



Figure 5-1. Newark Bay Study Area  
Current Valid USACE Issued Permits  
as of 1 Oct. 2006

## Dredging Contract Areas


### Maintenance Dredging


 Port Newark & Port Newark  
Pierhead Channels


### HDP Dredging

 Arthur Kill 41' Area 1


 Arthur Kill 41' Area 2/3

 S-KVK-2 50'

 S-NB-1 50'

 S-NB-2 50'

 S-E-1 50'

 Current Valid  
Permits-Dredging

 Current Valid  
Permits-Structures

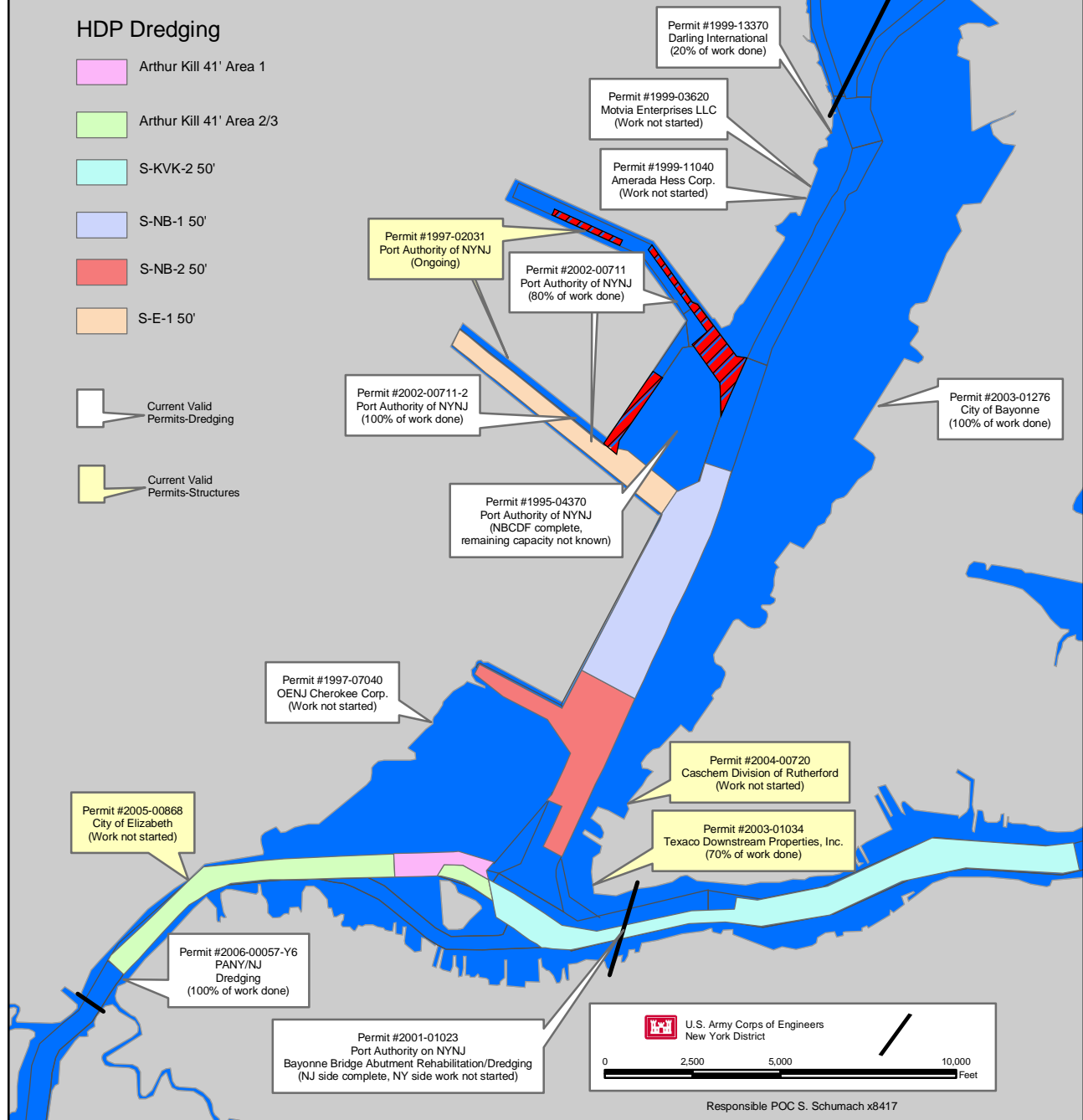
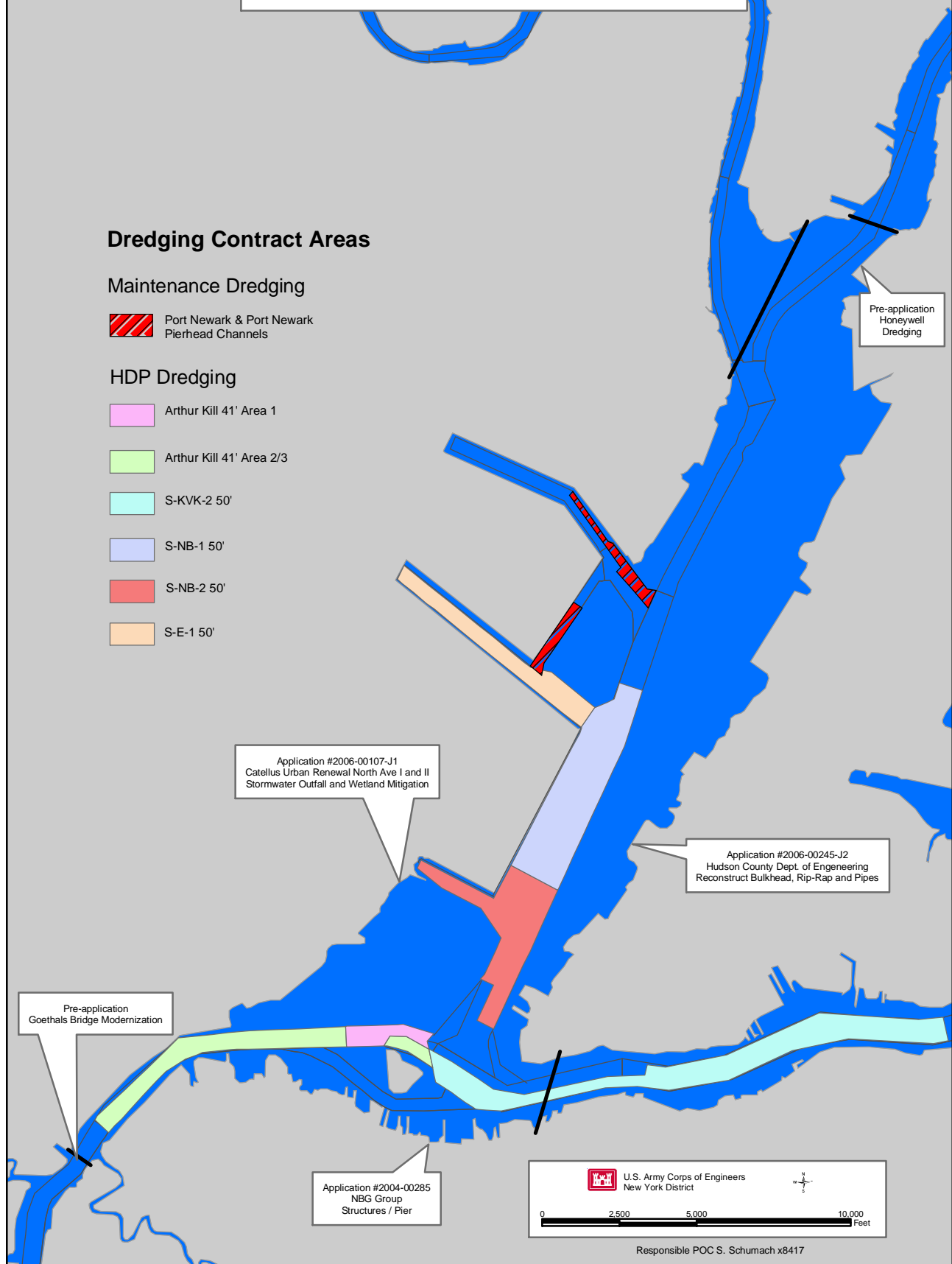
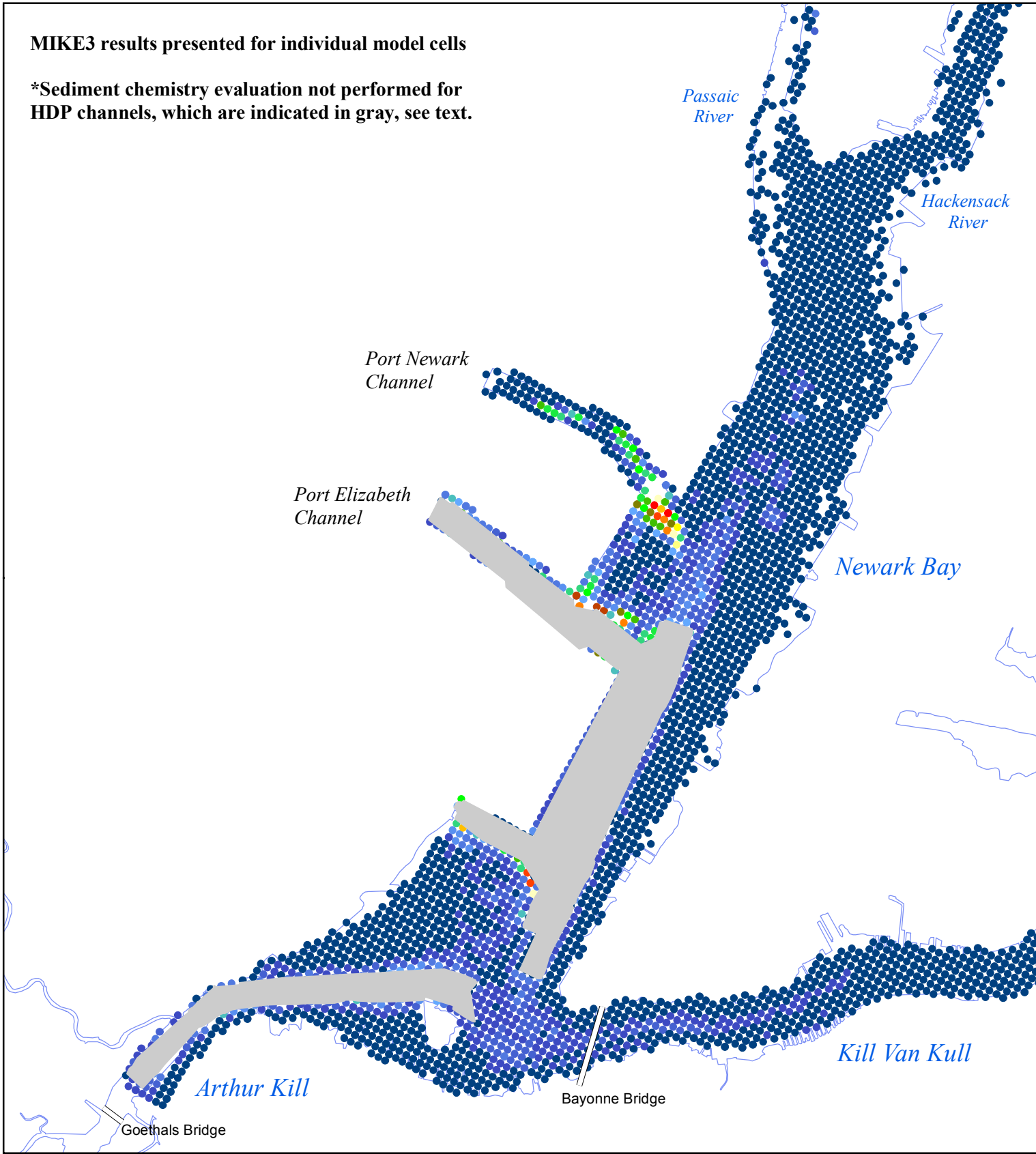


Figure 5-2. Newark Bay Study Area  
Current Applications or Pre-Applications  
Before USACE as of 1 Oct. 2006



