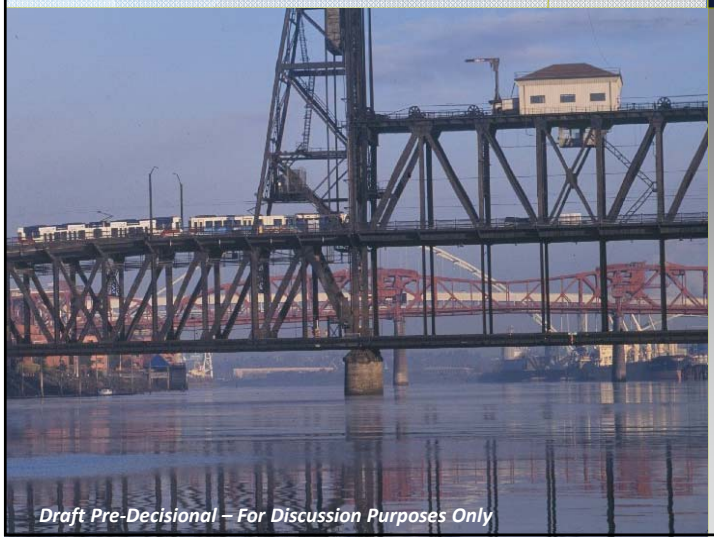
Portland Harbor Feasibility Study

EPA LWG Meeting – Development of Sediment Decision Units



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US EPA
Oregon Operations Office
Portland, Oregon

Via Webinar

March 27, 2014
Time 9:00 AM to 1 PM PDT

Agenda

- Objective
- Approach
- Modifications
- Sediment Decision Units

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Objective

- Develop a spatial basis for evaluating SMAs based on:
  - River regions
    - East side
    - Navigational Channel
    - West side
    - Swan Island
- Goal = reproducibly defined, spatially based decision area to evaluate risk reduction, centered on contaminant high concentration areas

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Approach

- Delineate sub-areas of the site exhibiting the highest concentrations
- Segregate data based on river region
- Develop a rolling average based on non-weighted surface sediment results for the Key RAL COCs
- Adjust SDU boundaries based on interpolated concentration contours
- Circle back to add additional SDUs based on other considerations (e.g., benthic risk, non RAL COCs)

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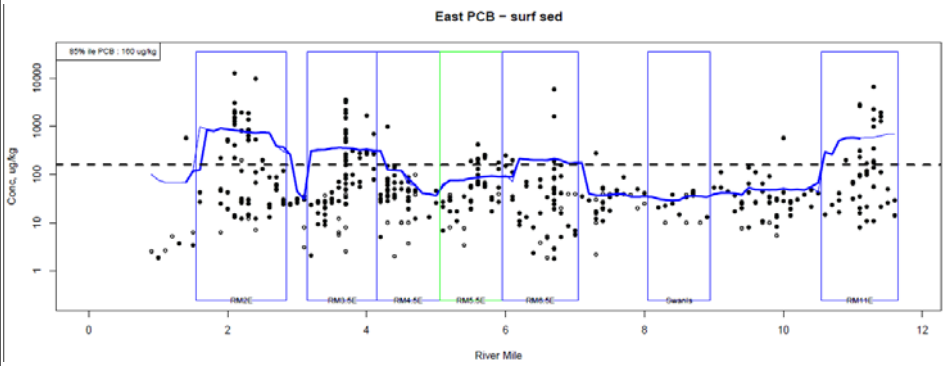
Rolling Average – example = PCB on East side



Note: All SDUs shown, not just PCB related ones

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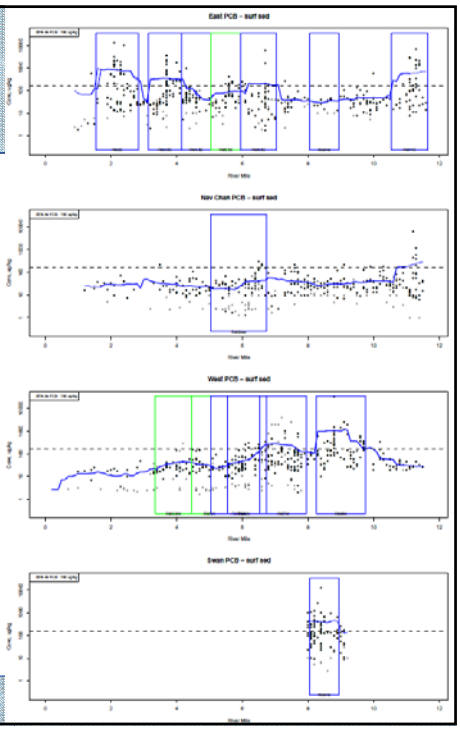
Total PCBs



