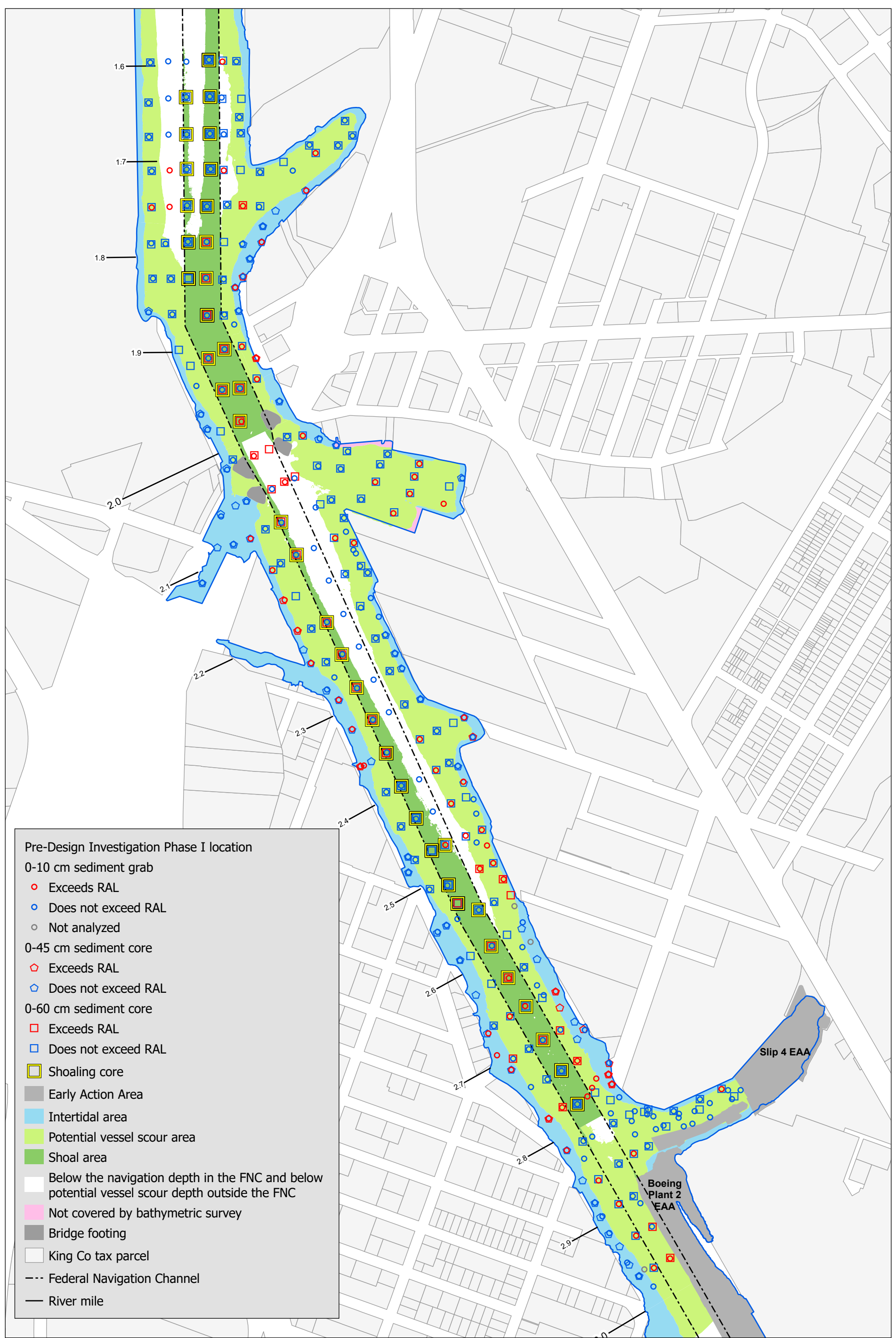
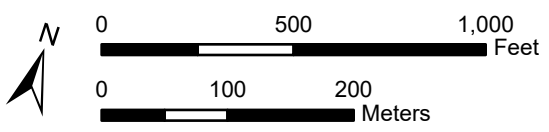