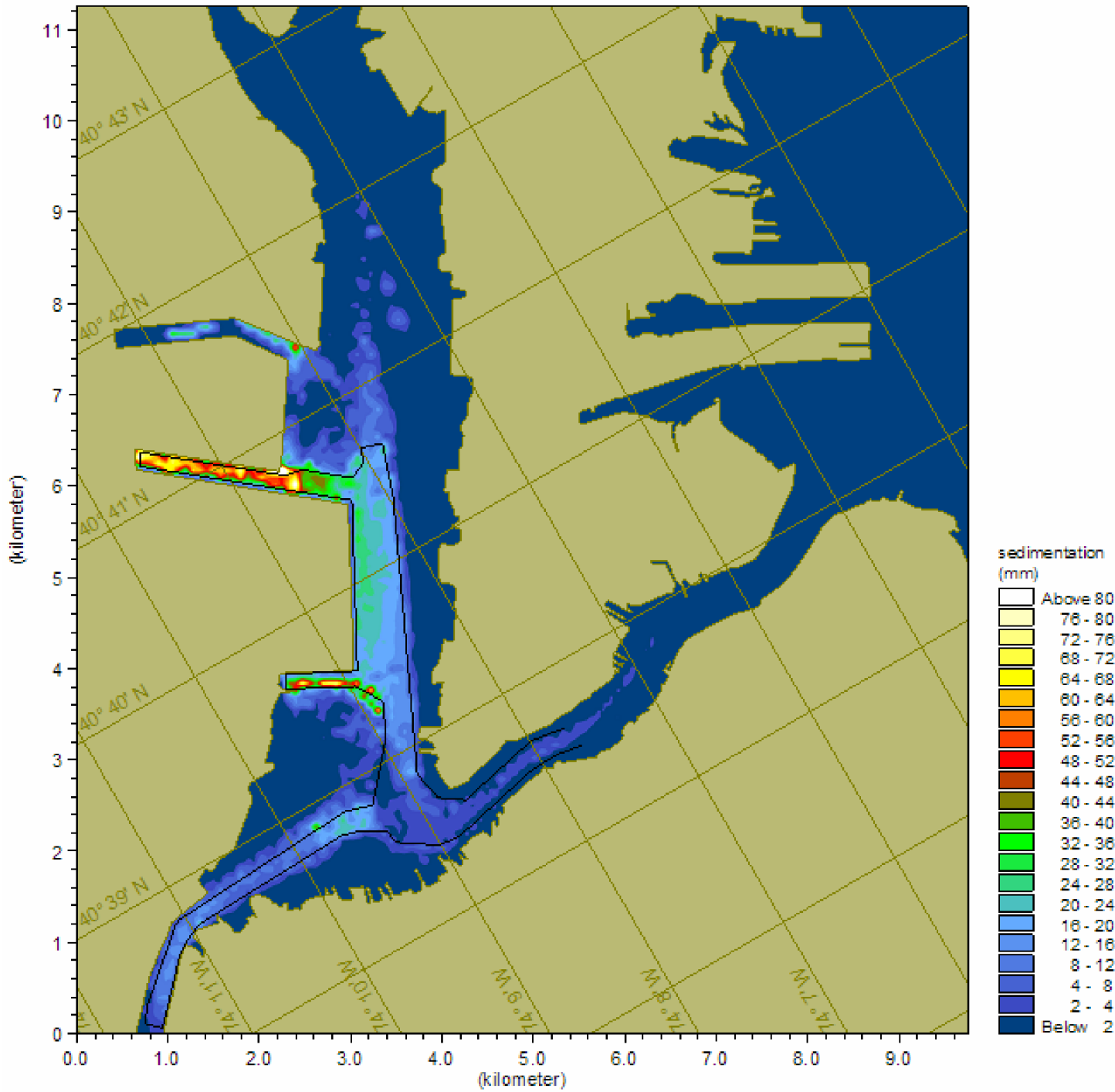
MIKE3 results presented for individual model cells

\*Sediment chemistry evaluation not performed for HDP channels, which are indicated in gray, see text.



Interpolated MIKE3 Model Results

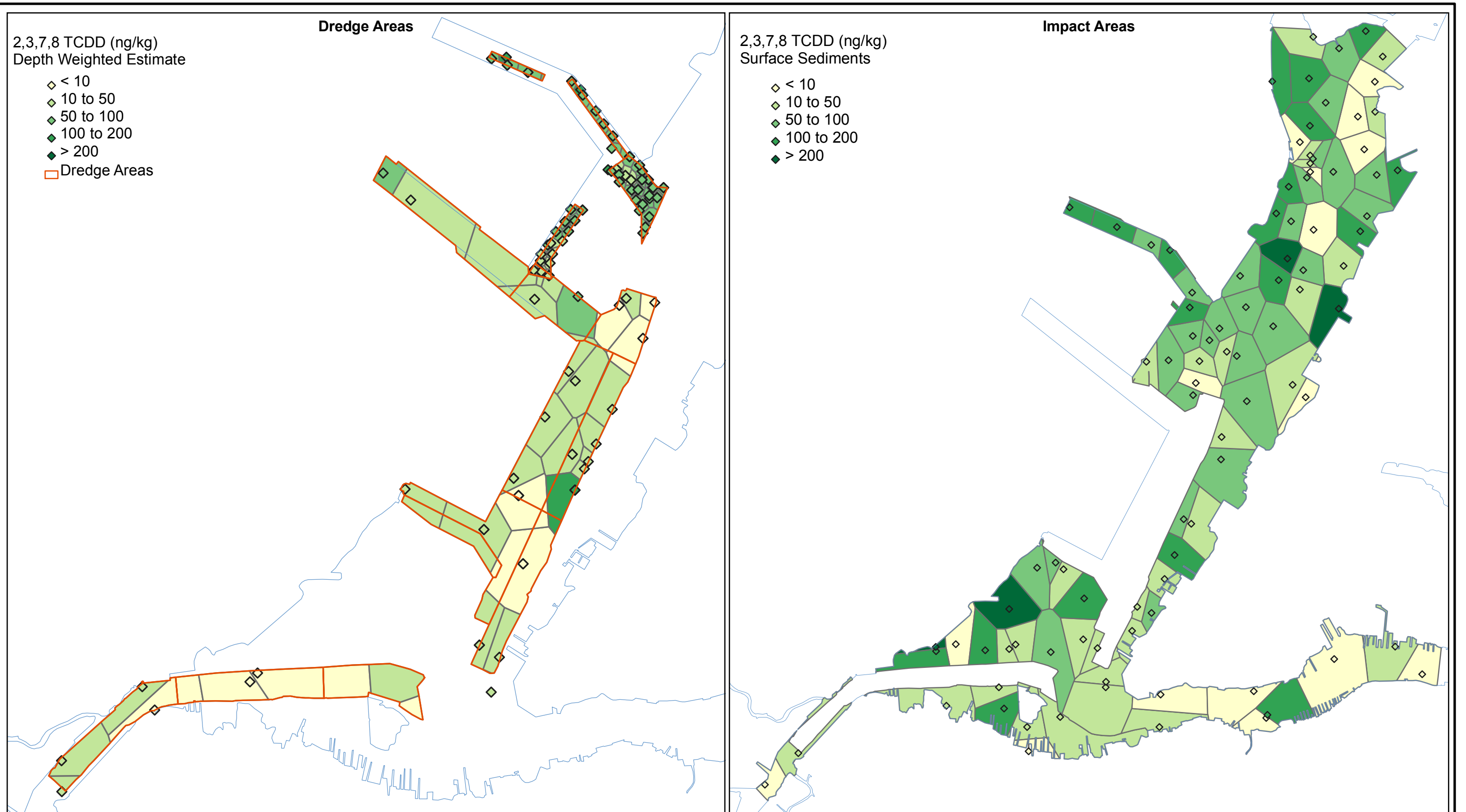
Source: Appendix 1, Figure 38



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Figure 5-3.

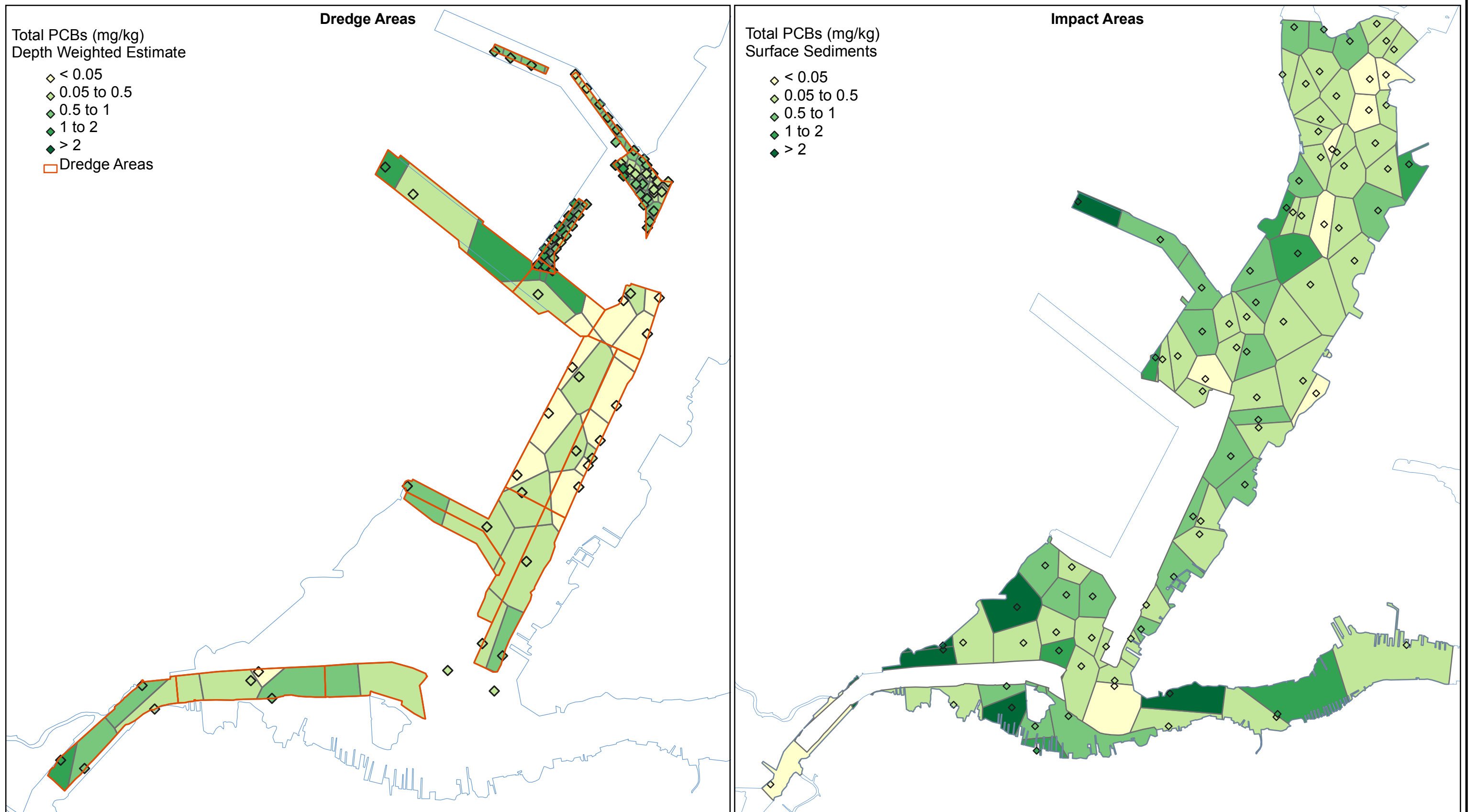
Cumulative 5-year Sedimentation Due to Resuspension  
Caused by the HDP and Other Dredging



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Figure 5-4

2,3,7,8 TCDD in the sediments of Newark Bay under current  
conditions: Thiessen polygons, cumulative assessment



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**Figure 5-5**

**Total PCBs in the sediments of Newark Bay under current  
conditions: Thiessen polygons, cumulative assessment**





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Figure 5-6

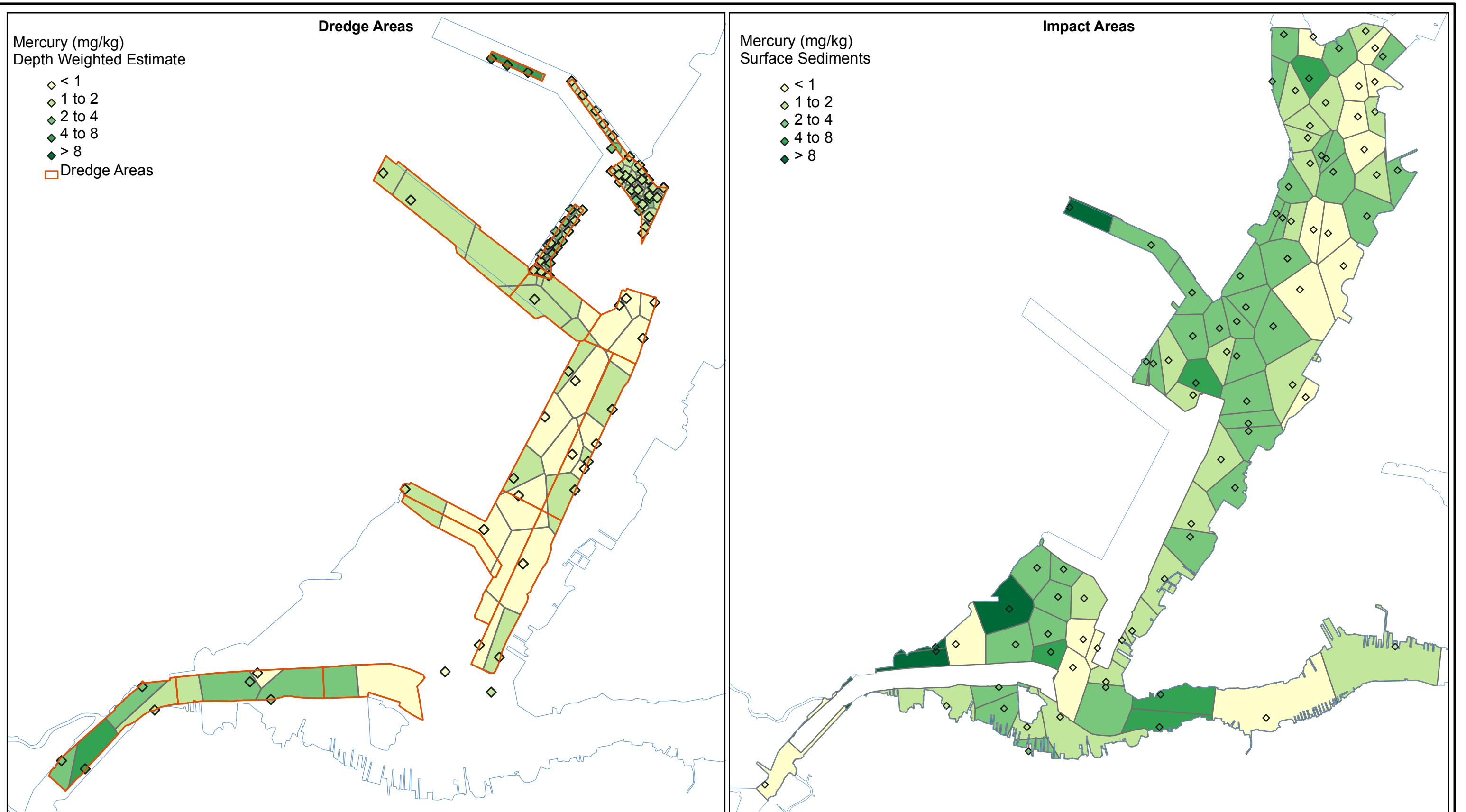
DDTs in the sediments of Newark Bay under current  
conditions: Thiessen polygons, cumulative assessment