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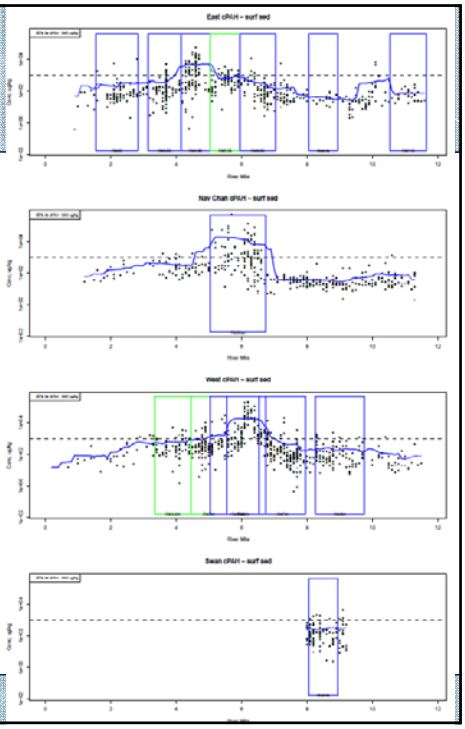
BapEq



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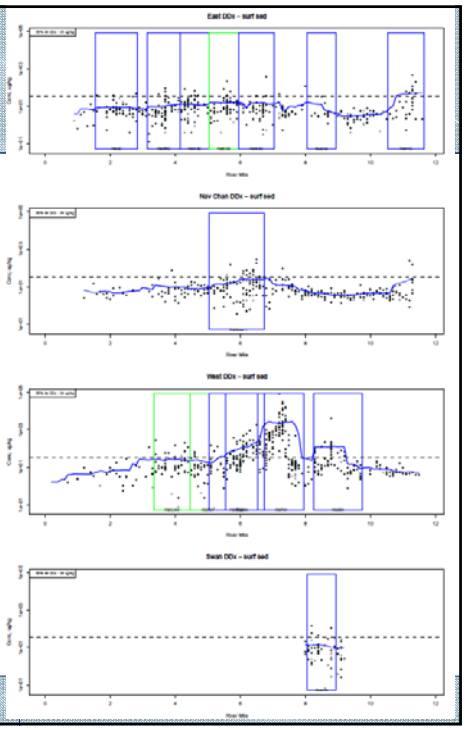
DDx



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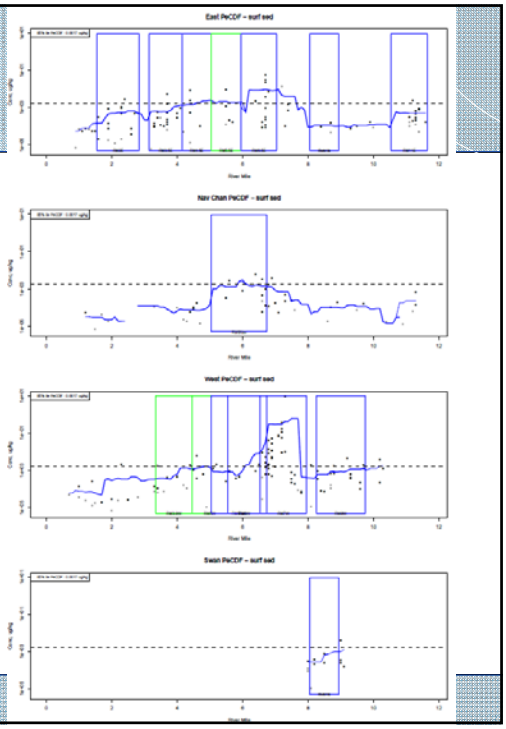
PeCDF



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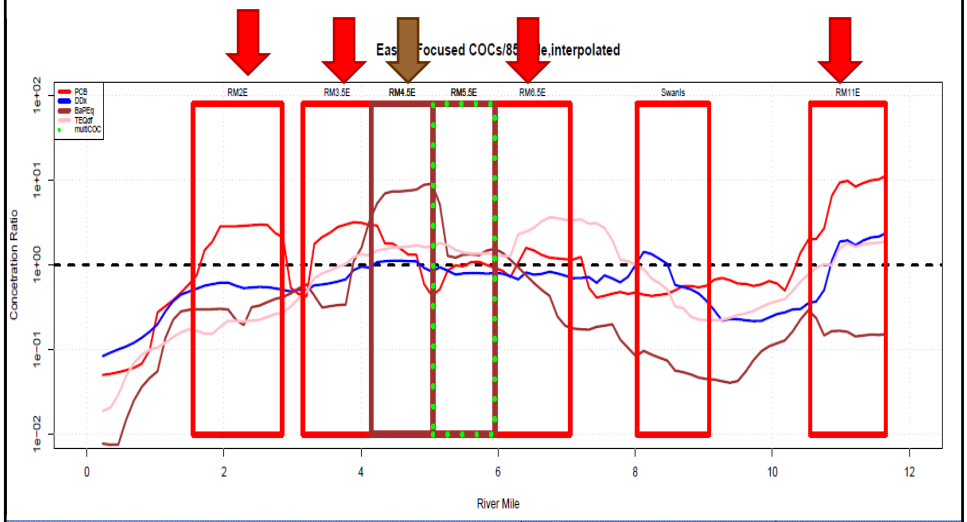
East - Normalized by 85th percentile