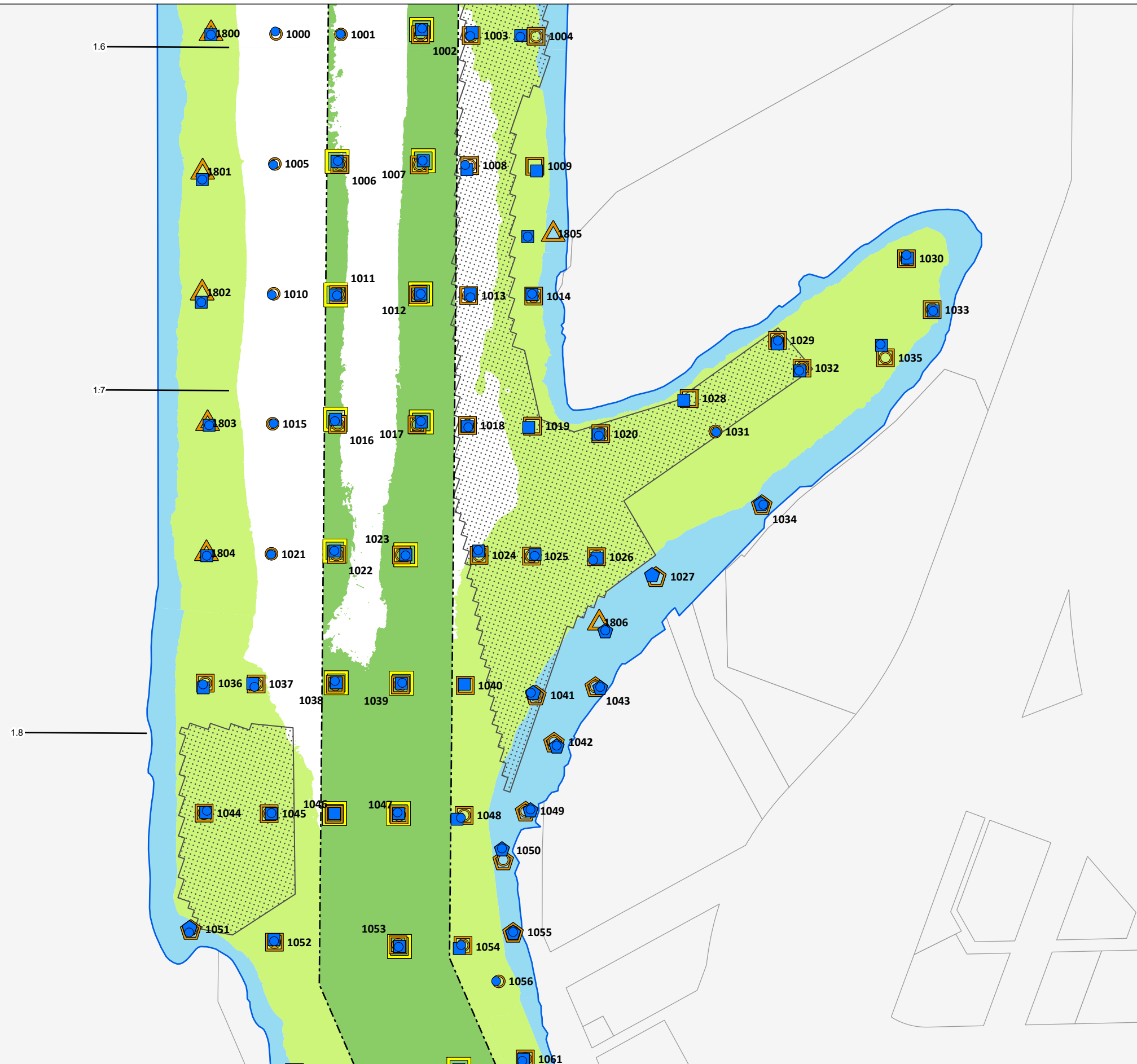
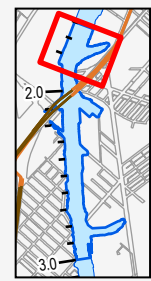
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- Pre-Design Investigation Phase I location
- 0-10 cm sediment grab
    - Exceeds RAL
    - Does not exceed RAL
    - Not analyzed
  - 0-45 cm sediment core
    - ◇ Exceeds RAL
    - ◇ Does not exceed RAL
  - 0-60 cm sediment core
    - Exceeds RAL
    - Does not exceed RAL
  - Shoaling core
  - Early Action Area
  - Intertidal area
  - Potential vessel scour area
  - Shoal area
  - Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
  - Not covered by bathymetric survey
  - Bridge footing
  - King Co tax parcel
  - Federal Navigation Channel
  - River mile



**Map 1. Phase I PDI sediment sampling locations (2022) and RAL exceedances**



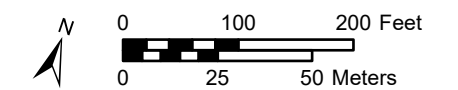
**Actual PDI Phase I sampling locations**

- 0-10 cm sediment grab
- ◆ 0-45 cm sediment core
- 0-60 cm sediment core

**Phase I target sampling locations**

- 0-10 cm sediment grab
- ◇ 0-45 cm sediment core
- 0-60 cm sediment core
- ∇ Vertical extent core
- △ Understructure sampling location
- ◻ Shoaling core

- ▨ Recovery Category 1
- Early Action Area
- Intertidal area
- Potential vessel scour area
- Shoal area
- Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
- Not covered by bathymetric survey
- Bridge footing
- King Co tax parcel
- Federal Navigation Channel
- River mile



**Map 2a. Phase I PDI sediment sampling locations (2022) target and actual, RM 1.6 to RM 1.85**

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**Actual PDI Phase I sampling locations**

- 0-10 cm sediment grab
- ⬠ 0-45 cm sediment core
- ⬠ 0-60 cm sediment core

**Phase I target sampling locations**

- 0-10 cm sediment grab
- ⬠ 0-45 cm sediment core
- ⬠ 0-60 cm sediment core
- ∇ Vertical extent core
- △ Understructure sampling location
- Shoaling core

