

Prepared by CEH 7/29/2026; I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\00 Percent Design.aprx|Fig 02-1 7059 Vicinity map



Figure 2-1. LDW Superfund Site Vicinity Map

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF
DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026

Prepared by CEH 7/29/2026; I:\Client\LDWG\Work_Orders\KOC5 Middle Reach Design\Maps and Analyses\Design\02-2 7059 Middle reach vicinity map

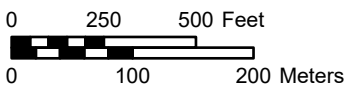
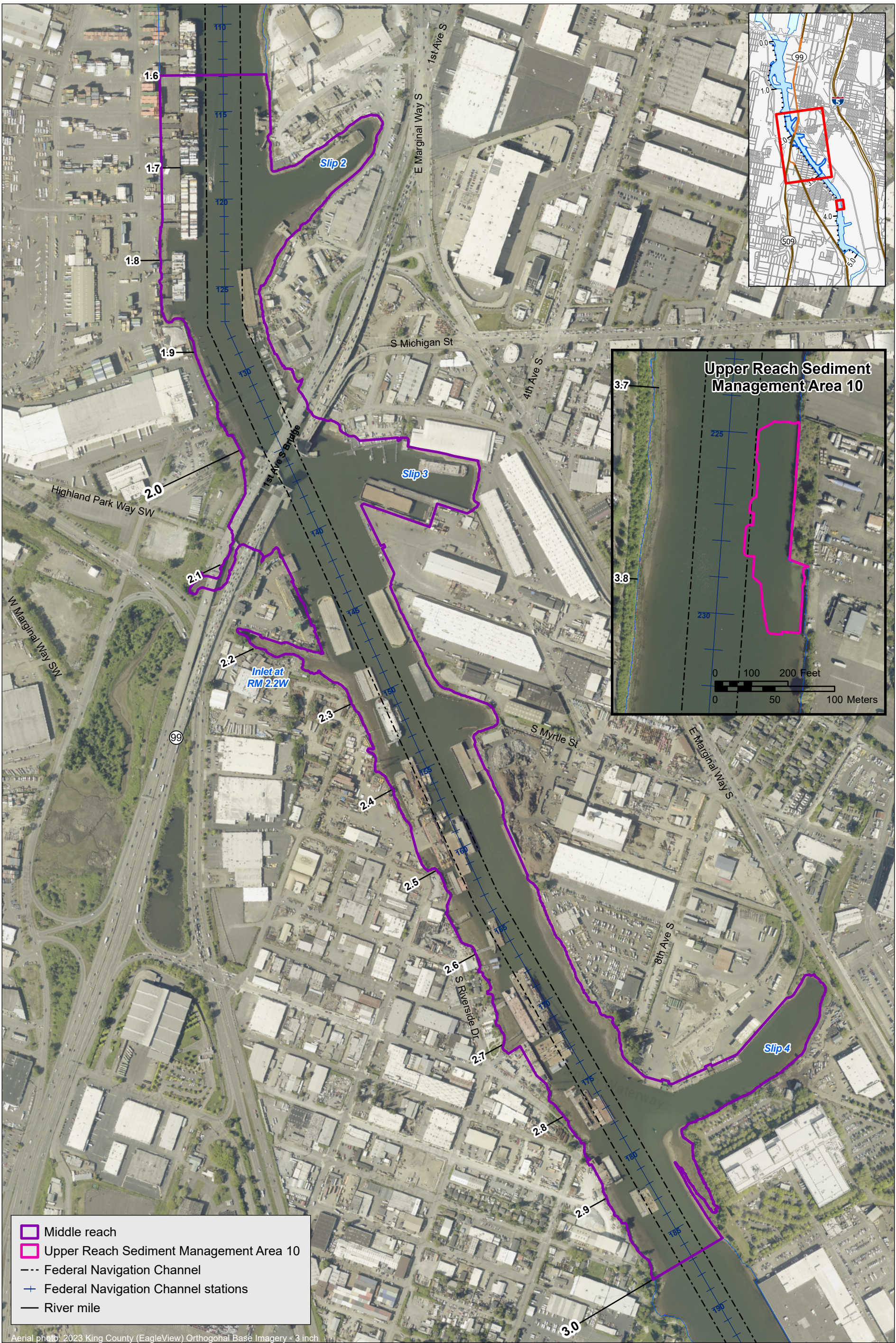
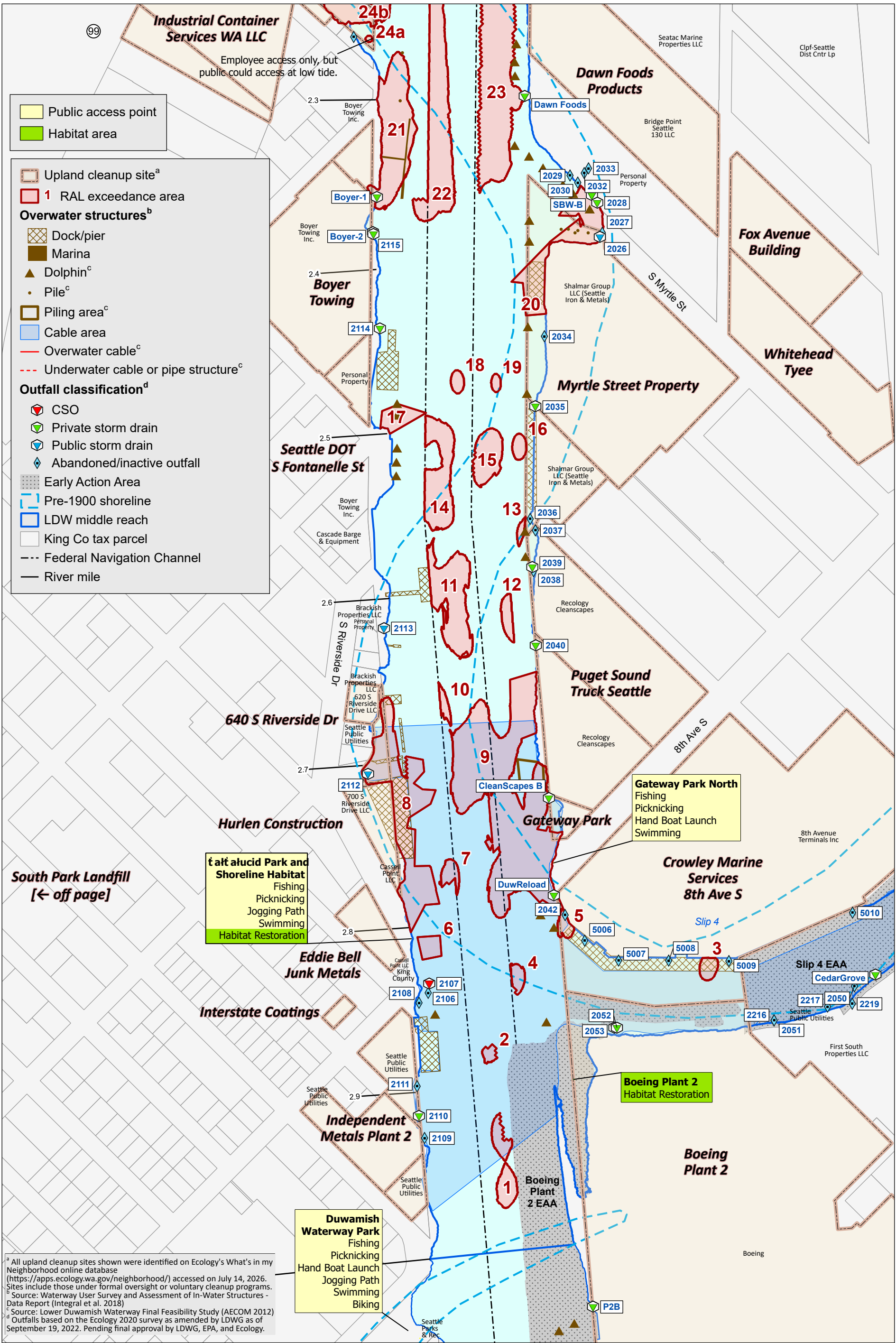


