

**US Environmental Protection Agency
Hudson River PCBs Reassessment Remedial Investigation/Feasibility Study
Community Interaction Program**

**Steering Committee Meeting
October 19, 1998
Saratoga Springs, NY**

On October 19, 1998, a Steering Committee meeting was held at The Inn at Saratoga in Saratoga Springs, NY. The agenda for the meeting is Attachment 1. Sign-in sheets are found in Attachment 2. The use of brackets - [] - indicates clarifications made by the writer in cases where unclarified text would be unclear to those not at the meeting. Copies of the audio tapes recorded at the meeting are available on request.

Mel Hauptman, United States Environmental Protection Agency (USEPA) Superfund Branch Chief, opened the meeting and turned the floor over to Steve Sandford, leader of the Natural Resource Damages Unit in the Division of Fish and Wildlife at New York State Department of Environmental Conservation (DEC) in Albany, for a presentation on natural resource damages (NRD). Attachment 3 contains the handouts accompanying Mr. Sandford's presentation, which addressed the natural resource damages process and its relation to the Hudson River, including a status. Although the natural resource damages process ties into [EPA's] reassessment process, it is not part of the reassessment.

Mr. Sandford began by explaining that the natural resource damages process is a relatively new phenomenon with different legal bases. The one most pertinent in the case of the Hudson is the authorization that comes from Superfund in 1980. Mr. Sandford explained that any enforcement action can have three components: punitive, remedial, and compensatory. In the case of the Hudson River, EPA is handling the remedial component. For the compensatory component, which is the natural resources damages component, three agencies (one state and two federal) for the Hudson - DEC, National Oceanographic and Atmospheric Administration (NOAA), and the Department of the Interior - work together as a natural resource trustee council for the Hudson.

Referencing the "Natural Resource Damages Assessment Process" shown in the attachment, Mr. Sandford pointed out that the trustees are now near the very beginning of the process, which began in October of 1997 with the Reassessment Screen when the trustees reviewed existing information and determined that there was enough information to go forward. They found injuries to the river and responsible parties that can be identified and associated with those injuries.

The trustee council plans to have a thorough public participation process, beginning with the focus group meeting that was convened in mid-August of 1998. The draft of the assessment plan including all the injuries to the river was released in September 1998 (part of Attachment 3), and several public meetings have been scheduled for a variety of locations from Albany to New York City.

In answer to a number of questions from the floor, Mr. Sandford explained that funding is shared by

New York State and federal agencies, but that NOAA has the lion's share of funding at present. Costs that any agency spends in the project are costs that can be claimed for repayment, in addition to any restoration costs. With regard to questions of damages that are of "intrinsic value" - injuries that are hard to quantify specifically - Mr. Sanford stated that he felt this would be one of the questions for the public scoping process. It will be a dollars and cents decision as to whether seeking damages would cost more than could ultimately be recovered.

The natural resource damages process will not undertake a remediation study. The focus is on restoration. The process is such that a claim can be made only after injuries to the river and the damages (what society has suffered as a result of those injuries) are assessed. With regard to the Hudson River, a natural resource damages claim cannot be submitted until the current reassessment is complete. In June when a remedial decision is made for the river, the trustees can assess the damages, because at that point it will be known how much can be cleaned up through remediation. Assuming a continuing injury to the river, the less remediation that is done as a result of the reassessment (for example, if the Record of Decision [ROD] were "No Action"), the larger the NRD claim would be.

Furthermore, there will not necessarily be money involved in the claim, with the exception of the costs expended by the agencies that can be recouped. The current preferred approach by the trustee council is called a restoration-based claim, in which losses that have occurred can be compensated for by such activities as wetland restoration along the river, additional programs, or other kinds of restoration projects.

Relative to a question regarding damage caused by discharge of contaminants that were legal at the time they were discharged, as is the case with the PCBs discharged by GE prior to their ban, Mr. Sanford said damage from that would not be compensable, and some means would need to be found to "tease apart" any injuries that occurred from later, illegal discharge.

Mr. Tomchuk followed Mr. Sanford's presentation with a status and update on peer review. The September 9 and 10 peer review on EPA's modeling approach involved seven scientists who found that "the overall modeling approach was acceptable with significant changes." For example, for the bio-uptake modeling, the scientists suggested a "more mechanistic" approach as opposed to a database approach. This would mean dividing the model into more components that portray how a fish takes in the material and then the kinetics of what happens to the material once it is in the body of the fish. The final report from the peer review group is not yet available. Mr. Tomchuk indicated that [EPA] came out of the peer review feeling that the overall approach is based in sound science but that there are areas that needed some changes. EPA will look at the report and all the comments and determine how to address them.

Much discussion ensued regarding the September peer review specifically and the peer review process in general, and is highlighted in the following paragraphs. In response to a question from Marion Trieste, Co-chairperson of the Environmental Liaison Group as to whether other information was being given to the peer reviewers than that supplied by EPA, Mr. Tomchuk stated that three documents were given to the peer review group: the Preliminary Model Calibration Report (PMCR) released in 1996; the preliminary response to comments on that report; and the revised scope of work for the baseline modeling report. General Electric sent some of their more recent analyses to the peer reviewers. Ms. Trieste expressed curiosity about how much information citizens and special

interest groups could submit to the peer reviewers since GE submitted "incredible amounts of documentation."

Mr. Dave Adams was concerned that there is a lot of good data available from sources other than EPA (GE and DEC were specified), and that peer reviewers should "get the benefit of all appropriate information." Mr. Tomchuk clarified that all such data that has been collected for this site are in the EPA data bases, and are used in EPA's reports. Peer reviewers do not interpret all the data. Peer review is done for a specific document to determine if that scientific document based on sound background. It is not a decision on which is the best process to use but rather a decision as to whether [the approach being reviewed] is valid and sufficient to go further with the decision-making process.

Mr. Adams further worried that peer reviewers, although specialists, were potentially "severely handicapped" by not having been involved in the Hudson River study. The speaker referenced instances of different points of view about the data, commented that it would be difficult for the peer reviewers to discern these differing viewpoints on their own, and suggested that peer reviewers should be made aware of such situations. Mr. Tomchuk stated the idea of an independent review was important, and although some aspects of the reviewers' not knowing site-specific information might be a disadvantage, they can still judge whether a particular method is a sound scientific one, which is the purpose of a peer review. EPA must address any comment made by GE or the public or a peer reviewer. A peer reviewer's comment does not carry more weight.

With regard to the question of spending money "up front to arrive at the right answer," Mr. Tomchuk indicated EPA is spending what it believes needs to be spent; arriving at the right answer is one of the reasons EPA has spent the money for an independent peer review and a public comment process.

Ms. Marilyn Pulver, Co-chairperson of the Agricultural Liaison Group, referenced local headlines indicating that peer reviewers were, among other things, critical of EPA PCB models, and stated that EPA should have known "to do a better job." She expressed concern that this is only the first document to be reviewed, and stated that EPA can have no credibility until all documents are peer reviewed, unless EPA is willing to issue a "no dredge, no landfill decision at this time." Ms. Pulver called EPA Administrator Carol Browner's consideration of an "emergency action" based on documents that have not been peer reviewed "irresponsible, ludicrous, and criminal" and called upon EPA to "stop this sham that is called the reassessment," stating that "the river is cleansing itself, the fish are thriving, and no one's health is being adversely affected." She said "we will not be satisfied with anything less at this point than peer review of all documents."

Discussion moved to comments and contributions from Steering Committee members. Ms. DeGroot, Co-chairperson of the Citizen Liaison Group, began by commenting on the peer review: she is disappointed that there are limitations but believes peer review is important and should proceed beyond the one document reviewed to date. She also said that Ms. Browner's comments were "incredible to her" and make her not want to be part of the process. She said it is important that the project move along in such a way that those who have been involved for so long will be sure that the decision will be made in the right way. Peer review is a step in the right direction. There will be other issues that come up that will need to be peer reviewed also.

