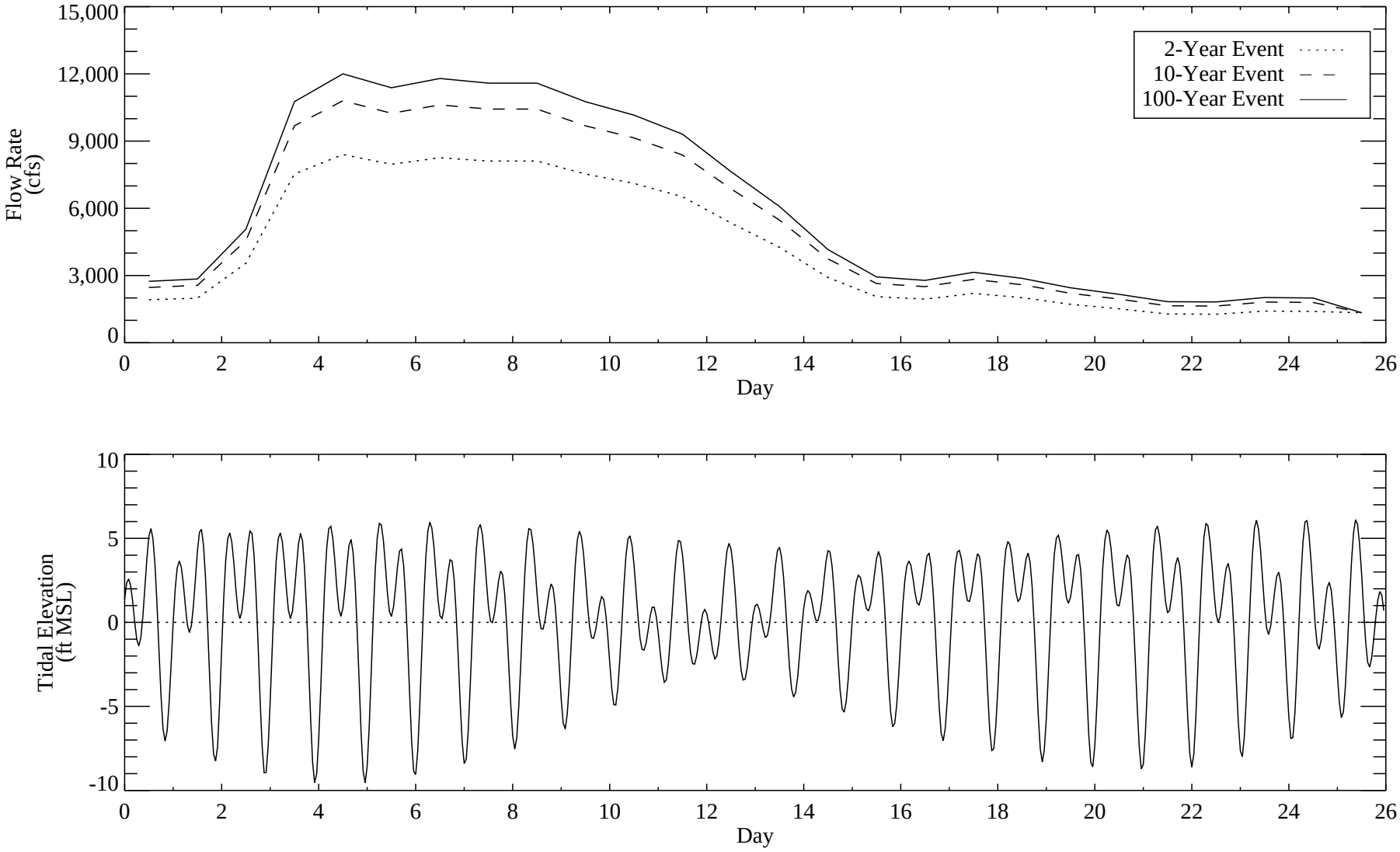
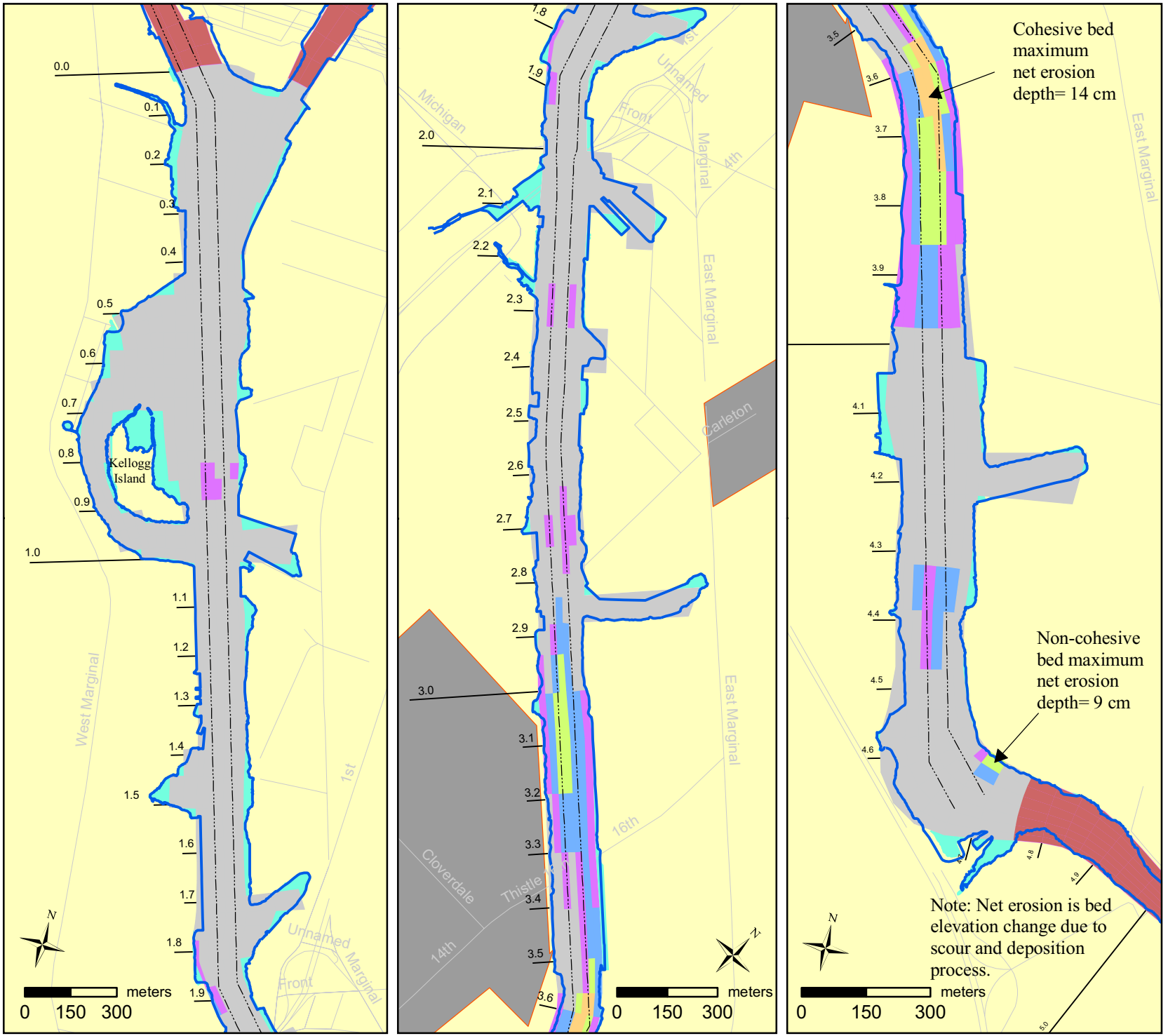
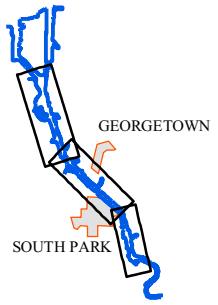


