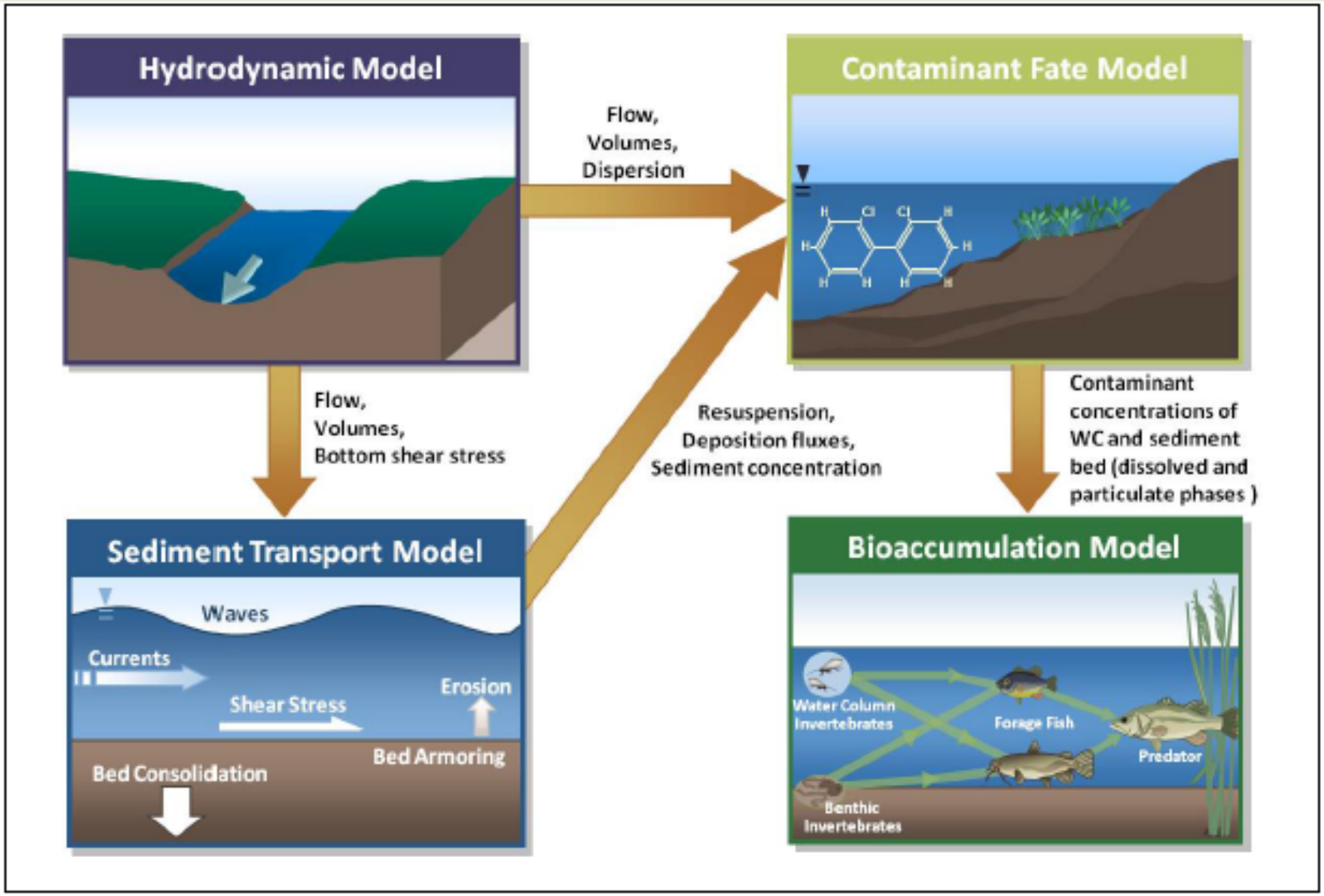
Model Components



LWG Lower Willamette Group
ANCHOR QEA

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This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part

Figure 2.1-1
Portland Harbor RI/FS
Draft Feasibility Study Report
Generalized Model Framework and Model Linkages