Mr. Tomchuk pointed out that there is another peer review planned after the completion of the Phase 2 documents. All Phase 2 documents are currently planned for peer review. There is discussion to break out the last two reports - the Data Evaluation and Interpretation Report (DEIR) and the Low Resolution Coring Report - for peer review because they have been completed, but no decision has been made on that.

Ms. Pulver asked if there was a commitment that "nothing is going to be done on the Hudson" until the whole process is complete; she called potential early action a "scare tactic." Mr. Hauptman disagreed and said there is no commitment as to that action's occurring after peer review of the two documents mentioned. It is the decision as to whether or not an early action will be taken that will be made by the end of the year, not an action itself. With regard to potential early action Ms. Judith Schmidt-Dean, Chairperson of the Citizen Liaison Group, cited continual references in the local press to that possibility, and stated that if anyone "has a right to know what's going on, it's us here, and we know nothing. [Everything said] is meaningless if you have an administration that's just going to throw us all out, which is what that decision would be."

Mr. Tomchuk stated that making a decision [on an early action] without considering seven years of data and study is not going to happen. A lot of information gathered so far suggests that PCBs going into the river; hearing that, EPA's responsibility to protect human health and the environment indicated that the agency should look at the significance of those data and decide if action is warranted now. In response to Ms. Dean's concern that "after ten years this is the first time we've heard these words," Mr. Tomchuk stated that each analysis and each report enables EPA to know more. EPA comes out with information as it finishes each analysis. "After ten years, that's exactly what happens: you do your studies, and four years later when you've actually done all the analyses, you [say] 'this could be a significant conclusion. Is something warranted? Well, let's take a look.' ...We do have to take a look at it; that's our responsibility."

Mr. Tomchuk stated that EPA has peer reviewed information on cancer risk. In August of 1996 there was a peer review that included several GE scientists. Further, the major data set used in that peer review was GE's rat study. That was accepted evidence for a cancer slope factor. Mr. Tomchuk commented that this [peer review] is disregarded by many people, which he does not understand, because it is peer reviewed, [which EPA is being pressured about doing on its documents].

Additional discussion ensued as to the availability of human studies that show PCBs to be dangerous. Two studies were mentioned, an apparently much-cited study on impacts of PCB-contaminated lake fish on children and information on impacts of PCB-contaminated rice paddies in China, with disputes as to how reliable such studies are. Ms. Trieste pointed out that there is an agency in place to detect possible human carcinogens and protect people from harmful contamination. She expressed concern about potential development of areas [along the Hudson River] where more PCBs had been found than were previously thought to be present. Ms. DeGroot then stated she wanted to be sure [EPA] "did not waste millions of dollars doing something there is no proof that we need to do."

Mr. Tomchuk stated that he would prefer to have the right people present to get into a [risk assessment] discussion. He reiterated a point made on a previous occasion about epidemiological

studies: it is hard to have a conclusive study that points out an additional risk. A 10⁻⁴ (one in 10,000) risk is the action level for a Superfund site. This means if you sampled 10,000 people and find one case, which is an unacceptable risk to EPA, you would have to find an additional case attributable to the site. If you find one case, to determine where that case came from you need to have statistical significance to draw conclusions. This is a very difficult process, especially when you add other factors such as diets, exposures, etc. This makes epidemiological studies fraught with uncertainties.

Mr. Tomchuk said although he did not think there are studies that *say* PCBs cause cancer, there are studies that *suggest* that PCBs cause cancer, some that suggest that PCBs cause the same types of cancers we see in the [GE] rats. "That's pretty strong evidence." Ms. DeGroot countered that people think Elvis Presley is still alive, too. Mr. Tomchuk pointed out once again that if, "as seems to be the opinion, GE has the right answer on this," there were three GE scientists on the peer review panel that accepted the cancer slope factor developed from the rat data. Further, this was not a site-specific peer review, but involved a whole body of evidence, and these were scientists well versed in the literature of cancer studies.

Ms. DeGroot suggested an independent study in Ft. Edward where there is a "large pool of people already exposed to what you consider the carcinogens." Mr. Tomchuk said that capacitor workers were studied by GE, and results were inconclusive. Mr. Adams said there were fewer cases of cancer in that population than in the general population. Ms. DeGroot reiterated her suggestion for EPA to set up an independent review of that population; in light of the difficulties in doing conclusive epidemiological studies, Ms. DeGroot requested a "common sense" study of people living along the river and who dealt with large amounts of PCBs. She said that if EPA accepted the study that had been done [of the capacitor handlers] there would not be an issue. Mr. Tomchuk responded that there are many other studies [on both rats and people] indicating [there is a risk].

Ms. Trieste mentioned an instance of apparent falsification of papers to indicate that deceased former GE workers had died of natural causes when in fact they had died of cancer. This was part of a study associated with investigation of PCB contamination of the Housatonic River in MA. Ms. Trieste contended that there are instances of falsification of records, particularly in a working environment paid for by a big corporation; "people don't come forward with information, plus they are economically dependent on the polluter." She concluded by stating there are documents available showing that workers exposed to PCBs have liver cancers and other sores and wounds typical of certain types of PCB exposures.

Mr. Tomchuk agreed with a suggestion made by Mr. Adams that the subject be tabled until appropriate persons could be available. A GE representative suggested someone from GE could be made available for a future meeting, and Mr. Adams suggested a future Steering Committee meeting be devoted to the subject.

The round table discussion resumed. Ms. Dean asked if [liaison group chairpersons] could have copies of EPA's responses to the Saratoga County EMC's comments. Mr. Tomchuk said EPA has not responded formally to a lot of their comments. Some of the responses were related to the PMCR and were given to the peer review group as part of the preliminary response to comments on that report. He indicated that additional formal response was a question of resources, referenced the upcoming responsiveness summaries, and agreed to release the PMCR preliminary response report.

Regarding the EMC's comments on the scope of work for the risk assessment, Mr. Tomchuk stated he did not know when formal responses would be made. He would discuss some of the questions but the discussion would not reflect EPA's position. There will be a single-document compendium of responses to everyone's comments. Ms. Dean feels frustrated because she feels she will never know the answers: "what's the sense of [commenting]?"

Mr. Adams [a member of the Saratoga County EMC] cited two levels of comment. One level has to do with details of what is occurring, and can be addressed over a period of time. The other level bears directly on the on-going work, which he feels is Ms. Dean's concern. Mr. Adams said that if those latter comments were valid, and were not addressed early on, there is a danger that the on-going work could be erroneous, particularly in cases where the work builds on each ensuing step. Mr. Tomchuk said that he would try to do better on [completing] the responsiveness summaries, and in addressing some of Ms. Dean's concerns. He pointed out that although resources should not be the determining factor, the summaries EPA agreed to are being done by the same people doing the other project work.

Regarding the TAG grant, awarded to Scenic Hudson in 1997, Ms. Dean stated that the Citizen Liaison Group requests the following: 1) the date or dates and exact amount or amounts of money given to Scenic Hudson; 2) copies of instructions given to Scenic Hudson by EPA concerning the reporting or the research or financial informational activities; 3) copies of any actual reporting done by Scenic Hudson; 4) EPA internal audit directives as concerns financial reporting due from TAG grant recipients; and 5) that the EPA internal audit group receives a copy of her statement. She said the Citizen Liaison Group has grave concerns that "these monies given Scenic Hudson have been ill spent," and requests and audit.

