

Project: RSM Estuarine Sediment Loads and Budget Project.

Award number: W912DR-08-P-0396

October, 2008

Multiple data sets, including sediment concentrations, river flow, bathymetry, cross-sectional areas, etc. for York, Patuxent, and Potomac Rivers have been collected, processed, and/or formatted.

November, 2008

- Troubleshoot and improve programs to extract hydrodynamic model data. Quality control of extracted data.
- Collecting references for sediment budgets.

December, 2008

Work for December was a continuation of topics from November, including:

- Troubleshoot and improve programs to extract hydrodynamic model data. Quality control of extracted data.
- Collecting references, data sources, and techniques for sediment budget components, including a meeting on shoreline erosion complexities.

January, 2009

Continuing work on sediment loads.

Downloading and processing data for sediment budgets, including LIDAR data for bank heights and bathymetry data for accumulation in the estuaries.

February, 2009

Continuing to troubleshoot hydrodynamic model output with colleagues at VIMS and the Corps facility in Vicksburg, MS.

Analyzing bathymetric data for accumulation in the estuaries.

March, 2009

Finished troubleshooting hydrodynamic model output with colleagues at VIMS and the Corps facility in Vicksburg, MS. Waiting for verification.

In the process of formatting additional TSS sampling data to calculate estuarine sediment loads.

Calculated preliminary results for sediment accumulation in the York and Patuxent estuaries.

April, 2009

Verified hydrodynamic model output and finished comparing and troubleshooting hydrodynamic model results vs. original tidal prediction program results.

Formatted all TSS sampling data to calculate estuarine sediment loads. Processing or completed final datasets (depending upon the station) such as river cross-sectional areas, watershed areas, and river flow. Started to calculate estuarine sediment processes (the last step before calculating sediment loads).

Continuing to work on sediment accumulation in the York and Patuxent estuaries.

May, 2009[Sediment Loads and Budgets for the York and Patuxent Rivers \(W912DR-08-P-0396\)](#)

- Completed graphs of sediment transport processes.
- Completed calculations for sediment transport and sediment load values.
- Need to verify results.

[Sediment Loads and Estuarine Accumulation in the Potomac River \(W912DR-09-P-0202\)](#)

- Formatted all TSS sampling data to calculate estuarine sediment loads. Completed processing of final datasets such as velocity output, river cross-sectional areas, watershed areas, and river flow.
- Worked on graphs of sediment transport processes.

June, 2009[Sediment Loads and Budgets for the York and Patuxent Rivers \(W912DR-08-P-0396\)](#)

Worked on sediment accumulation in the estuaries. Conferred with colleagues at NOAA regarding bathymetric soundings data.

Obtained additional dataset for bank erosion in Maryland and conferred with colleagues regarding bank erosion in Virginia.

[Sediment Loads and Estuarine Accumulation in the Potomac River \(W912DR-09-P-0202\)](#)

Completed graphs of sediment transport processes.
Completed calculations for sediment transport and sediment load values.
Need to verify results.

July, 2009[Sediment Loads and Budgets for the York and Patuxent Rivers \(W912DR-08-P-0396\)](#)

Worked on bank erosion values.

Discussed bank erosion theory and datasets with colleagues.

[Sediment Loads and Estuarine Accumulation in the Potomac River \(W912DR-09-P-0202\)](#)

Worked on sediment accumulation in estuary.

Worked on bank erosion values.

August, 2009

[Sediment Loads and Budgets for the York and Patuxent Rivers \(W912DR-08-P-0396\)](#)

Calculated sediment budgets.

Analyzing results.

Writing presentation and report.

[Sediment Loads and Estuarine Accumulation in the Potomac River \(W912DR-09-P-0202\)](#)

Analyzing results.

Writing presentation and report.

September, 2009

This is the final progress report for these 2 projects.

[Sediment Loads and Budgets for the York and Patuxent Rivers \(W912DR-08-P-0396\)](#)

Calculated biogenic production loads.

Writing final contract report including text, graphics, maps, and tables.

[Sediment Loads and Estuarine Accumulation in the Potomac River \(W912DR-09-P-0202\)](#)

Writing final contract report including text, graphics, maps, and tables.

Final report submitted?