DEQ

Contaminant Fate and Transport Processes

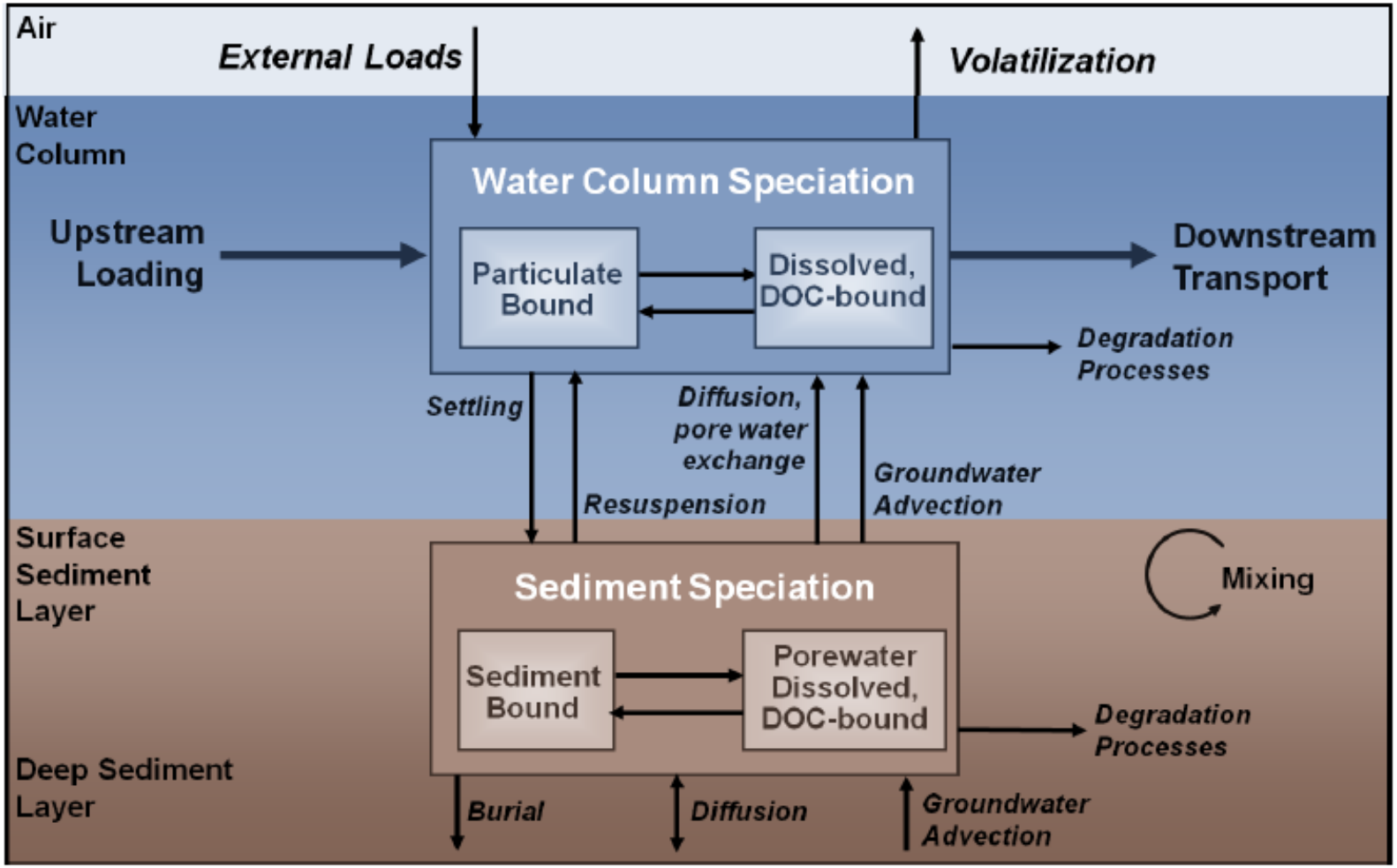

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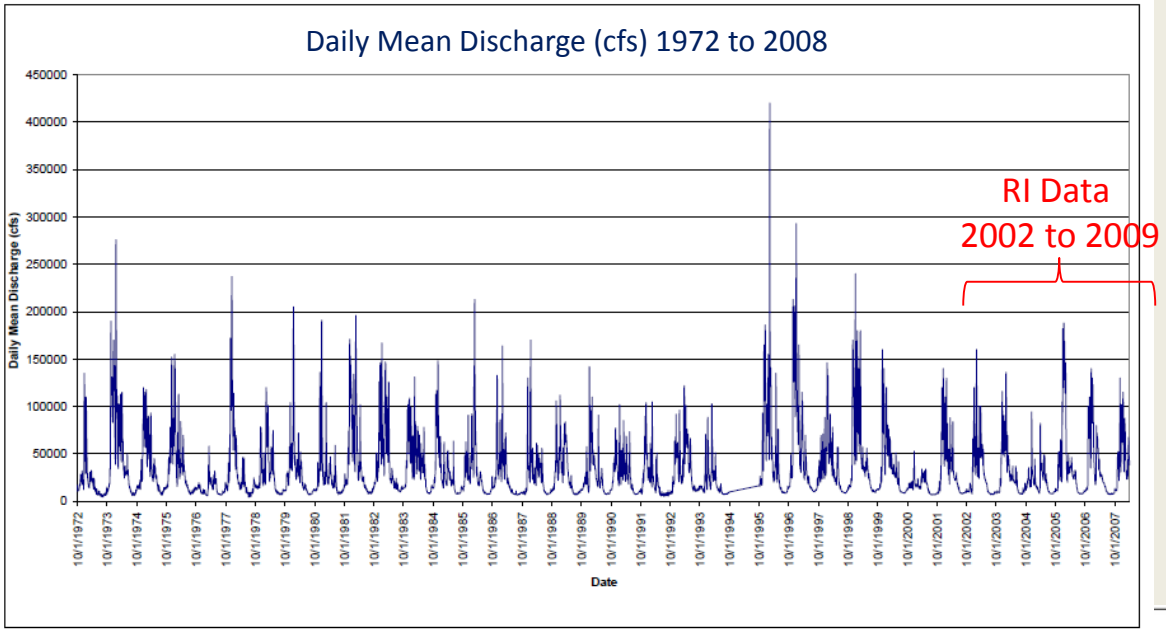
Figure 2.2-1
Portland Harbor RI/FS
Draft Feasibility Study Report
Processes Simulated by the Fate and Transport Model

