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# RIVER VOICES



MAY 1993

Produced jointly by the US Environmental Protection Agency Region II  
and the members of the Hudson River PCBs Reassessment RI/FS Liaison Groups

## From The Editor

River Voices is an update produced jointly by the US EPA and the members of the four Liaison Groups established under EPA's Community Interaction Program for the Hudson River PCBs Reassessment.

Articles appearing in *River Voices* are the sole opinion of the author whose name appears in the byline, and do not represent or reflect the opinion or policies of EPA. In addition, articles authored by Liaison Group members represent *only* the opinion of the author, and not the Liaison Group or membership as a whole.

Contributed articles published in *River Voices* appear as originally written, and any editing has been done for space consideration only, and with the prior consent of the author.

## SCHEDULE REVISION

The schedule for the Reassessment has been revised to more realistically reflect the work that has yet to be conducted. EPA is committed to conducting this Reassessment in a scientifically sound manner, which unfortunately requires more time than first estimated.

The dates listed below reflect the original and revised estimates for the submittal of draft reports to EPA. Once EPA has internally reviewed these reports, a review copy will be distributed to other agencies and the public. EPA will prepare a Proposed Plan, which will be distributed at the same time as the review copy of the Phase 3 Report. A public comment period will be held on the Phase 2 Report, and a later public comment period will be held on the Proposed Plan and the Phase 3 Report.

	<u>Original</u>	<u>Revised</u>
Phase 2	Aug. 93	Jan. 94
Phase 3	Dec. 93	Aug. 94

An estimated date for the signing of the Record of Decision has not been made at this time, since the decision process has many variables that are outside of EPA's control.

## FISH

by Warren Braley, Chatham, NY

Fish, Hudson River fish, that's what the EPA has to decide about - a livelihood for some, an afternoon's sport for others. Are those fish now safe to eat? Are they getting safer? Will dredging the Hudson speed up a healing process and be a constructive use of Superfund money? That is what EPA has got to decide.

Lone ago, I worked my way up the industrial ladder and I understand just how those PCBs got in the river. In those days nobody worried much about nature's ability to heal itself. Today our process industries have come of age and I worry much more about similar problems in developing third world countries.

I admit to bias. I'm a fisherman and an outdoor type, and I'll take a calculated risk on those fish for the sake of leaving the beauty of the river undistributed. In addition, as something of a farmer, I'm right with those up-country people who do not want farmland contaminated with river sludge. They are concerned with county land and crop values - not with ability to farm the land. No matter - EPA calls the shots on the basis of its present research.

For a look at how that research is going, I got the minutes of the last Science & Technical Committee Meeting (Joint Liaison Group Meeting w/members of the STC on 11/5/92) and read them twice. Once without knowing there the speakers came from or who had chosen them - and I could not tell. That is a very good sign. Nobody is trying to bend research results toward any particular course for action. I've seen that done, too.

There are still questions - do the mon and di-chlorinated PCBs that are in the river today still present a danger? Will new generations of fish still carry the more heavily chlorinated PCBs? In any case, EPA is doing a dedicated job of assessing present research in the light of their nine criteria for evaluating potential superfund sites. Let's be patient while they work.



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## ANGLER SURVEY SHOWS UNSAFE FISH CONSUMPTION

by: Bridget Barclay, Environmental Director, Hudson River Sloop Clearwater

As the debate over remediation of PCB contamination in the Hudson River drags on, the potential for human exposure to PCBs through consumption of contaminated fish, which EPA has identified as the most potent route of exposure, remains a serious threat to public health.

In the absence of any comprehensive cleanup, efforts to protect the public from exposure to PCBs have relied on New York State fishing bans (on the upper Hudson) and voluntary health advisories (on the lower Hudson). Whether these measures are being effective in preventing unsafe exposure to PCBs through consumption of Hudson River fish is a critical question, on which information has been lacking.

Clearwater sought to help fill this gap by providing current site-specific information about fish consumption and awareness of health advisories and fishing restrictions among Hudson River anglers. This was accomplished by conducting detailed interviews with over 300 anglers fishing from twenty heavily used fishing spots on the Hudson from Ft. Edward to the Verrazano Narrows Bridge, between June and November of 1991 and April and July of 1992.