Figure 3-1. Time variable river flow rate and tidal elevation used as boundary conditions for high-flow event simulations.

AC - D:\RETldw\Anaylsis\Model_Output\plot_highflow_events_07032007.pro
Tue Jul 03 13:34:56 2007



LOCATOR MAP



LEGEND

Net erosion depth (cm)

- > 10
- 6 - 10
- 2 - 6
- 0 - 2
- Net deposition
- Navigation channel
- Shore line
- River miles
- Roads
- Neighborhoods
- Outside model domain
- Hard bottom area

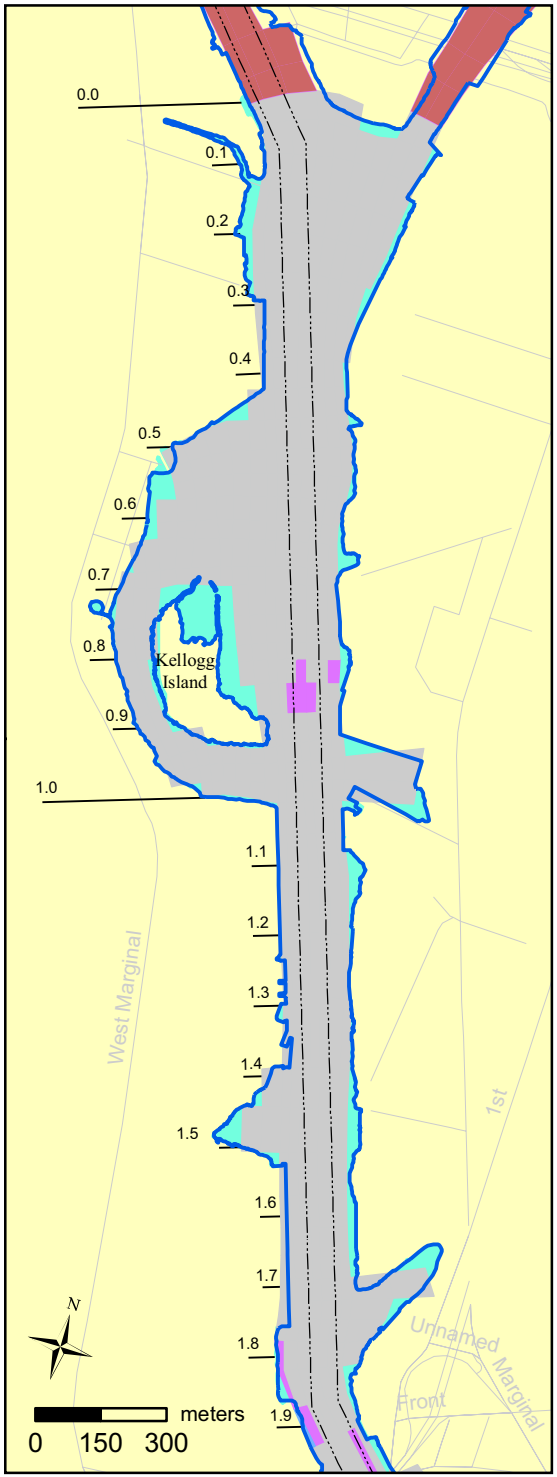
LOWER DUWAMISH WATERWAY STUDY AREA SEATTLE, WA