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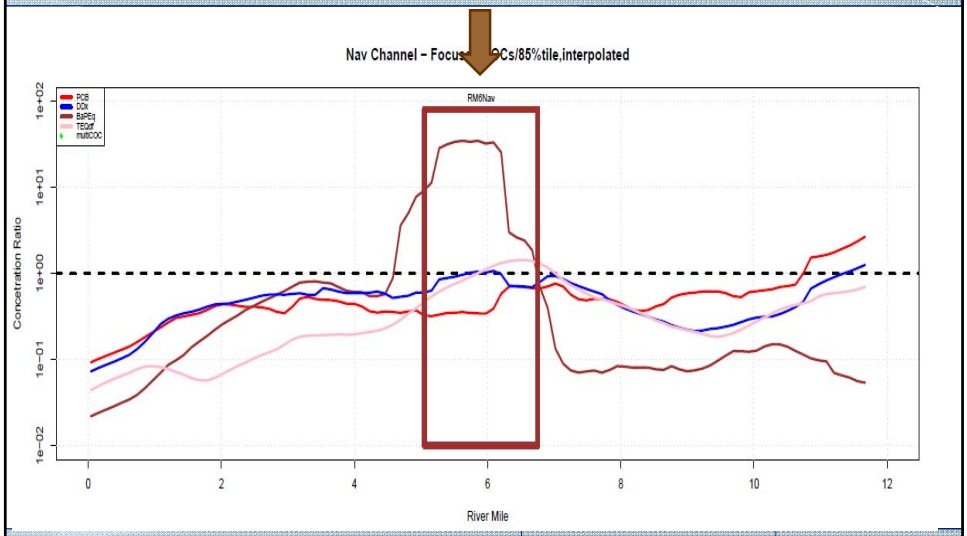
Nav Channel - Normalized by 85th percentile



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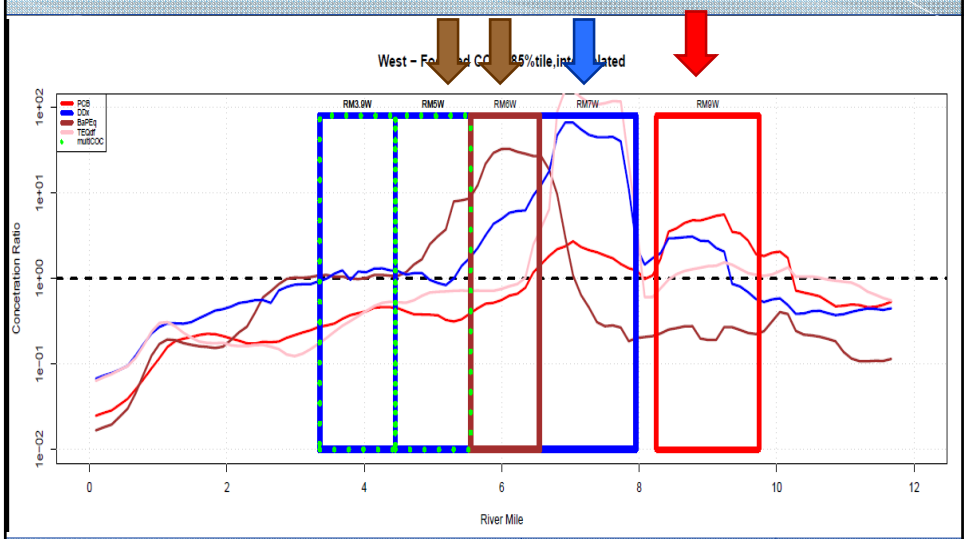
West - Normalized by 85th percentile