Clearwater's Angler Survey documents the fact that people who fish the Hudson are eating PCB contaminated fish, many of them in amounts that pose a serious health risk. Some of the key findings of the Angler Survey are as follows:

- 58% of anglers surveyed report eating their catch.
- Conservatively 57% of these anglers are eating their catch at unsafe levels (i.e., amounts that exceed the health advisory recommendations).
- 72% of the anglers also report giving away at least some of their catch to be eaten by someone else.
- 87% of anglers who said they were taking their fish home to eat said they shared those meals with other people (usually family).
- More than half the anglers interviewed (52%) said they were not aware of state health advisories or fishing bans.
- 27% of anglers had incorrect information.
- Only 7% had accurate knowledge of the advisories and bans.

Certain groups of people seem to be at greatest risk from fish consumption;

- Hispanic and African American anglers were more likely than whites to be eating their catch, and less likely to know of health advisories.
- Anglers in the lowest income group were most likely to be eating their catch (particularly in the NY Harbor area), and more likely to say they were fishing primarily for food, as opposed to recreation.

This indicates that some of the fishing on the Hudson may be subsistence fishing - a particularly

difficult health problem.

Of great concern is fish consumption by women of childbearing age and children, because of the potentially greater impacts that PCBs can have on developing organs in young children and fetuses. Studies have found birth defects and development disorders among children of women who were exposed to PCBs through fish consumption. As a result, the health advisories include a recommendation that women of childbearing age and children avoid eating any Hudson River fish. When asked what advisories they were aware of, no angler interviewed mentioned knowing of the advisory for women and children.

Simple awareness of advisories does not appear to be enough to prevent unsafe fish consumption. Even the total ban on fishing along the upper Hudson is not fully effective in protecting public health. Anglers continue to fish this stretch of the river, and 22% of those surveyed said they eat their catch. Given the consistently high levels of PCBs in upper Hudson fish, and the three-fold increases in PCB levels now being seen, it is of great concern that people continue to fish this stretch of the river and eat their catch.

People's decisions on whether to eat their catch seems to be strongly influenced by their own perceptions or beliefs about the risks involved. Unfortunately, anglers' responses to this survey indicate critical gaps in information and prevalent misconceptions.

When asked what they thought would happen if they ate contaminated fish, few anglers (10%) identified the resulting health effects as occurring over the long term. No angler mentioned the potential for effects in the children of exposed individuals; and nearly half of all anglers interviewed believe they can tell by observation or experience if the fish are safe to eat.

Nearly one fifth of the anglers who said there are ways to make the fish safer to eat after it is caught erroneously think that soaking the fish (i.e., in beer, salt water, lemon, vinegar) will reduce the amount of contamination in their fish meal.

The results of the Angler Survey provide compelling evidence that the only certain way to prevent exposure to unsafe levels of PCBs through fish consumption is to take action to reduce the high levels of PCBs in those fish. The fact that there is ongoing exposure to PCBs through fish consumption should be a key component of EPA's decision on whether to clean up PCB contaminated river sediments. In the interim it is imperative that additional action be taken to increase the fishing public's awareness of, and adherence to, fishing bans and health advisories.

Full copies of this report are available from Clearwater. If you wish to obtain one, please contact Clearwater at 914/454-7673.

## New York State Department Of Health Advisory on the Hudson River 1992/1993

1) Eat no more than one meal (one half pound) per week of fish from the state's freshwaters, the Hudson River estuary, or the NY City harbor area (the New York waters of the Hudson River to the Verrazano Narrows Bridge, the East River to the Throgs Neck Bridge, the Arthur Kill, Kill Van Kull, and the Harlem River), except as recommended below.

2) Women of childbearing age, infants and children under the age of 15 should not eat fish with elevated contaminant levels. The fish species listed from the waters below have contaminant levels that exceed federal food standards and most fish taken from these waters contain elevated contaminant levels.

3) Observe the following restrictions on eating fish from these waters and their tributaries to the first barrier impassable by fish:

<u>Water</u>	<u>Species</u>	<u>Recommendation</u>
<i>Hudson River</i>		
- Hudson Falls to Troy Dam	All species	No fishing.
- Troy Dam south to & including lower NY Harbor	American eel, White perch, Carp, Goldfish, White catfish.	Eat none.
	Walleye, Rainbow smelt, Largemouth bass, Smallmouth bass, Atlantic Needlefish, Bluefish, Northern pike, Tiger muskellunge	Eat no more than one meal per per month.
	Blue crab	Eat no more than 6 crabs per week.
	- hepatopancreas (mustard, liver or tomalley)	Eat none.
	- cooking liquid	Discard.
- Troy Dam south to Tappan Zee Br.	Striped bass	Eat none.
- Tappan Zee Br. south to and including lower NY Harbor	Striped bass	Eat no more than one meal per month.