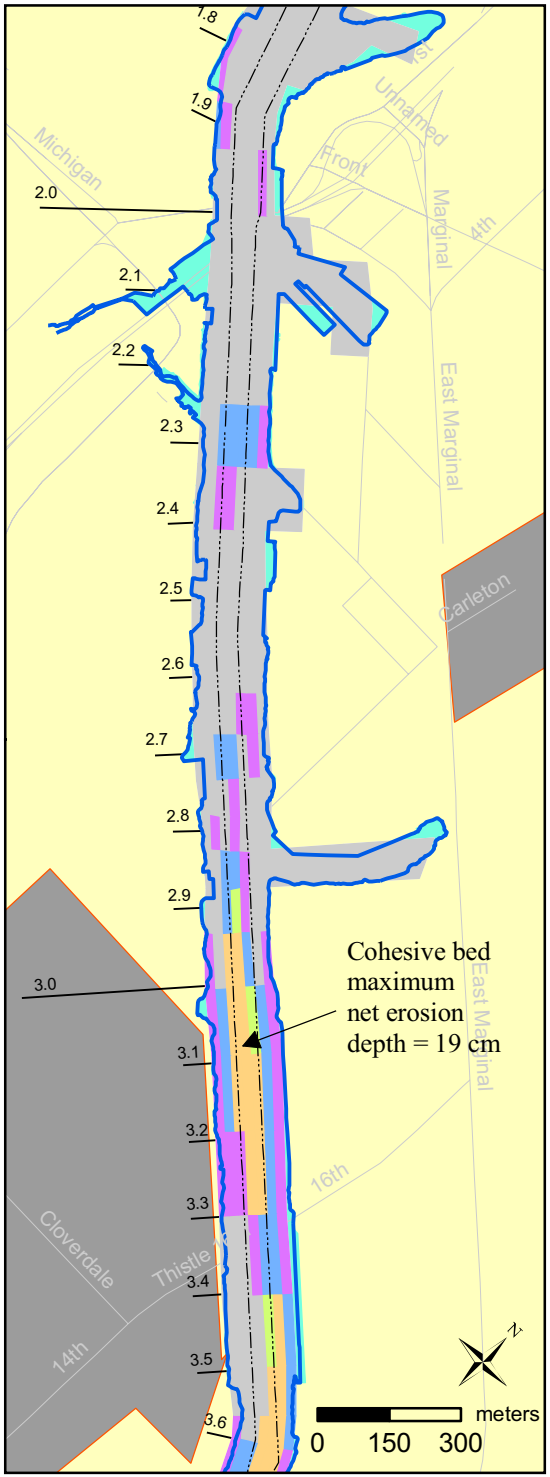
Figure 3-2.
Spatial distribution of predicted net erosion during 2-year high-flow event.

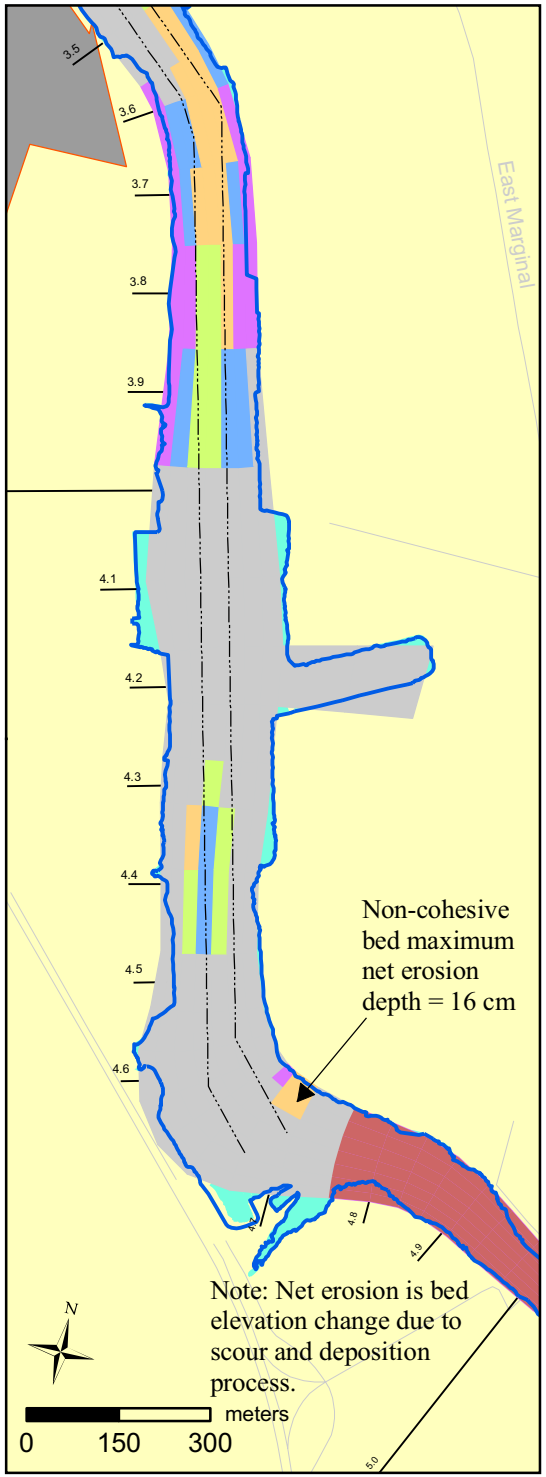
June 2008

QEA
Quantitative Environmental Analysis, LLC

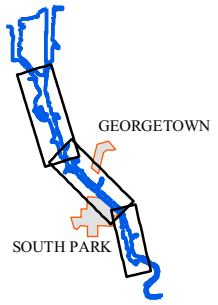
FC/AC - \\gis_station\d_drive\Private\RETldw\GIS_plot\sensitivity_plot_04102008.mxd







LOCATOR MAP



LEGEND

Net erosion depth (cm)

- > 10
- 6 - 10
- 2 - 6
- 0 - 2
- Net deposition
- Navigation channel
- Shore line
- River miles
- Roads
- Neighborhoods
- Outside model domain
- Hard bottom area