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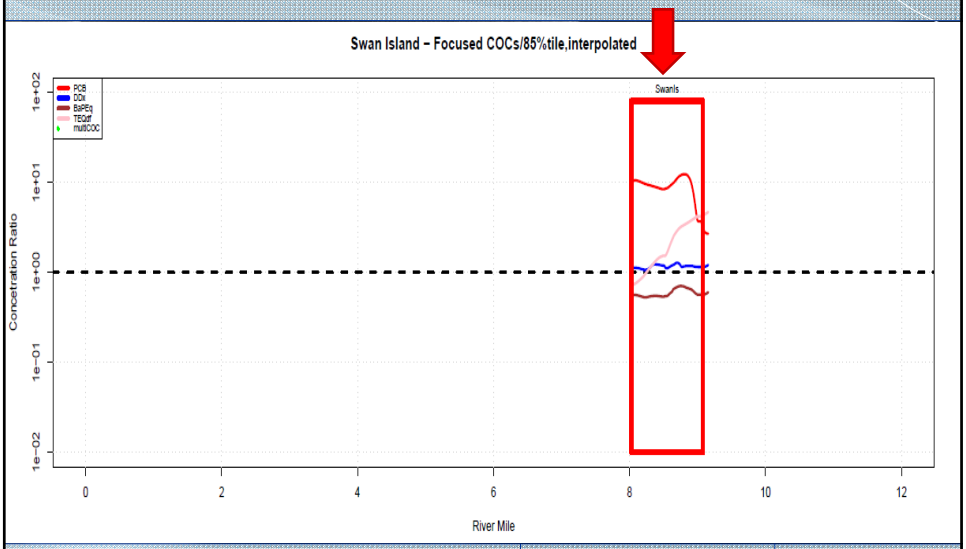
Swan Island - Normalized by 85th percentile



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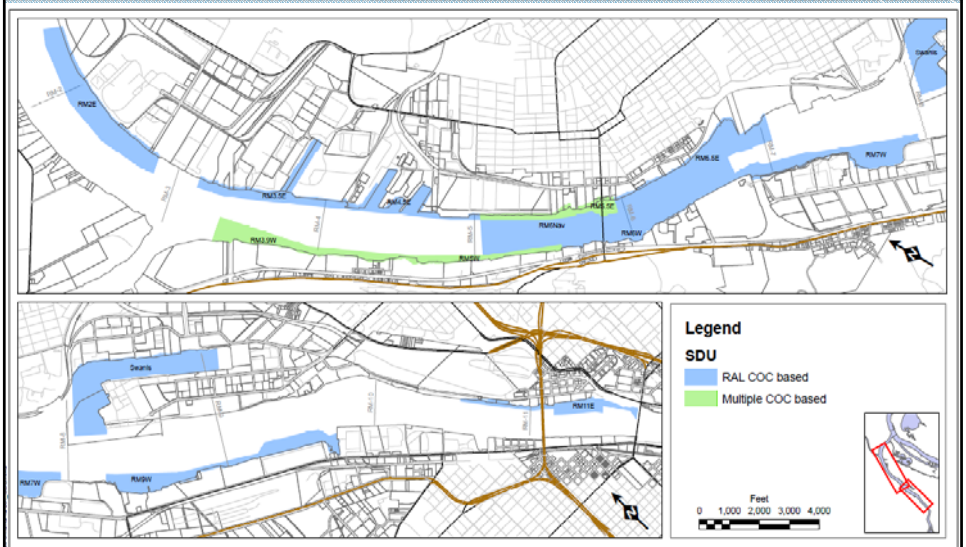
Additional SDUs



Sediment Decision Units (SDU)

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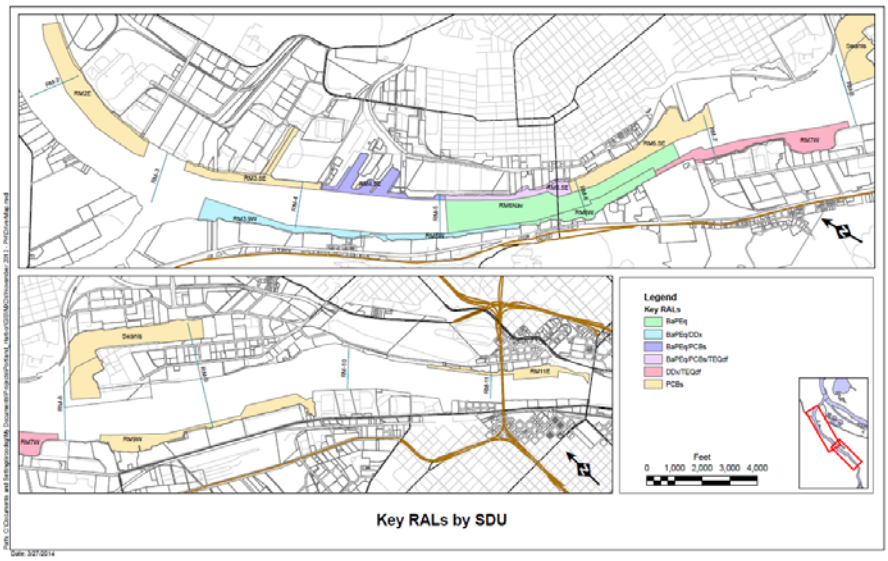
Map of SDUs with Key RALs designated