In the photo, taken after the Joint Liaison Group meeting in Latham, NY, on 3/31/93, NYSDEC's Bill Ports reviews site drawings of the Bakers Falls investigation area with Sharon Ruggi and Carl Deppe, Co-chair of the Environmental Liaison Group. NYSDEC's Karl Berger looks on.

See "Liaison Group Doings" on page 6.

## OFFICE OF CANALS TO DREDGE PART OF CHAMPLAIN CANAL

John King of New York State Thruway's Office of Canals reports that this spring, the New York State Canal Corporation will be dredging the shoal of coarse gravel and cobbles deposited by the Hoosick River in the Champlain Canal channel below lock C-4 near Stillwater. This operation will remove about 5,000 cubic yards of material that is interfering with commercial traffic.

We have analyzed four (4) samples of the siltier part of this dredge site and the results are 0.32 ppm, <0.01 ppm; 0.03 ppm and <0.1 ppm. Any PCB contamination would be in the siltier material, not the coarse gravel and cobbles we are going to remove. Since we will only be removing the coarse gravel and cobbles, the PCB levels will be even lower than those shown above.

The dredging will be done via a Gradall Dredge or a Derrick Boat loading the material onto flat scows, transporting it to the upper end of lock C-4 and offloading it directly upland on the west side of the canal. This project is very important to the safety of the commercial navigation and it is imperative that we start as soon as possible this spring (tentatively on May 20th).

On behalf of EPA, let me take this opportunity to thank the members of the Liaison Groups for their contributions to **River Voices** - bravo!

*Ann Rychlenski, Editor*



## An Open Letter to EPA

by David D. Adams, Saratoga County EMC

In July of 1992 and again in October of 1992 I submitted comments to EPA expressing concerns and questions about EPA's Hudson River PCB Reassessment program. To date, EPA has not provided an adequate response to some of the most significant of these comments. This letter is written to repeat these comments in the hope of obtaining responsive answers from EPA.

My foremost concern is EPA's failure to produce a definitive plan or model that explicitly spells out how EPA expects to get from the data being obtained to the desired endpoint, i.e., what will the future PCB concentration in fish be? This plan must include the relationships (equations/algorithms) EPA intends to use in applying the data and the assumptions EPA must make to apply these relationships along with the reasons which EPA shows the assumptions to be valid or at least, reasonable.

Without the specific details of EPA's plan, it is impossible for anyone, especially the Scientific and Technical Committee (STC), to critique EPA's course of action. The minutes of last November's Joint Liaison Group meeting identify that the STC has not yet seen EPA's model. This situation leaves us in the position of having to accept on faith that EPA knows "what's best". We don't know is the right data or data in sufficient quantity are being obtained. A second concern is that EPA has not adequately explained why it is not taking fish samples in the same locations that sediment and water samples are being taken.

The final desired result is to predict future PCB levels in fish. So, why isn't it pertinent to get current PCB levels in fish and compare these measured values to the levels predicted using EPA's model and the PCB levels measured in the sediments and the water? There has been some indication that EPA will use other current fish data (from DEC and/or NOAA), but these samples will not necessarily be at locations where EPA is sampling.

EPA has not stated what assumptions are necessary to use these data along with justification of the assumptions so that use of these data can be critically reviewed.

This concern was addressed at the November 5, 1992 meeting at which time EPA responded that such sampling was "not part of our program" and "not critical to our work at this time", without explanation or justification of these positions. However, it would appear data on fish may be even more important, if not critical, in view of the subsequent discussion in the November meeting which indicated that the PCB congeners in the fish do not correspond to those in the sediments but more to the PCB congeners in the water.

This point also seems to be reflected in the recent data showing high PCB levels in water and fish

samples from the Baker's Falls area. The point that the fish seem to respond to PCB water concentrations and not sediment concentrations also emphasizes even more the need for EPA to make available for review its model for using the data obtained.

Again, EPA's failure to provide its model or method of analysis leaves it unclear as to whether EPA is including in-situ PCB degradation in the model. GE has collected considerable data that indicates such degradation is occurring which could be significant in deciding what action, if any, is necessary.

One last concern. At the start of the November 5, 1992 meeting, EPA stated that questions submitted on risk assessment would not be addressed because nothing had changed since a meeting on this subject in February, 1992. I have reviewed the minutes of the February, 1992 meeting and do not find the answers to the questions submitted at the November meeting. Therefore, I again ask that EPA address these questions which ask for the STC's comments on the method EPA proposes to use to calculate the health risk and the STC's assessment of the uncertainty range of the health risk assessment.