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Figure 5-7

Benzo(a)pyrene in the sediments of Newark Bay under current  
conditions: Thiessen polygons, cumulative assessment



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Figure 5-8

Mercury in the sediments of Newark Bay under current  
conditions: Thiessen polygons, cumulative assessment

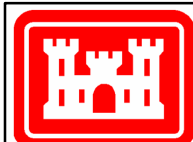
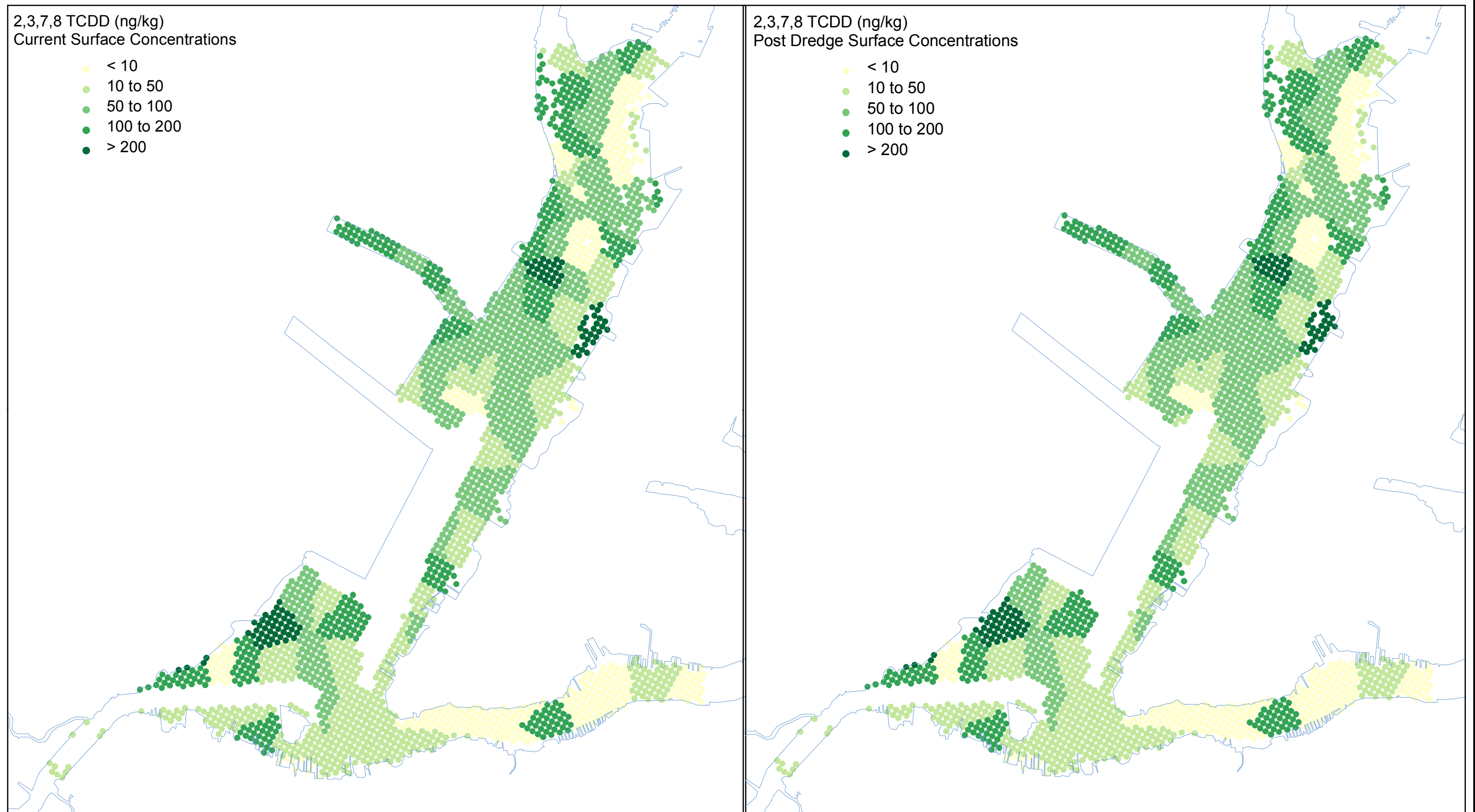




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Figure 5-9

Chromium in the sediments of Newark Bay under current  
conditions: Thiessen polygons, cumulative assessment

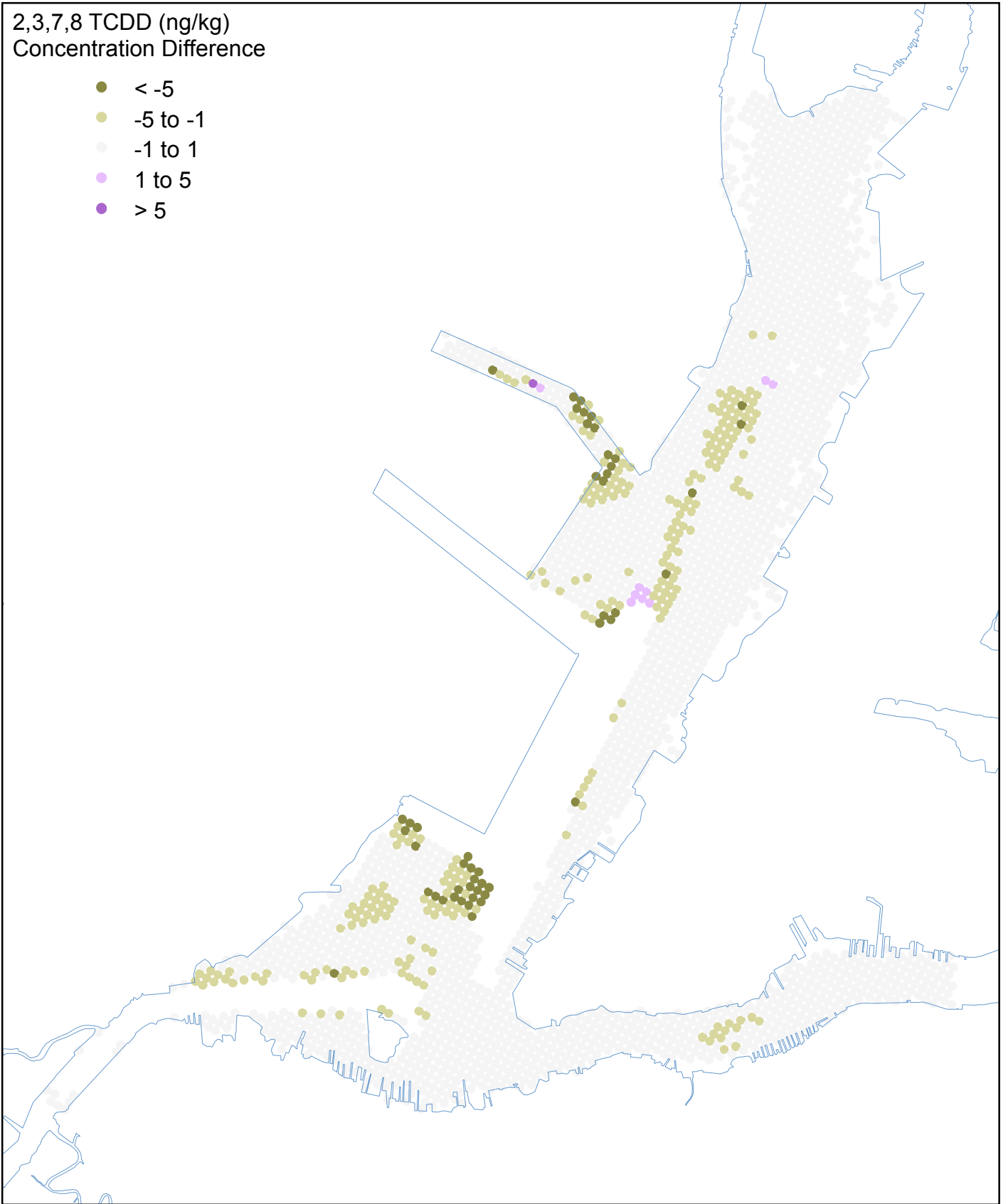


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**Figure 5-10a**  
**2,3,7,8 TCDD: comparison of existing surface sediment concentrations with post dredging concentrations predicted by the model, cumulative assessment**

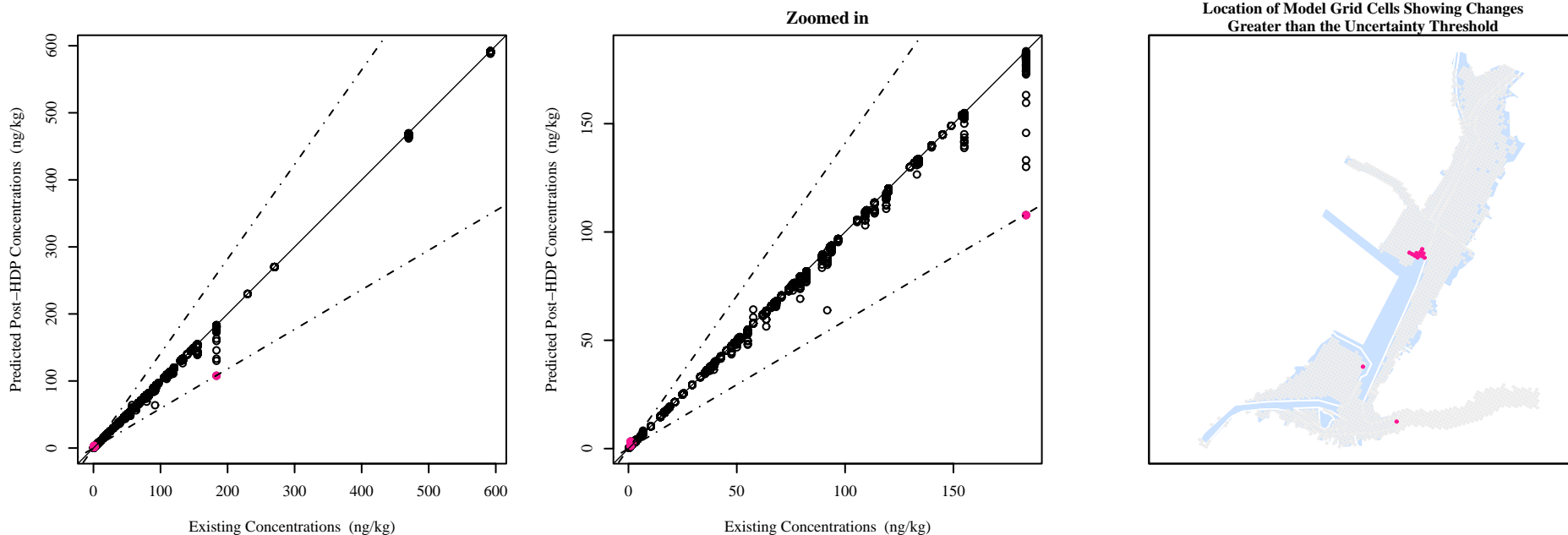
2,3,7,8 TCDD (ng/kg)  
Concentration Difference