DEQ

Modeling Challenge – Highly Dynamic System



Video of 1997 Flood
www.youtube.com/watch?v=1AGSFFOSfz0

integral LWG Lower Willamette Group

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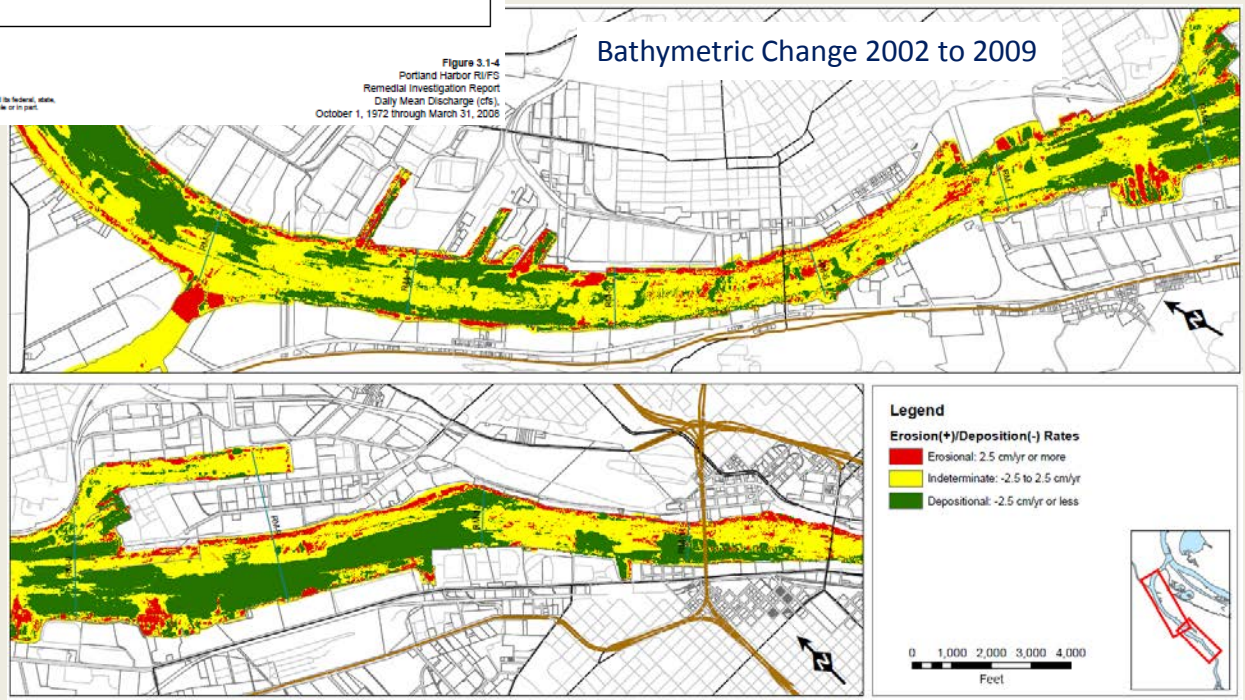
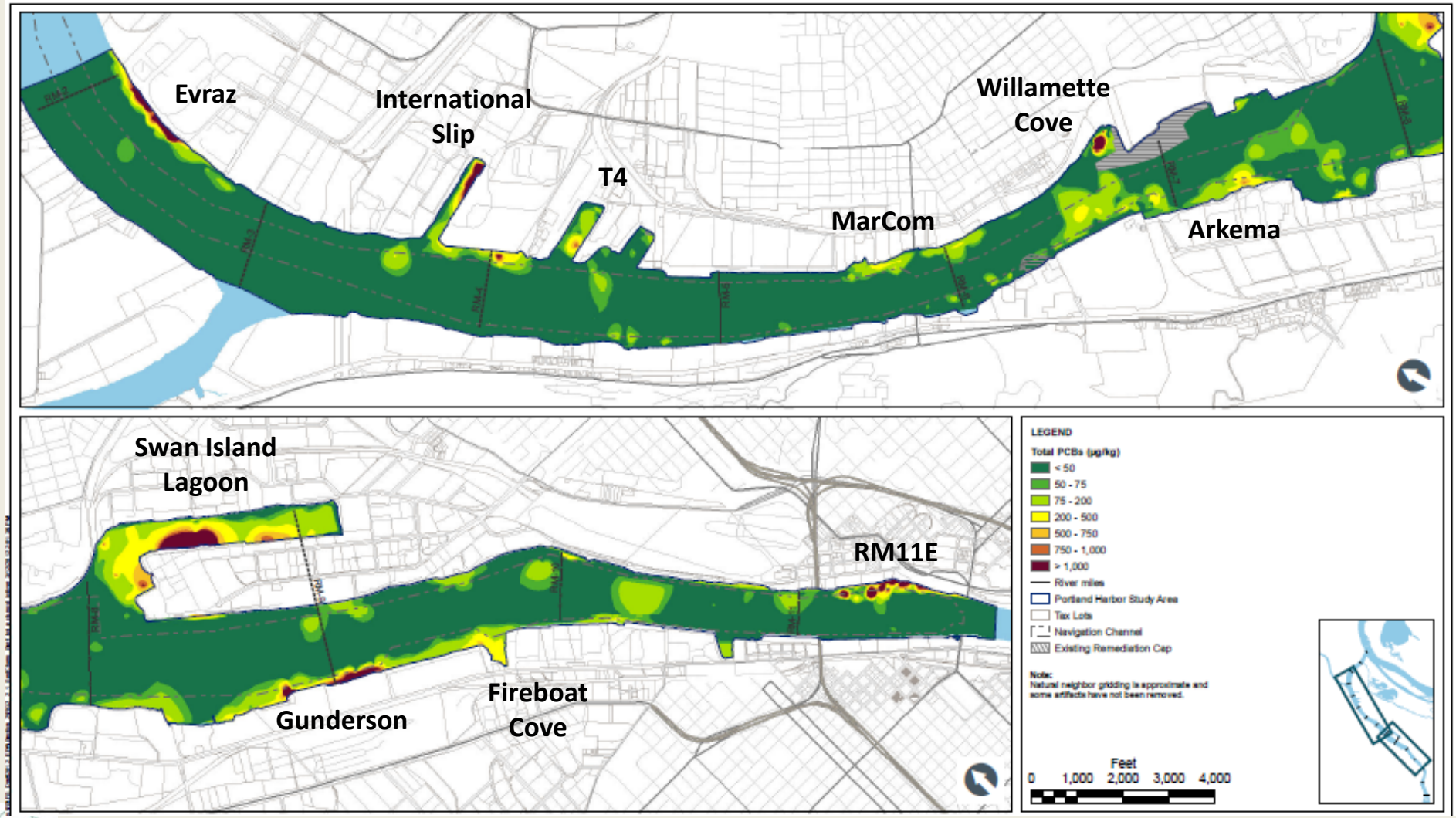
Figure 3.1-4
Portland Harbor RI/FS
Remedial Investigation Report
Daily Mean Discharge (cfs),
October 1, 1972 through March 31, 2008