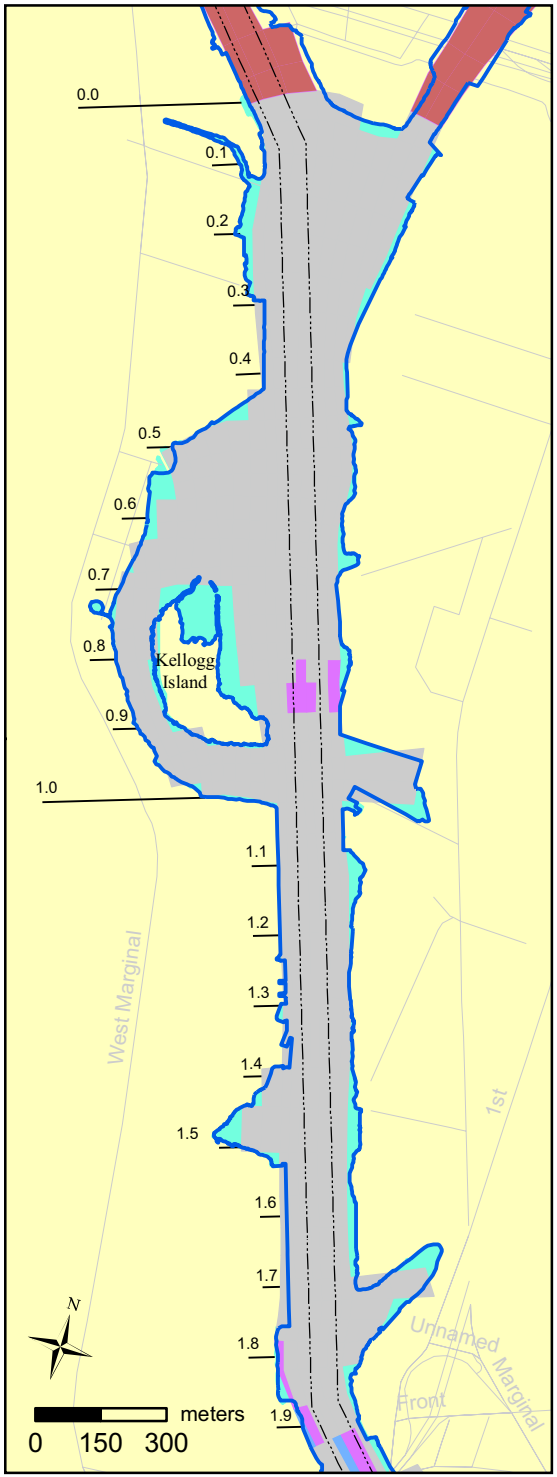
LOWER DUWAMISH WATERWAY STUDY AREA SEATTLE, WA

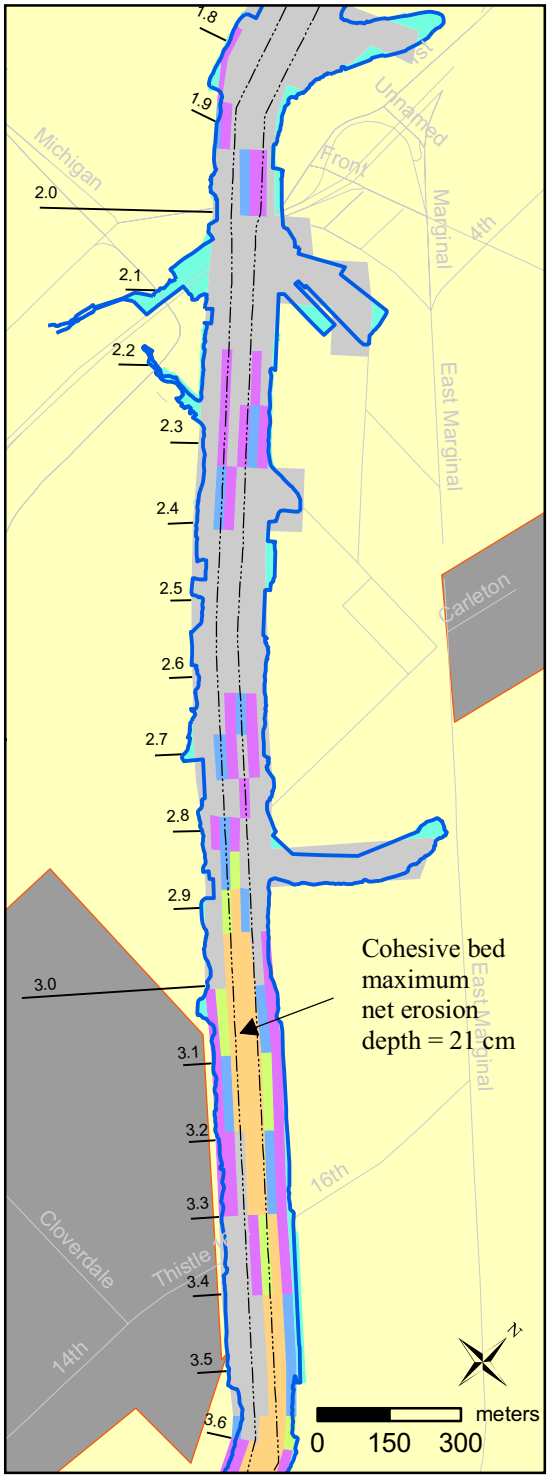
Figure 3-3.
Spatial distribution of predicted net erosion during 10-year high-flow event.

