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Sheboygan River Dredging Project Questions and Answers #1 February 15, 2010



1. Why is the Sheboygan River being dredged?

Because dangerous contaminants are present in the sediments. These contaminants cause serious environmental problems and can have a major impact on human health. The primary contaminants are called PCB's (polychlorinated biphenyls). PCB's affect growth and development of children and may cause cancer, among other health effects. Testing revealed that other contaminants are also present such as heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); volatile organic compounds (VOC's) such as methylene chloride, acetone, chloroform, methyl ethyl ketone, and toluene; and polynuclear aromatic hydrocarbons (PAH's) including petroleum products, waste oil, and coal tars. These other contaminants also have the potential to cause maladies in human and wildlife populations.

2. How did the contaminants get into the River?

Various industries discharged the contaminants into the River over the course of several decades.

3. Is anything being done to force the companies that released the contaminants into the River to clean it up?

The federal government through the U.S. Environmental Protection Agency (EPA) declared 14 miles of the Sheboygan River a hazardous waste site under the Superfund legislation in 1986. Declaring the River a hazardous waste Superfund site brings to bear federal enforcement action or the threat of enforcement action. Tecumseh Products Company in Sheboygan Falls became the primary responsible party by this process. Clean up liability on

part of Tecumseh was transferred to Pollution Risk Services (PRS), who is now responsible for removing contaminated sediments in the River through dredging.

4. Is there a legal basis or document that establishes responsibilities and the extent of clean up made mandatory under Superfund?

A legally binding agreement between the EPA and PRS was formally enacted in May of 2000. This legally binding document is called the Record of Decision. The Record of Decision created an official limit to liability, which requires PRS to remove only a small portion of the contaminated sediments in the River. There is thus no further enforcement mandate to remove additional contaminated sediment out of the River. Federal enforcement officials believe that natural deposition of relatively clean sediments will bury the remaining contaminated sediments, reducing their threat. Under this scenario, it is believed that the concentrations of PCB's in fish tissue will become safe to eat up to 30 years after completion of the limited dredging required under the Record of Decision. Other types of contaminants would be cleaned up and eliminated from the River in association with the removal of the PCB's as the primary pollutant of concern. Some people believe that the threat will never go away if large amounts of contaminated sediments are left behind, and if these remaining contaminated sediments are not removed, the River can never again be dredged to former depths to allow for full use and enjoyment, including navigation by larger watercraft, allowing a wider range of commerce to occur, and maximizing economic development potential adjacent to the River. There are no tax dollars spent on Superfund clean up projects, as all expenses are borne by the party (or parties) held liable in the Record of Decision.

5. Has any clean up occurred since the River was listed as a Superfund site in 1986?

Tecumseh performed clean up actions on its property in Sheboygan Falls in 1989 and 1990 to prevent additional discharges of contaminants into the River. PRS began remediating the Tecumseh property in 2004 and dredged the upper most portions of the Sheboygan River in the Sheboygan Falls area in 2006 and 2007. Additional monitoring and testing in the middle and lower sections of the River were performed in 2008 and 2009 in advance of the next and final phase of the dredging project within the Record of Decision under the Superfund Act.



Dredging the Upper Sheboygan River, 2007

6. When will dredging the River resume under the Superfund enforcement action?

PRS is planning to resume dredging operations to remove some contaminated sediments in the lower reaches of the River in April or May of 2010. Plans to do so, however, have yet to be formally approved by the EPA. This last phase of the Superfund dredging effort will take one or possibly two summers to complete.

7. What happens to the contaminated sediment that is removed from the River under Superfund?

Sediments contaminated by PCB's greater than 50 parts per million (ppm) are transported to a hazardous waste landfill near Wayne, Michigan. This is necessary under another federal law and there are no hazardous waste landfills in Wisconsin. Sediments containing less than 50 ppm PCB's are transported to a landfill near Chilton, Wisconsin. There has been some thought about possibly locating a spoils repository within Sheboygan County for sediments containing less than 50 ppm PCB's, but that idea has not been actively pursued.

8. What must be done to the sediment before it is transported to a disposal site?

Transporting and proper disposal of contaminated sediment is very expensive, up to \$200 or more per cubic yard. Since the dredging process removes a slurry that is mostly River water with very little solid sediments, it must be dewatered first. This also makes the sediments easier to transport. Dewatering in the Upper River was performed by Geo-tubes. Geo-tubes are long permeable bags. When stuffed with the dredged slurry, the water passes through the fabric membrane, leaving the solid sediments behind. After much of the water is removed so that the sediments are a semi-solid that no longer exudes water, it is placed in lined and covered trucks and taken to a disposal site. Testing of the sediment determines if it goes to Michigan or Chilton.