Regarding the Low Resolution Coring Report's conclusion that there was a 40 percent loss of PCBs from the sediments in the Thompson Island Pool since 1984, Mr. Deppe, Co-chairperson of the Environmental Liaison Group, asked Mr. Tomchuk if he were aware of GE's position that EPA's calculations were such that if followed, the number should be 80 percent instead of 40. Mr. Tomchuk said the comparison was of two analytical techniques, and the difference goes back to the chemistry. In 1984, the chemistry used only measured PCBs with three or more chlorines for the most part. In 1994 when EPA sampled, the whole spectrum of PCBs including monos and dis was measured. If you disregard the monos and dis, you can compare the two numbers. What GE is saying is that there is an 80 percent reduction in tri- plus PCBs, not in total PCBs. This is not 80 percent mass loss, because some PCBs were converted to monos and dis. Mr. Tomchuk said some data in hot spot areas suggests a similar type of loss, but given the uncertainties surrounding the numbers, the 40 percent loss is between 5 and 75 percent loss. Mr. Tomchuk said there may be some dechlorination product from dechlorination prior to 1984 that was not originally considered and now needs to be looked at. EPA has not finished its analysis of GE's position.

Mr. Deppe asked Mr. Sloan from DEC if anything in his fish data collected over the years reflects any of those 40 percent or 80 percent numbers? Mr. Sloan replied that [PCB] concentrations have remained relatively stable in the fish; whatever the rest of the dynamic is that is associated with the sediment, it is still enough that [PCBs] are still present in the system and the fish are remaining at fairly constant levels in that portion of the river.

Ms. Pulver questioned the definition of "on site" from the Feasibility Study Scope of Work (SOW) as a corridor including the upper Hudson River and extending two miles from either bank. Ms. Pulver expressed concern that this is a major change in the [definition of] the Superfund site with no explanation, and asked if municipalities and property owners in that corridor have been notified.

Mr. Tomchuk explained by reviewing the six possible response actions covered in the SOW. The last two (1) Complete or Partial Removal with On-Site Dewatering and Subsequent On-Site or Off-Site Disposal and 2) Complete or Partial Removal with On-Site or Off-Site Treatment and Disposal) use the term "on-site" as defined as Ms. Pulver quoted, referring to the local area next to the river, and consistent with the siting survey released last January. The corridor is not considered part of the Superfund site itself. The reference is for [potential location of] an on-site treatment or disposal facility and is inherent in talking about any option that includes removal of sediment.

Ms. Pulver asked for a commitment that the normal DEC hazardous waste siting process will be adhered to when that stage is reached, and Mr. Tomchuk responded that EPA has said nothing but that all along. Local zoning regulations are not necessarily within EPA's decision-making process and would more likely be part of the siting hearing process.

Ms. Ruggi asked if she were correct that EPA had committed not to site a landfill in "our area" but would go to an already-permitted landfill elsewhere. Mr. Tomchuk clarified that if an early action were determined to be necessary, EPA would not go through a landfill siting process but would go to someplace already existing. Ms. Ruggi then restated her feeling with regard to the reassessment that "there will be a dredge and dump project." Mr. Tomchuk stated he hears that more from Ms. Ruggi and Ms. Pulver than in [EPA's] offices.

Discussion refocused on the possible early action, which Ms. Schmidt-Dean referred to as an "emergency action." Mr. Tomchuk and Mr. Hauptman pointed out that no one from EPA used or uses that term, that it comes from the press and other sources, and that if it is perceived as a threat locally, it is because that is the way it appears in the press. A suggestion was made that EPA advise the people who participate on the committees ahead of time of major announcements appearing in the press. Mr. Tomchuk said that EPA used to release documents ahead to the committees, but was then put in the position of spending two to three weeks addressing comments on the document prior to having had the chance to discuss or explain it, so that practice has changed. Now everyone gets the information at the same time. EPA releases a document and follows up with a Joint Liaison Group meeting the evening of the release so that committee members see the document before the headlines appear. The suggestion was made to separate handling of an impending news release from handling of a document release, although Mr. Tomchuk contended that most of what raises controversy is document-related.

The next discussion centered on whether or not EPA should release any information at all that has not been completely [reviewed and substantiated], followed by another round of comments on Administrator Browner's statement regarding a potential early action. Mr. Tomchuk said both Administrator Browner's and Ms. Jeanne Fox' statements regarding the possibility of an early action were very general based upon the [Low Resolution Coring Report], and suggested that the issue being raised was really whether or not the report has valid information in it about [PCB] losses. EPA has received good comments on the report and is looking at them. Ms. Ruggi said the

"headlines generated by Carol Browner threatening an early action" are the main problem.

Ms. DeGroot stated that EPA has said it is looking at questions about the report, and suggested it "would be smart to wait till you get those questions answered" before making a statement that would have such an impact. Mr. Tomchuk said the report is put out for public comment in order to *get* questions. Ms. DeGroot further said EPA should make sure the numbers are right before publishing. Mr. Tomchuk reiterated that in EPA's best estimate, that was what was put out; EPA has no reason to put out anything other than that.

Discussion returned to the word "site" and Mr. Deppe requested that the word be removed if EPA does not mean "Superfund site." Mr. Fisher, site attorney for EPA, clarified that on-site in Superfund refers to anywhere contamination has come to be located or any area in close proximity to [the area of contamination] that you would need to perpetuate a response action. Mr. Tomchuk acknowledged the semantic issue and agreed to consider issuing a one-page correction.

The Agricultural Liaison Group met in August and had some of the same frustrations that had been discussed. Mr. Borden wrote a letter to Administrator Browner to express the group's concerns. Additionally, Mr. Borden commented that Ms. Browner should know what the impact of her statements in the press would be, and should be more careful of what she says.

Ms. Trieste asked about the next issue of *River Voices*. She stated that the multiple issues of [GE's] *River Watch* were very much a one-sided presentation about the health of the river. Ms. Trieste expressed concern that the public was not getting information from the agency [EPA] that it was their right to have. Karen Coghlan, TAMS Consultants, indicated that an issue of *River Voices* was under preparation at that time.

With regard to Ms. Browner, Ms. Trieste said she has personally seen Ms. Browner fight for very strong laws against those who would degrade Superfund, "the very law that is protecting our river from further damage. She is the best thing we have going for us right now as far as working for public interest." Ms. Trieste observed that she has seen "a lot of politicians working not for our interests and for the taxpayers but for the people who make the big profits off what they have to gain by not cleaning waste."

Mr. Tomchuk agreed to consider a suggestion to hold a Joint Liaison Group meeting with health experts available to discuss health effects of PCBs, although he expressed concern that people would leave the way they came, having heard some people say that PCBs are carcinogens and others say PCBs they are not.

Mr. Tomchuk announced an Availability Session on the Feasibility Report and Human Health Risk SOWs to be held at the Albany Marriott on Wolf Road 2:30 to 4:30 in the afternoon and 6:30 to 8:30 in the evening tomorrow, October 20. The public comment period for the SOWs ends Monday, November 2, 1998. He closed the meeting by commenting that although the meetings are sometimes difficult, he feels they are very beneficial and hopes the other participants feel the same.



ATTACHMENT 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

HUDSON RIVER PCB REASSESSMENT
COMMUNITY INTERACTION PROGRAM

STEERING COMMITTEE MEETING

Monday, October 19, 1998
7:30 p.m.
Saratoga Springs, New York

A G E N D A

Welcome & Introduction

Mel Hauptman, Sediment
Projects Team Leader, USEPA

Presentation on Natural Resource
Damage Claim

Steve Sandford, NYSDEC

Peer Review Update &
Discussion

Doug Tomchuk, Reassessment
Project Manager, USEPA

Liaison Group Concerns

Liaison Group Officers

Questions & Answers

US ENVIRONMENTAL PROTECTION AGENCY
HUDSON RIVER PCBs REASSESSMENT
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

Community Interaction Program
Steering Committee Meeting
Saratoga Springs, NY
October 19, 1998

NAME	ADDRESS	AFFILIATION/TELEPHONE
Carl Deppe	28 Thomas Ave Hudson Falls NY 12839	CEASE
Ron Sloan	50 Wolf Rd Albany NY	DEC
DAVID ADAMS	216 STAGE RD. CHARLTON, NY 12019	SAR. CO. EMC & GOV'T. LIAISON COMM.
Lee Coleman	Daily Gazette	374 Broadway Saratoga Springs NY 12801
Phil Gruber	28 Spook Hollow Rd Stillwater NY 12170	Ag Comm PCB
Marion Trieste	463 RT 32 Schuylerville NY 12871	
Tom Borla	2841 Valley Mills Rd Schuylerville NY	Ag Liaison & Wash. Co. Farm Bureau.