Sediment Decision Units

SDU	Length (mi)	Acres	SDU type	Key RAL COCs
RM2E	1.3	102.8	RAL COC based	PCBs
RM3.5E	1	51.3	RAL COC based	PCBs
RM4.5E	0.9	43.3	RAL COC based	BaPEq/PCBs
RM5.5E	0.9	30.0	Multiple COC based	BaPEq/PCBs/TEQdf
RM6.5E	1.1	89.2	RAL COC based	PCBs
SwanIs	1.1	117.0	RAL COC based	PCBs
RM11E	1.1	28.8	RAL COC based	PCBs
RM3.9W	1.1	49.3	Multiple COC based	BaPEq/DDx
RM5W	1.1	24.6	Multiple COC based	BaPEq/DDx
RM6W	1	38.1	RAL COC based	BaPEq
RM7W	1.4	68.3	RAL COC based	DDx/TEQdf
RM9W	1.5	67.9	RAL COC based	PCBs
RM6Nav	1.7	147.0	RAL COC based	BaPEq

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SDUs and RAL curves

- RAL Curves Developed for each SDU
- Focused COC RALs
  - Total PCBs
  - Total BaPEq
  - Total DDx
  - Dioxin/furan as TEQ
- EPA Alts – No Action through G*
- LWG Alts – No Action through F

*Note: Benthic layer not added to EPA alternatives for following graphs

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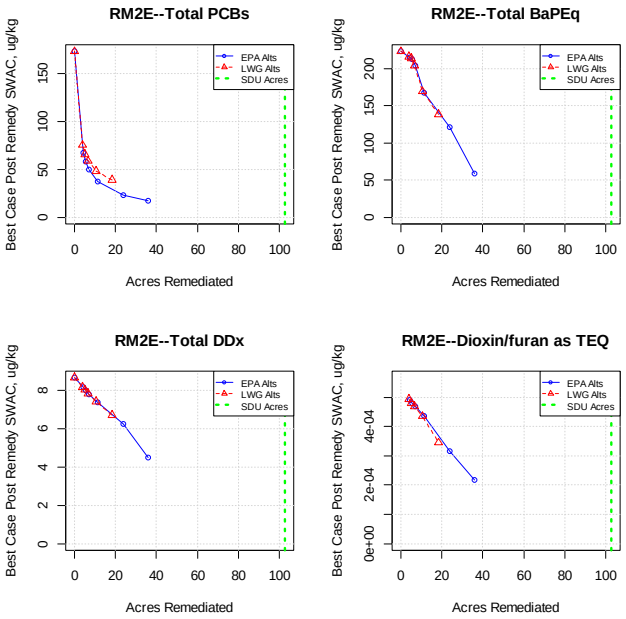

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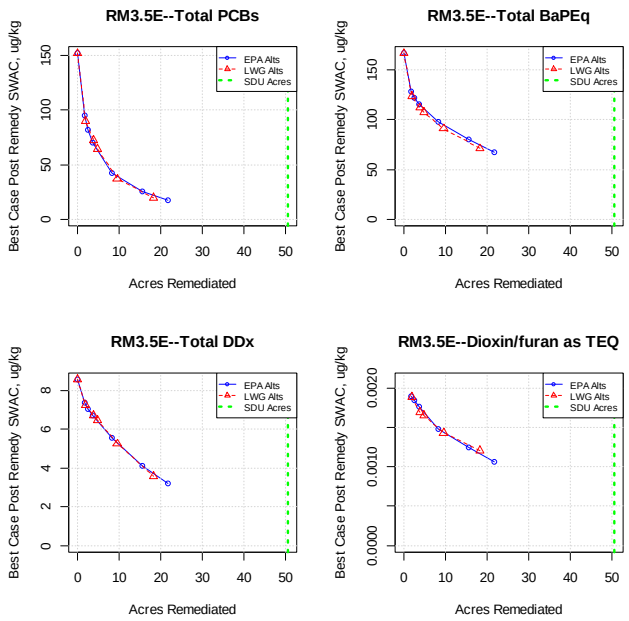