Figure 2-2. Middle Reach Vicinity Map



^a All upland cleanup sites shown were identified on Ecology's What's in my Neighborhood online database (<https://apps.ecology.wa.gov/neighborhood/>) accessed on July 14, 2026. Sites include those under formal oversight or voluntary cleanup programs.
^b Source: Waterway User Survey and Assessment of In-Water Structures - Data Report (Integral et al. 2018)
^c Source: Lower Duwamish Waterway Final Feasibility Study (AECOM 2012)
^d Outfalls based on the Ecology 2020 survey as amended by LDWG as of September 19, 2022. Pending final approval by LDWG, EPA, and Ecology.

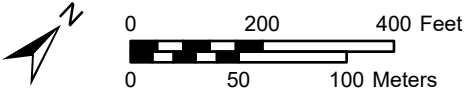
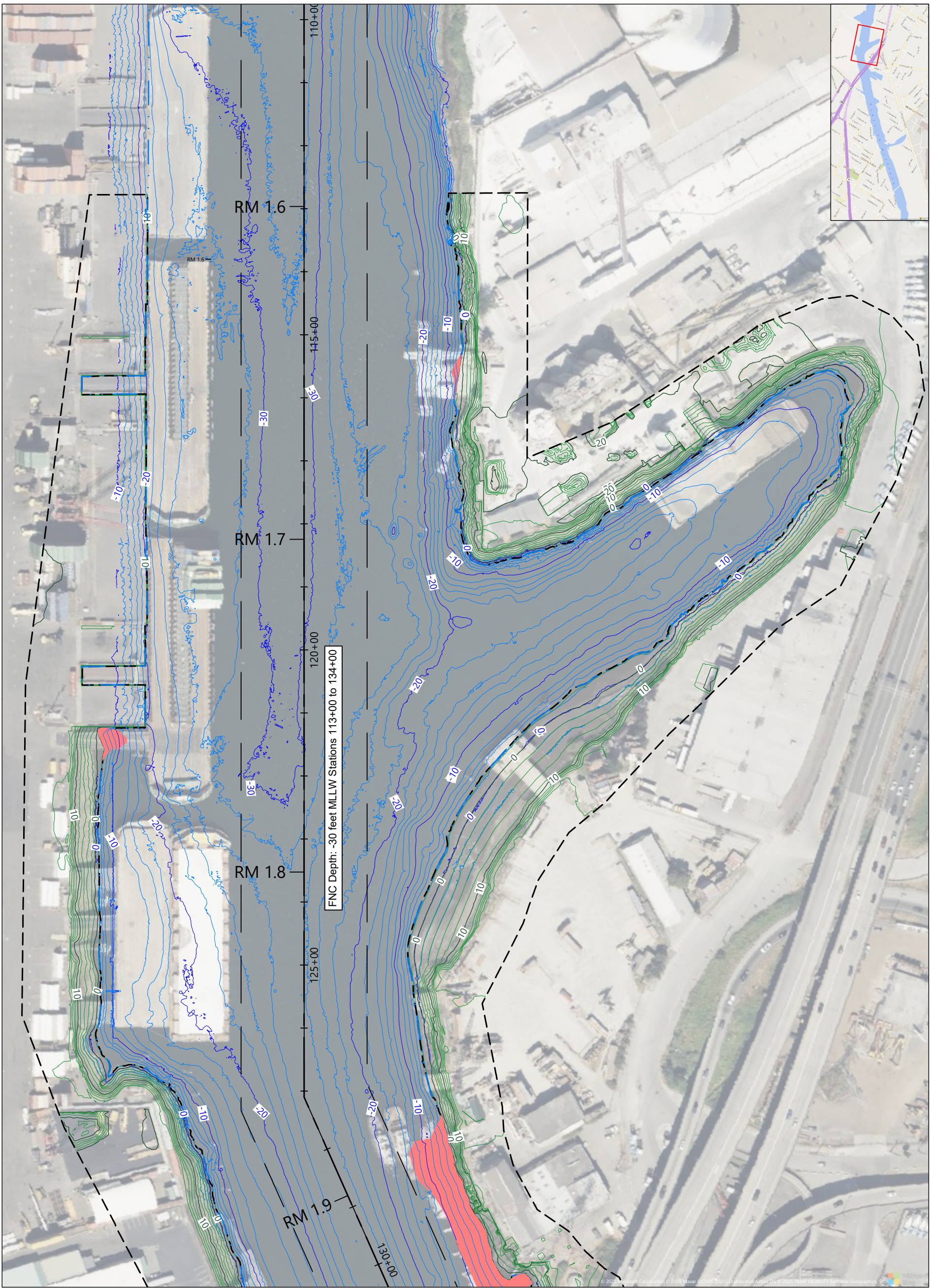


Figure 2-3b. Infrastructure, Early Action Areas, Upland Sites, and Land Ownership, RM 2.3 to RM 3.0

K:\Projects\0075-City of Seattle\Middle Reach of the Lower Duwamish Waterway\0075-RP-005 LDWMR Surveys Interpolation.dwg Figure 2-4a
Jul 23, 2026 2:45pm tgriga



Source: Miller Creek Associates (photogrammetric survey, site flow on June 6, 2024) and True North Surveying (ground survey, shots collected on August 19-23, 2024). Northwest Hydro performed the bathymetric survey in 2021, as well as the bathymetric surveys between January and June 2023.