**US ENVIRONMENTAL PROTECTION AGENCY
HUDSON RIVER PCBs REASSESSMENT
REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

**Community Interaction Program
Steering Committee Meeting
Saratoga Springs, NY
October 19, 1998**

NAME	ADDRESS	AFFILIATION/TELEPHONE
Paul McDowell		New York Farm Bureau
Margerya Culbreth		Reg. Liaison
John Santacrose	PO Box 3705 Albany, NY 12203	Environmental Liaison
Joan Gerhardt	13 Locust St. Colens Falls NY 12801	68

Attachment 2
2-3
M. V.

**US ENVIRONMENTAL PROTECTION AGENCY
HUDSON RIVER PCBs REASSESSMENT
REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

**Community Interaction Program
Steering Committee Meeting
Saratoga Springs, NY
October 19, 1998**

NAME	ADDRESS	AFFILIATION/TELEPHONE
Sharon Ruggi	15 Burgoyne Ave. Hudson Falls, N.Y.	
William Forts	50 Wolf Rd Albany, NY 12233	NYS DEC
STEVE (SANFORD)	50 WOLF ROAD ALBANY 12233	NYS DEC
July Schmutz-Den	1 Ferry St Schville ny	C.L.G.
Bob Deboer	18 Deboer Rd Ft Ed	CLG
Lugh Foster	200 Henry Johnson Blvd Albany, NY 12216	Arbor Hill Environmental Justice Corp

**US ENVIRONMENTAL PROTECTION AGENCY
HUDSON RIVER PCBs REASSESSMENT
REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

**Community Interaction Program
Availability Session - 2:30 to 4:30 PM
Albany, NY
October 20, 1998**

NAME	ADDRESS	AFFILIATION/TELEPHONE
Ken Darna	20 Waddington Lane Delmar NY 12054	
David Aron	216 Stage Rd Chewton, NY 12019	SAR. CO. EMC & GOV'T. LIAISON COMM. 518-377-1690
Mike Lapushinsky	199 W. Dominick Rome, N.Y. 13440	New York Rivers United
Kathy Cooke	# 5th floor AESOB Alb 12236	NYS Comptroller's office 518 486 5433
John Hessel	GE 1 Computer Ave Albany NY 12205	GE 518 458-6619
John Santacrose	Po Box 3705 Albany, NY 12203	Albany Socy of NY State 518-489-9945

ATTACHMENT 2
3-3

US ENVIRONMENTAL PROTECTION AGENCY
HUDSON RIVER PCBs REASSESSMENT
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

Community Interaction Program
Availability Session - 6:30 to 8:30 PM
Albany, NY
October 20, 1998

NAME	ADDRESS	AFFILIATION/TELEPHONE
Rich Schiavo	9 Vassar St Poughkeepsie, NY 12601	Scenic Hudson 914-473-4440
Liz Foster	200 Henry Johnson Blvd Albany, NY 12210	Arbor Hill EDC

The Natural Resource Damages Assessment Process

Prepared 19 October 1998 by S. J. Sanford, NYSDEC

Preassessment Screen - a quick review of existing information
- should we go forward?



Draft Scope of the NRDA Plan - what needs to be measured?



develop NRDA Plan

NRDA Plan



implement studies

Assessment - measure injuries & damages; what needs to be restored?



place value (\$ or projects) on injuries or restoration

Claim - seek compensation - negotiate or litigate



Restoration Planning - select and design final projects



Restoration - implement projects

ATTACHMENT 3
2-14

DRAFT

**Scope
for the
Hudson River Natural Resource Damages
Assessment Plan**

Prepared by

The Hudson River Natural Resources Trustee Council

New York State Department of Environmental Conservation
National Oceanic and Atmospheric Administration
United States Fish and Wildlife Service

September 1998

10.10129

Introduction

This document represents a preliminary step in the process of assessing natural resource damages (NRD) in the Hudson River. The NRD process is the companion component to a hazardous waste site cleanup under the Comprehensive Environmental Response, Compensation and Liability Act, also known as CERCLA or the federal Superfund law. The purpose of a CERCLA cleanup is to stop a hazardous substance release from continuing to cause harm or risk to human health and the environment. Hazardous waste site cleanups under CERCLA are administered by the U.S. Environmental Protection Agency (EPA). The purpose of an NRD action under CERCLA is to compensate the public, or make the public whole, for the injury to the environment and the loss of use of the environment caused by the release of a hazardous substance before during and after the cleanup is completed. NRD actions under CERCLA are administered by designated federal and state agencies and Indian tribes acting on behalf of the public as natural resource trustees. In conjunction with a cleanup, an NRD action makes the public whole by requiring a responsible party to perform or pay for restoration projects that restore the injured natural resources and the uses and services they provide.

In coordination with the EPA's Hudson River Reassessment, the Hudson River Natural Resource Trustees - the United States Department of the Interior (DOI), the National Oceanic and Atmospheric Administration (NOAA), and the New York State Department of Environmental Conservation (NYSDEC) - will be conducting an assessment of natural resources damages with respect to the Hudson River PCBs Superfund site.

Assessing NRDs can be a large and complex undertaking. The federal government has developed regulations which guide this process. The Trustees have been following the Federal Regulations for Natural Resource Damages Assessments (43 CFR Part 11).

In October 1997, the Trustees took the first step in the natural resources damages assessment (NRDA) process with the issuance of a preassessment screen determination for the Hudson River. The preassessment screen was based on existing data concerning the ecological impacts of PCBs. The preassessment screen documents the Trustees' determination that conditions in the River warrant a natural resource damage assessment.

The Trustees are now at the next step, which is the development of an assessment plan. The purpose of the assessment plan is to ensure that the trustees perform the assessment in a planned and systematic manner, using appropriate methodologies for evaluating and quantifying injuries to the Hudson River's natural resources. The planning process will also allow the Trustees to determine whether the assessment can be conducted at a reasonable cost.

Before preparing the Plan itself, the Trustees have first prepared this document, the *Draft Scope*. The *Scope* is a preliminary outline of the contents of what will be the *Hudson River Natural Resource Damages Assessment Plan*.

The *Plan* will be organized in chapters, as set out below. Chapter 1 will include an overview of the assessment process, which explains how the Trustees will satisfy certain underlying procedural requirements in the DOI regulations. Chapter 2 of the *Plan* will provide background information identifying the substances and resources of concern to the Trustees. Chapter 3 will describe the specific activities the Trustees propose to undertake to document the nature and degree of injuries to natural resources. Chapter 4 will provide an introduction to the concept of damages, with an emphasis on the costs of restoration and potential methods by which the Trustees will calculate other natural resource damages. Chapter 4 will also describe the types of restoration alternatives likely to be considered, the categories of compensable values for which the Trustees may claim damages, and the economic methodologies the Trustees would likely use to estimate these compensable values. These chapters are to be followed by a glossary and appendices as needed. The full *Draft Plan* will be issued for public comment through a formal review process.

At the same time that we are offering this Draft Scope for public comment, the Trustees have also begun to develop those parts of the *Draft Plan* which are fundamental to any assessment plan; in other words, we are getting a head start on certain generic or "boilerplate" elements which the regulations require to be included. These consist primarily of introductory sections summarizing existing conditions and regulatory mandates. The later portions, however, offer opportunities for the Trustees to make numerous decisions about what should and should not be studied or measured by the Plan.

The Trustees are offering this *Draft Scope* for public comment so that we may involve all concerns at the earliest possible stage. It may be useful for you, as you read the *Scope*, to consider the following questions:

- 1) Will the *NRDA Plan* address all of the significant injuries?
- 2) Will the *NRDA Plan* address injuries which are insignificant and should not be studied or measured?
- 3) Are there assessment methodologies which should or should not be employed in the Assessment?