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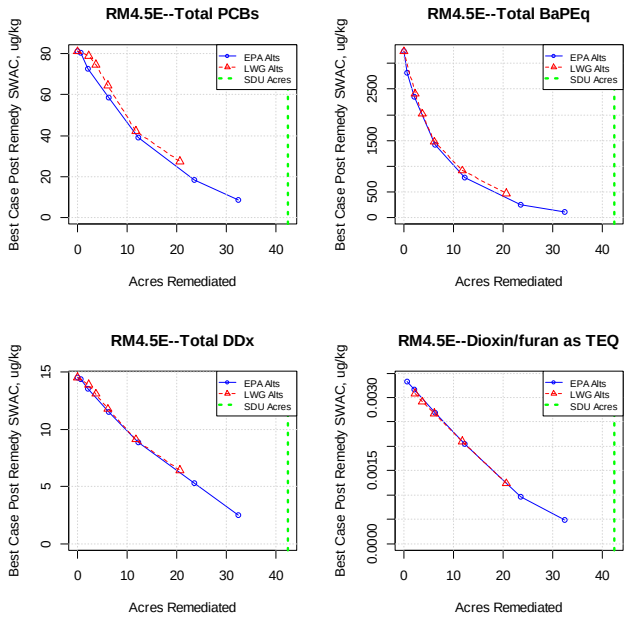

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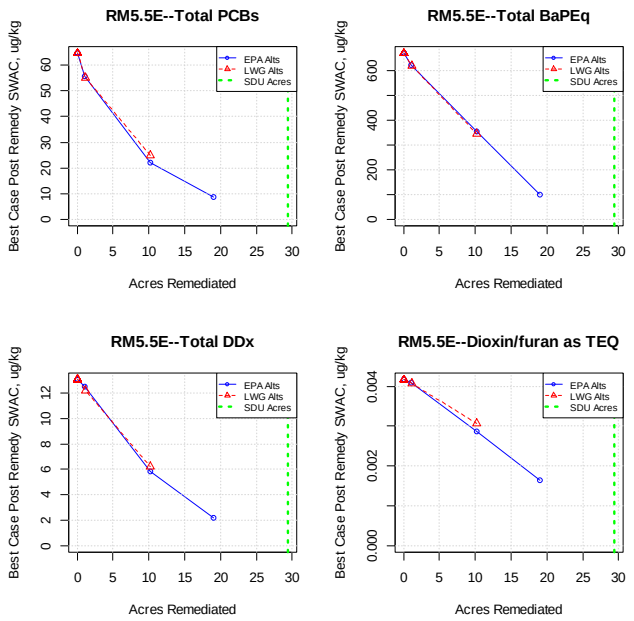

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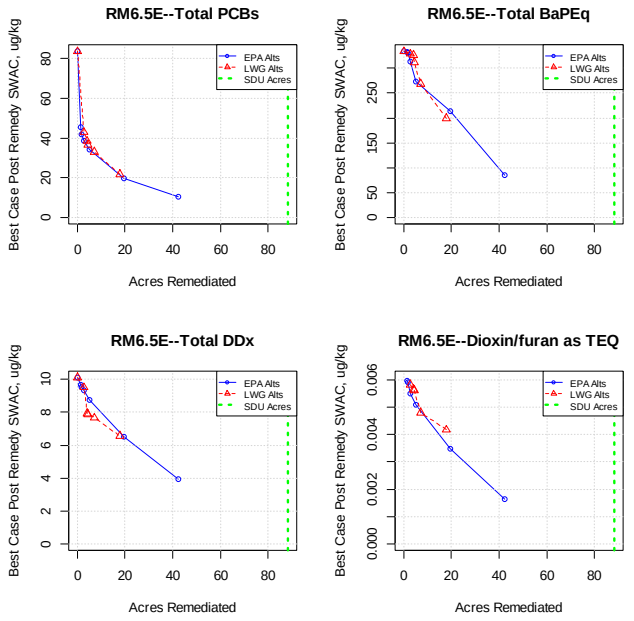

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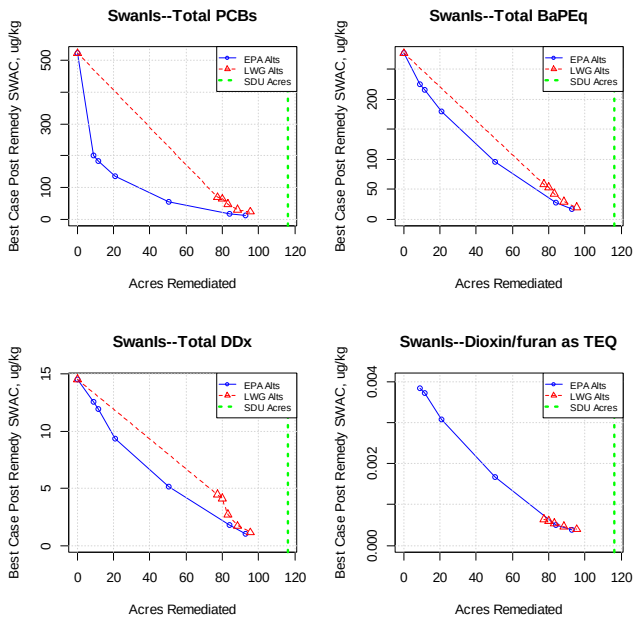