[Dotted Pattern] Recovery Category 1  
 [Grey Area] Early Action Area  
 [Light Blue Area] Intertidal area  
 [Light Green Area] Potential vessel scour area  
 [Dark Green Area] Shoal area  
 [White Area] Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC  
 [Pink Area] Not covered by bathymetric survey  
 [Grey Shape] Bridge footing  
 [Thin Grey Line] King Co tax parcel  
 [Dashed Line] Federal Navigation Channel  
 [Solid Line] River mile

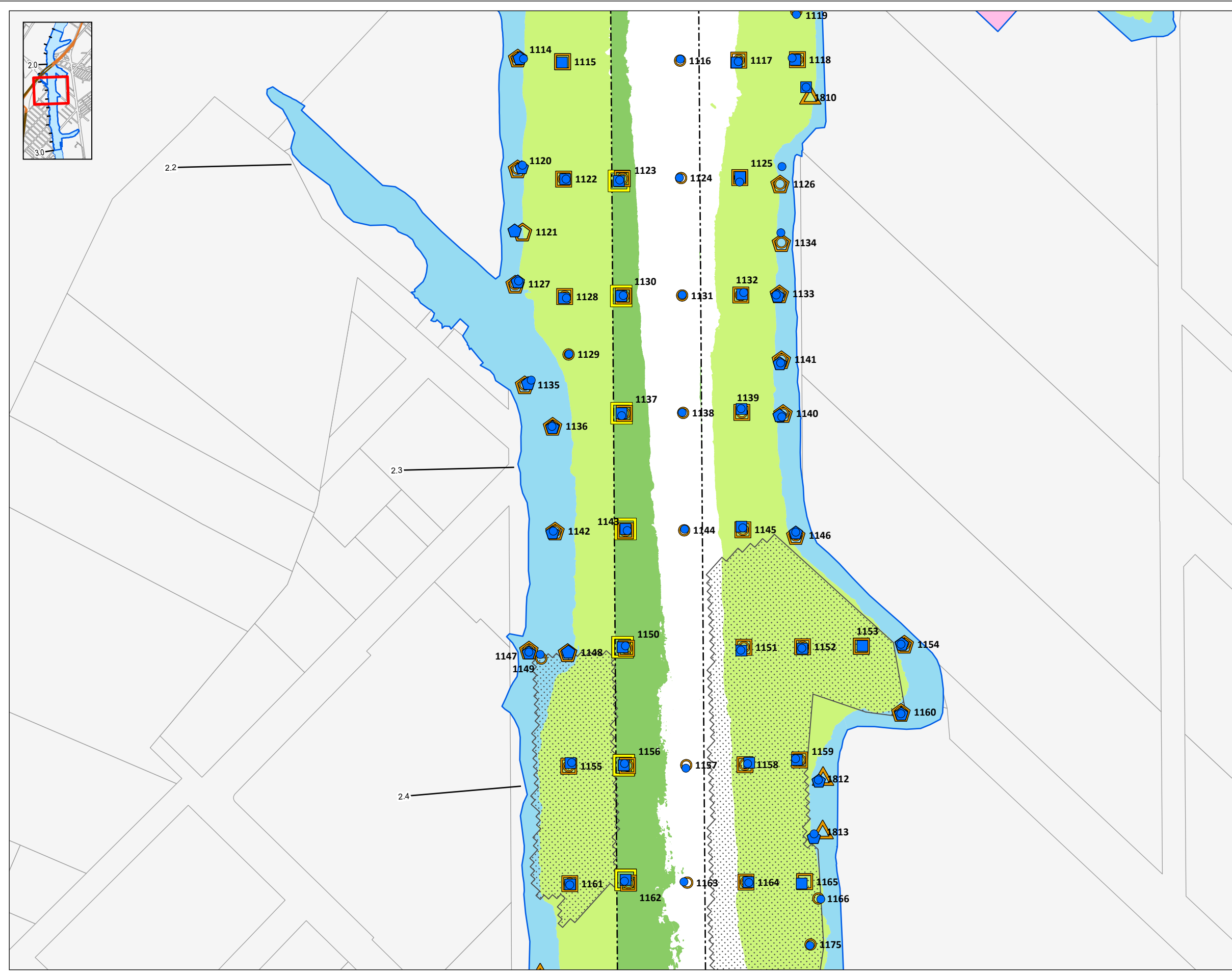


**Map 2b. Phase I PDI sediment sampling locations (2022) target and actual, RM 1.85 to RM 2.15**

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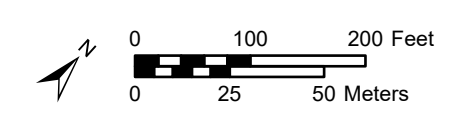
**Actual PDI Phase I sampling locations**

- 0-10 cm sediment grab
- ⬠ 0-45 cm sediment core
- ⬠ 0-60 cm sediment core

**Phase I target sampling locations**

- 0-10 cm sediment grab
- ⬠ 0-45 cm sediment core
- ⬠ 0-60 cm sediment core
- ∇ Vertical extent core
- △ Understructure sampling location
- Shoaling core