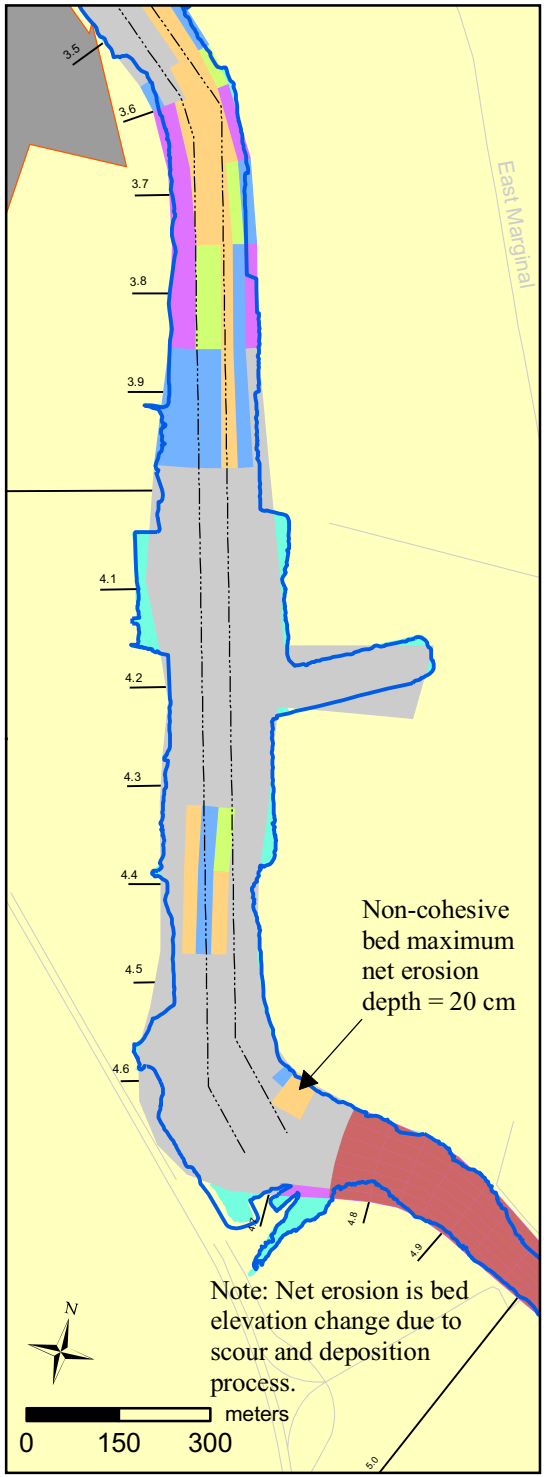
June 2008

QEA
Quantitative Environmental Analysis, LLC

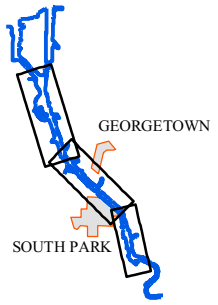
FC/AC - \\gis_station\d_drive\Private\RETldw\GIS_plot\sensitivity_plot_04102008.mxd







LOCATOR MAP



LEGEND

Net erosion depth (cm)

- > 10
- 6 - 10
- 2 - 6
- 0 - 2
- Net deposition
- Navigation channel
- Shore line
- River miles
- Roads
- Neighborhoods
- Outside model domain
- Hard bottom area

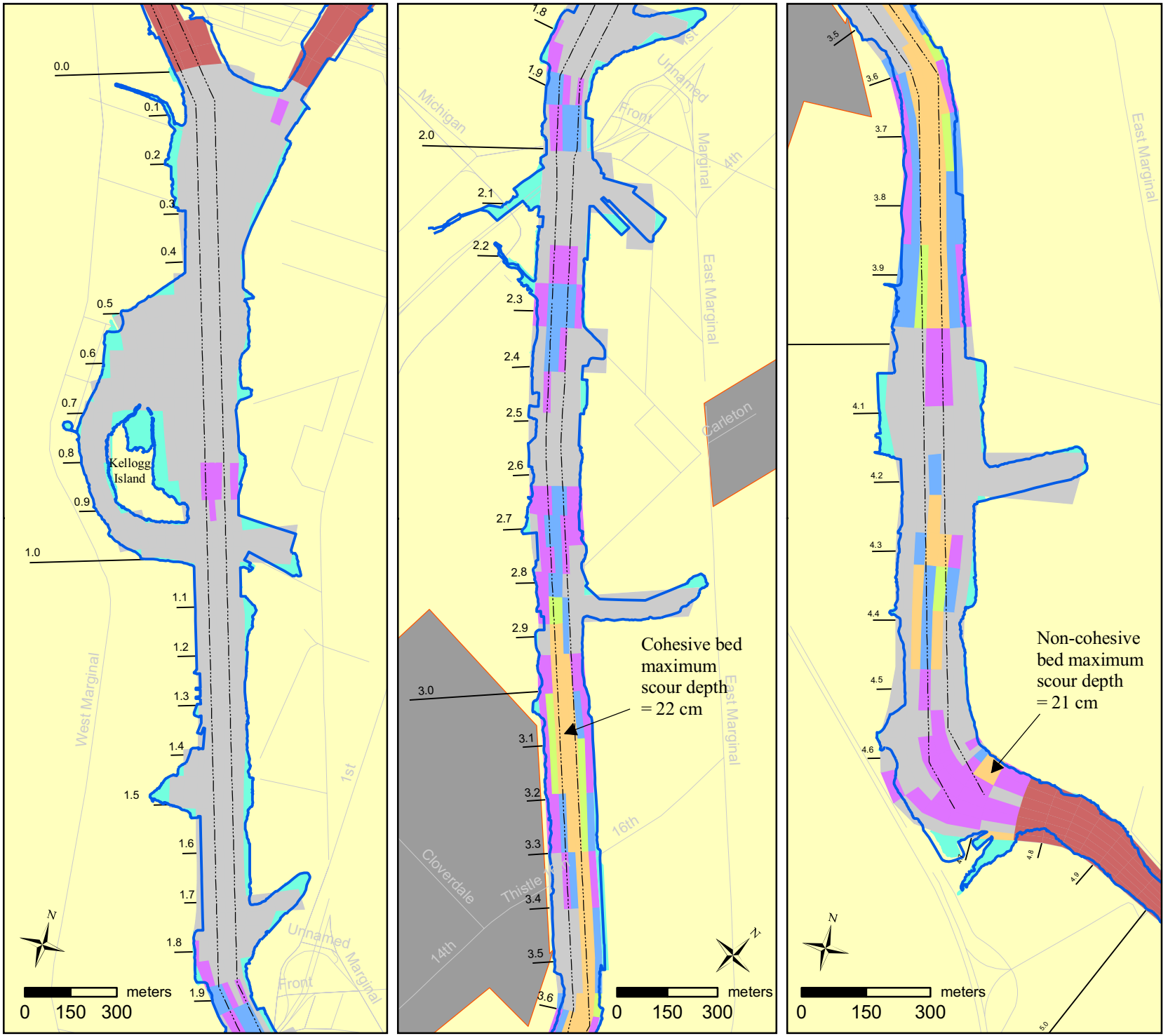
LOWER DUWAMISH WATERWAY STUDY AREA SEATTLE, WA

Figure 3-4.
Spatial distribution of predicted net erosion during 100-year high-flow event.