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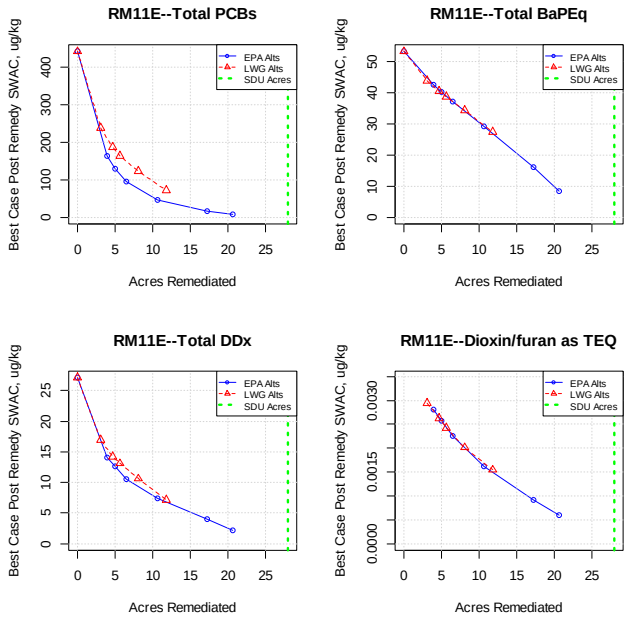

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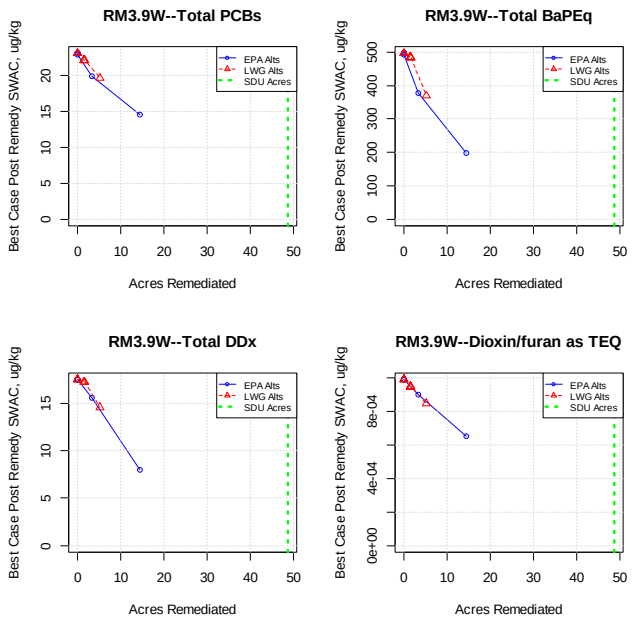

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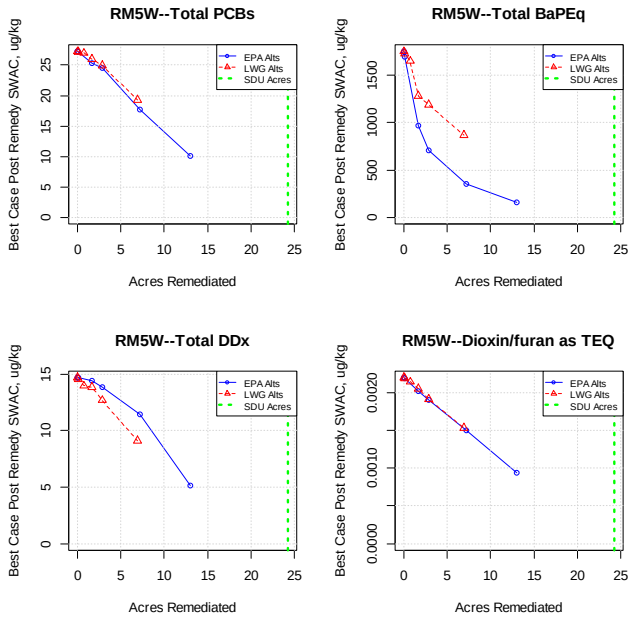