[Dotted Pattern] Recovery Category 1  
 [Grey Box] Early Action Area  
 [Light Blue Box] Intertidal area  
 [Light Green Box] Potential vessel scour area  
 [Dark Green Box] Shoal area  
 [White Box] Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC  
 [Pink Box] Not covered by bathymetric survey  
 [Grey Box] Bridge footing  
 [White Box] King Co tax parcel  
 [Dashed Line] Federal Navigation Channel  
 [Solid Line] River mile



**Map 2c. Phase I PDI sediment sampling locations (2022) target and actual, RM 2.15 to RM 2.45**

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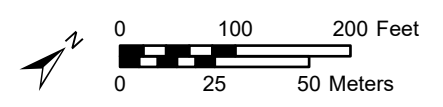


**Actual PDI Phase I sampling locations**

- 0-10 cm sediment grab
- ◆ 0-45 cm sediment core
- 0-60 cm sediment core

**Phase I target sampling locations**

- 0-10 cm sediment grab
- ◇ 0-45 cm sediment core
- 0-60 cm sediment core
- ∇ Vertical extent core
- △ Understructure sampling location
- Shoaling core
- ▨ Recovery Category 1
- Early Action Area
- Intertidal area
- Potential vessel scour area
- Shoal area
- Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
- Not covered by bathymetric survey
- Bridge footing
- King Co tax parcel
- Federal Navigation Channel
- River mile

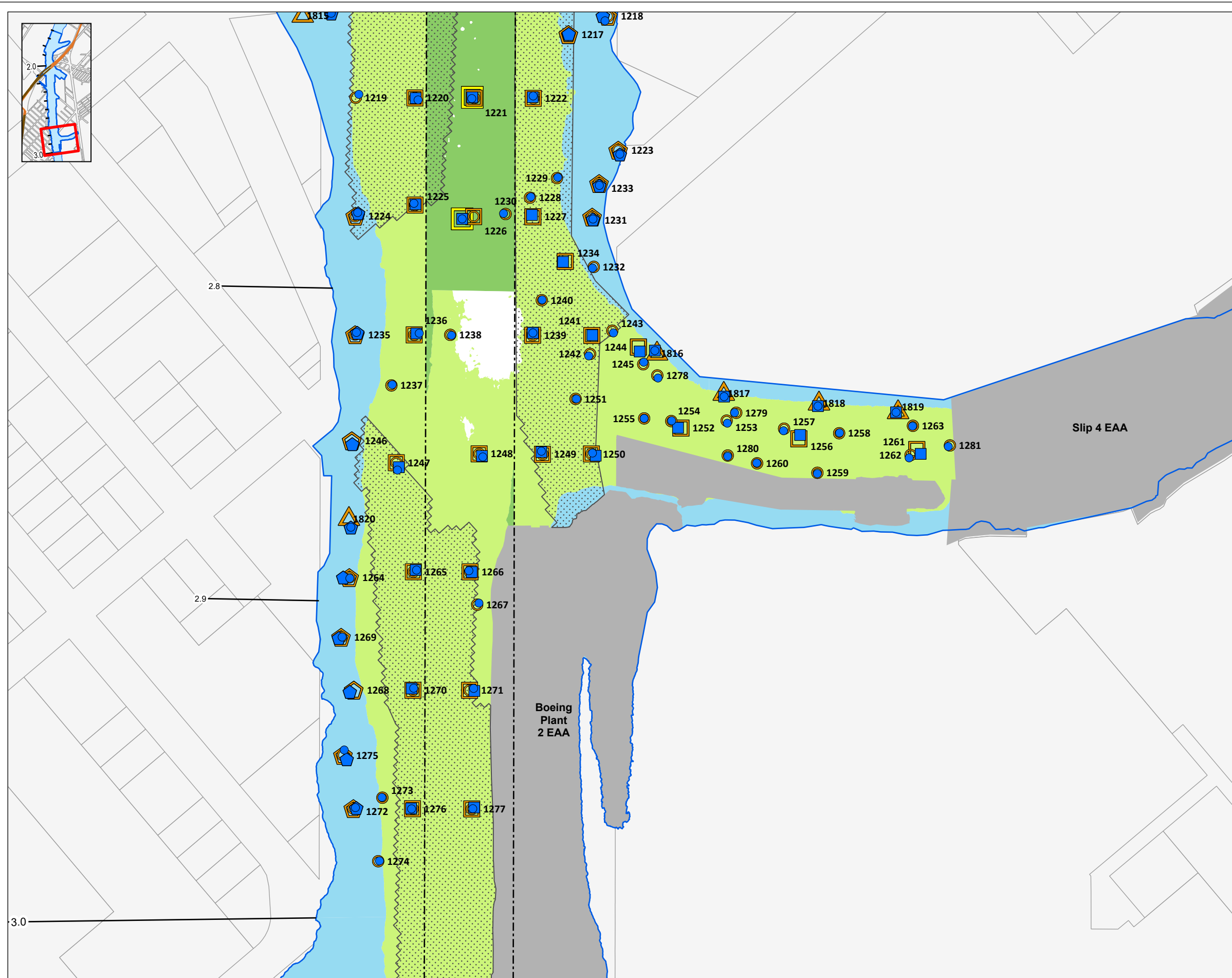


**Map 2d. Phase I PDI sediment sampling locations (2022) target and actual, RM 2.45 to RM 2.75**

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**Actual PDI Phase I sampling locations**