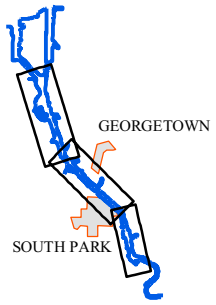
June 2008

QEA
Quantitative Environmental Analysis, LLC

FC/AC - \\gis_station\d_drive\Private\RETldw\GIS_plot\sensitivity_plot_04102008.mxd



LOCATOR MAP



LEGEND

Maximum scour depth (cm)

- > 10
- 6 - 10
- 2 - 6
- 0 - 2
- 0
- Navigation channel
- Shore line
- River mile
- Roads
- Neighborhoods
- Outside model domain
- Hard bottom area

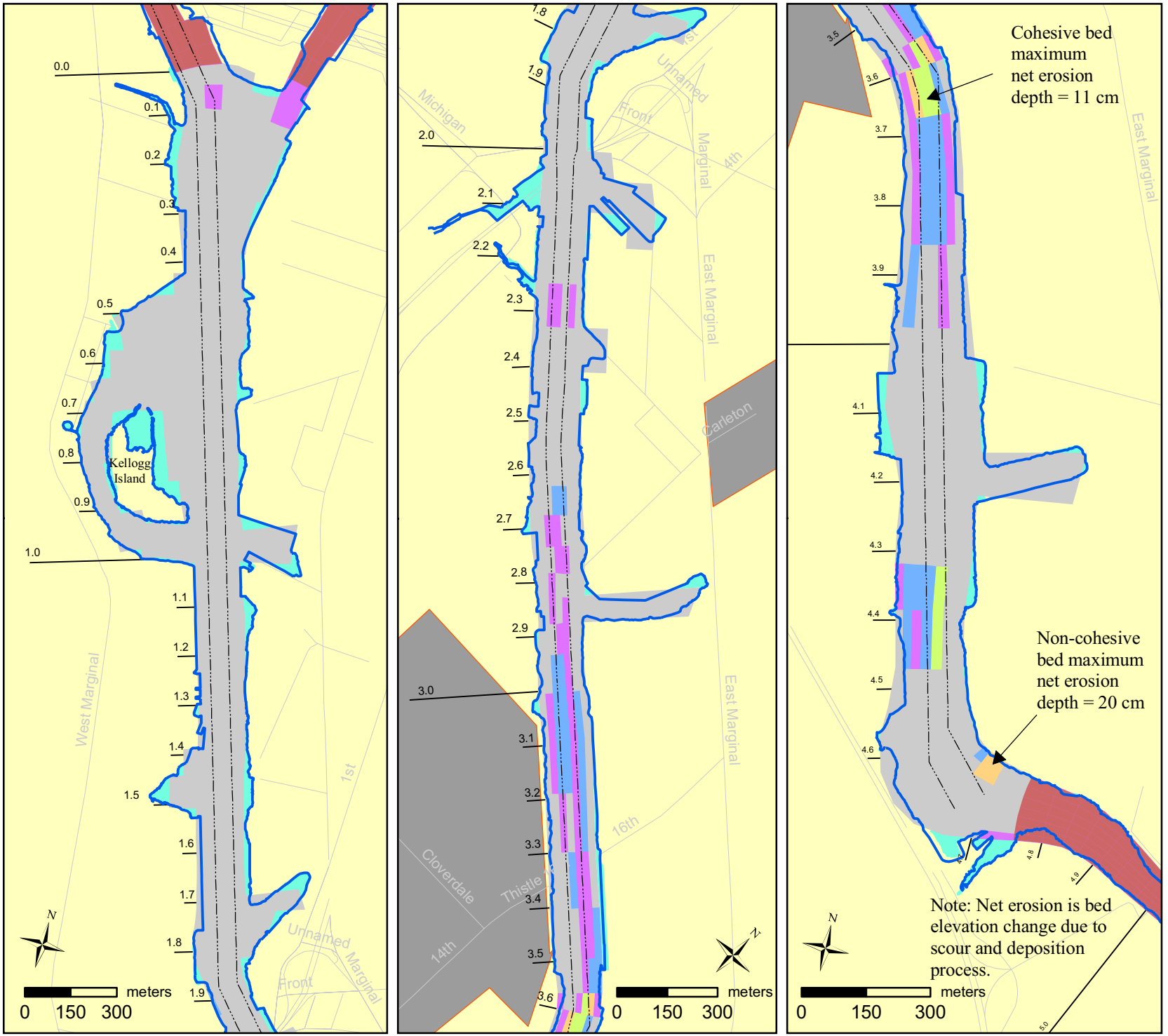
LOWER DUWAMISH WATERWAY STUDY AREA SEATTLE, WA

Figure 3-5.
Spatial distribution of predicted maximum bed scour depth during 100-year high-flow event.

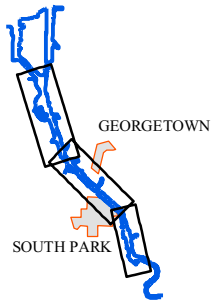
June 2008

QEA
Quantitative Environmental Analysis, LLC

FC/AC - \\gis_station\d_drive\Private\RETldw\GIS_plot\sensitivity_plot_04102008.mxd



LOCATOR MAP



LEGEND

Net erosion depth (cm)

- > 10
- 6 - 10
- 2 - 6
- 0 - 2
- Net deposition
- Navigation channel
- Shore line
- River miles
- Roads
- Neighborhoods
- Outside model domain
- Hard bottom area