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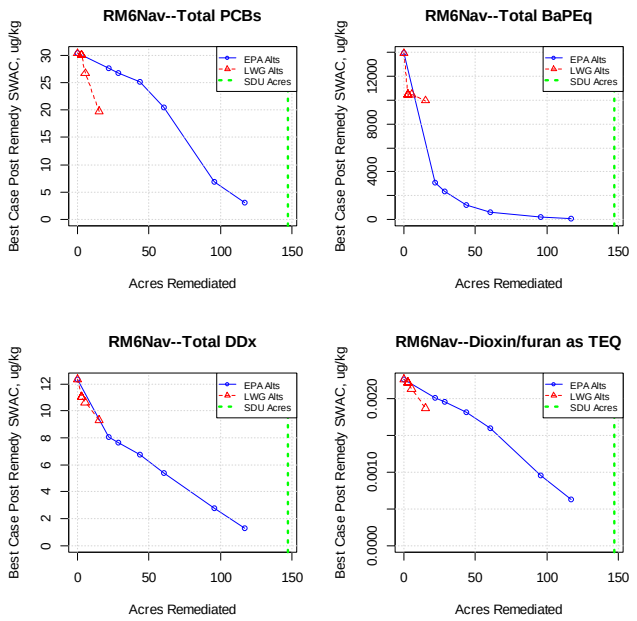

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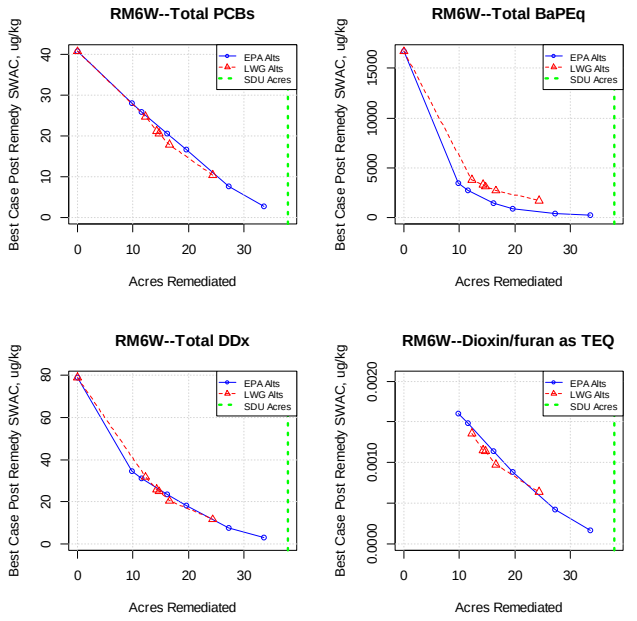

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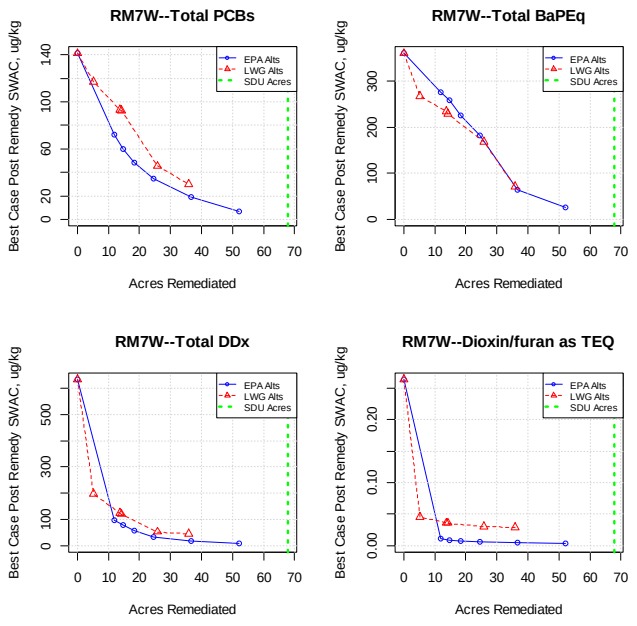

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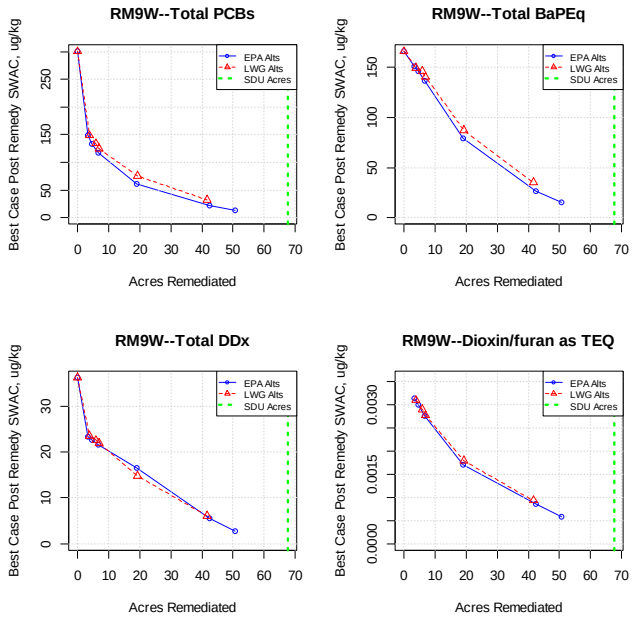

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Questions?