- 0-10 cm sediment grab
- ⬠ 0-45 cm sediment core
- 0-60 cm sediment core

**Phase I target sampling locations**

- 0-10 cm sediment grab
- ⬠ 0-45 cm sediment core
- 0-60 cm sediment core
- ∇ Vertical extent core
- △ Understructure sampling location
- Shoaling core

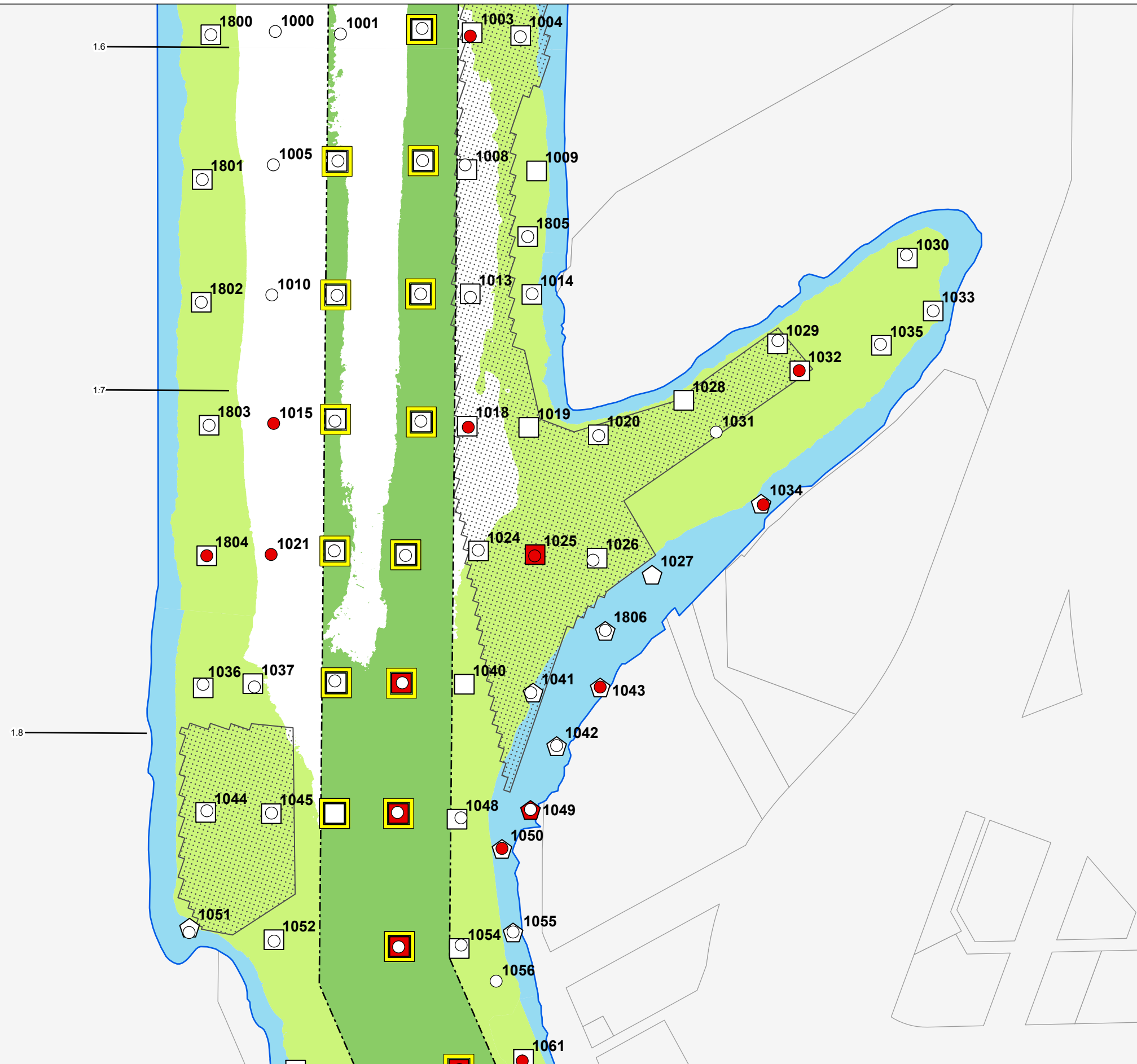
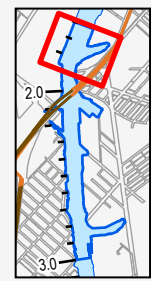
■ Recovery Category 1  
 ■ Early Action Area  
 ■ Intertidal area  
 ■ Potential vessel scour area  
 ■ Shoal area  
 ■ Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC  
 ■ Not covered by bathymetric survey  
 ■ Bridge footing  
 ■ King Co tax parcel  
 --- Federal Navigation Channel  
 — River mile



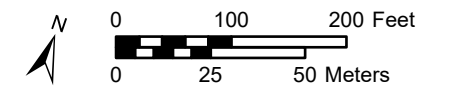
**Map 2e. Phase I PDI sediment sampling locations (2022) target and actual, RM 2.75 to RM 3.0**