In summary, EPA's goal is to determine if any remedial action is necessary. If EPA's method of analysis is faulty, then EPA's conclusions are likely to also be faulty. The consequences if EPA concludes that remedial action is necessary, when in fact it is not are a lot of money spent for no real benefit to PCB levels in the fish, potential disposal problem of PCB contaminated sediment, and possible severe damage to the Hudson River's ecological system. There is also the possibility that EPA could conclude that no action is necessary when in fact a remedial action would be helpful. EPA owes the community concerned about the Hudson River answers to the concerns and questions discussed above.

## EDITOR'S RESPONSE:

by Douglas Tomchuk, USEPA, Project Manager

EPA has solicited comments from the public at several points during the Reassessment and has considered the comments received. Comments on the Phase 1 Report were addressed in a Responsiveness Summary, and comments on the Phase 2 Work Plan were addressed by issuing a revised document which incorporated appropriate changes based on the comments received. However, EPA does not have the resources available to send a detailed, comment-by-comment response to every letter we receive during the course of the Reassessment.

The overall scope of EPA's modeling effort is described in the Phase 2 Work Plan. An explanation of the purposes of the modeling efforts is found there.

*Continued on page 6*

## Letters To The Editor

Dear Ann,

As I sit looking out my window at the beautiful Hudson River flowing by, I am filled with amazement over the continued expense and time devoted to this Reassessment by the EPA in which I am involved.

Sometimes it seems to be a modern day Shakespeare play with plots and sub-plots and sub-sub-plots. Rather than allow the process to disintegrate into confusion and disarray, I feel we must pay more attention to the scientific reasons behind the upcoming EPA decision.

I, as a citizen, want to know and be part of a process that listens diligently to all legitimate scientific information, the most up-to-date, relevant work available. I know how much technology has changed and progressed throughout the time this project was first conceived and where we are now.

There are many examples of government over-reaction and expenditure at Superfund sites that are now understood to be less of a threat to people than originally thought. Dioxin and PCBs are both currently being reevaluated as serious health threats. One would think that information alone would make this huge bureaucratic machine at last slow down. Prudence is a virtue almost unknown in government.

As a co-chair of the Citizens Liaison Group, I attended a presentation to the agricultural group by Dan Abramowicz, a scientist who works for G.E. He presented work that has been published in Science Magazine. Basically, he presented more proof that the PCBs in the river are breaking down naturally both in the water and in the mud (river bottom). Along with this good news he sought to deal with the recent news of heightened PCB levels that have been recorded in the river. The presentation was excellent and hopeful.

Certainly we must be aware of the source (G.E.), however, as a citizen I want all information made available to me and I think his would and should be necessary to the EPA for their final evaluations and decision.

Bridget Barclay (of Clearwater) was in our local paper the Post Star, fanning the fires of ignorance with her unqualified and unsupported remarks on the state of PCBs in the river. As a co-chair of the citizens group and as a concerned individual I would like to challenge Clearwater and Scenic Hudson to present a scientist(s) who can support Bridget's continuing skepticism. As she is Chair of the Environmental Liaison Group I would like her to present us with some qualified disagreement. I'm willing to listen. But I am tired of hearing them doubt. Doubting is not good enough reason to support her platform of dredging.

I believe that all the Liaison Groups would benefit from an inclusive scientific debate and presentation. Without a presentation of all the facts, our groups

operate in the dark. How can we function within the process unless we know on what basis a final decision will be made. Without knowing all the facts it would appear that the EPA had made its decision on the Reassessment on other factors (politics, perhaps?). Let us make sure that doesn't happen.

Katie DeGroot

## EDITOR'S RESPONSE

As you know, EPA is presently engaged in the second phase of its three-phased Reassessment RI/FS for the Hudson River PCB site. Throughout, EPA has explored and digested vast amounts of the most current scientifically valid information on this complex issue from a multitude of sources.

EPA recognizes the divergence of opinion among scientists and academicians on some of the issues pertinent to the project (e.g., biodegradation of PCBs); and to ensure healthy scientific debate and representation of a variety of perspectives and "cutting edge" technologies, EPA has formed the Scientific & Technical Committee.

All Liaison Group members are free to call their own group meetings, inviting guest speakers to present issues relevant to the Reassessment.