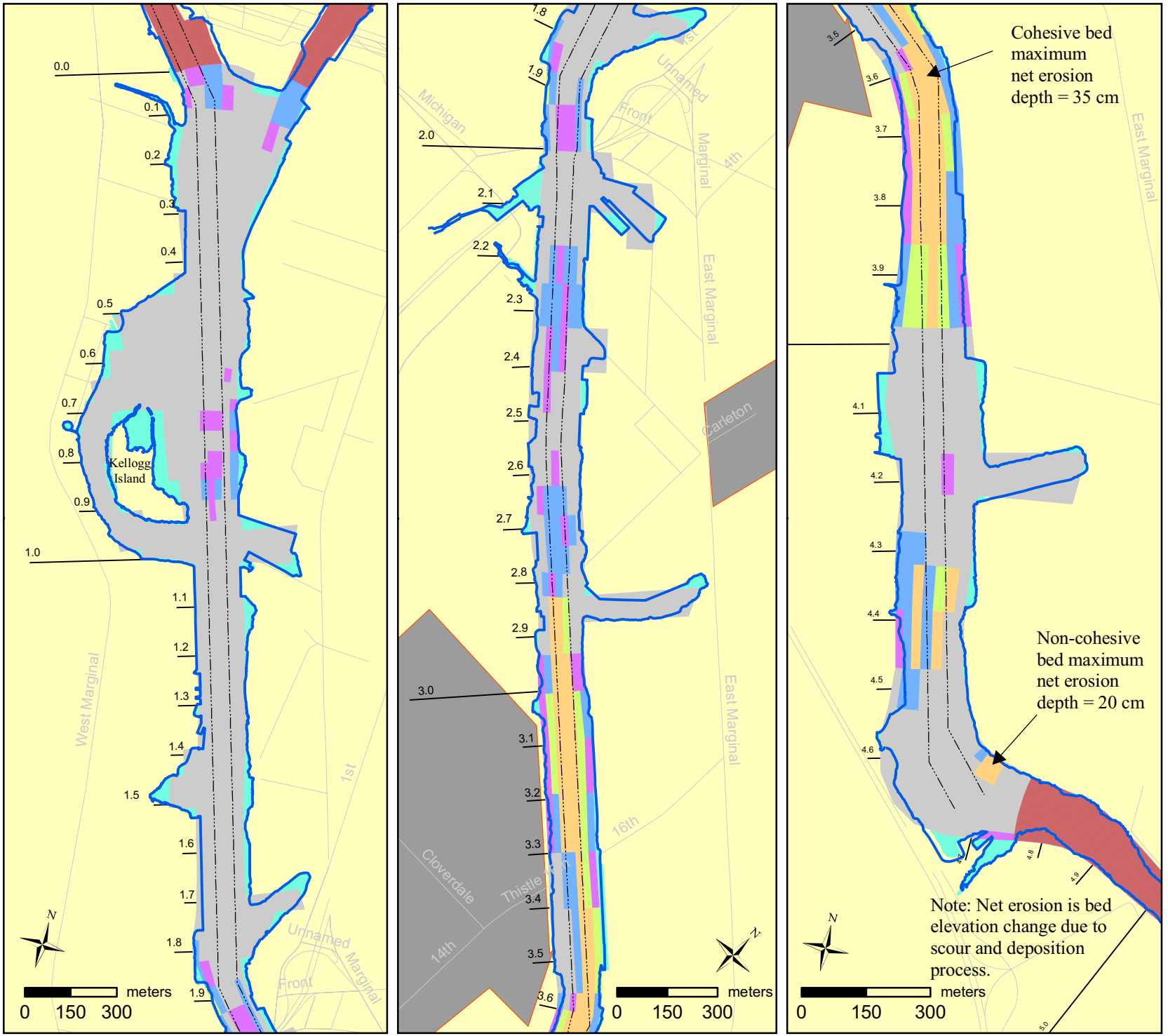
LOWER DUWAMISH WATERWAY STUDY AREA SEATTLE, WA

Figure 3-6.
Spatial distribution of predicted net erosion during 100-year high-flow event for lower-bound erosion parameter sensitivity simulation.

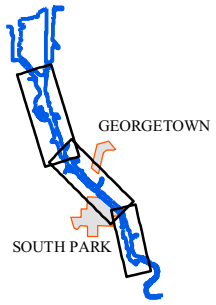
June 2008

QEA
Quantitative Environmental Analysis, LLC

FC/AC - \\gis_station\d_drive\Private\RETIdw\GIS_plot\sensitivity_plot_04102008.mxd



LOCATOR MAP



LEGEND

Net erosion depth (cm)

- > 10
- 6 - 10
- 2 - 6
- 0 - 2
- Net deposition
- Navigation channel
- Shore line
- River miles
- Roads
- Neighborhoods
- Outside model domain
- Hard bottom area

LOWER DUWAMISH WATERWAY STUDY AREA SEATTLE, WA

Figure 3-7.
Spatial distribution of predicted net erosion during 100-year high-flow event for upper-bound erosion parameter sensitivity simulation.

June 2008

Quantitative Environmental Analysis, LLC

FC/AC - \\gis_station\d_drive\Private\RETldw\GIS_plot\sensitivity_plot_04102008.mxd

