

**Saginaw-Tittabawassee Rivers Contamination CAG**  
**Full CAG Meeting**  
**Memorial Park, Freeland MI**  
**Monday, September 19, 2016**  
**6:00 PM – 8:00 PM**  
**DRAFT**

**CAG Members Present**

Drummond Black  
Charles Curtiss  
Leonard Heinzman  
Joe Kozumplik  
James Krogsrud  
Terry Miller  
Luis Mulford  
David Sommers  
Joel Tanner  
Bob Wiese

**CAG Members Absent**

Peter Bagley  
Michael Kelly  
Jim Koski  
Laura Ogar  
Lee Pavlik  
Nancy Pavlik  
Bryce Wakeman

**Ex-Officio Members Present**

Mary Logan, USEPA  
Daniel Dailey, Michigan DEQ  
Todd Konechne, Dow Chemical

**Support and Agency Staff Present**

Doug Sarno, CAG Facilitator  
Janelle Pistro, Dow Chemical  
Diane Russell, USEPA  
Peter deFur, TAP Contractor to the CAG

Doug Sarno called the meeting to order at 6:00 PM. Agenda items included:

- EPA Project updates
- Segment 4/5 Presentation
- Segment 4/5 Discussion and CAG process for recommendations
- Introduction and discussion of TAP contractor

Copies of all meeting summaries and presentations are available at [www.saginawcag.com](http://www.saginawcag.com).

Materials and additional information on the Dow Chemical Site including all presentations from CAG meetings are also available at the EPA web site at <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0503250>

## **1. CAG Updates**

### **Technical Assistance**

Peter deFur of Environmental Stewardship Concepts (ESC) was introduced. ESC is beginning work under the first task order of the TAP to help the CAG understand the pros and cons of removal vs. capping identified by the last recommendation committee, as well as assisting the CAG in recommendations on Segments 4 and 5. Peter introduced his firm and talked about the number of sites where they are providing support to community organizations at Superfund sites and similar situations. Their work includes translating technical documents into lay language for citizens, reviewing technical documents for technical veracity, and assisting community clients in preparing comments to the agency.

### **CAG Annual Meeting**

The CAG is a Michigan nonprofit corporation, it is important to follow the requisite rules associated with that incorporation. By unanimous vote, the following slate of officers was approved: David Sommers, President, Bryce Wakeman, Vice President and Drummond Black, Treasurer. Drummond distributed the Treasurers report for 2015 and explained the income and expenses. Main expenses were facilitation, travel, and web site. Dow provides periodic payments so income and expenses do not necessarily line up exactly in the calendar year. The report was approved by unanimous vote.

### **Communication**

The CAG's web site was hacked with a bogus link added to the site. This has been resolved.

### **State Ex Officio**

Al Taylor has been promoted to the Chief of the Hazardous Waste Section. Dan Dailey will represent Michigan DEQ until an official *ex-officio* member is identified.

## **Calendar**

The next meeting is currently planned for Tuesday December 6. The public comment period for the Segment 4/5 proposed plan is September 22 through November 6. The CAG will explore moving the next meeting forward be able to discuss possible recommendations prior to the end of the comment period.

## **2. Segment 4/5 Proposed Plan**

Mary Logan provided an overview of the proposed plan for Segments 4 and 5 of the Tittabawassee River Cleanup Plan. The materials are posted on the EPA web site and the official public comment period starts on Thursday September 22. Comments submitted tonight would not be considered as official, but a comment form is available for anyone who wishes to submit official comments.

The public meeting will be held on Wednesday October 19, 6:30 PM at Arrowwood Elementary School, 5410 Seidel Road, Saginaw.

Mary presented the proposed cleanup for two types of cleanup consistent with past plans:

1. 16 Bank Management Areas (BMAs)
2. Two Sediment Management Areas (SMAs)

Proposed cleanup plans include the following:

- All of the BMAs will be stabilized
- SMA 5-1 will include a combination of removal, capping, and monitored natural attenuation
- SMA 5-2 will be capped.

Background on the cleanup areas:

- These segments begin about 11.5 miles downstream from the Dow property, and comprise approximately 6.1 miles of the river.
- Segment 4 is 3.4 miles long, and Segment 4 5 is 2.7 miles long.
- This section includes Island MM which was removed in a 2011 cleanup action.
- The segments include residential, undeveloped, and agricultural properties.
- Tittabawassee Road Bridge, Imerman Park, and two State Road Bridges are also all within this stretch of the river.
- Extensive investigations have taken place including chemical sampling, stability evaluations and biological evaluations.

All of this information is documented in a technical report which is available on line and at the public library.

### Key findings

- Dioxins and furans are the key risk drivers
- Contaminants are not evenly distributed
- Riverbank and sediment erosion is occurring and varies by location
- Specific areas have been identified that will need cleanup.

### Scope of Cleanup

- 16 BMAs have been identified between 150 and 650 feet long, comprising about 1.1 total miles of riverbank
- 2 SMAs will be addressed, each about 0.7 acres
- Evaluations are ongoing, more areas could be identified
- Fact sheet includes map with location of areas targeted for cleanup.

### Why Clean Up?

Sediment deposits and riverbank soil are potential sources of dioxins/furans if they erode. Erosion could contribute to bioaccumulation in fish and downstream movement of contaminants.

