

Meeting Summary
Trinity River PCB TMDL Project
July 19, 2007
First Public Meeting
North Central Council of Governments
Centerpoint III Building
Tejas Room
Arlington, Texas

- 1. Welcome & Introductions**
- 2. Overview of TMDL Process**
- 3. Overview of Trinity River PCB TMDL Project**
 - Project Background
 - Historical Data Review
 - PCB Conceptual Model
 - Project Data Requirements
 - Proposed Sampling Parameters and Locations
- 4. General Project Timeline for Upcoming Work**
 - Finalize Monitoring Plan and QAPP (Fall 2007)
 - Data Collection and Analysis (Fall 2007 – Spring 2009)
- 5. Open Discussion of Ongoing TMDL Project Work**
- 7. Meeting Conclusion**
 - Next Meeting Plans
- 8. Adjourn**

Attendees:

Angela	Kilpatrick	Trinity River Authority (TRA)
Bob	Ressl	City of Arlington
Cathy	Matthews	City of Dallas
Cesar	Cavazos	City of Dallas, Storm Water
Christy	Yorek	Lockheed Martin
Darrel	Andrews	Tarrant Regional Water District
David	Brown	U.S. Geological Survey
David	Piller	Exelon Power
David	Rutledge	Luminant
Elizabeth	Turner	City of Dallas
Ellen	Yost	North Texas Council Of Governments (NTCOG)
Gene	Rattan	Tarrant County Public Health Dept

James	Whih	City of Keller
Julia	Jentsch	Chiang, Patel & Yerby, Inc. (CP&Y)
Karen	Siddall	City of Irving
Kent	Becher	U.S. Geological Survey
Mark	Ernst	Tarrant Regional Water District
Michael	Bastian	CH2M
Neil	Strassman	Tarrant County
Pat	Lambert	North Texas Council Of Governments (NTCOG)
Richard	Talley	City of Fort Worth
Sam	Brush	North Texas Council Of Governments (NTCOG)
Shawneille	Campbell	U.S. Environmental Protection Agency
T.	Sury	City of Grand Prairie
Tim	Keleher	Exelon Power Texas
Vicki	Stokes	City of Fort Worth

Support Staff:

Dania Grundmann – Texas Commission on Environmental Quality (TCEQ)
 John Mummert – TCEQ
 Randy Rushin – Water Monitoring Solutions (WMS)
 Mel Vargas – Parsons
 Kirk Dean – Parsons

Administrative Issues

The first public meeting of the Trinity River Polychlorinated Biphenyls (PCBs) TMDL met on Thursday, July 19, 2007 from 9:30 AM – 12:00 PM at the North Central Texas Council of Governments facility in Arlington, Texas. The meeting was held to inform the public about a Trinity River PCB TMDL project that has been initiated. Dania Grundmann, the TCEQ Project Manager opened the meeting with self-introductions.

Overview of TMDL Process

Dania presented introductory material to familiarize attendees with the TMDL process. Dania also discussed Section 303(d) of the Clean Water Act and the process of water quality assessment. She defined TMDLs, explained the function of TMDLs, presented the elements of a TMDL, and discussed the process involved in TMDL development and implementation. Dania explained that for this project for PCBs, the TX Department of State Health Services (TDSHS) determines risk associated with fish consumption. At the present time, there is a fish possession ban and fish consumption advisory issued by the TDSHS for portions of the Trinity. The goal of the TMDL is to restore the water quality and promote the recreational fishing (fish consumption) use in the listed segments of the Trinity River.

Overview of Aquatic Life Order and Fish Consumption Advisory within the Trinity River Basin

Dr. Kirk Dean with Parsons, the consultant contracted for the TMDL project, presented information on the Aquatic Life Order and a Health Advisory that was placed on four

segments of the Trinity River in 2002 – TCEQ Segments 0829, 0806, 0841 and 0805. Kirk discussed basic information about PCBs and explained that the 209 compounds (congeners) collectively known as PCBs have toxic effects, limited water solubility, and tend to be associated with sediments in aquatic systems. PCB congeners are also known to partition into fish tissue (due to the fat content of the fish). The production, distribution and new use of products with these compounds were banned in 1977 in the United States. One of the main uses of PCBs was in electrical transformers.