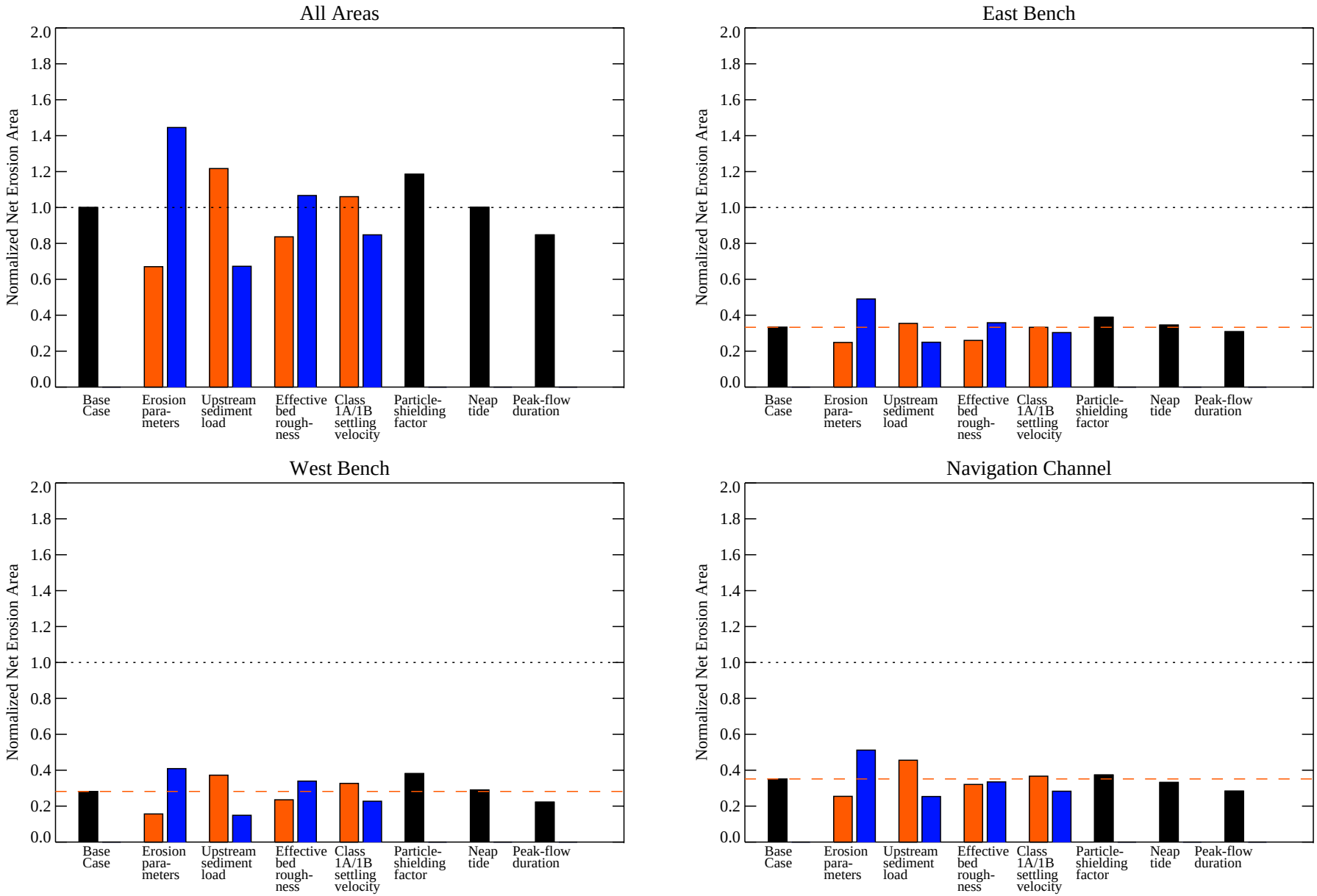


Figure 3-8: Comparison of base-case and sensitivity results for 100-year high-flow event: normalized net erosional area (RM 0 to 4.3). Base-case (normalization) area is 65 acres.

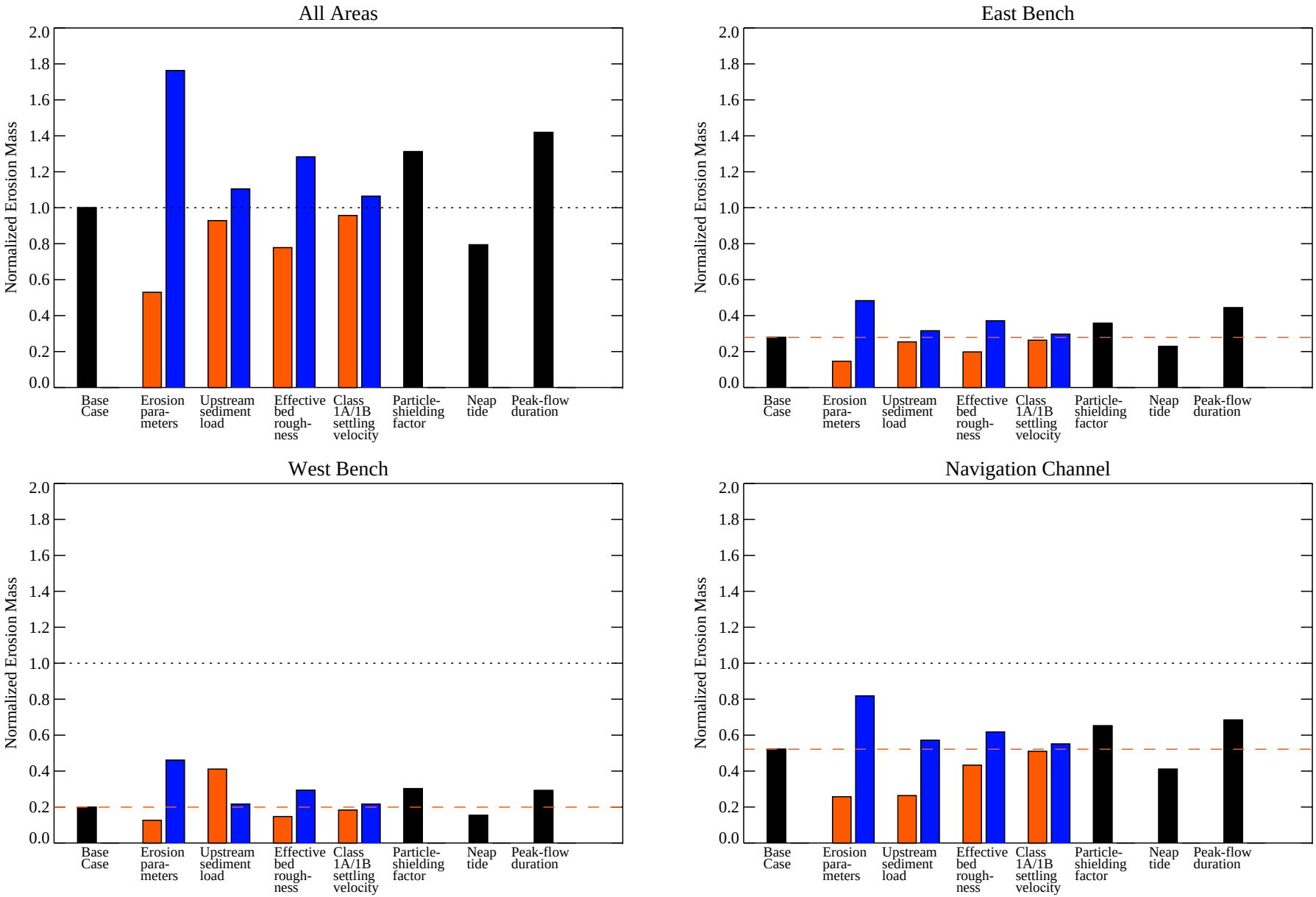


Figure 3-9: Comparison of base-case and sensitivity results for 100-year high-flow event: normalized erosion mass (RM 0 to 4.3). Base-case (normalization) mass is 51,300 metric tons.