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- PDI Phase I sampling location**
- 0-10 cm sediment grab**
    - Exceeds RAL
    - Does not exceed RAL
    - Not analyzed
  - 0-45 cm sediment core**
    - ◩ Exceeds RAL
    - ◩ Does not exceed RAL
  - 0-60 cm sediment core**
    - Exceeds RAL
    - Does not exceed RAL
    - Shallowing core
  - ◻ Recovery Category 1
  - Intertidal area
  - Potential vessel scour area
  - Shoal area
  - Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
  - Not covered by bathymetric survey
  - Bridge footing
  - Early Action Area
  - King Co tax parcel
  - Federal Navigation Channel
  - River mile

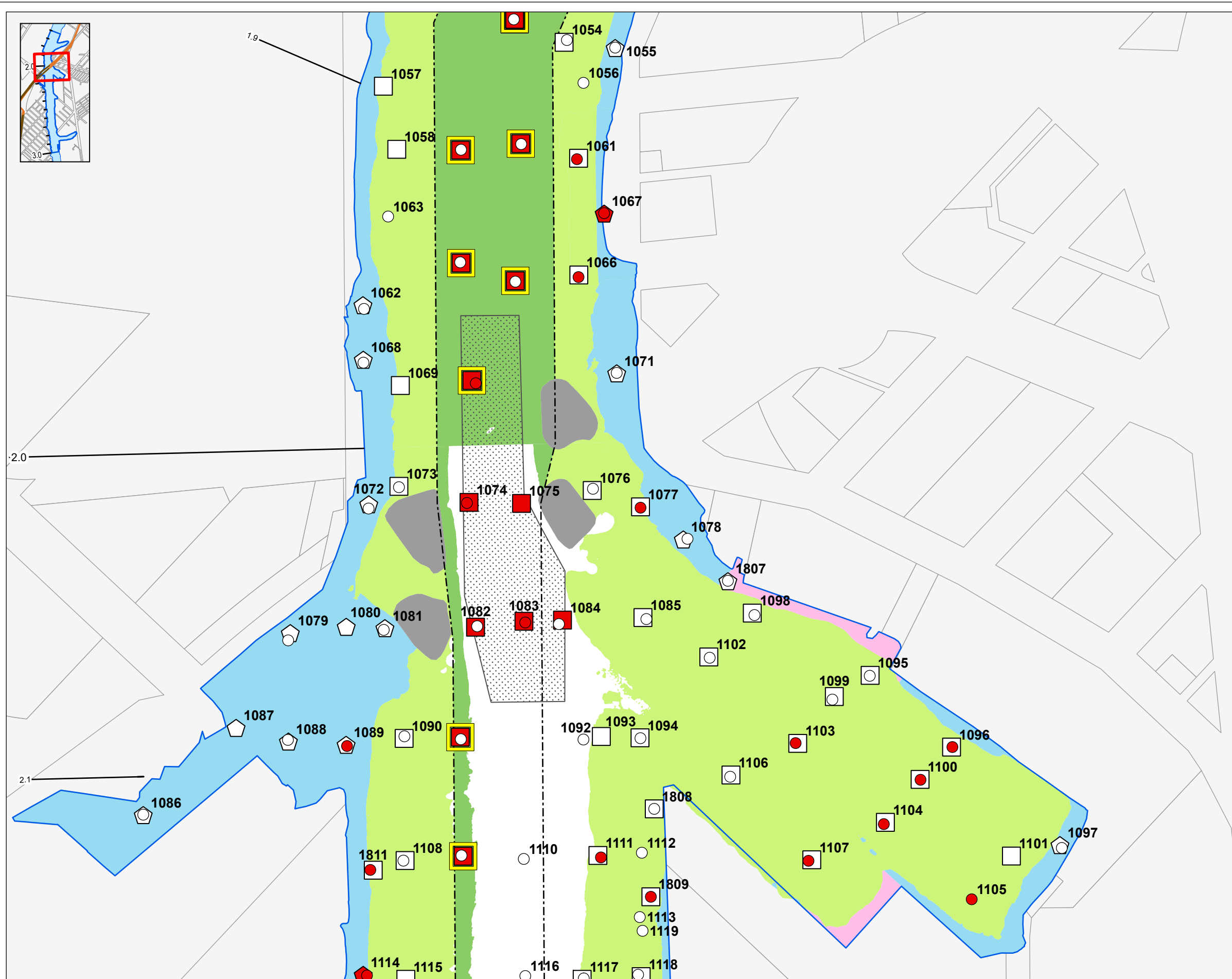


**Map 3a. Phase I PDI sediment sampling locations (2022) and RAL exceedances, RM 1.6 to RM 1.85**

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**PDI Phase I sampling location**

**0-10 cm sediment grab**

- Exceeds RAL
- Does not exceed RAL
- Not analyzed

**0-45 cm sediment core**

- ⬠ Exceeds RAL
- ⬠ Does not exceed RAL

**0-60 cm sediment core**

- Exceeds RAL
- Does not exceed RAL
- Shoaling core

- ▨ Recovery Category 1
- Intertidal area
- Potential vessel scour area
- Shoal area
- Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
- Not covered by bathymetric survey
- Bridge footing
- Early Action Area
- King Co tax parcel
- Federal Navigation Channel
- River mile