Geo-tubes used for dewatering sediments from the Upper Sheboygan River, 2007

Water collected from the geo-tubes is treated to ensure that no contamination is present and is discharged back into the River, cleaner than the River water itself is.



Onsite water treatment plant, Upper Sheboygan River, 2007

Another option that may be considered for dewatering for the remaining dredging operation is the use of a settling pond. In this technique, the dredged slurry is simply pumped into a constructed lined pond and the solids gradually settle out and are removed and loaded onto trucks for disposal.

9. Is dewatering safe?

Of course it is. First, would the EPA and the DNR even consider approving any facility or process that poses risk to the surrounding community? Would the federal and state departments of transportation allow the unsafe transport of these sediments if they posed a risk to the communities they pass through? Second, the sediments in the River are comparatively in the same status and state as the sediments during dewatering – and exposed to the environment in the same manner. Third, flooding has likely deposited contaminated sediments on the banks along the River, and we have the contaminated sediments under the water that will be dredged out, so there is already existing exposure to PCB's along the River and if this was indeed an unsafe condition we should be seeing the effects of this in the population. Fourth, exposure risk to PCB's in an occupational, industrial, industrial hazardous waste situation, or spill of PCB fluids is far different than exposure to small amounts of PCB's adhering to sediment particles in the Sheboygan River. Finally, the only major risk to humans from PCB's adhering to the sediments in the Sheboygan River is by ingesting fish or wildlife living in the contaminated zone as concentrations of PCB's build up in the tissues of fish and wildlife such as ducks to many times the background level found in the sediment. A person may have to ingest large amounts of sediments in order to accumulate the same dose of PCB's as found in fish and wildlife through a process known as bio-accumulation. People have voiced emotional concerns about spills of dredged materials, that PCB's will volatilize and spread through the community via air currents, and that children will become ill being any where near a dewatering site. Nothing could be further from the truth and to continue to voice these concerns despite solid evidence, experience, and science to the contrary is irresponsible. Let people forget, dewatering has occurred at numerous other PCB sites in Wisconsin, this nation, and abroad with no record of adverse health impacts. In fact, the EPA has performed an exhaustive study of this practice. Further, dewatering in the Sheboygan River basin has

already occurred in Sheboygan Falls near the school bus garage, a park, and residences with no harm or contamination being noted. After use, the site was returned to a natural state better than it was before dewatering occurred and the same would be demanded contractually for any new dewatering site being considered.

10. What will be done to ensure that the dewatering process is safe to calm people's fears?
Complete environmental testing would be required before construction of any new dewatering site is allowed to begin. Background levels of any of the contaminants in the River sediments will be measured, if they exist. Complete monitoring and testing will be done throughout the operation period to detect any possible spikes in contaminants. When the dewatering site is decommissioned, the complete background study will be repeated to ensure that there is in fact no residual spike in any contaminant. If there would be any contamination, it would have to be cleaned up to pre-operation standards. The only possible way for PCB's to migrate offsite during dewatering would be if the sediments were allowed to dry completely and left uncovered so that they would be picked up by wind. As the dewatering process keeps the sediments moist, and means are provided to add water just in case, there is no risk of aerial transport. But even if it occurred, the concentrations of PCB's that adhere strongly to soil particles would likely be inconsequential to anyone downwind. Access to any dewatering site is tightly controlled, so there would be no chance for children to play in any contaminated sediment. Besides, the sediment is largely contained by either the geo-tubes or the settling pond before it is removed and loaded onto trucks. Should there be a break or catastrophic failure in the pond or any piping, the spilled or discharged material is only river water containing a small percentage of contaminated sediments. This released water would either be contained onsite or simply carry the sediments back into the River where they came from. If subsequent testing after catastrophic failure reveals excess levels of contamination, it would have to be cleaned up. These safeguards are in effect insurance policies for the public. In any case, there would be no build up of PCB's in any terrestrial or aquatic food chain that might then be a danger to public health. Any vegetation lost or damaged in the temporary dewatering process would be completely restored and monitored to ensure survival.