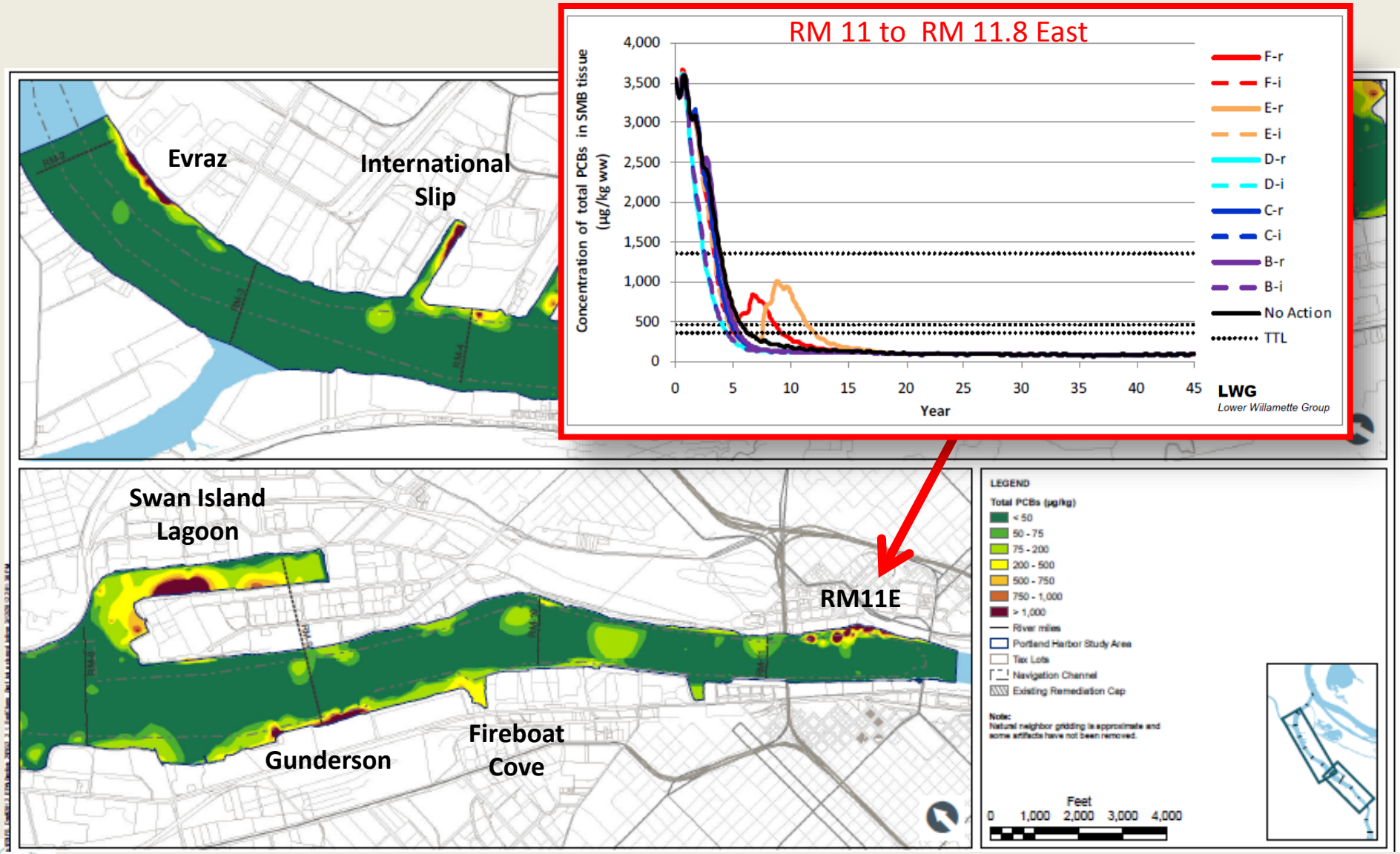


Portland, Oregon 1996 Flood

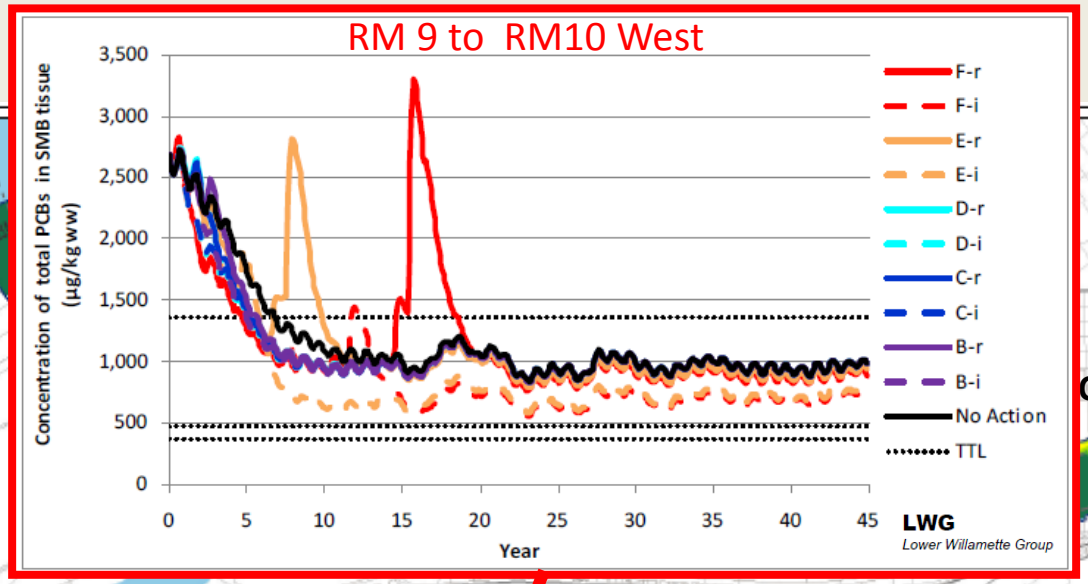
Modeling Hot Spot (e.g., PCBs)