If any Liaison Group wishes to call a meeting to invite representatives of divergent scientific viewpoints to engage in discussion on technical issues related to this project, they may do so at any time.

Since its implementation in 1990, EPA's Community Interaction Program (CIP) has afforded the public every avenue available for the access of information. We have done so through the Liaison Group structure; the establishment of 16 Information Repositories; field demonstrations of sampling and analysis techniques; unedited contributed publication in "River Voices"; and opportunities to comment on the Reassessment. In addition, EPA's Phase I Responsiveness Summary responded to over 600 separate comments, and numerous public and informational meetings have been held on the project.

Finally, meetings to the Scientific & Technical Committee are open to observers, and detailed minutes of those meetings are made available at the Information Repositories.

We all acknowledge that this project is not new to controversy or heated disagreement between the varied constituencies within its geographic boundaries. We are confident that with the input of the STC, Oversight Committee and Liaison Group membership, much relevant information and opinion is being shared and considered; thus EPA can make an informed decision that is motivated by the best science available.

## Liaison Group Doings

Since our last issue of **River Voices** was published in October, 1992, there has been a considerable amount of activity within the CIP and the Liaison Groups. Here's an update of those activities:

On November 5, 1992, a Joint Liaison Group meeting that featured discussions by some members of the Scientific & Technical Committee was held in Latham, NY. The panelists from the STC included Dr. Daniel Abramowicz of G.E., Dr. James Bonner of Texas A&M University and Dr. Richard Bopp of Rensselaer Polytechnic Institute. Some very lively discussion and debate on the technical aspects of the Reassessment ensued, and was greatly enjoyed by those present. Verbatim minutes of that meeting are available at the Information Repositories for the site.

Early in 1993, Jim Behan, Co-Chair of the Citizen Liaison Group, resigned his position as officer due to a career change that may have presented a conflict of interest. Katie DeGroot was elected to replace Jim. We welcome Katie and are pleased to report that Jim will still participate in the CIP as member of the Citizen Group.

In February, 1993, the Agricultural Liaison Group called a meeting in Schuylerville, NY. The group invited Dan Abramowicz and John Haggard of G.E., who gave presentations on the recently-released results of G.E.'s bioremediation research, and an update on G.E.'s findings with regard to the suspected PCB source around Baker's Falls.

Most recently, a Joint Liaison Group meeting was held on March 31, 1993, in Latham, the subject of which was "EPA's Decision Making Process." Bill McCabe, Deputy Director of Superfund, talked about how EPA makes a remedial decision on a Superfund site, with special emphasis on EPA's Nine Criteria.



*Government Liaison Group Chair Darryl Decker talks with EPA's Ann Rychlenski after the 3/31 meeting. Doug Tomchuk, EPA Project Manager, and Bill McCabe, Superfund Deputy Director, converse with other attendees.*

## EDITOR'S RESPONSE - *cont'd from page 4*

Specific details of the models and the assumptions to be used will be made available as work progresses, as was done by including preliminary sediment transport work in the Phase 1 Report. Most of the information Mr. Adams is seeking will be included in the Phase 2 Report. With respect to data sufficiency for the modeling effort, the team that designed the sampling plan for the Reassessment included the same people who outlined the modeling approach, and data sufficiency, of course, was carefully evaluated.

With respect to Mr. Adams' concern that EPA should conduct congener-specific PCB analysis of fish tissue samples taken from locations where the sediment is also analyzed, EPS is conducting such work. Originally, EPA was to collect the sediment samples, while DEC/NOAA were to collect and analyze the fish at the corresponding locations. However, the ecological assessment has evolved over the past several months in that the sediment/fish sampling effort will be included in the Reassessment. (DEC/NOAA will actually collect the fish for EPA, and EPA will have them analyzed.)

Clarification is also necessary regarding human health risk issues. Mr. Adams appears to be seeking the Scientific and Technical Committee's (STC's) opinion on the method that EPA uses to calculate health risk. However, such STC discussions would not be a beneficial use of time, nor is that the role of the STC. EPA's methodology is established in national guidance, and questions regarding that methodology need to be addressed on a national level. Because of the numerous questions that General Electric has raised regarding toxicity of PCBs and the potential national implications of changing toxicity values, Region II has raised those issues to EPA Headquarters.



If you have any comments to an article appearing in **River Voices**, are interested in joining one of the four Liaison Groups, are interested in attending one of our meetings as an observer, or if you just want to know a little more about this program, contact:

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