11. Is it possible to dredge any of the remaining large amount of additional contaminated sediment out of the River after the Superfund dredging project is completed?
It is true that the Record of Decision, the legally binding document that addresses removal of contaminated sediment by any responsible party, allows the vast majority of the contaminated sediment to remain in the Sheboygan River without further obligation by the responsible parties to clean it up. Since the remaining sediments are also contaminated, and some of this remaining contamination may even be at greater levels than those removed, any additional dredging and sediment disposal would also have to occur under strict environmental regulations. But as the responsible parties are off the hook for paying for this additional dredging through the legal framework in the Record of Decision, other ways of doing the dredging and finding the funding to do so must be sought. Fortunately there is a program to do just that, called the Great Lakes Legacy Act. The Great Lakes Legacy Act, managed by the EPA, has recently received a large increase in funding due to increased attention to environmental problems in the Great Lakes region by the federal government. In fact, up to \$75 million has been appropriated, with more likely. Although some people may be dismayed that federal funds are used to clean up pollution caused by industries, it is the only source for large sums of money to accomplish this, which is better than leaving the contaminated sediment in the River which may cause further pollution and prevents full use and enjoyment of the River for future generations. In fact, the Legacy Act has funneled money to other Wisconsin communities already to clean up PCB's that were not removed by responsible parties. The money is there, and if we do not get a share of it to clean up the Sheboygan River, other communities will get it for their projects. A Legacy Act grant application will be submitted by the Sheboygan River working group (perhaps through the DNR) to obtain additional funds to clean up the River to a greater degree than required under the Superfund enforcement action. Unfortunately, this requires a local match of up to 40% of

the project cost. It is estimated that the local match in this instance might be about \$7.5 million. In two other river dredging projects in Wisconsin, the DNR has contributed many millions of dollars over that amount to cover the total required local match. We are pressuring the DNR to likewise fund the Sheboygan project. In addition, there are various other ways to cover most of the local match and those look very promising. Some of the potentially responsible parties may also volunteer to participate in the local match as a sign of good will and community betterment. This still might require some partnership investment by the County and the City, however.

12. Why should Sheboygan County become even more involved in this dredging effort and contribute scarce financial resources towards this project if needed? Isn't this a City of Sheboygan issue?

The 14 miles of contamination in the River in fact lie in several communities, not just the City of Sheboygan, with numerous interested parties and stakeholder groups throughout the County from sport fishermen, conservation organizations, business interests, and tourists to recreational boaters and charter captains. Substantial environmental and health effects exist in a large corridor through the center of the County. This multi-jurisdictional effort thus begs for County involvement and coordination. In fact, the majority of County residents reside in the communities directly affected by the impairments associated with the contamination in the River and no doubt pay the largest share of property taxes. Like the Morgan Aircraft project at the County airport and other similar cases, any County dollars or grants obtained to assist in the dredging project will be of tremendous benefit for the entire County, not just the political subdivisions where the project is located. The resulting economic development boon will create jobs and increase the tax base while making the riverfront and adjacent areas more attractive. Besides the economic benefits, this project of course would eventually eliminate major environmental pollution and threats to human health not found in other County projects that have an economic development component. Because of the convergence of grant funding, enforcement action funding, state and federal agency interest, momentum, possible financial contributions from other partners, public involvement, and encouragement from numerous stakeholder groups, timing could not be better to finally, after decades of being studied and listed as a federal Superfund hazardous waste site, get the Sheboygan River cleaned up. To not want to participate in this project with the philosophical belief that responsible parties should pay for all the removal of contaminated sediment certainly is good, just, and is understandable but ignores the legal reality found in the Record of Decision which places a limit on industrial liability. The possible temptation by a few to turn this initiative into a rural versus city issue to polarize County residents on a project that in fact could unite everyone and certainly benefits everyone would be also be unfortunate. The complex Sheboygan River dredging project instead is developing into a successful model of intergovernmental cooperation on the private, federal, state, city, and county level to build upon, to encourage further cooperation and common visions that could translate to other successes and even cost savings ventures. This project is the epitome of the County's Smart Growth philosophy and planning goals found in *Common Visions: Sheboygan County Comprehensive Plan – 2010 – 2030* recently adopted by the County Board, and also comports with the *Sheboygan County Outdoor Recreation and Open Space Plan* and the *Sheboygan County Natural Areas and Critical Resources Plan* which were also adopted by the County Board.

13. Where can I find more detailed information on the Sheboygan River dredging project?

A compendium of documents such as the Record of Decision and website links have just been posted on the Sheboygan County website at:

http://www.co.sheboygan.wi.us/html/d_plann_sheb_river.htm

Please contact Jim Hulbert at 920-459-3765 or hulbejch@co.sheboygan.wi.us for more information.