned dams if the dams were removed. USGS is trying to determine where the sediment would erode and aggrade within the current channel if the dams were to catastrophically fail, and how much sediment would become mobile if this were to happen. USGS is also studying other effects of removing the dams, and they are collecting data on the sediment and on discharges into the river at two points in the study area.

What questions will the USGS study not resolve?

- What would happen to Allegan Dam if the three state-owned dams are removed?
- What would happen to Lake Allegan, which already has sedimentation issues, if upstream dams are removed?
- Where could EPA dispose of significant quantities of contaminated sediment removed from the river? How much would that cost?

- How long would the dredging, excavation and disposal of floodplain soil and sediment take before the dams could be removed? EPA believes that such dredging and excavation could take several years.

When is the USGS study due to be completed?

EPA expects an initial draft in September 2003. The final USGS report is not due until September 2004.

What if EPA issues a proposed plan or record of decision before September 2004 that does not involve dam removal, but the USGS study shows that removing the dams would improve long-term effectiveness of the river cleanup, and not cost significantly more than leaving the dams in place?

If EPA issues a proposed plan or record of decision that does not involve dam removal before all USGS studies are completed, but the USGS studies contain information that makes EPA believe that it needs to reconsider its cleanup plan in any way (including dam removal), then EPA will re-evaluate it. Under the NCP, EPA can always revise a proposed plan and amend a record of decision based on important new information.

Can EPA require that the dams stay in place? Can EPA leave contaminated sediment in place if the state, which owns the property, wants it all removed?

EPA hasn't decided whether the dams should stay or be removed. But legally, EPA can require – as part of its proposed cleanup plan – that waste stays on-site. Again, the effect on people and the environment is a key issue. EPA policy is against moving wastes from a contaminated area to a clean area. The NCP process actually favors leaving untreated waste at the site, because moving waste from one site to another is not always the right thing to do. EPA can also require – as part of the cleanup plan – that the dams be repaired and maintained to keep the river in its present channel and prevent erosion of soil with high levels of PCBs.

If EPA requires the dams to remain in place, who will pay for the necessary repairs and long-term operation and maintenance of the dams?

The potentially responsible parties.

If EPA requires the dams to remain in place, does that mean PCB-contaminated soil and sediment will remain forever?

The risk to people and the environment will determine whether contaminated soil and sediment remain in place. Any decision on removing the dams will ensure that floodplain

soil and sediment with PCBs above the ecological risk value and the human health risk value will either be removed or treated on-site. The ecological risk range for floodplain soil is 6 to 8 parts per million and for in-stream sediment is 0.5 to 0.6 ppm. The human health risk value for floodplain soil is 23 ppm. An example of an on-site solution is a cap, or an impenetrable barrier over the contaminated material.

What happens if the state decides to just take down these dams?

The state can't legally do that because of provisions of the Superfund law. The state is an owner of part of a Superfund site, and property owners need EPA's approval to do any cleanup work if EPA has already started a process called a "remedial investigation and feasibility study." Removing the dams would fall into the category of cleanup work. See Section 122(e)(6) for the relevant legal citation.

What is EPA considering when looking at the cost of removing the dams?

Because the state-owned dams are already partly dismantled, the major cost of removing them is the cost of transporting and disposing of contaminated sediment and soil. Transportation and disposal costs are estimated to range from 1 to 3 times the cost of dredging, depending upon the location of the final disposal site. A key problem at all sediment sites is how to dispose of the contaminated materials. At some sites – such as the Fox River in Wisconsin, where the disposal area is quite close to the site – sediment will be pumped through a temporary pipeline directly from the river to the disposal site. This results in a significant cost savings, especially if there's a large amount of sediment. At other sites, there's no proper disposal area nearby. So after the water is drained and treated, the sediment must be hauled – usually by truck – to a distant location. The cost of hauling sediment to a remote location can be quite high. To date, EPA does not have a nearby disposal area for the contaminated sediment and soil that would need to come out of the Kalamazoo in the event of dam removal.



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