### BMA options were

- Stabilization using natural and engineered approaches to prevent erosion
- Removal and disposal of material off-site at an approved location.

### Bank Stabilization

#### Advantages

- Less disruption
- Less change to property and riverbank
- Improves habitat quality
- Cost effective

#### Limitations

- More short term maintenance needed
- Contaminants remain in place
- Long term monitoring required and possible maintenance.

### Bank Removal

#### Advantages

- Least uncertainty about long term performance
- Flexibility for future use

#### Limitations

- Significant disruption during construction
- Removes existing habitat
- Changes riverbank shape and structure

- More costly and complex

EPA recommends stabilization for all banks, major considerations include:

- Expected land owner and community acceptance
- Trade-offs related to short and long term effects
- Potential impact on adjacent areas
- Access and ability to assure long-term O&M
- Cost effectiveness

SMA options

- Monitored Natural Attenuation
- Capping with clean material designed to prevent erosion
- Removal and disposal
- Combination of capping and removal

EPA Recommends

- A combination of removal, capping and monitored natural attenuation for SMA 5-1
- Capping of SMA 5-2

Major considerations

- Contaminant depth and profile
- Stability evaluations
- Adjacent work needed
- Implementation challenges (access and staging availability, water depth, construction issues)

Mary discussed the configurations and locations of the two SMAs and the potential challenges of accessing the material.

The EPA 2005 Sediments Guidance notes:

- There is no presumptive remedy for any contaminated sediment site, regardless of the contaminant or level of risk
- Both in-place and removal approaches may reach acceptable levels of effectiveness and permanence, depending on site conditions.

EPA Evaluation Criteria are described in detail in the EPA fact sheet and include:

- Effectiveness
- Implementability
- Cost

### Process and Timing

- Public comment period September 22 through November 6
- Dow design early 2017 through 2018
- Cleanup starts summer 2017 through 2018

CAG Question: What happens to the sediment? Taken to an approved off-site facility, the city of Midland landfill and Dow plant sites have been used in the past.

CAG Question: Have we used MNA in the past? We have not used it explicitly for an area identified for cleanup. Technically any area that is not selected for cleanup is being treated by MNA at some level.

CAG Question: How long is monitoring? In perpetuity.

CAG Question: How do you set a baseline for monitoring? We are looking at the material on top of the cap, is it remaining in place and keeping the contamination in place. For banks, we look at erosion and vegetation to ensure the cap remains stable and is keeping those materials in place. The monitoring program is robust, we also look at sediment levels over time, fish levels over time and the overall health of the river system. The CAG will look at this in more detail over the next year.

CAG Question: Is MNA just watching, how is that different than just leaving it alone? By controlling all sources, EPA believes that the main sources will be under control and will monitor the system over time to ensure that contamination levels are sufficient to maintain a healthy system.

CAG Question: How often will you monitor to ensure things are not changing? Currently it will be several times per year plus following high-energy flooding events.

CAG Question: Does that include scouring due to ice? We monitor in the spring so we would be able to evaluate any scouring effects at that time. We do not want to ever put people at risk when the river is not safe.

CAG Comment: It will be very good to communicate success as we see positive results from monitoring over time. It is really important to get these positive stories out over time. Response: We are seeing some documented reductions in sediments and fish over time, it is still really early in the cleanup process, we are now in our fourth construction season, and hope to improve our data over time. Seeing reduction in fish tissue levels can take decades.

CAG Question: We have seen a lot of activity and investment, how will we know we are being successful? If we see overall decrease in sediment concentrations and fish levels over time. Sediment concentrations are indicators of fish contamination.

CAG Question: How do I get data on samples on my property? Email EPA or Dow. It is not provided automatically, but all property owners have the right to request the data on their property. Once that information is shared, property owners are required to disclose this data if they sell the property. Some want the data and some don't.

CAG Question: Do property owners have special meetings? Yes, EPA directly approaches all property owners that are affected directly ahead of the public meeting. Most folks are very interested in the logistics. Homeowners are encouraged to provide specific comments. Work closely with owners on access, timing, and routing of materials. All public comments are compiled in the responsiveness summary (with the names redacted to protect privacy). One CAG member on the River noted that CAG reached out to them to meet and look at the property regarding the floodplain cleanup, they were very responsible to homeowner concerns and needs, and answered all questions. The same type of process is conducted for the BMAs as well.

CAG Question: Imerman park is included in this section, is this the first time we have done a park cleanup? No, EPA conducted a removal action at West Michigan Park in a previous action. Some older actions were also done at parks.

### **Meeting Reschedule**

The CAG will explore moving the final meeting of the year to the week of November 1 to allow discussion and action on the CAG recommendations before the end of the public comment period.

### **Public Comments**

Public Question: For bank stabilization is it a prairie or will it allow trees? Want to keep enough light to maintain growth on the bank, looking for a sustainable plant mix.

Public Question: How can the public access the monitoring data, are you monitoring any wildlife beyond fish? There is a lot of the data available from MSU on their wildlife studies, EPA has over 500 technical reports posted on line right now. Monitoring data is placed in an annual report each year.

Public Question: For floodplain properties are data available on line? Property owners can request the information, but EPA does not share personally identifiable information on line.

The meeting adjourned at 7:25 PM