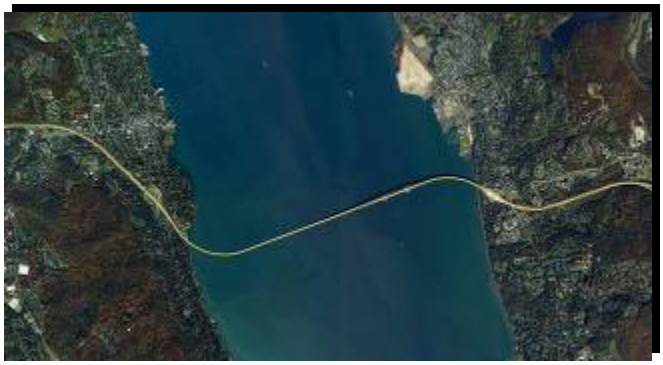
TAPPAN ZEE BRIDGE/I-287
ENVIRONMENTAL REVIEW

New York State Department of Transportation
Metropolitan Transportation Authority Metro-North Railroad
New York State Thruway Authority

Meeting Minutes

Stakeholders' Advisory Working Groups (SAWGs)
Environmental SAWG Meeting #5

Tappan Zee Bridge/I-287 Corridor
Environmental Review



November 29, 2007

Meeting Title:	Stakeholders' Advisory Working Groups (SAWGs) Environmental SAWG Meeting #5
Meeting Purpose:	Exchange of information
Location Date:	Holiday Inn, Suffern, New York November 29, 2007

Agenda:

Attendees:

Name

Hon. Tom Abinanti
Sherry Alperstein
Rick Beckerman
Renee Cohen
Richard Fagan
Melanie Golden
Melissa Guardaro
Klaus Jacob
Roberta Lane
Hon. Bruce Levine
John Lipscomb
Richard May
Josh Moreinis
Gregory Price
Marysue Robbins
Gabby Rosenfeld
Irene Ross
Stephen Safran
Joan Schroeder
Marion Shaw
Leslie Snyder
Andrew Stewart
Kathleen Sullivan

Members of the agencies and consultant team.

Agenda Item 1
Introduction and welcome to Stakeholders' Advisory Working Group by Paul Plotczyk

Introductory Presentation

Paul Plotczyk (SAWG facilitator) briefly described the purpose of the SAWG meeting, and introduced Bob Lavarie, the NYSDOT Environmental Lead, who provided a brief summary of the purpose for this SAWG. Bob then introduced James Coyle of Earth Tech (environmental consultant) to begin presenting the technical portion of the agenda. Mr. Coyle presented information regarding the transit mode analysis, which is a program to use various criteria to help select one or more transit modes to include in the project alternatives. Included are transportation criteria such as transit ridership and roadway congestion, environmental criteria such as consistency with land use plans and impacts to wetlands, and cost criteria such as capital and operating costs.

Mr. Coyle then introduced Mark Moese, also of Earth Tech, to describe the ecological portion of the Hudson River sampling program. Portions of the Hudson River sampling program related to the geophysical aspects of the study area, including bathymetry, sediment type and chemistry, and hydrodynamics, had been described in detail at the previous SAWG meeting.

Based on discussions with NY State Department of Environmental Conservation (NYSDEC), it was determined that ecological conditions throughout the length of the larger Hudson River have either largely been established or are being evaluated by programs conducted under the auspices of NYSDEC, National Oceanic and Atmospheric Administration (NOAA), and utility companies, among others. The goal of the Tappan Zee program, according to these agencies, should be to determine if there is a unique habitat in the vicinity of the existing bridge that could be impacted by potential construction activities. In addition, the program should identify habitat conditions along potential new bridge alignments.

Therefore, as discussed at the previous SAWG meeting, the overall sampling program has been focused on establishing river conditions extant along the current bridge alignment and also along potential alignments of a new bridge. River conditions relevant to the rehabilitation alternative are addressed by sampling in the vicinity of the existing bridge. Thus, the river sampling program developed for the Tappan Zee study principally involves sampling and analyses along the existing and potential new bridge alignments, and in a limited number of outlying reference areas distant from the bridge. The data will be used directly and in conjunction with various analytical tools to estimate the short- and long-term impacts of the project.