- < -5
- -5 to -1
- -1 to 1
- 1 to 5
- > 5



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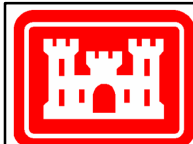
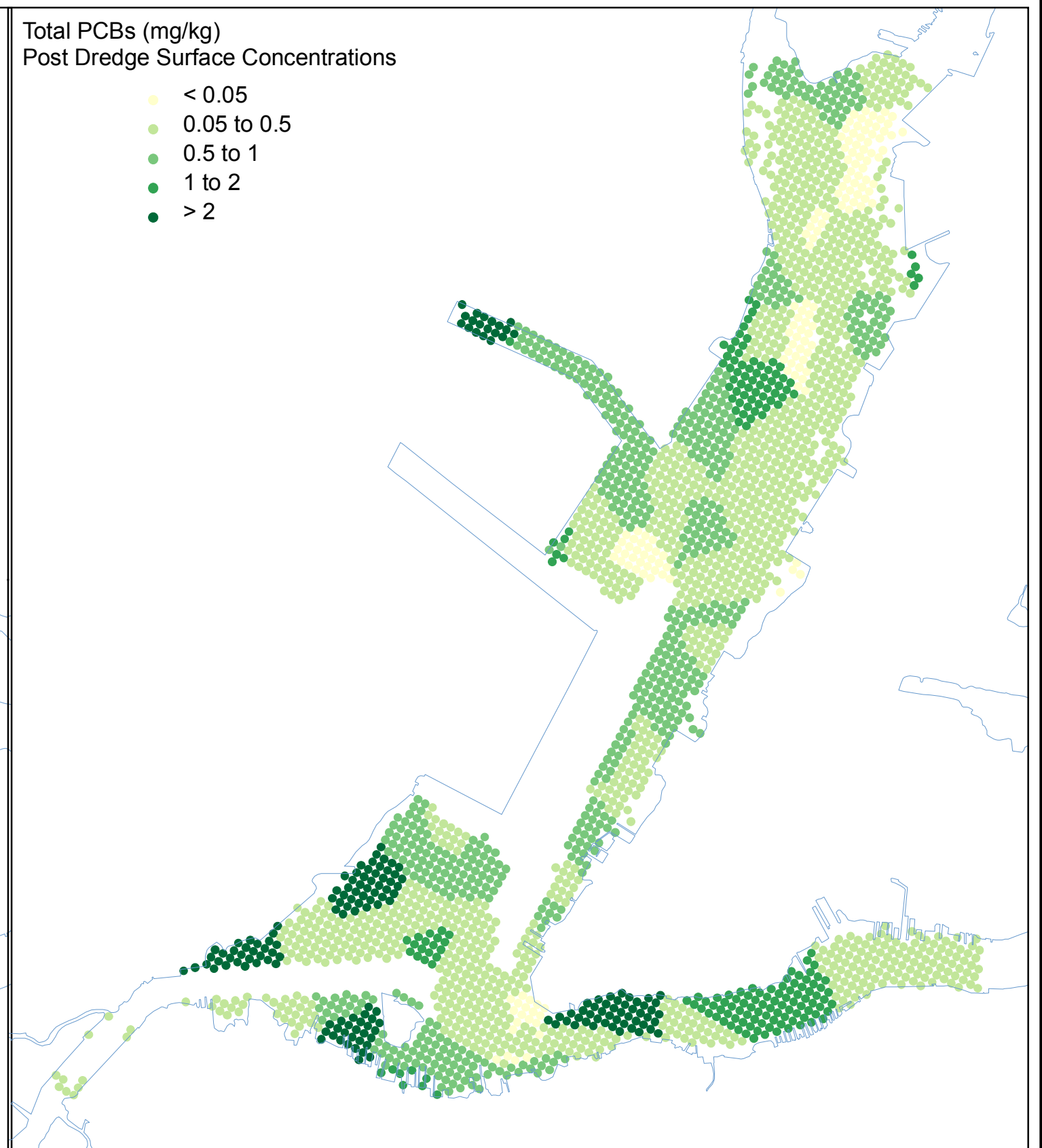
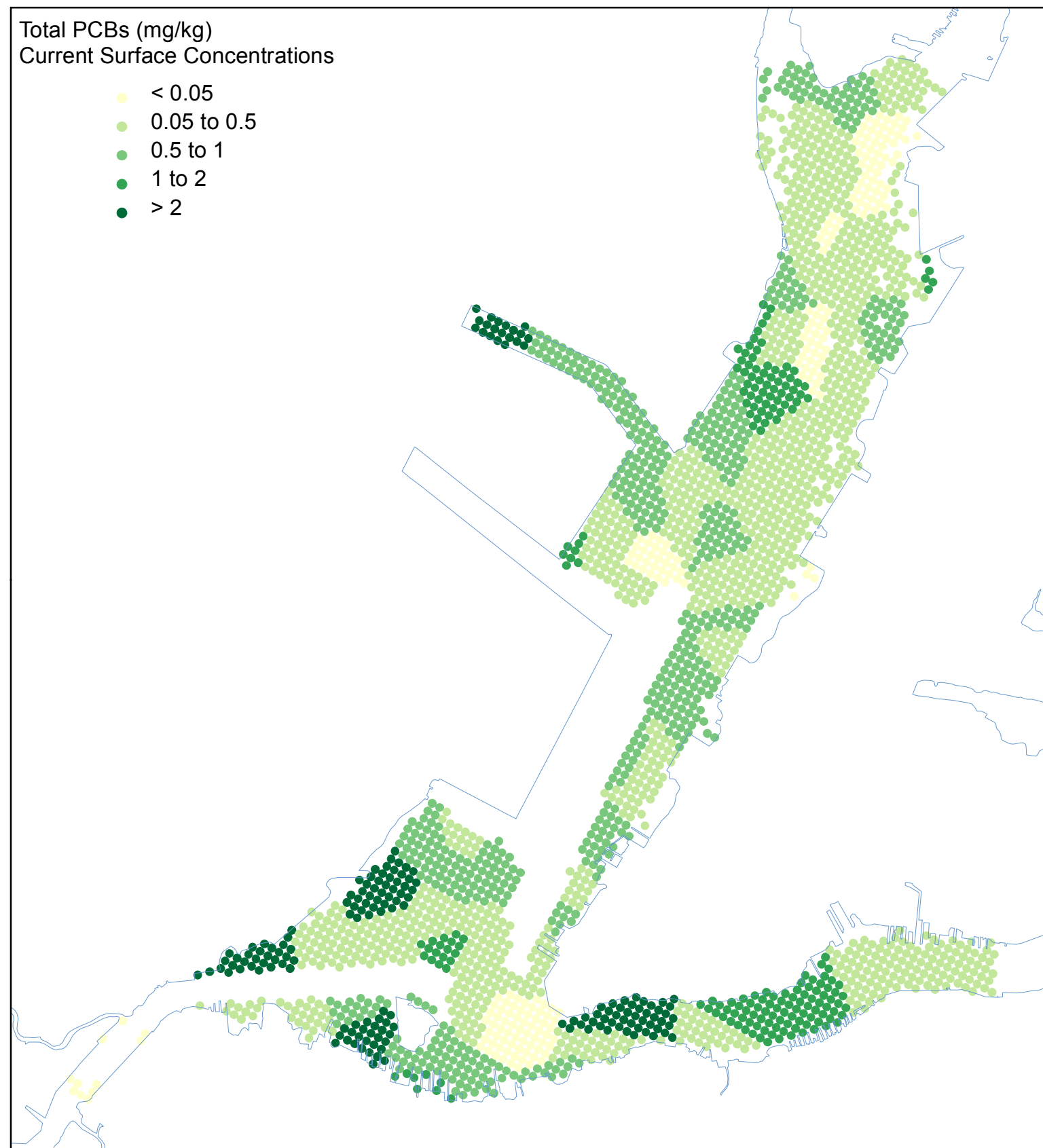
**Figure 5-10b**  
**2,3,7,8 TCDD: change in surface sediment**  
**concentrations due to dredging as predicted**  
**by the model, cumulative assessment**



**Figure 5-10c. 2,3,7,8 TCDD : Predicted changes in surface sediment concentrations that are greater than the uncertainty threshold cumulative assessment**

*Predicted changes were greater than the uncertainty threshold in points colored pink. Dashed line represents the boundaries of the uncertainty threshold. See text for more details.*





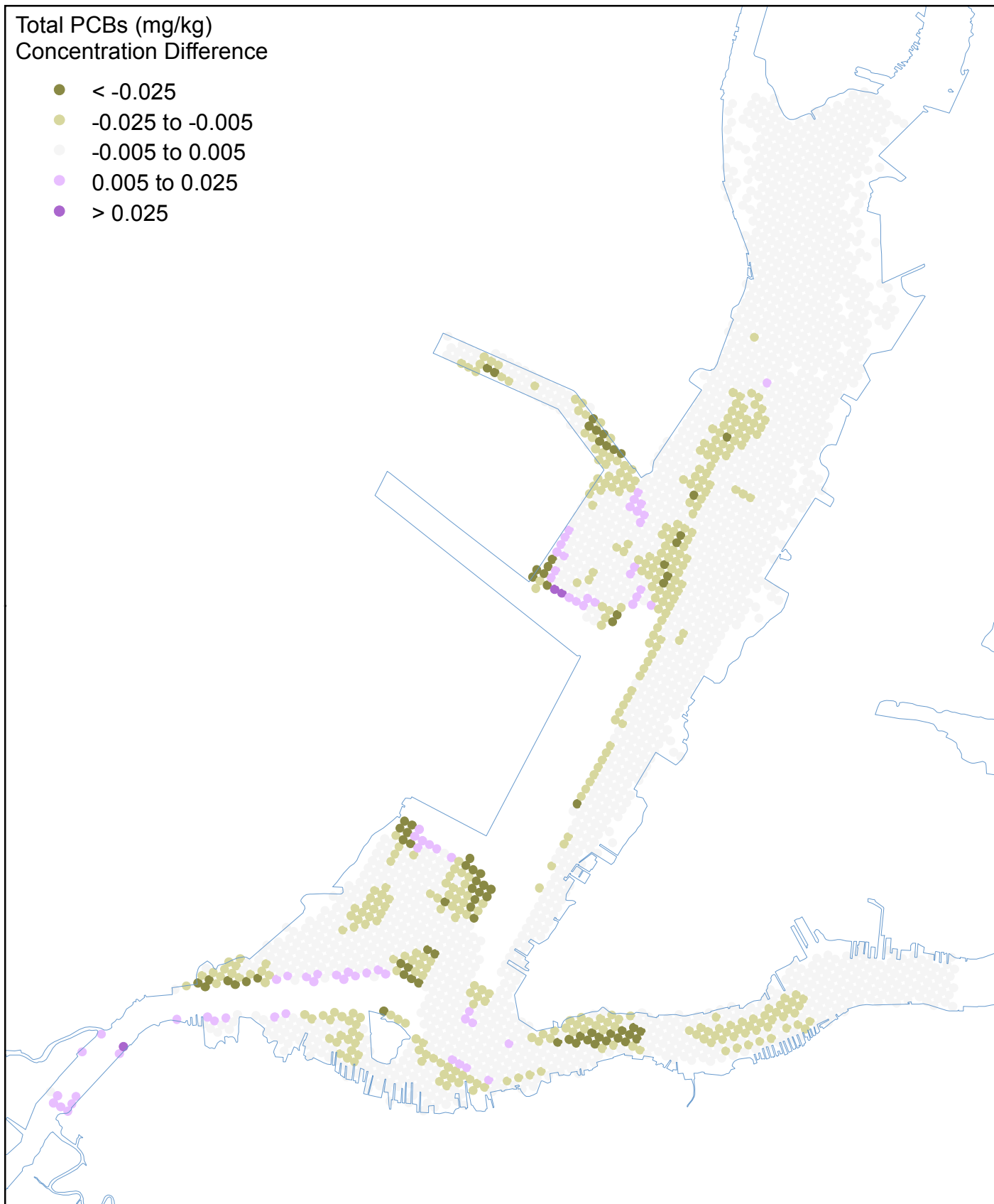
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**Figure 5-11a**  
**Total PCBs: comparison of existing surface sediment concentrations with post dredging concentrations predicted by the model, cumulative assessment**



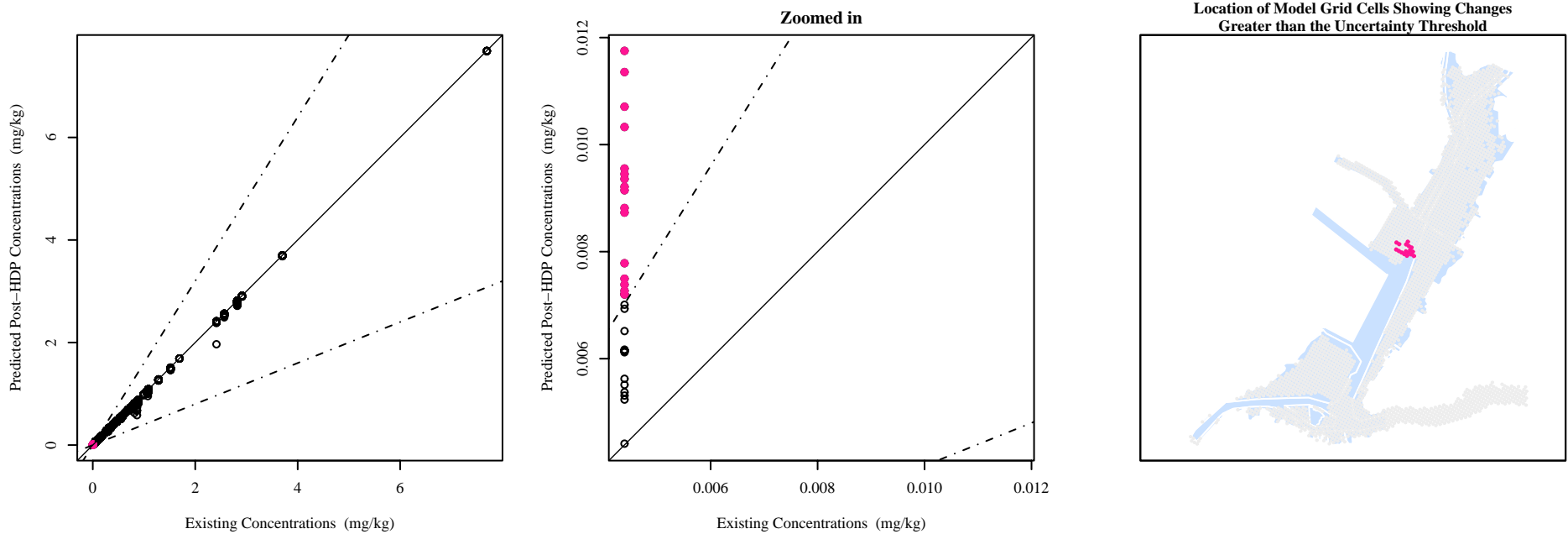
Total PCBs (mg/kg)  
Concentration Difference

