70263

Memorandum

TO: John Connolly

DATE: July 14, 1999

PROJECT: Hudson River

FROM: Mike Erickson

COPIES: Doug Tomchuk, Al DiBernardo, Vic Bierman

SUBJECT: Request for GE sediment transport model results

John, per our discussion regarding the possible use of the GE sediment transport model results to describe solids deposition and resuspension in the EPA PCB fate and transport model, LTI is providing QEA with necessary information to provide the results in a useable form. LTI plans to evaluate these results and to continue to discuss with EPA, the possibility of incorporating these into the EPA model. This memo accompanies, via email, two zipped files containing GIS coverages of the EPA model's spatial segmentation grid.

We request that you overlay the EPA model segmentation grid on the GE sediment transport model grid and space-time collapse the results to provide us daily-averaged time-series of settling and resuspension velocities and fluxes for each sediment segment in the HUDTOX model for the 1977-1998 QEA simulation period. The contribution of each sediment transport model grid element to the EPA model segments should be area-weighted by the area of the element included in each segment.

In addition, please provide us your flow and solids loading time series inputs to the model for the 1977-1998 simulation period so that we can evaluate these against our estimates.

We are also requesting that you provide us your hydrodynamic model results throughout the model domain from the coupled hydrodynamic-sediment transport calculation for the 1977-1998 simulation period.

GIS Coverage of Sediment Segmentation

The GIS coverage of our sediment segmentation grid contains multiple cohesive and noncohesive sediment polygons within individual water column segments. The various cohesive and noncohesive polygon areas are combined and represented as one cohesive segment and one noncohesive segment beneath each water column segment. Each polygon in the sediment segmentation coverage is assigned a sediment segment number. As a result, the combination of polygon number and sediment segment number is not unique in the coverage.

In specifying cohesive and noncohesive segments in the Thompson Island Pool, some small areas were neglected to simplify the segmentation. If an individual water column segment in the TIP contained less than 15% by area of cohesive sediment or noncohesive sediment, it was considered to be all noncohesive or cohesive, respectively. The resulting segmentation represents 90% of the cohesive area identified by the USEPA Phase2 Side Scan Sonar Study.

QEA-LTI Data Transfer

The requested data files will likely be too large to permit efficient email data transfer. Please post the data files via ftp to LTI's ftp site: ftp.limno.com. Login as anonymous and use your email address as a password. Please send me email notification when the data are posted and list the posted file names in the email.