Agenda Item 2a
Technical Presentation – Transit Mode Analysis
Introduction of Jim Coyle to the Stakeholders' Advisory Working Group by Bob Lavarie

Agenda Item 2b
Technical Presentation –River Ecology Study
Introduction of Mark Moese to the Stakeholders' Advisory Working Group by Jim Coyle

Agenda Item 3
Questions and Comments

Transit Mode Analysis Presentation

The meeting began with Jim Coyle of Earth Tech (environmental consultant to the Tappan Zee Bridge/I-287 Corridor Project) presenting information regarding the transit mode analysis study that is being prepared for the project. The presentation addressed the reason for doing a transit mode analysis, the alternatives/options to be studied, and the various evaluation criteria that will be used in the analysis. The criteria being used to evaluate modal choice include transportation evaluation criteria intended to focus on the travel behavior of each alternative. The transportation criteria include ridership, congestion, roadway capacity and travel times. In addition, environmental criteria have been developed, including criteria related to consistency with land use plans, the need to acquire land or relocate existing uses, wetlands, Hudson River habitats, parklands, and cultural resources. Finally, a set of cost criteria are being considered as part of the transit mode evaluation program, including capital costs, annual operating costs, fare revenues, cost per passenger and per passenger mile, and time savings benefits.

Question: Will cost data be prepared for each alternative?

Response: Yes.

Question: Will rehabilitation require disturbance to the river bottom?

Response: Yes, rehabilitating would require installation of new piers, which would disturb the bottom.

Technical Presentation – River Ecology Study

Introduction

The presentation began with a series of slides describing the program objectives, data needs, the overall layout of the program, and the various regulatory agencies involved in developing the program or issuing permits for the proposed work.

Benthic Community Surveys

The process by which benthic samples are collected was briefly described. A sampling device is lowered from a vessel and collects benthic sediments that are brought on board the vessel and washed to remove sediment. The remaining material (e.g., shells, organisms, etc.) is placed in jars, preserved with rubbing alcohol, and stained with a biologic stain. The samples are transported to a separate laboratory for identification.

Question: Has there been a decrease in the number of fish species in the river over the last 20 or so years?

Response: The project team hasn't looked into overall species richness over that time frame. The Riverkeeper representative indicated that his organization's data indicates there has been a decline in species richness.

Pier Biological Habitat Evaluation

A brief description of the process used by the diver to inspect the piers was given, and then a section of video from the pier inspection was shown.

Question: Does the video show that the bridge piers are a significant habitat?

Response: The question of whether the piers are a significant habitat has not yet been addressed. However, it was noted that there is not much similar habitat (i.e., hard substrate) in the vicinity of the bridge. Similar habitat may be found on piers and other vertical structures near-shore, but generally the substrate offered by the bridge piers is not found elsewhere mid-river.

Question: Were live oysters found?

Response: Yes, and it was considered surprising to some degree.

Comments: -Good to know something is living in the river.
-Lamont has done study and documented oyster reefs north of the bridge.

Submerged Aquatic Vegetation (SAV) Surveys

The SAV investigation was described. The study included the shoreline approximately one mile north and south of the bridge. Sampling also occurred around the bridge to the 6-foot contour line, sampling occurred every 50 to 100 feet. Two areas of SAV were identified in the Nyack Marina and the Tarrytown Marina. Both of these areas were small (approximately 10 feet by 20 feet).

Fish Surveys

The fish survey program, which includes both acoustic measurement and netting, was described. The acoustic survey is accomplished by a boat that has a downward and side-looking transducer, and is run at six transects near the bridge. Review of the data shows that the fish are mainly concentrated in the deeper part of the river during the colder months, and move out of the river and into the shallows in the warmer months. Tables summarizing the gill-netting program were shown, depicting total quantities of fish caught as well as a summary of richness over time. Low yields for the fish trapping program were noted.

Question: Where are the nets being set, at the river bottom?

Response: The nets are placed on the river bottom. The project team is confident that the nets are not "laying down".

Question: Is the number of fish species decreasing?

Response: Species richness appears to be increasing.

Comment: The Riverkeeper representative indicated that the number was decreasing, and that NYSDEC was considering closure of the shad and herring fisheries, but that sturgeon may be rebounding. Further, the problem with using historic fish data lies in deciding where to set the baseline for comparisons. The Hudson River is a world-class river in terms of species abundance, but populations are declining and the question is not about the bridge, but about power plants, fish harvesting and loss of habitat.