- < -0.025
- -0.025 to -0.005
- -0.005 to 0.005
- 0.005 to 0.025
- > 0.025



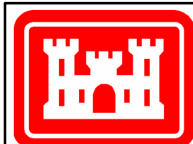
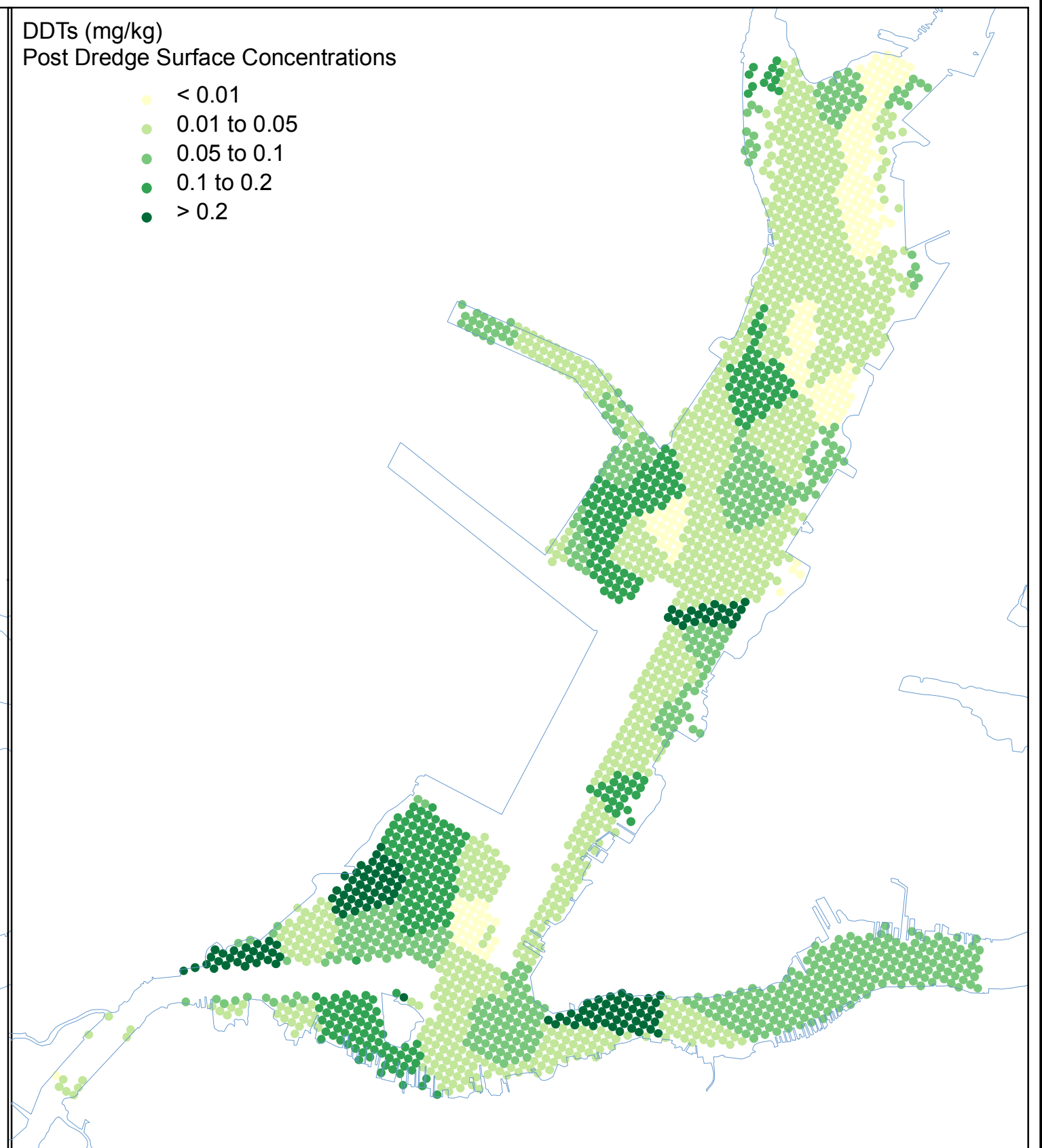
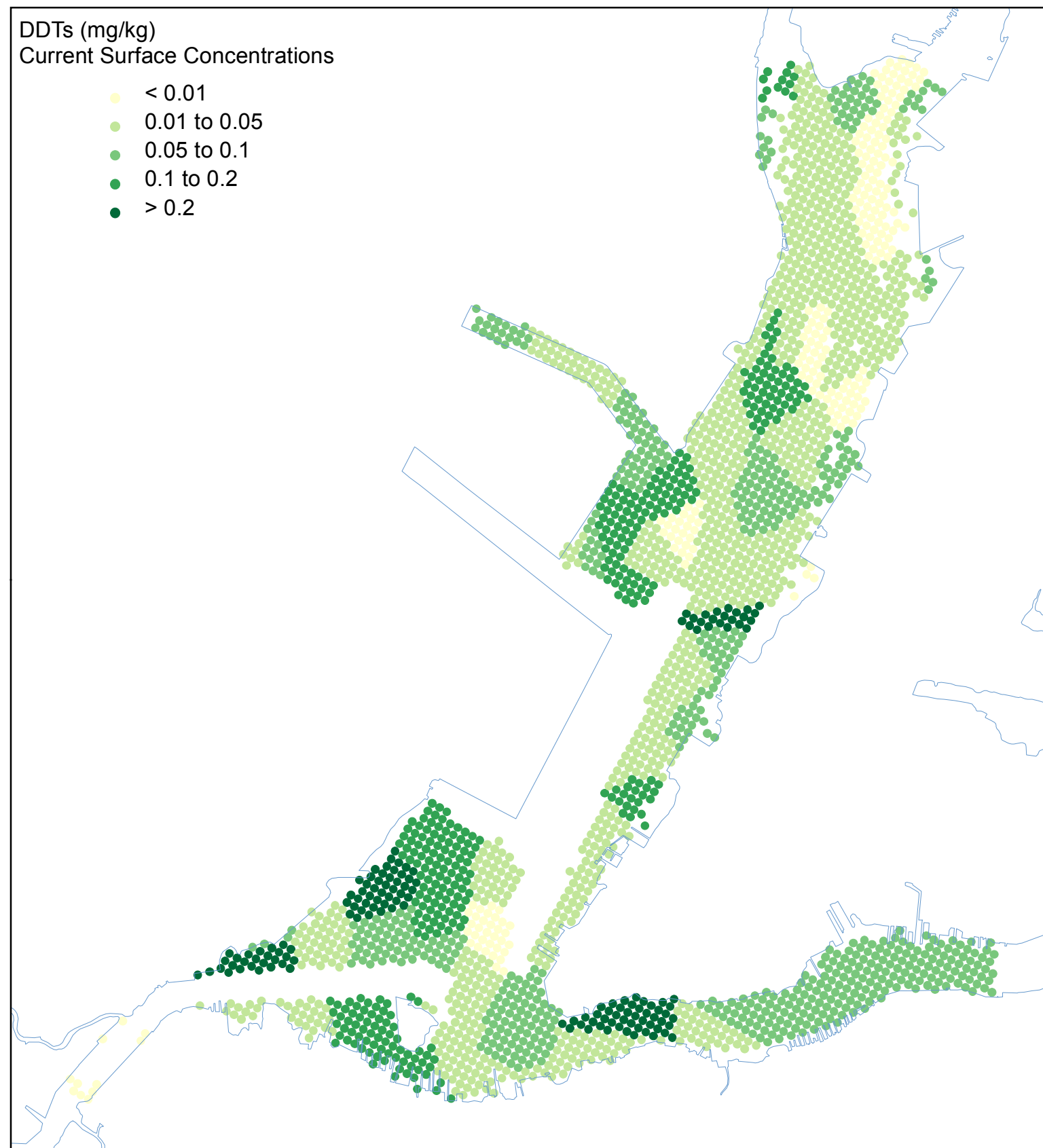
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**Figure 5-11b**  
**Total PCBs: change in surface sediment**  
**concentrations due to dredging as predicted**  
**by the model, cumulative assessment**



**Figure 5-11c. Total PCBs : Predicted changes in surface sediment concentrations that are greater than the uncertainty threshold cumulative assessment**

*Predicted changes were greater than the uncertainty threshold in points colored pink. Dashed line represents the boundaries of the uncertainty threshold. See text for more details.*

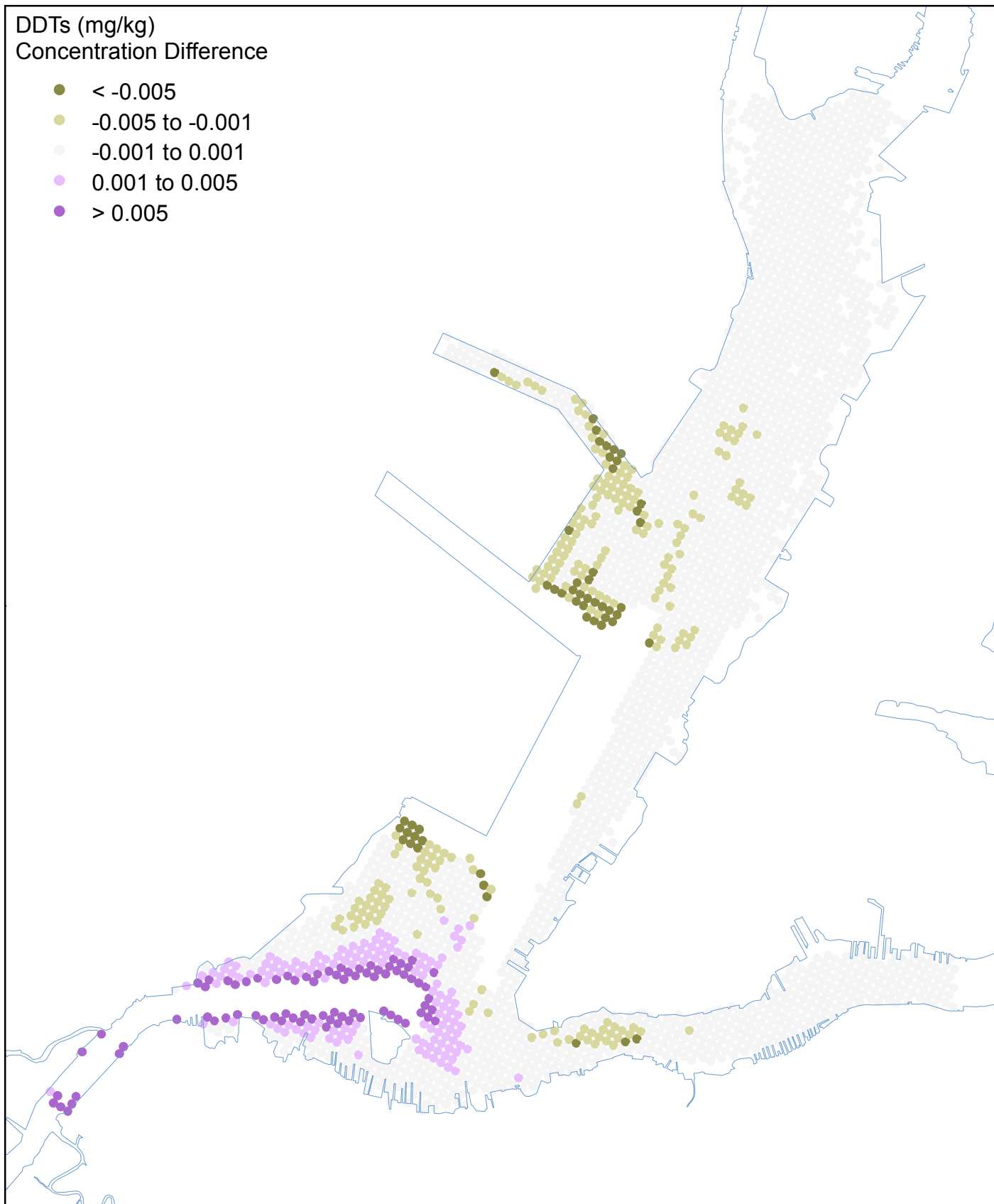


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**Figure 5-12a**  
**DDTs: comparison of existing surface sediment concentrations with post dredging concentrations predicted by the model, cumulative assessment**