**Map 3b. Phase I PDI sediment sampling locations (2022) and RAL exceedances, RM 1.85 to RM 2.15**

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**PDI Phase I sampling location**

**0-10 cm sediment grab**

- Exceeds RAL
- Does not exceed RAL
- Not analyzed

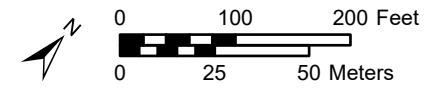
**0-45 cm sediment core**

- ⬠ Exceeds RAL
- ⬠ Does not exceed RAL

**0-60 cm sediment core**

- Exceeds RAL
- Does not exceed RAL
- Shoaling core

- ▨ Recovery Category 1
- Intertidal area
- Potential vessel scour area
- Shoal area
- Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
- Not covered by bathymetric survey
- Bridge footing
- Early Action Area
- King Co tax parcel
- Federal Navigation Channel
- River mile



**Map 3c. Phase I PDI sediment sampling locations (2022) and RAL exceedances, RM 2.15 to RM 2.45**

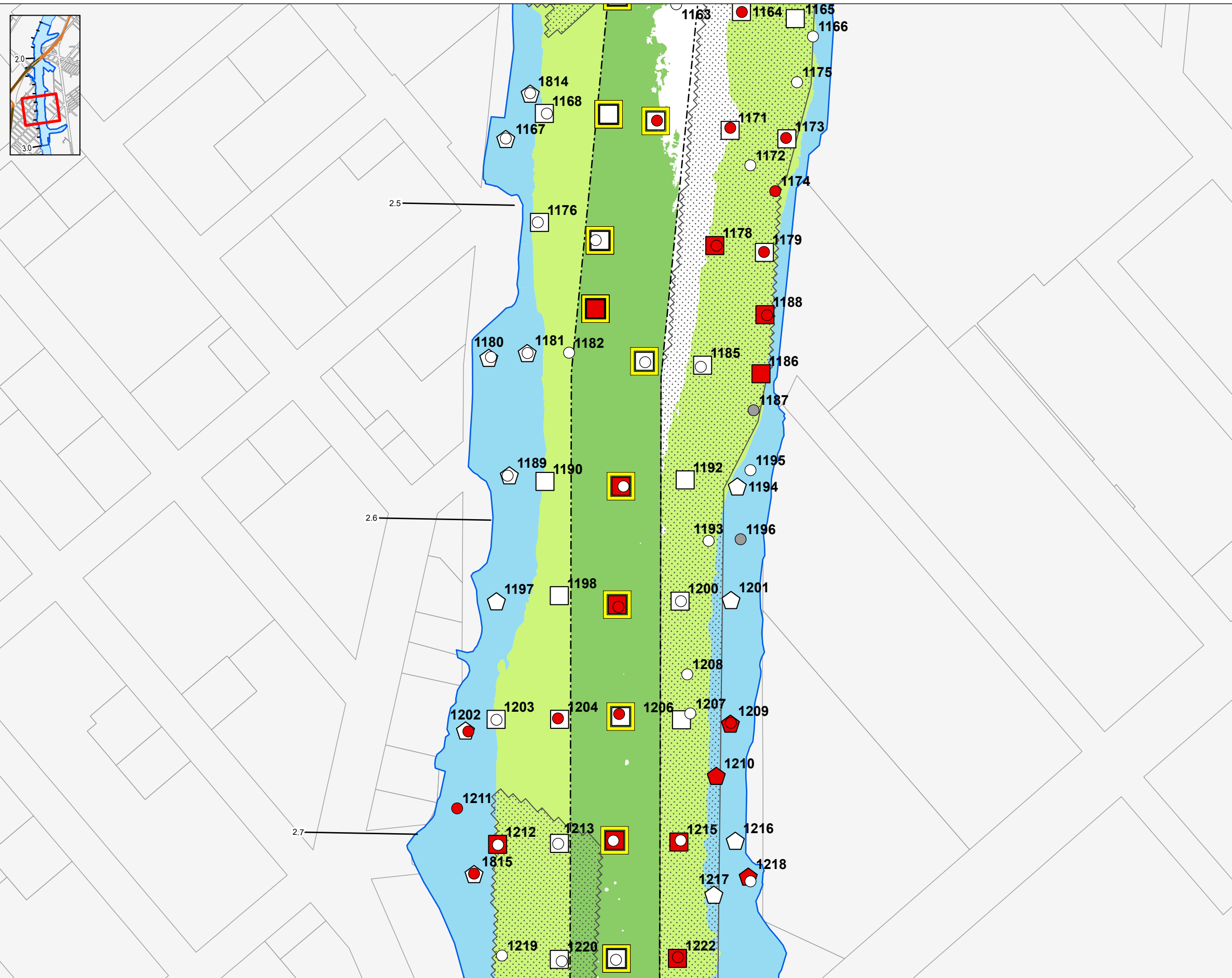
PRE-DESIGN INVESTIGATION PHASE I DATA  
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**PDI Phase I sampling location**