Historical PCB Data in the Watershed

Kirk reported that a number of studies had previously been performed for various purposes, including the collection of 141 fish tissue samples. Kirk showed maps of the project area and the four sectors into which the historical data had been divided. The sectors roughly separated the predominately urban, suburban, and rural areas. Fish tissue PCBs concentrations were greatest in the urban land use sectors in Fort Worth and Dallas. Kirk reported that it is suspected that the historical legacy contamination is probably a big part of the PCB load in the system. Resuspension of contaminated bed sediments back into the water column could also be a major source. Kirk said there are plans to measure sediment concentrations and estimate the load contributed by the sediments. Kirk explained other potential major sources included point-source discharges (note: MS4 regulated areas are looked at as a potential point source load), nonpoint-source runoff, and tributary inflow. Potential minor sources such as contaminated groundwater and direct wet/dry atmospheric deposition are not considered a significant factor in this system.

PCB Conceptual Model

Kirk presented basic information concerning the model that will be developed. He reported that the plan was to develop an un-complicated model that would evaluate the mechanisms necessary to reduce the PCBs concentrations to an acceptable level. Kirk said that a “multiple box-analytical model” would be best to use in this situation. The data requirements would include flow, in-stream PCB concentrations, in-stream suspended solids, sediment PCB concentrations, estimate of PCB loads coming in from point and nonpoint sources, and finally, PCB concentrations in fish tissues.

PCB Analysis

Kirk reported that EPA Method 1668A would be used for PCB analyses. Kirk reported that based on past experience and the results of PCB projects in the Houston area, 1668A had proved to be the best method. A comment was made that advances in the method and experience in the Delaware River Basin had shown that PCBs could be measured in smaller volumes of water than proposed for collection and filtration in the Trinity River project, and that that information was available on the Delaware River basin web site.

Proposed Sampling Locations

A list of proposed sampling locations was distributed and discussed. Dania said that all of the locations that included a check mark were being coordinated and partnered with work being done by TDSHS. Some of the sampling would be performed by boat, but site

access, especially in the lower Trinity was difficult and time consuming. If anyone knows land owners or access points please let us know.

Meeting Conclusion

Kirk reviewed the project schedule to date and said that preparation and approval of the QAPP and sampling plan should be wrapping up at the end of the summer (2007). From October or November through next spring (2008), data collection and analysis is expected to be performed. In approximately September 2008, work should be progressing on the model analysis. After that, the TMDL report will be written and public comment taken. The next phase will be the Implementation Plan. Dania Grundmann indicated that another meeting will be held next spring to update the stakeholders on the progress. As suggested by a meeting participant, it was agreed that the monitoring plan will be posted on the TCEQ web page for a public review. She indicated she would keep the web updated as reports became available. The meeting was adjourned.

Questions during Presentations

Q: Is the TMDL triggered by the fish tissue data – by the TDSHS screening level?

A: No, the TCEQ relies on the TDSHS's issuance of aquatic life orders and fish consumption advisories. The TDSHS has the regulatory authority in the state of Texas to issue aquatic life orders and fish consumption advisories. Waterbodies with a TDSHS advisory are placed on the 303(d) list, which requires the preparation of a TMDL. It is important to note that the TDSHS uses the cumulative risk to consumers to determine systemic and long-term cancerous effects. These waterbodies are listed for several contaminants such as chlordane, not just PCBs. The PCBs however are the driving contaminant of the advisory and ban.

Q: How does this compare with the water quality standards?

A: There is a screening level for concentrations in water that is calculated to be protective of the fish consumption use. It is based on a concentration of .47 nanograms per gram for fish tissue. When converted to a water-number, it something like .017 microgram per liter using a bioaccumulation factor.

Q: Is that just gar or are there other species? (A question posed during a slide summarizing historical fish tissue data).

A: This slide is for all the species. The dataset was a hodge-podge of fish gathered and analyzed. The most common species gathered was largemouth bass but there are also carp, gar, and sunfish.

Q: You have talked about processes within the channel, the Trinity jumps its' banks quite a bit under storm water flow. What is the role within the flood plain? For deposition within the flood plain itself? Or better yet, development within the flood plain?