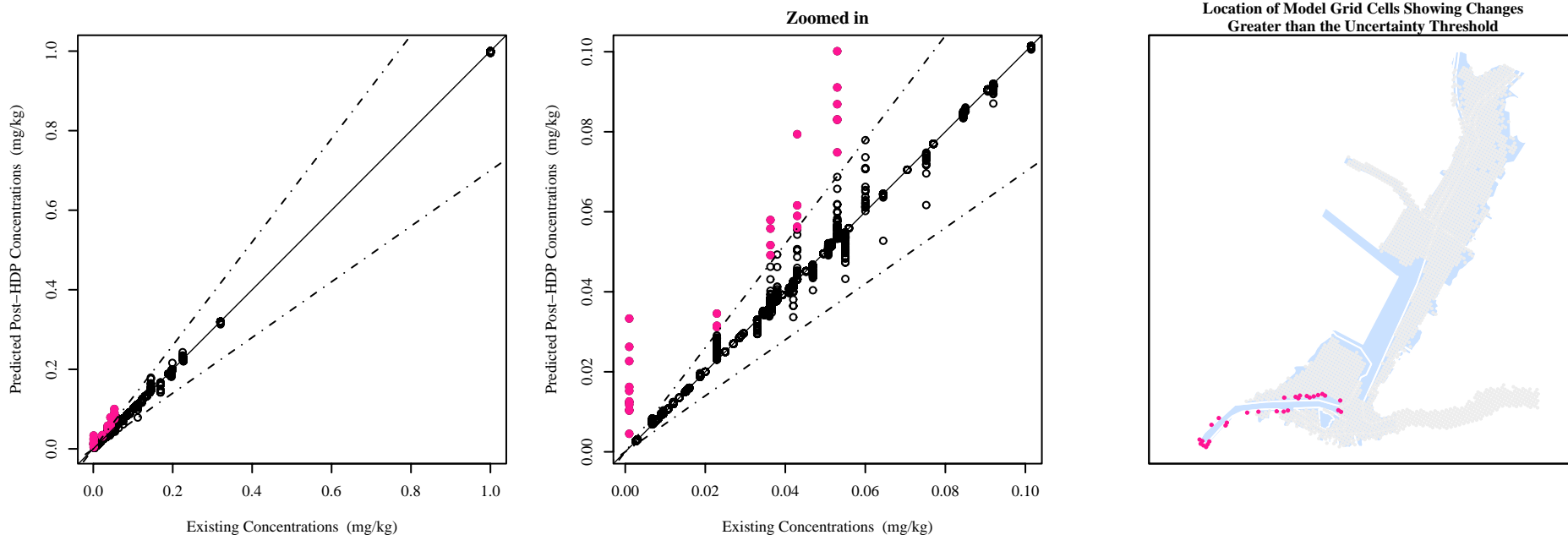
DDTs (mg/kg)  
Concentration Difference

- < -0.005
- -0.005 to -0.001
- -0.001 to 0.001
- 0.001 to 0.005
- > 0.005



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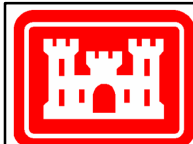
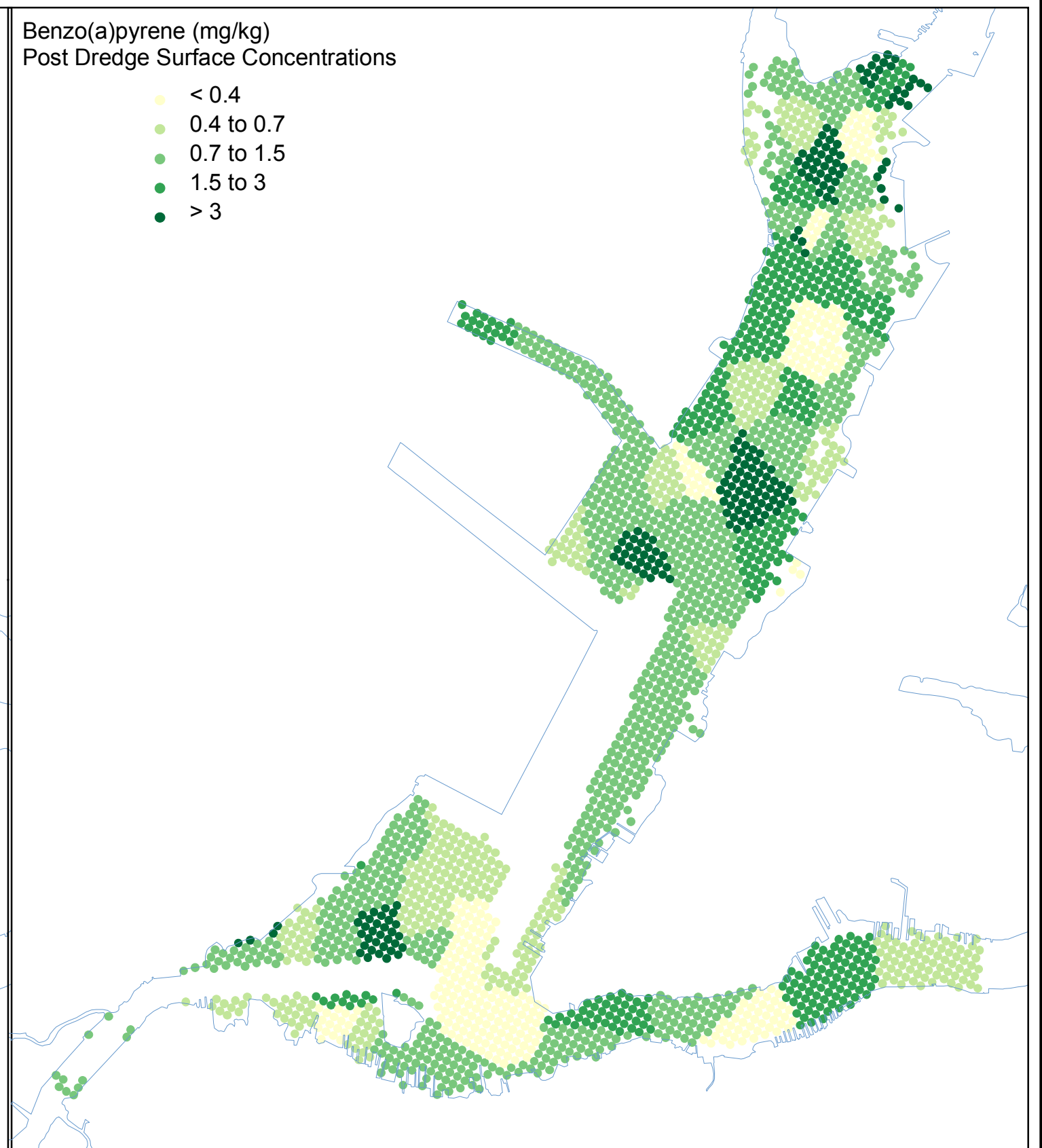
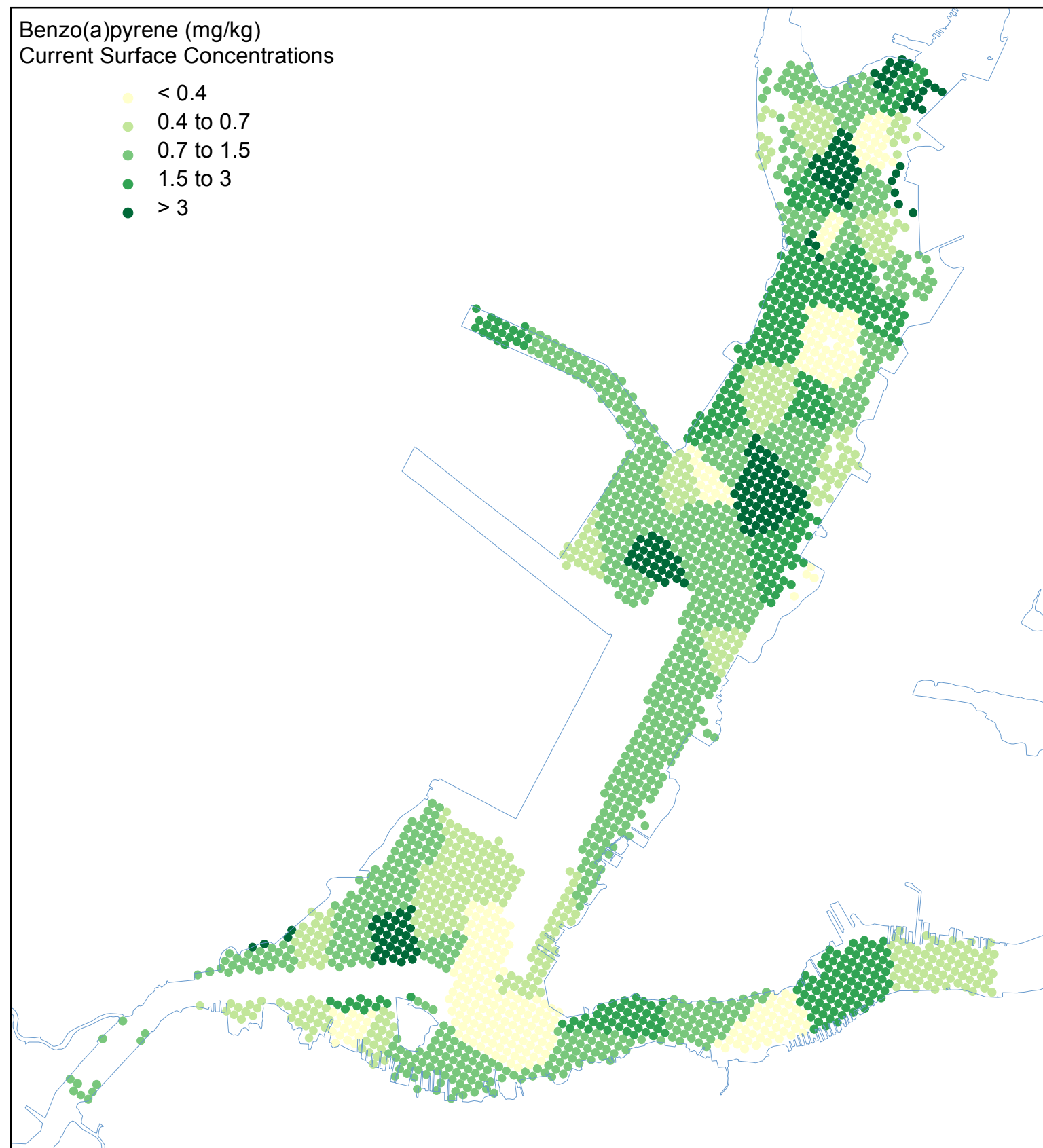
**Figure 5-12b**  
**DDTs: change in surface sediment**  
**concentrations due to dredging as predicted**  
**by the model, cumulative assessment**



**Figure 5-12c. DDT : Predicted changes in surface sediment concentrations that are greater than the uncertainty threshold cumulative assessment**

*Predicted changes were greater than the uncertainty threshold in points colored pink. Dashed line represents the boundaries of the uncertainty threshold. See text for more details.*



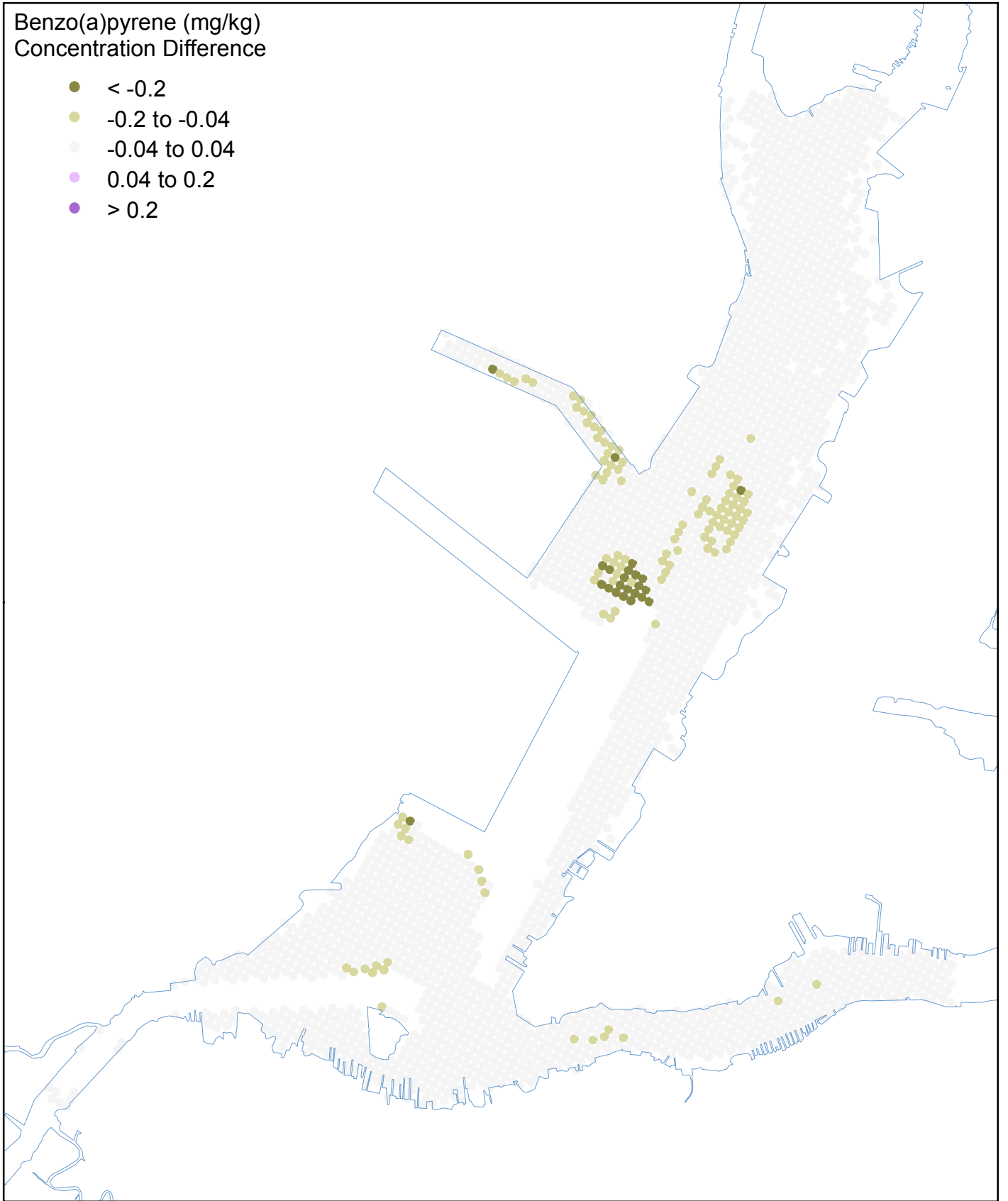


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**Figure 5-13a**  
**Benzo(a)pyrene: comparison of existing surface sediment concentrations with post dredging concentrations predicted by the model, cumulative assessment**

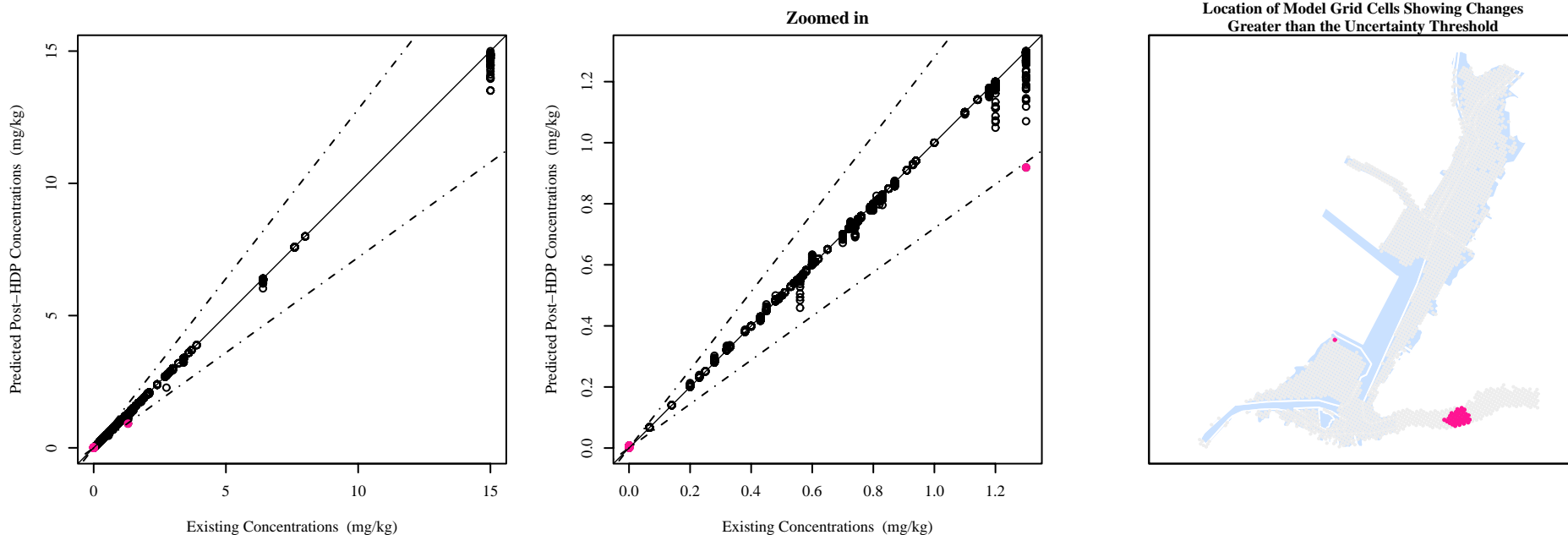
Benzo(a)pyrene (mg/kg)  
Concentration Difference