You do not need to confine your review to these questions; the entire *Draft Scope* is subject to revision. Nevertheless, your answers to these questions can provide especially useful information to the Trustees.

All written (letter, e-mail or fax) comments on this document must be submitted to Steve Sanford and received no later than December 11, 1998. For additional information, please contact one of the representatives listed below.

The Hudson River Natural Resource Trustees look forward to your continued participation in the assessment and restoration of Hudson River natural resources.

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CHAPTER 1 - PROCESS OVERVIEW

Authority to Conduct a Natural Resource Damage Assessment

Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (42 USC 9601 *et seq.*), the Oil Pollution Act (OPA, 33 USC 2701 *et seq.*), the Federal Water Pollution Control Act (the "Clean Water Act" (CWA)), as amended (33 USC 1251 *et seq.*), federal and state officials act on behalf of the public as Trustees for natural resources.

This section of the Plan will explain the statutory and common law provisions that authorize the Trustees to proceed with the NRDA. These include delegation of Trusteeship to the agencies by the President of the United States and Governor of New York, and the Trustees' determination that there is a reasonable probability of making a successful damage claim.

Decision to Perform a Type B Assessment

The DOI regulations provide for two types of assessment (43 CFR §11.33). The first, "type A" assessment, is a simplified assessment that uses computer models to generate a damage claim. This procedure requires minimal input from field observations, but is generally limited to assessment of relatively minor, short duration discharges or releases that occur in coastal or marine environments or in the Great Lakes. The second, a "type B" assessment, allows for the use of a range of scientific and economic methodologies. At this point, the Trustees expect to follow the procedures required for a Type B assessment. This section of the Plan will discuss the two types of assessments, their applicability to the Hudson River, and the Trustees' decision to perform a "type B" assessment as outlined in 43 CFR §11.35.

Preliminary Estimate of Damages

The DOI regulations require the Trustees to develop a preliminary estimate of damages prior to performing a type B assessment. The purpose of the preliminary estimate of damages is to review the anticipated costs of restoration, rehabilitation, replacement, and/or acquisition of equivalent resources for the injured natural resources and the compensable value. The preliminary estimate of damages is intended to ensure that the choice of scientific, cost estimating, and valuation methodologies used in the damage assessment fulfill the requirements of reasonable cost (43 CFR §11.38(b)).

The Trustees have completed a preliminary estimate of damages for the Hudson River and are confident that the value of the damages determined through the NRDA will exceed the estimate of assessment costs. The Trustees will make the results of the preliminary estimate of damages public when the assessment is complete.

Coordination

With Resource Trustees

CERCLA (§104(b)(2)) requires prompt notification of Federal and State natural resource Trustees of potential damages to natural resources under investigation and requires coordination of the assessments, investigations, and planning with such Trustees. Consistent with the DOI regulations (43 CFR §11.32) all natural resource Trustees whose responsibility is shared with other natural resource Trustees, as a result of coexisting or contiguous natural resources or concurrent jurisdiction, have been notified that an Assessment Plan is being developed.

Coordination among the Trustees is also an essential component of a cost-effective damage assessment. The Trustees have signed a Memorandum of Agreement, dated August 1997, establishing a Hudson River Natural Resource Trustee Council. The purpose of the Trustee Council is to provide a framework for coordination and cooperation among the State and Federal Trustees in the pursuit of natural resource damage claims and the restoration of injured natural resources in the Hudson River.

With Non-Trustee Parties

This section will describe the provisions to be made for public participation in the assessment process as required by §11.32.

With Remedial Investigation/Feasibility Study (RI/FS) Activities

The DOI regulations require the coordination of a damage assessment, to the extent possible, with response actions or other investigations being performed pursuant to the National Contingency Plan (43 CFR §11.31(a)(3)). The United States Environmental Protection Agency (EPA) is presently conducting an investigation of polychlorinated biphenyl (PCB) contamination of the Hudson River. NYSDEC is also supervising remedial investigations and activities at two General Electric plants located at Hudson Falls and Fort Edward. At a minimum, the Trustees intend to take into consideration the objectives of these activities during the planning and implementation of this assessment. The Trustees will design the assessment to take account of the impacts of any remediation or restoration activities that satisfy the Trustees' NRDA objectives.

PRP Involvement in Plan Implementation

This section will describe the provisions to be made for involvement of Potentially Responsible Parties (PRPs) in the assessment process (43 CFR §11.32(a)(2)). The regulations allow PRPs to take a role in conducting the assessment, at the discretion of the Trustees.

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Split Samples, Procedures and Schedules for Sharing Data

This section will discuss procedures and schedules for sharing data, split samples, and results of analyses with any PRPs (43 CFR §11.31(a)(4)).

Quality Assurance/ Quality Control Plan

This section will discuss the requirement that the Trustees develop a quality assurance plan or to ensure the validity of the original data collected as part of the NRDA (43 CFR §11.31(c)(2)). The final Plan will include general provisions concerning quality control and quality assurance (QA/QC) applicable to the data the Trustees intend to utilize in the course of the assessment. In general, a quality assurance plan must provide sufficient detail to demonstrate that technical and quality objectives are identified; the intended measurements or data acquisition methods are appropriate; assessment procedures are sufficient for confirming that the type and quality of data needed are obtained. Project-specific QA/QC plans will be developed for individual studies and will be available for public review.

CHAPTER 2 - BACKGROUND INFORMATION

The damage assessment will address injuries to a variety of natural resources associated with the release of hazardous substances. As a first step toward achieving this objective, the Trustees include in this chapter background information on the geographic scope of the assessment area, the history of industrial activity within that area, the nature of hazardous substance releases to the environment, and the natural resources subject to injury resulting from those releases.

Boundaries of Assessment Area

This section will describe the geographical boundaries of the damage assessment study area. The boundaries will likely encompass the Hudson River corridor from Glens Falls to the Battery in Manhattan, including the Hudson River itself and associated riparian and upland habitats.

Distribution of Hazardous Substances in the Assessment Area

This section will describe the distribution of hazardous substances in the assessment area drawing upon available sources and information and how that distribution is currently understood. It will include general characteristics, sources, and environmental effects of those hazardous substances. The assessment will likely focus on natural resource injuries and damages associated with the release of PCBs and metals.

History of Industrial Activity and Identification of Potentially Responsible Parties

This section of the Assessment Plan will provide a history of industrial activities in the Hudson River watershed.

Location of Releases of Hazardous Substances to the River System

This section will identify the locations where the hazardous substances of concern are known to have been released to the Hudson River watershed.

Natural Resources in the Assessment Area

The DOI regulations define five categories of natural resources for which natural resource damages may be sought: surface water resources, ground water resources, air resources, geologic resources, and biological resources (43 CFR §11.62). Surface water resources include both water column and associated bed and bank sediments. The following sections briefly describe each of these categories. The assessment plan will more fully describe the resources that will be investigated in the course of the assessment.

Surface Water and Sediments

The surface water resources in the assessment area include the water and bed and bank sediments of the Hudson River. The contamination of these resources has both direct and indirect impacts on biological resources. The assessment will include both establishment of the pathway component of the injury as well as identification of the potential injury to surface water and sediments.

Ground Water/Drinking Water

Ground water resources include the water in a saturated subsurface zone and the rocks or sediments through which this water flows. Ground water resources serve as a potential pathway for contaminants to migrate to other resources, such as surface water. Since ground water is a source of public drinking water, the assessment will include both establishment of the pathway component of the injury as well as identification of the potential injury to the drinking water supply.

Geologic Resources

Geologic resources include soils and sediments that are not otherwise accounted for under the definition of surface water or ground water resources. In this case, geologic resources include the soils and sediments located in upland and wetland areas closely associated with the Hudson River.

Air

Air resources are typically assessed in the context of their ability to serve as a pathway for hazardous substances to reach, and potentially injure other resource categories.