**0-10 cm sediment grab**

- Exceeds RAL
- Does not exceed RAL
- Not analyzed

**0-45 cm sediment core**

- ⬠ Exceeds RAL
- ⬠ Does not exceed RAL

**0-60 cm sediment core**

- Exceeds RAL
- Does not exceed RAL

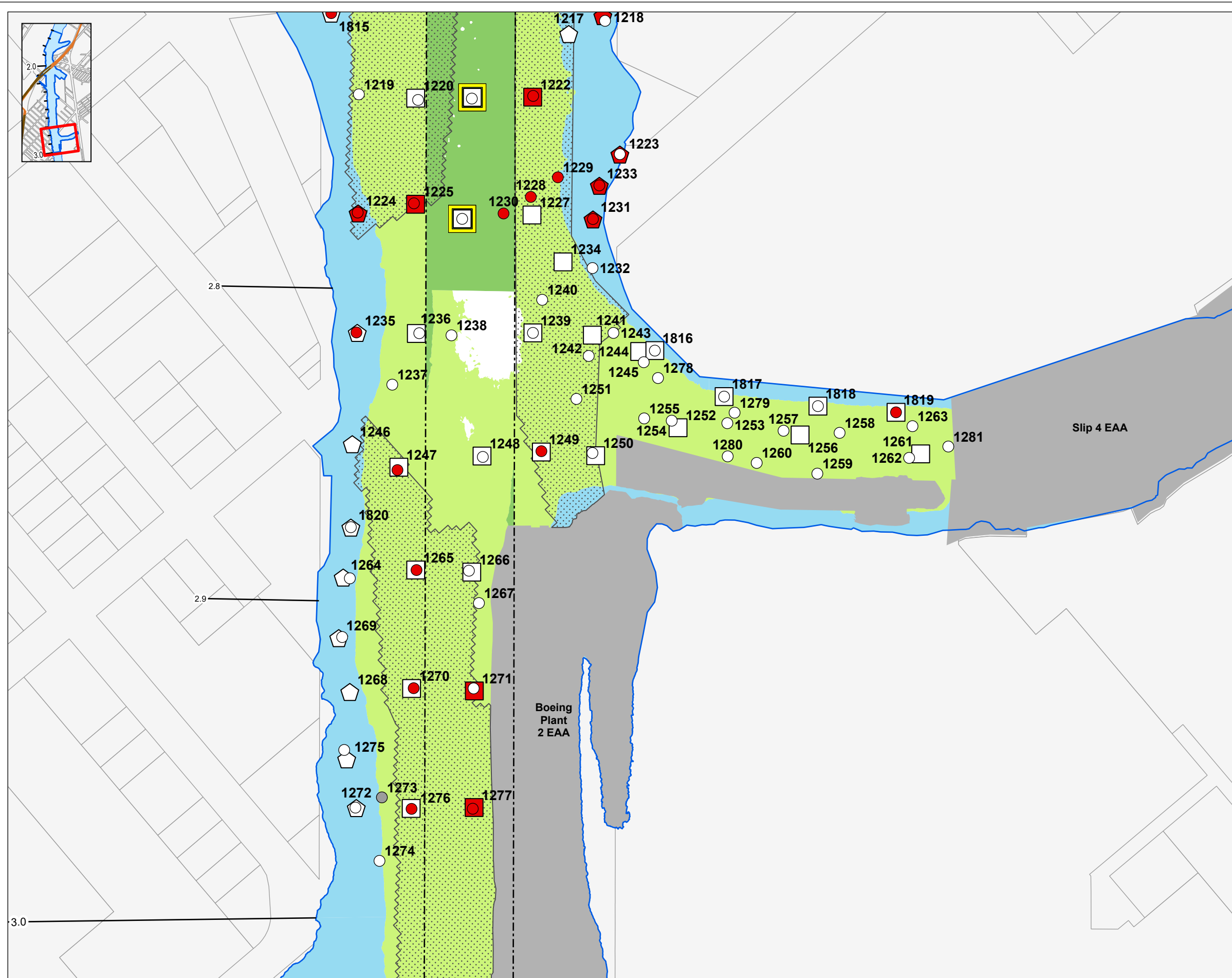
- Shoaling core
- ▨ Recovery Category 1
- Intertidal area
- Potential vessel scour area
- Shoal area
- Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
- Not covered by bathymetric survey
- Bridge footing
- Early Action Area
- King Co tax parcel
- Federal Navigation Channel
- River mile



**Map 3d. Phase I PDI sediment sampling locations (2022) and RAL exceedances, RM 2.45 to RM 2.75**

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**PDI Phase I sampling location**

**0-10 cm sediment grab**

- Exceeds RAL
- Does not exceed RAL
- Not analyzed

**0-45 cm sediment core**

- ⬠ Exceeds RAL
- ⬠ Does not exceed RAL

**0-60 cm sediment core**

- Exceeds RAL
- Does not exceed RAL

- Shoaling core
- ▨ Recovery Category 1
- Intertidal area
- Potential vessel scour area
- Shoal area
- Below the navigation depth in the FNC and below potential vessel scour depth outside the FNC
- Not covered by bathymetric survey
- Bridge footing
- Early Action Area
- King Co tax parcel
- Federal Navigation Channel
- River mile



**Map 3e. Phase I PDI sediment sampling locations (2022) and RAL exceedances, RM 2.75 to RM 3.0**

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PACKAGE FOR THE LDW MIDDLE REACH

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