- < -0.2
- -0.2 to -0.04
- -0.04 to 0.04
- 0.04 to 0.2
- > 0.2



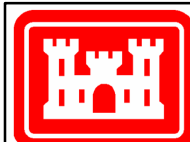
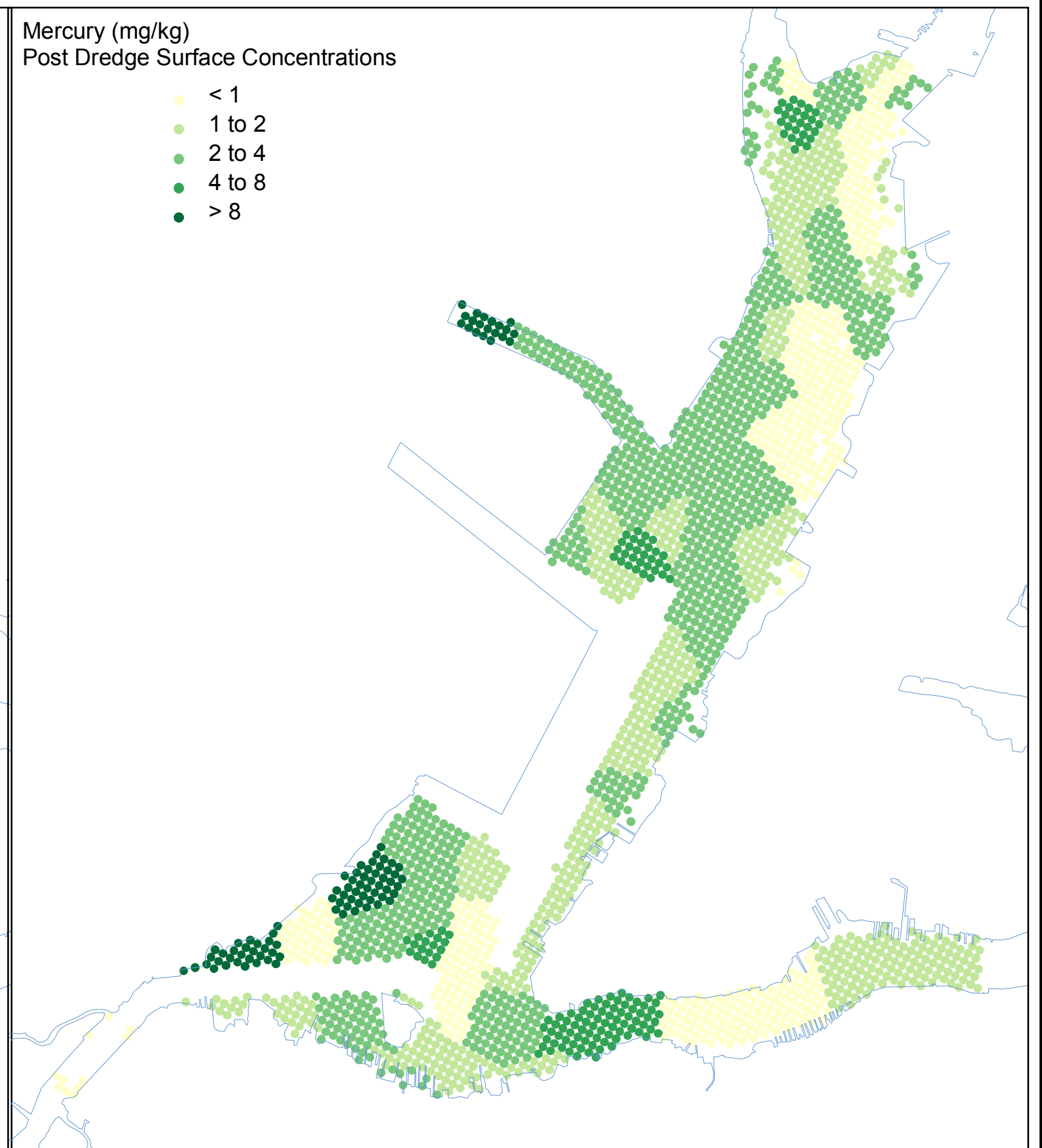
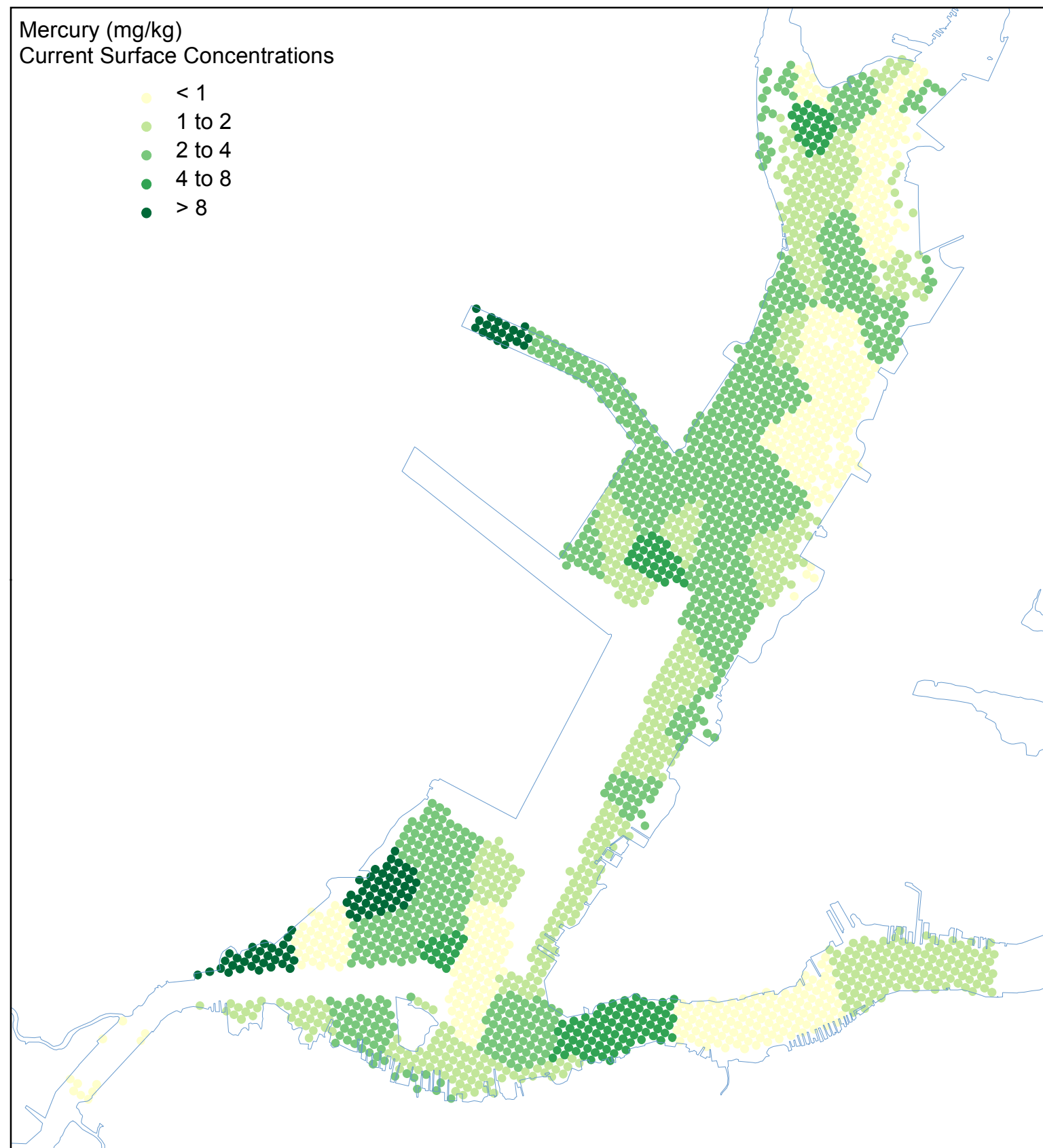
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**Figure 5-13b**  
**Benzo(a)pyrene: change in surface sediment**  
**concentrations due to dredging as predicted**  
**by the model, cumulative assessment**



**Figure 5-13c. Benzo(a)pyrene : Predicted changes in surface sediment concentrations that are greater than the uncertainty threshold cumulative assessment**

*Predicted changes were greater than the uncertainty threshold in points colored pink. Dashed line represents the boundaries of the uncertainty threshold. See text for more details.*

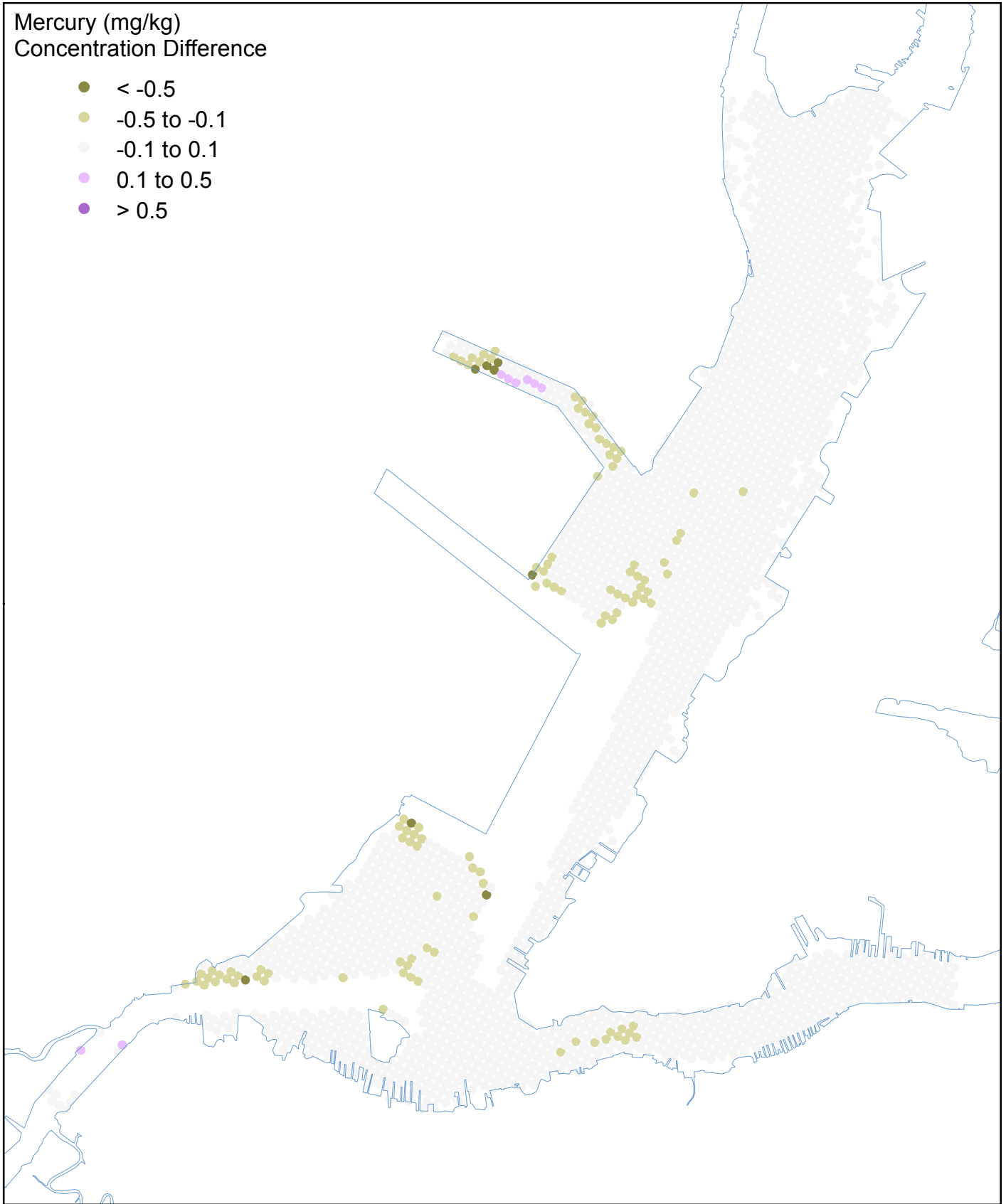


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**Figure 5-14a**  
**Mercury: comparison of existing surface sediment concentrations with post dredging concentrations predicted by the model, cumulative assessment**