Biological

Along with surface water resources, biological resources comprise key components of this damage assessment. The Hudson River corridor provides habitat for all trophic levels of the river's ecosystem. The plan will include the assessment of injuries to aquatic insects, fish, reptiles and amphibians, birds and mammals and the important ecological and human-use services that they provide.

- Macroinvertebrates (e.g. aquatic insects, crustaceans, bivalves) constitute a significant food source for many of the higher trophic levels. Because macroinvertebrates are sensitive to both physical and chemical changes in the environment, they have frequently been used to assess the environmental quality of aquatic ecosystems.
- The Hudson River corridor provides habitat for reptiles and amphibians, such as various turtles, snakes, frogs, and salamanders.

- The Hudson River also supports dozens of both residential and migratory fish species, including recreationally important species (e.g. striped bass, American shad) and the Federally endangered short-nosed sturgeon.
- The wetlands and riparian habitats of the Hudson River provide high quality nesting, resting, and feeding opportunities for a wide variety of resident and migratory birds. The Hudson River is also a nesting area for various rare, threatened and endangered bird species.
- The riparian zones of the Hudson River provide habitat for various mammals such as mink, muskrat, otter, and raccoons.

Confirmation of Exposure

Prior to undertaking a "type B" assessment, the Trustees must "confirm that at least one of the natural resources identified as potentially injured in the preassessment screen has in fact been exposed to the oil or hazardous substance" (43 CFR §11.37(a)). The definition of exposure as given in the regulations as "all or part of a natural resource is, or has been, in physical contact with oil or hazardous substance, or with media containing oil or hazardous substance" (43 CFR § 11.14(q)). This section of the Plan will provide a data summary satisfying this requirement.

CHAPTER 3 - INJURY DETERMINATION AND QUANTIFICATION

Introduction

This section of the Plan will describe the criteria to be used for determining whether natural resources have been injured. The Trustees anticipate using reliable existing data as well as undertaking new investigations to establish both what resources have been impacted and how the hazardous substances of concern caused or contributed to the injuries. Where new studies are required, the Trustees will prepare and make public specific sampling and analysis plans, either as appendices or supplements to the final Plan. This chapter will also set out the methods the Trustees plan to use to quantify the injuries documented in the assessment.

Injury

The definition of injury, as given in 43 CFR §11.14(v), is "a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil or release of a hazardous substance, or exposure to a product of reactions resulting from the discharge of oil or release of a hazardous substance." Where appropriate to the Hudson River ecosystem, the Trustees will consider other concepts of natural resource injury.

Methodology and Acceptance Criteria

This section will discuss type B procedures for completing injury determination and quantification as detailed in 43 CFR §11.61 (determination) and 43 CFR §11.70 (quantification). It will also generally discuss the concept of acceptance criteria for demonstration of injury as described in the regulations.

Pathway Determination

This section will discuss the concept of and need for contaminant pathway determination in general (43 CFR §11.61(c)(3)), as well as a discussion of the concept that non-biotic resources which provide a pathway for injury of another resource are themselves injured (43 CFR §11.62(b)(1)(v), etc.).

Determining Injury in the Hudson River

This section will give a short overview of the Hudson River resources which the Trustees will examine, including whether the Trustees believe the resource is injured, represents a pathway for injury of another resource, or both. Detailed discussions of the injury determination for these resources will be given in proceeding sections.

Quantifying Injury in the Hudson River

This section will discuss the broad categories of methodologies which will be used to quantify injury to Hudson River resources. This discussion will include the concepts of natural resource services and baseline services. Detailed discussions of the injury quantification for these resources will be given in proceeding sections.

Injury Documentation for the Hudson River System

Task 1 - Characterize the Nature and Extent of Surface Water Contamination

Background: This section will discuss factors that affect the injury determination, such as the existence of water quality criteria, the existence of long term water quality monitoring data, and other background information. Hudson River water as a source of injury to other natural resources will be discussed in the context of existing fish tissue data.

Hudson River surface waters, and the services these waters provide, have been affected by PCB contamination. The surface waters of this system provide habitat for fish and shellfish species, including feeding, breeding, and nursery services. In addition, these waters support both consumptive and non-consumptive recreational activities such as fishing, swimming, boating, and wildlife viewing.

Operative Injury Definition: This section will discuss surface water injury determination as detailed in 43 CFR §11.62(b)(1), including injury via acting as pathway to other natural resources (43 CFR §11.62(b)(1)(v)).

Acceptance Criteria: This section will discuss acceptance criteria, detailed in 43 CFR §11.62(b)(2), for sample collection of surface waters in order to prove injury of the resource. This section will also provide documentation that existing data were generated using generally accepted methods, as described in 43 CFR §11.64(b).

Task 2 - Characterize the Nature and Extent of Soil and Sediment Contamination

Background: Contaminants, such as PCBs and metals, tend to accumulate at high levels in sediments. Those sediments then serve as a continuing source of contamination to surface water and fish and wildlife species using the Hudson River for habitat. Also, PCBs in the sediments of the Hudson River have restricted or increased the costs of dredging needed for channel maintenance, marina development, and other river uses. Soils of the Hudson River floodplain or within disposal areas along the river may also serve as a source of contamination to other resources.

Operative Injury Definition: This section will discuss the regulatory definition of injury to soils and sediments, including injury to surface water by sediment contamination (43 CFR §11.62(b)(1)(iv), as well as injury to geologic resources (43 CFR §11.62(e)).

Acceptance Criteria: This section will discuss acceptance criteria, detailed in 43 CFR §11.62(b)(2)(I), for sample collection of bed and bank sediments in order to show injury to surface waters.

Task 3 - Evaluate the Impact of Hazardous Substances on Aquatic Invertebrates

Background: Aquatic invertebrates near the bottom of the food chain represent a critical contaminant pathway to vertebrates, both aquatic and terrestrial. Contaminants are passed up the food chain to fish, reptiles, amphibians, birds and mammals which prey on them, magnifying concentrations of toxins in the predators; sometimes resulting in food items that are unhealthy for human consumption. Additionally, the toxic nature of certain contaminants may result in injury to aquatic invertebrates and disruption of the food chain when these prey are eliminated from the ecosystem.

Aquatic biologists employ biomonitoring -- the use of organisms to test water quality -- because sampling invertebrate communities can provide a "fingerprint" of what the water/sediment quality in the aquatic ecosystem was for the several months prior to sampling. This section will discuss the collection of aquatic invertebrates and the analysis of their tissues for toxic contaminants such that the potential source and levels of contamination in the aquatic food chain can be determined.

Operative Injury Definition: This section will discuss the biological injury criteria detailed in 43 CFR §11.62(f), including the concept that sediment is injured when concentrations of a hazardous substance are sufficient to cause injury to biota (43 CFR §11.62(b)(1)(v)).

Acceptance Criteria: This section will discuss the acceptance criteria for demonstrating biological injury detailed in 43 CFR §11.62(f)(4).

Task 4 - Evaluate the Impact of Hazardous Substances on Fish

Background: PCB concentrations in fish in the Hudson River have historically been detected well above the 2 ppm tolerance level recommended by the Food and Drug Administration (21 CFR §109.30(a)(7)). Fishing advisories and closures have been instituted along the Hudson River, primarily due to elevated PCB concentrations. PCBs and other hazardous substances are known to adversely impact reproduction, immune function, health, and survival of certain fish species. As an important food source, fish also represent an important pathway to other resources.

Operative Injury Definition: This section will discuss the definitions of injury to fish which are contained in the regulations at 43 CFR §11.62(f)(1). Two operative subsections are those which define exceedence of FDA action or tolerance levels as injury (43 CFR §11.62(f)(1)(ii)) and which state that injury has occurred if a state health agency issued a directive to limit or ban consumption (43 CFR §11.62(f)(1)(iii)).

Acceptance Criteria: This section will describe the acceptance criteria for proving biological injury detailed at 43 CFR §11.62(f)(4), as well as the requirements of 43 CFR §11.64(f).

