June 17, 2013
Environmental Stewardship Concepts, LLC

Hudson River Phase II dredging monitoring summary January 1 – June 15, 2013:

- Overview
  - Phase 2, Year 3 dredging operations began on April 29, 2013. For the purposes of this report, we also noted off-season monitoring from the period of January 1 to April 28, 2013.
  - Dredging is scheduled to occur in Certification Units (CUs) 49 through 60 and 67-78
    - CUs 49 -60 are around/below Griffin Island down to the Thompson Island Dam
    - CUs 67-77 are between Fort Miller Dam and Northumberland Dam
    - CU 78 is just below Northumberland Dam and above Lock 5
  - Approximately 125,000 yds^3 has been dredged in Phase 2 Year 3 as of June 8, 2013 (source: http://www.hudsondredgingdata.com/ProductivityHistory)

  - There were 13 dates with air quality monitoring exceedances during May and June of the dredging season, located at the Processing Facility as well as at River Locations G and K as dredging activities ramped up:
    - Processing Facility – 7 exceedances
    - River Location G – 1 exceedances
    - River Location K – 5 exceedances

- There was one PCB water quality exceedances during the 72 dates with recorded levels from January 1st to June 15, 2013.
  - Stillwater-1 exceedance of 562 parts per trillion (ppt)
    - This measurement occurred on June 11th during a major storm event accompanied by flash flooding risks; additional monitoring during that week was intermittent due to related high river flows.
  - As of 5/13/13, daily monitoring ceased at the Schuylerville Lock 5 site because of its proximity to current dredging activities.
    - Daily monitoring now takes place at the Stillwater far-field monitoring site, as it meets the requisite one mile+ minimum from active dredging.
  - Both far-field water monitoring locations consistently show low to moderate PCB levels during most samples; however, data suggest that PCB levels may be steadily rising as dredging proceeds.
    - Both sites began to exhibit a slight rise in PCB levels as of 5/13/2013, as pre-dredge activities increased and additional dredge locations were brought on-line for the dredging season.
      - *While all but one PCB level remains below the performance standard, we recommend close attention to this potential trend over the coming months.*

- The PCB levels are presented in the attached spreadsheet, with the data presented as concentrations in ppt, and plotted in graphical format. We note that there are several landfills that could be PCB sources, and the Housic River may also be a source of PCBs (attached map).
- Since this dredging season began, PCB levels are consistently highest at the Stillwater site, with the highest non-exceedance level noted at 495 ppt (also during a high storm event).
  - PCB levels are slightly reduced at the more distant Waterford site.
- The two highest PCB levels were both related to storm events; although, not all higher levels (above 300 ppt, yet below the 500 ppt standard) were weather related (source: www.hpc.ncep.noaa.gov/noaa/, archives for National Weather Service/Weather Prediction Center).

➢ Monitoring was done weekly during off season and then resumed on a daily or weekly basis, as required by the specific site/location.
  - Most monitoring was done as a 24 hour composite measurement, with occasional grab samples also taken.

➢ The RAWP (Remedial Assessment Work Plan) for 2013 requires that water quality be measured at near-field (300 meters downstream of dredging) and far-field (>1 mile downstream of dredging) sites for PCB levels, Total Suspended Solids (TSS), pH levels, Dissolved Oxygen, temperature, and conductivity.
  - The EPA's Water quality page only reports far-field PCB level data.
  - A request has been made for detailed water quality data for further review.

➢ Exceedance Level: "far-field PCB concentration has a confirmed exceedance of 500 ppt" (source http://www.hudsondredgingdata.com/MonitoringWater)

❖ No odor, noise, lighting, or navigation monitoring exceedances this dredging season (Quality of Life Performance Standards).

Reference

http://www.hudsondredgingdata.com/

Map

https://maps.google.com/maps/ms?msid=218345549794281703125.0004df84a9b94981cbde6&msa=0&ll=43.250704,-73.578529&spn=0.150038,0.238609