Mercury (mg/kg)  
Concentration Difference

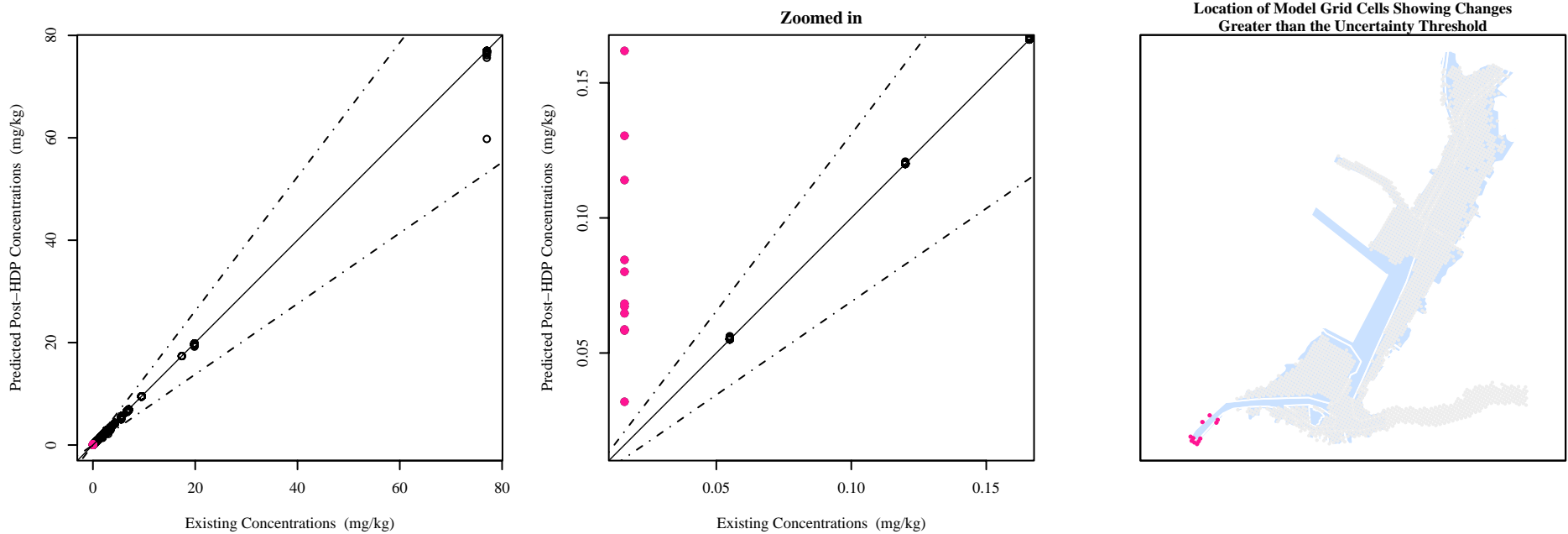
- < -0.5
- -0.5 to -0.1
- -0.1 to 0.1
- 0.1 to 0.5
- > 0.5



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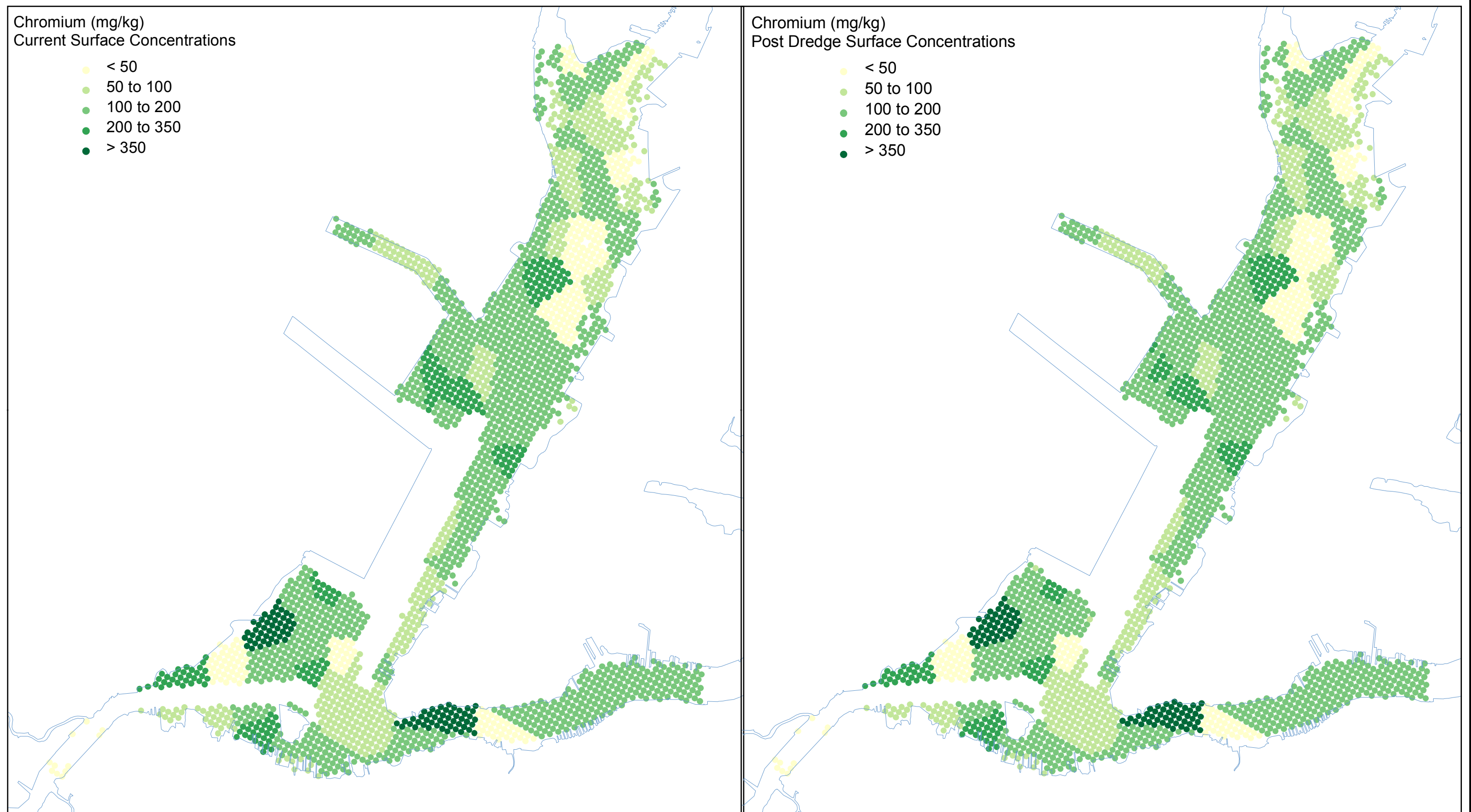
**Figure 5-14b**  
**Mercury: change in surface sediment**  
**concentrations due to dredging as predicted**  
**by the model, cumulative assessment**





**Figure 5-14c. Mercury : Predicted changes in surface sediment concentrations that are greater than the uncertainty threshold cumulative assessment**

*Predicted changes were greater than the uncertainty threshold in points colored pink. Dashed line represents the boundaries of the uncertainty threshold. See text for more details.*

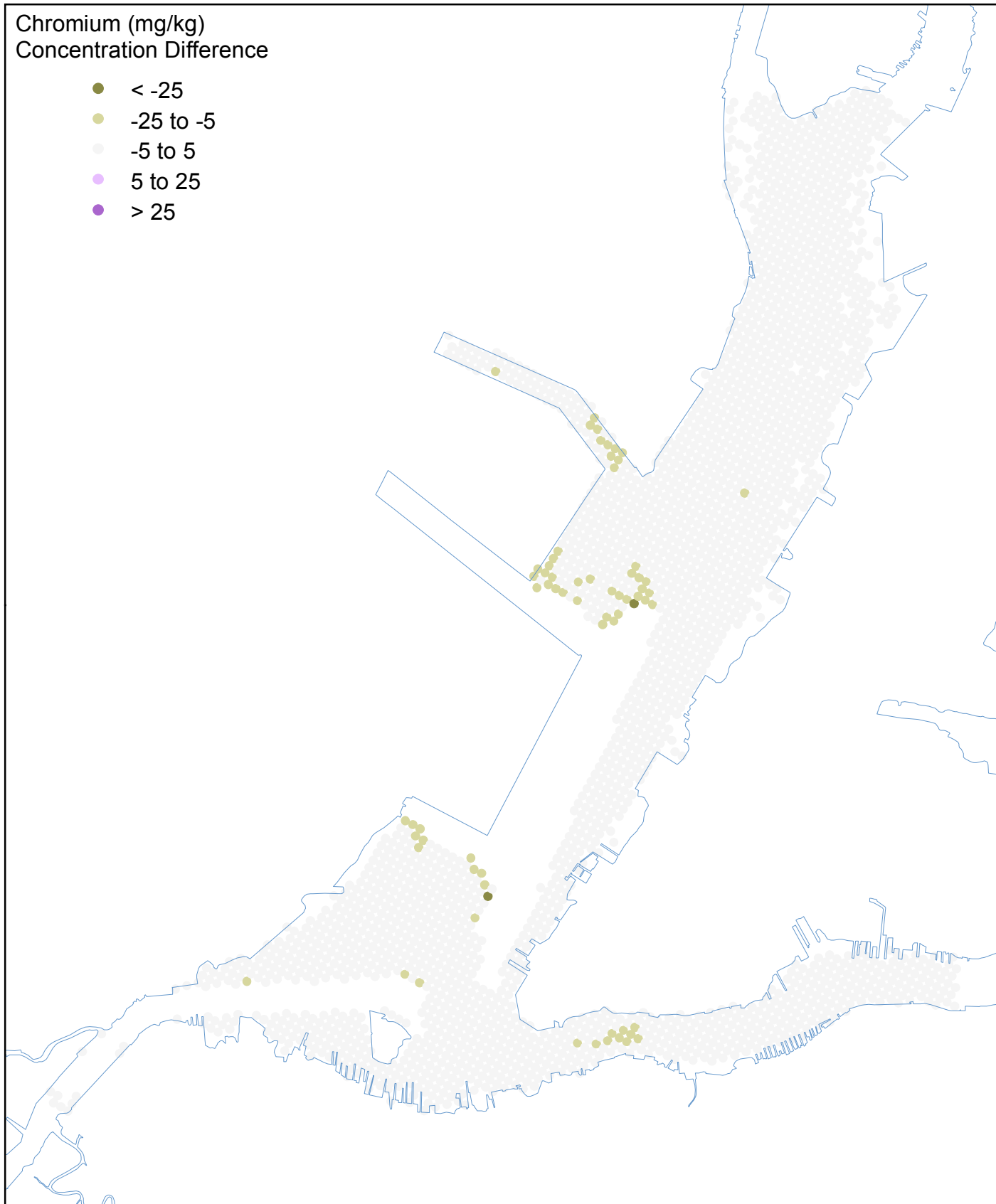


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**Figure 5-15a**  
**Chromium: comparison of existing surface sediment concentrations with post dredging concentrations predicted by the model, cumulative assessment**

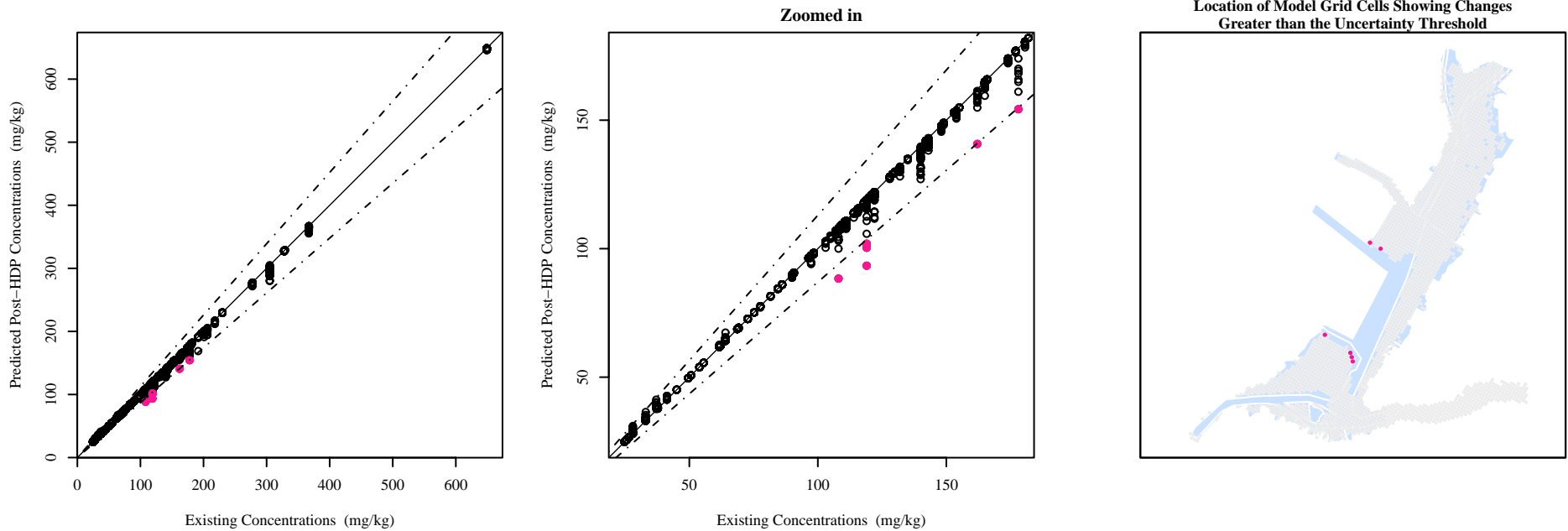
Chromium (mg/kg)  
Concentration Difference

- < -25
- -25 to -5
- -5 to 5
- 5 to 25
- > 25



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**Figure 5-15b**  
**Chromium: change in surface sediment**  
**concentrations due to dredging as predicted**  
**by the model, cumulative assessment**



**Figure 5-15c. Chromium : Predicted changes in surface sediment concentrations that are greater than the uncertainty threshold cumulative assessment**

*Predicted changes were greater than the uncertainty threshold in points colored pink. Dashed line represents the boundaries of the uncertainty threshold. See text for more details.*