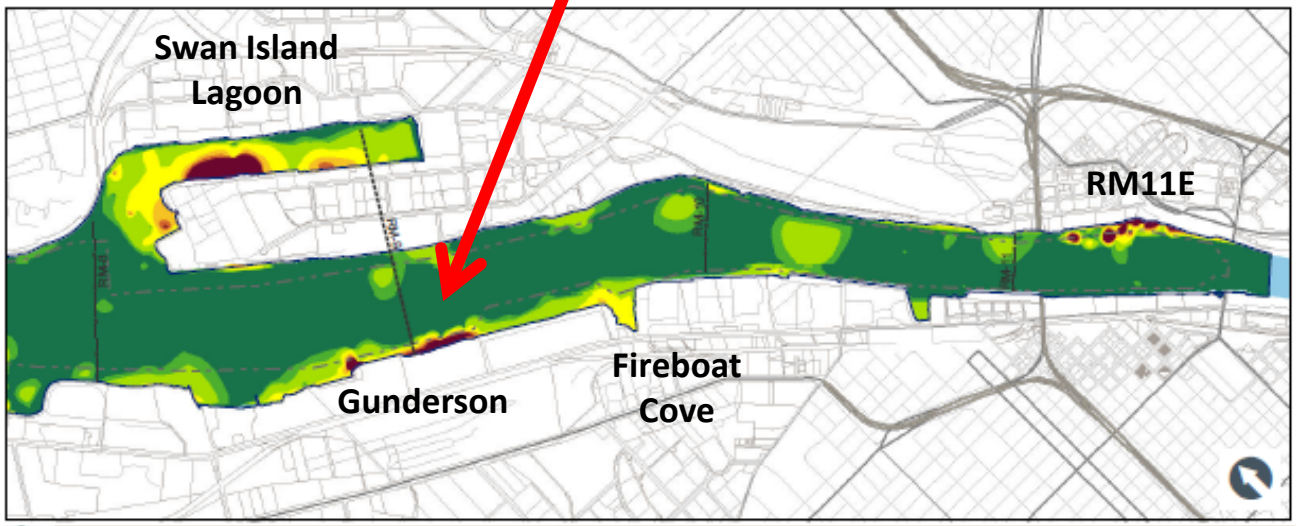


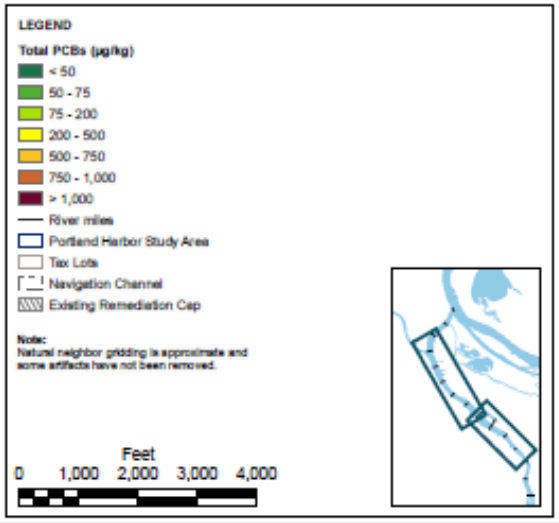
RM11E Area Model Results – Full recovery < 10 years with No Action