Task 5 - Evaluate the Impacts of Hazardous Substances on Birds

Background: Hazardous substances, like PCBs and metals, have been shown to adversely affect reproduction, growth, health, and survival of numerous bird species. The assessment will evaluate injuries to bird species, in general. However, greater attention will be paid to injuries to Federal or State listed threatened and endangered species (e.g. bald eagle, peregrine falcon), species that have been shown to be sensitive to PCBs or other hazardous substances of concern (e.g. black-crowned night heron, wood duck), and species that are consumed by humans (e.g., waterfowl).

Operative Injury Definition: This section will discuss the definition of injury to biological resources which is contained in the regulations at 43 CFR §11.62(f).

Acceptance Criteria: This section will describe the acceptance criteria for proving biological injury detailed at 43 CFR §11.62(f)(4), as well as the requirements of 43 CFR §11.64(f).

Task 6 - Evaluate the Impacts of Hazardous Substances on Reptiles & Amphibians

Background: Many of the reptiles and amphibians found in the Hudson River and its riparian zone rely heavily on food sources of aquatic origin; therefore, the potential is high for them to be injured due to the accumulation of harmful contaminants. These contaminants are in turn further concentrated in the tissues of the animals that prey on reptiles and amphibians. Levels of PCBs and other contaminants may be high enough in the tissues of large frogs and turtles to make them unfit for human consumption. This is currently the case for snapping turtles for which there is a NYS Department of Health consumption advisory due to PCB contamination.

Operative Injury Definition: This section will discuss the definition of injury to biological resources which is contained in the regulations at 43 CFR §11.62(f). Of particular relevance may be 43 CFR §11.62(f)(1)(ii) and (iii), dealing with FDA action and tolerance levels and State issued limits or bans on consumption.

Acceptance Criteria: This section will describe the acceptance criteria for proving biological injury detailed at 43 CFR §11.62(f)(4), as well as the requirements of 43 CFR §11.64(f).

Task 7 - Evaluate the Impacts of Hazardous Substances on Mammals

Background: The potential is high for mammals that feed in the Hudson River riparian zone to accumulate harmful levels of contaminants. Mink, in particular, have been shown

to experience reproductive impairment and mortality as a result of consuming PCB contaminated prey.

Operative Injury Definition: This section will discuss the definition of injury to biological resources which is contained in the regulations at 43 CFR §11.62(f).

Acceptance Criteria: This section will describe the acceptance criteria for proving biological injury detailed at 43 CFR §11.62(f)(4), as well as the requirements of 43 CFR §11.64(f).

Injury Quantification - Option A

Introduction

This section will discuss the injury quantification phase of the assessment, as described in 43 CFR §11.70 through 43 CFR §11.73. This will encompass the concept of natural resource services, as detailed in 43 CFR §11.70 and 43 CFR §11.71, as well as the concepts of baseline services and recoverability. The Tasks listed below (Tasks 8 - 14) assume that all resources described above are judged worthy of quantification. This will likely not be the case, as contemplated in 43 CFR §11.71(d).

Task 8 - Quantify Injury to Surface Water

Extent of Injury and Service Reduction: This section will describe the extent of the surface water injury, as detailed in 43 CFR §11.71(h), and then go on to detail the services lost because of the injury, as discussed in 43 CFR §11.71(h)(4). Injury and service loss will likely be assessed over both geographical and temporal ranges, and include surface water as habitat for biota. If this information is not available, this section will discuss how such information will be developed.

Baseline Services Determination: This section will discuss the baseline services determination for surface water, as described generally in 43 CFR §11.72. Surface water is specifically addressed in 43 CFR §11.72(g). If information on baseline services is not available, this section will describe the information needed and how it will be developed.

Resource Recoverability Analysis: This section will describe how resource recoverability will be assessed, as required by 43 CFR §11.73. This will likely include an assessment of the mathematical modeling of the Hudson River which is being performed by the EPA as part of the Hudson River RRI/FS.

Task 9 - Quantify Injury to Soil and Sediment

Extent of Injury and Service Reduction: This section will describe the extent of the injury to soil and sediment, as detailed in 43 CFR §11.71, and then go on to detail the services lost because of the injury, as discussed specifically in 43 CFR §11.71(k). Injury and service loss will likely be assessed over both geographical and temporal ranges, and include soils and sediment as habitat for biota (service) and as a pathway of injury to surface water (injury). If this information is not available, this section will discuss how such information will be developed.

Baseline Services Determination: This section will discuss the baseline services determination for soils and sediment, as described generally in 43 CFR §11.72. Geologic resources are specifically addressed in 43 CFR §11.72(j). If information on baseline services is not available, this section will describe the information needed and discuss how it will be developed.

Resource Recoverability Analysis: This section will describe how resource recoverability will be assessed, as required by 43 CFR §11.73. This will likely include an assessment of the mathematical modeling of the Hudson River which is being performed by the EPA as part of the Hudson River RRI/FS.

Task 10 - Quantify Injury to Aquatic Insects

Extent of Injury and Service Reduction: This section will describe the extent of the injury to aquatic insect communities, as detailed in 43 CFR §11.71, and then go on to detail the services lost because of the injury, as discussed specifically in 43 CFR §11.71(l). Much of the information needed to complete this assessment is likely not available; this section will discuss how the necessary information will be developed.

Baseline Services Determination: This section will discuss the baseline services determination for aquatic insect communities, as described generally in 43 CFR §11.72. Biological resources are specifically addressed in 43 CFR §11.72(k). If information on baseline services is not available, this section will describe the information needed and discuss how it will be developed.

Resource Recoverability Analysis: This section will describe how resource recoverability will be assessed, as required by 43 CFR §11.73.

Task 11 - Quantify Injury to Fish

Extent of Injury and Service Reduction: This section will describe the extent of the injury to fish, as detailed in 43 CFR §11.71, and then go on to detail the services lost because of the injury, as discussed specifically in 43 CFR §11.71(l). Injury and service loss will likely be assessed over both geographical and temporal ranges. If this information is not available, this section will discuss how such information will be developed.

Baseline Services Determination: This section will discuss the baseline services determination for soils and sediment, as described generally in 43 CFR §11.72. Biological resources are specifically addressed in 43 CFR §11.72(j). If information on baseline services is not available, this section will describe the information needed and discuss how it will be developed.

Resource Recoverability Analysis: This section will describe how resource recoverability will be assessed, as required by 43 CFR §11.73. This will likely include an assessment of the mathematical modeling of the Hudson River which is being performed by the EPA as part of the Hudson River RRI/FS.

Task 12 - Quantify Injury to Birds

Extent of Injury and Service Reduction: This section will describe the extent of the injury to birds and bird populations, as detailed in 43 CFR §11.71, and then go on to detail the services lost because of the injury, as discussed specifically in 43 CFR §11.71(l). Much of the information needed to complete this assessment is likely not available; this section will discuss how the necessary information will be developed.

Baseline Services Determination: This section will discuss the baseline services determination for birds and bird populations, as described generally in 43 CFR §11.72. Biological resources are specifically addressed in 43 CFR §11.72(j). If information on baseline services is not available, this section will describe the information needed and discuss how it will be developed.

Resource Recoverability Analysis: This section will describe how resource recoverability will be assessed, as required by 43 CFR §11.73.

Task 13 - Quantify Injury to Reptiles & Amphibians

Extent of Injury and Service Reduction: This section will describe the extent of the injury to reptiles and amphibians and their populations, as detailed in 43 CFR §11.71, and then go on to detail the services lost because of the injury, as discussed specifically in 43 CFR §11.71(l). Much of the information needed to complete this assessment is likely not available; this section will discuss how the necessary information will be developed.

Baseline Services Determination: This section will discuss the baseline services determination for reptiles and amphibians, as described generally in 43 CFR §11.72. Biological resources are specifically addressed in 43 CFR §11.72(j). If information on baseline services is not available, this section will describe the information needed and discuss how it will be developed.