A: That is a good question and I am not sure I have an answer for it. It could be a removal mechanism or a source. Certainly the 10-15 year flood events can be a major

driver of change in the system. It will be difficult to develop a model with those kinds of processes.

Q: When you are doing sediment analysis, will it be just a grab sample or core analysis?

A: There will be a number of different grab sediment samples composited to help average the actual concentrations.

Q: Do you want to sample where the fish feed?

A: Not necessarily, we don't want to bias any of the results. We are here today though to get your input and advice. At this point – all of this is draft.

Q: Have you changed the sampling locations that were on the web?

A: At this time, we have not put any of this draft information on the web. I think you are thinking of fish tissue sampling by DSHS. Any sampling done on Mountain Creek Lake will be a part of the ongoing TMDL implementation for that waterbody. TCEQ has already developed a TMDL for Mountain Creek Lake and it is not part of this current project.

Q: How many events will you be doing?

A: We are planning on just a single event. Not great from a data quality objective but it is an expensive proposition to do this sampling and additional sampling events would probably not make that much difference, especially from the sediment point of view. I hope to get better estimates by doing spatial averaging instead of temporal averaging concentrations.

Q: If stakeholders want to review the actual plan that you are putting together, as opposed to the power-point, how would they do that?

A: We will be finalizing our sampling plan and then submit it to TCEQ about the end of July. The TCEQ could put a copy of the plan on the web for you to download and review. [NOTE: The sampling plan will be placed on the TCEQ web site when internal review is complete. We will send an e-mail to everyone who attended the meeting when the plan is available. Please provide any comments via e-mail. We can summarize and respond to any of the comments received.]

Q: Will the model analysis be done by the end of 2008?

A: Quite possibly, it is not a very time intensive task. It may depend on how lucky we are at storm water sampling.

Q: How about the reporting and implementation plan? What would be a general schedule?

A: Once the TCEQ receives the final technical report it will probably take several months to develop the report, hold a couple of meetings, get stakeholder comments, revise the draft TMDL as needed and then put it out for a more formal comment period.

Q: Given that we are dealing with very persistent material that hasn't been used in the environment in quite some time, we are looking at residuals that are persistent – loading

coming in should be very, very low. It seems it needs more evaluations as to what time and history are doing to it than the analysis we are collecting right now. Is this a fish problem that is going to for 5 years, 20 years, or 200 years? We may be swatting after something we may never catch.

A: The TCEQ approach on other legacy contaminants during implementation phases – is natural attenuation. We have monitored from the late 80's and we can show that the levels (chlordane) have declined. However, if you look at the PCB data – there is not a decline. We need to take additional steps and do something more. Clearly, there are continuing sources and we need to get to those sources through this project. It may be decades before the fish ban and advisory are lifted.

Q: Are there any records of stock piles of transformers in land fills?

A: EPA does have a PCB transformer database. I am not sure as to the level of detail in it.

C: What we were discussing is transformers that might be outside the control of the big power companies that have had clean-up procedures. If they don't have inspections, put Best Management Practices (BMPs) in place, etc.

C: Not knowing, in the past, I am sure transformers were disposed of in landfills. But PCBs are also found in lighting.

C: PCBs are all over the globe – they are found in Isle Royale, a completely natural island in the middle of Lake Superior with no sources around, other than atmospheric deposition. But the levels that we are seeing here in the Trinity River are not only from that. Our hope is that by doing the sediment sampling and looking at where the concentrations are the highest, we may be able to trace up tributaries to better identify some potential source areas. We had very good luck with that in the Houston Ship Channel area for dioxins (historic waste disposal area).

Q: Are there any good studies on PCBs that are published?

A: There are lots – a lot from the Great Lakes area and the Hudson River.

Q: Where are the PCBs coming from that are being discharged by the wastewater treatment plants?

A: Good question – it is in very low amounts.

C: In the East, they found out that through some chlorination processes, they were producing PCB and did not even know it.

C: Kirk did not feel it was that easy to make PCBs through the chlorination process, especially in the absence of heat.

The TCEQ web page for this TMDL project may be found at:

http://www.tceq.state.tx.us/implementation/water/tmdl/77-trinity_pcbs.html

The web page includes the project overview, meeting information, meeting summaries, and project documents.