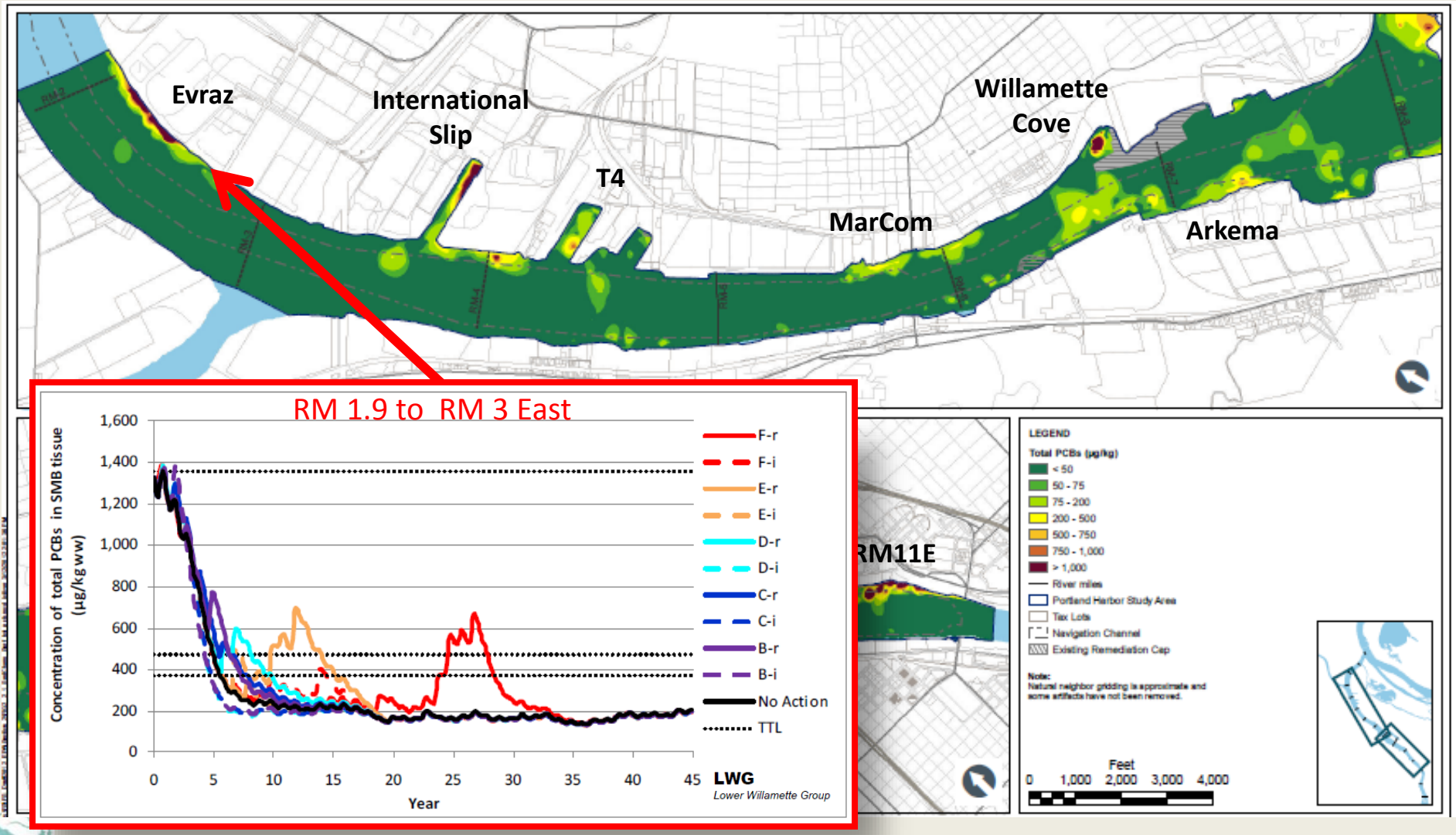
Gunderson Area Model Results – Full recovery < 10 years with No Action