Avian and Mammal Surveys

The avian and mammal survey programs were described briefly. A map identifying the survey locations around the bridge and near the reference location was shown. The avian and mammal study was completed in August, 2007, and occurred over four seasons. Over 90 avian species were identified in 22,000 avian sightings, and included both NYS Threatened Species and Species of Concern. The mammal survey revealed that mammals common to an urban environment (e.g., squirrels, rats, etc.) were often sighted in the project area. White-tailed deer was the largest mammal species sighted, and were found along the Hudson River Line and in the reference areas.

Question: Why were organic data not presented?

Response: The organic data is undergoing quality review and will be available for presentation at a future SAWG.

Question: What are the potential sources of mercury in the sediments?

Response: While the Tappan Zee Bridge sampling program is not designed to identify contaminant sources, the former Marathon Battery site, Croton Landfill, and General Motors sites were mentioned as possible point sources. One participant suggested that air emissions from coal burning may explain background levels of mercury found throughout the watershed. It was noted that the Environmental Protection Agency (USEPA) has now implemented a "mercury rule" for new coal-burning power plants.

Question: Could geotechnical data obtained from the sediment cores assist in the evaluation of the bridge foundations?

Response: Geotechnical data was collected as part of the geophysical program primarily to aid in understanding and refining the results of chemical analyses. This data will appear in the Environmental Impact Statement. A separate geotechnical investigation, designed specifically to gather data for design of any potential replacement bridge foundations, is not included in the current presentation.

General Questions

Question: When will the fish surveys end?
Response: February 2008.

Question: In the last 20 years we have not seen the river freezing over – is this global warming?

Response:	There are many factors that play into the river freezing over, and it is not possible to make a conclusive determination on this issue. Any bridge would have to be designed to account for river freezing.
Question:	Was there a difference in sighted bird species between the bridge and the reference areas to the north?
Response:	The only T&E species utilizing the bridge was the Peregrine Falcon. Other T&E species actively utilized the reference areas. Also, the bird species were separated with respect to the different habitats around the bridge and in the reference area. In the reference area, there are wooded areas and many of the birds sighted were those species common to wooded habitats. Around the bridge, there is mostly an urban environment, and species observed there were those common to an urban environment. Also around the bridge, many avian sightings were those common to a marine environment (e.g., gulls and cormorants).
Question:	Has the water temperature changed over the years since the bridge opened?
Response:	The Riverkeeper representative noted that the change in river temperature has been very small, and is consistent with changes in ocean temperature.
Comment:	Earth Tech added that water temperature does affect fish, and that this year's shad run was delayed due to coldness of the water.
Response:	The Riverkeeper representative responded that water temperature is an issue for spawning runs, and that the window of compatible temperatures is decreasing.
Question:	With respect to marine borers – what did you see?
Response:	That was not a focus of analysts' study.
Comment:	The Riverkeeper representative indicated that he was surprised that environmental consultants were not asked to look at marine borers. Marine borers were originally given as a reason for replacing the bridge.
Response:	The marine borer question is more of a structural engineering issue. NYSTA data is available showing winnowing (or "hourglassing") of the bridge piers is occurring, although this can be attributed to several factors.
Question:	Have you collected water quality samples?
Response:	No. However, it was noted that water quality has improved due to various regulatory measures (e.g., NPDES, secondary and tertiary sewage treatment, etc.)
Question:	Does runoff from the bridge impact water quality?
Response:	There is some impact at the immediate vicinity of the bridge, and in fact the presentation noted that fish survey netting was impacted by metal debris in the vicinity of the bridge.

Potential treatment options to reduce these impacts under rehabilitation or new bridge alternatives will be part of future discussions.

Comment — John Lipscomb (Riverkeeper) noted the bridge is not a big part of the overall problem of spills impacting the river, as the river's drainage basin covers over 14,000 square miles. The bulk of impacting materials comes from those upland areas.

Question: — Will you share your data with the NYSDEC in order to contribute to the Hudson River database?

Response: — Yes. In fact, Earth Tech had a meeting with NYSDEC a few weeks ago to update them on the program.