Resource Recoverability Analysis: This section will describe how resource recoverability will be assessed, as required by 43 CFR §11.73.

Task 14 - Quantify Injury to Mammals

Extent of Injury and Service Reduction: This section will discuss the extent of injury to mammals and mammal populations, as detailed in 43 CFR §11.71, and then go on to detail the services lost because of the injury, as discussed specifically in 43 CFR §11.71(l). Much of the information needed to complete this assessment is likely not available; this section will discuss how the necessary information will be developed.

Baseline Services Determination: This section will discuss the baseline services determination for mammals and mammal populations, as described generally in 43 CFR §11.72. Biological resources are specifically addressed in 43 CFR §11.72(j). If information on baseline services is not available, this section will describe the information needed and discuss how it will be developed.

Resource Recoverability Analysis: This section will describe how resource recoverability will be assessed, as required by 43 CFR §11.73.

Injury Quantification - Option B

This section will discuss the injury quantification phase of the assessment, as described in 43 CFR §11.70 through 43 CFR §11.73. This will encompass the concept of natural resource services (e.g., provision of habitat, food, and recreational use) as detailed in 43 CFR §11.70 and 43 CFR §11.71 and the geographical and temporal extent to which these resources and services have been reduced from baseline conditions. Resource recoverability will be an additional component of the assessment according to §11.73. The Tasks listed below (Tasks 8 - 14) assume that all resources described above are judged worthy of quantification. This will likely not be the case, as contemplated in 43 CFR §11.71(d).

Specifically, the Trustees will quantify injury to :

- Surface Water
- Soil and Sediment
- Aquatic Invertebrates
- Fish
- Birds
- Reptiles and Amphibians
- Mammals

CHAPTER 4 - RESTORATION AND COMPENSATION DETERMINATION

Introduction

Once the natural resource injury or injuries have been documented and quantified, the Trustees must calculate the dollar amount of compensation and/or identify the restoration projects and their costs necessary to restore those losses for the public. In Chapter 4, the Trustees will discuss the methodologies they may use.

At present, the Trustees anticipate preparing a "Restoration and Compensation Determination Plan" (RCDP) after completion of the injury quantification phase of the assessment. The RCDP will apply the approach outlined in this section of the Assessment Plan to identifying possible alternatives for the restoration, rehabilitation, replacement, or acquisition of the equivalent of the injured resources. The RCDP will also select among these alternatives and set out the cost-estimating and valuation methodologies that will be applied in calculating the actual damages (monetary) figure. The RCDP will be made available for public review separately under the provisions described in 43 CFR §11.81(d)(2).

Baseline

The Trustees must consider baseline in the calculation of compensable values and in the context of restoration. Baseline data will be gathered through specific studies, historical data, and/or collected from control areas as appropriate and outlined in 43 CFR §11.72. With regards to restoration, the Trustees must be prepared to describe as completely as is possible and/or feasible the conditions that they seek to restore. Following the DOI regulations in general: "baseline data should reflect conditions that would have been expected at the assessment area had the discharge of oil or the release(s) of hazardous substances not occurred, taking into account both natural processes and those that are the result of human activities" (43 CFR §11.72(b)(1)).

Restoration

Section 11.82(b)(1)(i) states that "restoration or rehabilitation actions are those actions undertaken to return injured natural resources to their baseline conditions, as measured in terms of the physical, chemical, or biological properties that the injured natural resources would have exhibited or the services that would have been provided by those resources had the release of hazardous substances not occurred." Replacement or acquisition of the equivalent means the substitution for injured resources with resources that provide the same or substantially similar services (11.82(b)(1)(ii)).

Restoration Objectives

The goal of the Trustees is to restore the resources in the assessment area to their baseline conditions. This section will identify the objectives that will be considered.

Potential Restoration Alternatives

The process of selecting a restoration alternative begins with the identification of a reasonable number of potential alternatives, each of which may include one or more actions designed to achieve restoration, rehabilitation, replacement, or acquisition of the equivalent resources (43 CFR §11.82(b)(1)). Restoration and rehabilitation involve actions that return the injured resources to their baseline conditions (43 CFR §11.82(b)(1)(i)). Replacement and acquisition of the equivalent involve substituting for the injured resources other resources that provide the same or substantially similar services (43 CFR §11.82(b)(1)(ii)). Possible alternatives are limited to those actions that restore, rehabilitate, replace, and/or acquire the equivalent of the injured resources and services to no more than their baseline (43 CFR §11.82(b)(1)(iii)).

As discussed in 11.82(c)(1), this list of potential alternatives can range from intensive action on the part of the Trustees to natural recovery, and by 11.82(c)(2) must include an alternative considering natural recovery with minimal management actions, based upon the "no action-Natural Recovery determination as described in 43 CFR §11.73(a)(1). The selection of a restoration alternative will be arrived at by the Trustees after careful consideration of the relevant factors, including those given in 43 CFR §11.82(d). Additionally, this section will address actions required, rationale for selection and the determination of costs as described in 43 CFR §11.83(b).

Compensable Value

Compensable value is the amount of money or increase in the use and services provided by the injured natural resources required to compensate the public for the loss in services provided by the injured resources between the time of the discharge or release and the time the resources and the services those resources provided are fully restored to their baseline conditions (43 CFR §11.83(c)). Compensable values will include but not be limited to recreational losses, ecological/habitat losses, added costs of public development activities, and non-use losses. These losses will be calculated using the methodologies described in 11.83(c)(2).

Implementation of the Damage Determination

As required by the DOI regulations, the Trustees will take into account the following factors during the process of calculating natural resource damages.

Double Counting

Double counting is when a benefit or a cost is counted more than once in the damage assessment (43 CFR §11.84(c)(1)). Trustees are instructed by the regulations to avoid double counting and will take appropriate steps to identify and account for any double counting that may result from the application damage methodologies. In addition, the Trustees will factor the effects or anticipated effects of response actions into the analysis (43 CFR §11.84(c)(2)).

Uncertainty

As described in 43 CFR §11.84(d), the assessment shall explicitly incorporate and report on uncertainty in the various assumptions and variables used to calculate damages, and the effect that these factors have on the resultant damage estimate. Such uncertainty analysis shall include, where appropriate, the derivation and application of probability estimates for the important assumptions and factors used to determine damages.

Discounting

Where possible, the Trustees will estimate damages in the form of an expected present value amount and follow the guidance for selection of a discount rate as given in 43 CFR §11.84(e).

Substitutability

As part of the calculation of compensable values, the Trustees will incorporate estimates of the public's ability to substitute resource services or uses for those of the injured resources. As directed in 43 CFR §11.84(f), this substitutability will be estimated only if the potential benefits from an increase in accuracy are greater than the potential costs.

Scope of the Analysis

Trustees are required to consider the scope of the analysis before estimating compensable value. Given the historical significance of the Hudson River and the large scale and interstate aspects of the services provided, such as transportation and fish habitat, it is anticipated that the scope of the analysis will extend beyond the state level (43 CFR §11.84(h)).

Steering Committee Meeting
October 19 1998

Judith Schmidt-Dean
Chair - Citizen's Liaison Group

RE: TAG GRANT AWARDED TO SCENIC HUDSON IN 1997

As it appears from the public's point of view that Scenic Hudson has done nothing with this TAG Grant, the Citizen Liaison Group requests the following from EPA:

- The date, or dates, and exact amount, or amounts of monies given to Scenic Hudson.
- Copies of instructions given to Scenic Hudson by EPA as concerns reporting, ie., informational, activities, research and financial. Also, copies of any actual reporting done by Scenic Hudson.
- EPA Internal Audit Directives as concerns the financial reporting due from TAG Grant recipients. What kind of controls are in place to protect taxpayer monies?

We also request that the EPA Internal Audit Division be given a copy of this statement. The Citizen Liaison Group has grave concerns that these monies given Scenic Hudson have been ill spent. We request that an audit be conducted as to the original letting of this grant and any activities since by both the EPA Hudson River Reassessment Group and Scenic Hudson.