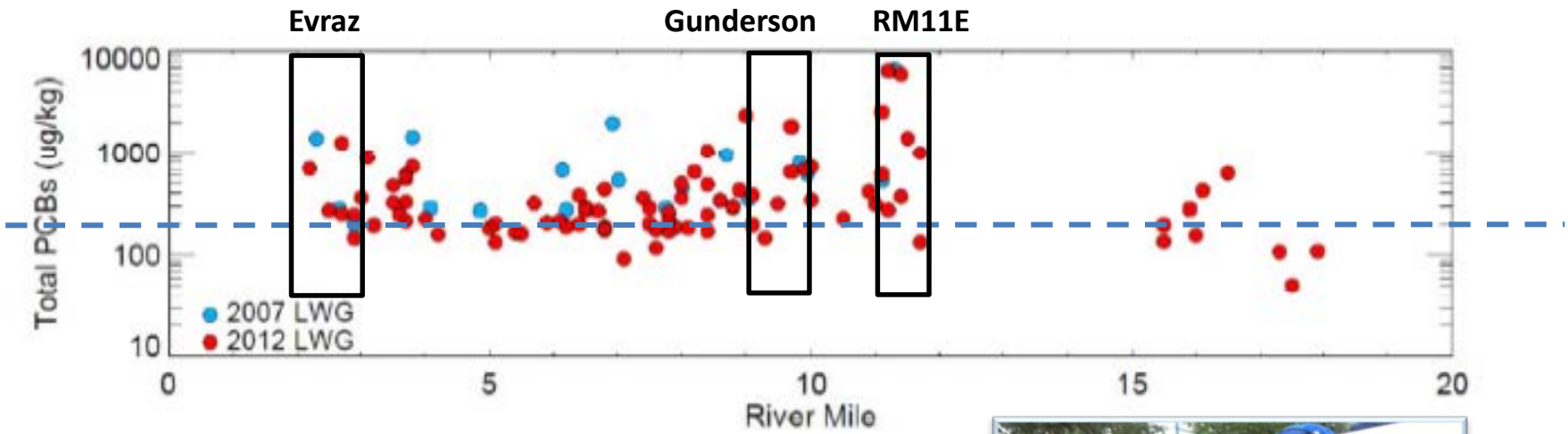


Evraz Area Model Results – Full recovery < 10 years with No Action



Empirical Data – No Discernible Recovery

2007 and 2012 PCB Concentrations in Whole Smallmouth Bass by River Mile



EPA Draft Feasibility Study Figure 4.1-6

Conclusions and Recommendations

- The LWG's MNR model appears to substantially over predict MNR rates in key hot spot areas
- Conversely, it is unknown whether MNR may be *more effective* than predicted for off-channel areas such as SI Lagoon
- EPA and LWG should work together to solve problems with LWG's MNR model
- If too late for the ROD, model improvements should be factored in to remedial design and some form of adaptive management

Gunderson Marine Barge Launch
www.youtube.com/watch?v=Oa_z-1bQbFA