Legend:

- Federal Navigation Channel
- Channel Centerline and Stationing
- Waterward extent of topographic survey
- 2024 Topography Survey Limits
- 2024 Topography (2' & 10' Intervals)
- 2021/2023 Bathymetry (2' & 10' Intervals)
- Interpolated Areas

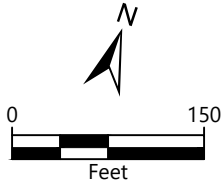
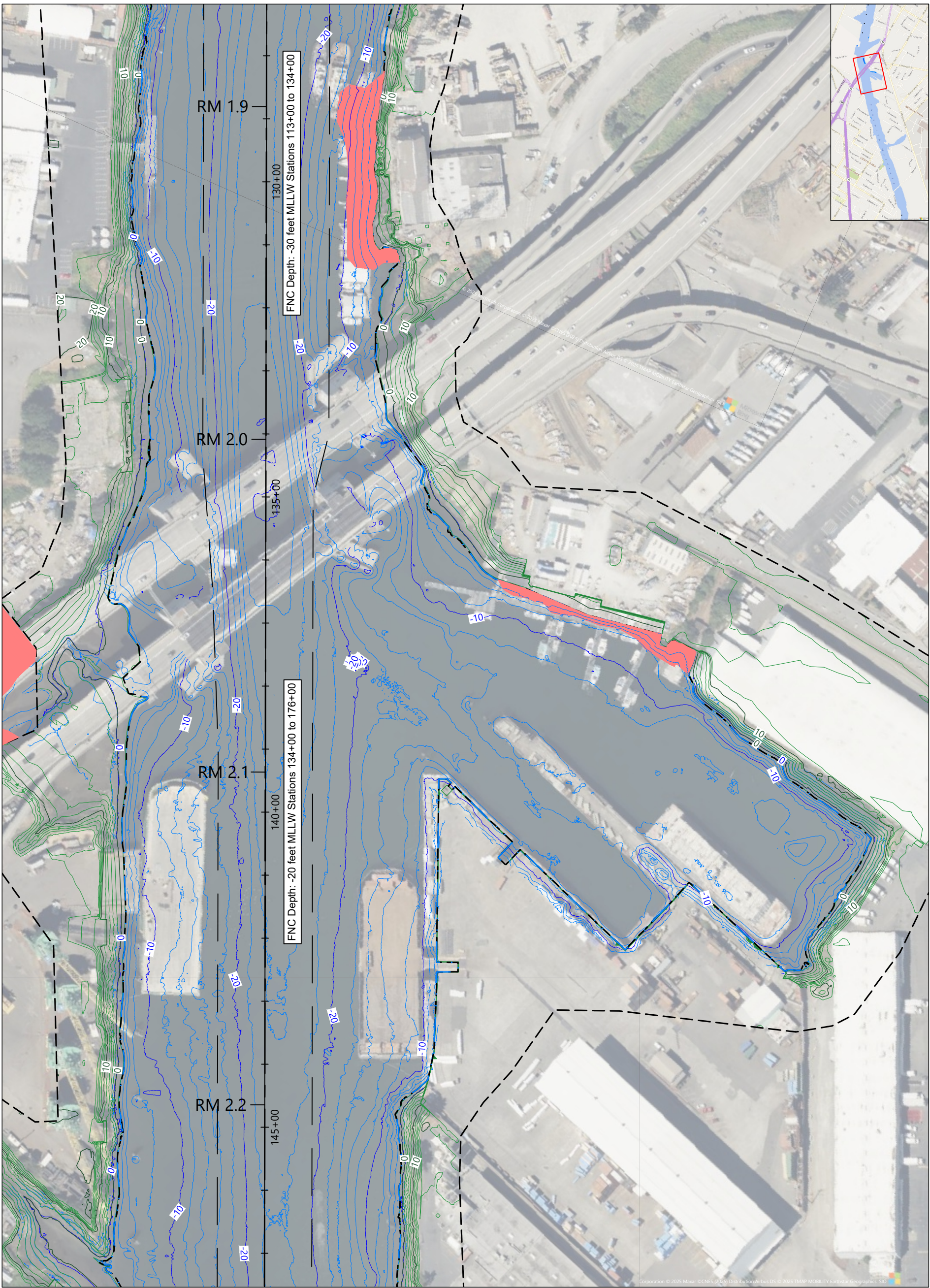


Figure 2-4a. Bathymetric and Topographic Survey Map, RM 1.5 to RM 1.9

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 23, 2026

K:\Projects\0075-City of Seattle\Middle Reach of the Lower Duwamish Waterway\0075-RP-005 LDWMR Surveys Interpolation.dwg Figure 2-4b Jul 23, 2026 2:45pm ltriga



Source: Miller Creek Associates (photogrammetric survey, site flow on June 6, 2024) and True North Surveying (ground survey, shots collected on August 19-23, 2024). Northwest Hydro performed the bathymetric survey in 2021, as well as the bathymetric surveys between January and June 2023.

Legend:

- Federal Navigation Channel
- 2024 Topography Survey Limits
- 10— 2024 Topography (2' & 10' Intervals)
- 20— 2021/2023 Bathymetry (2' & 10' Intervals)
- Waterward extent of topographic survey
- Interpolated Areas

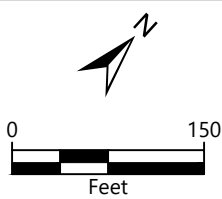
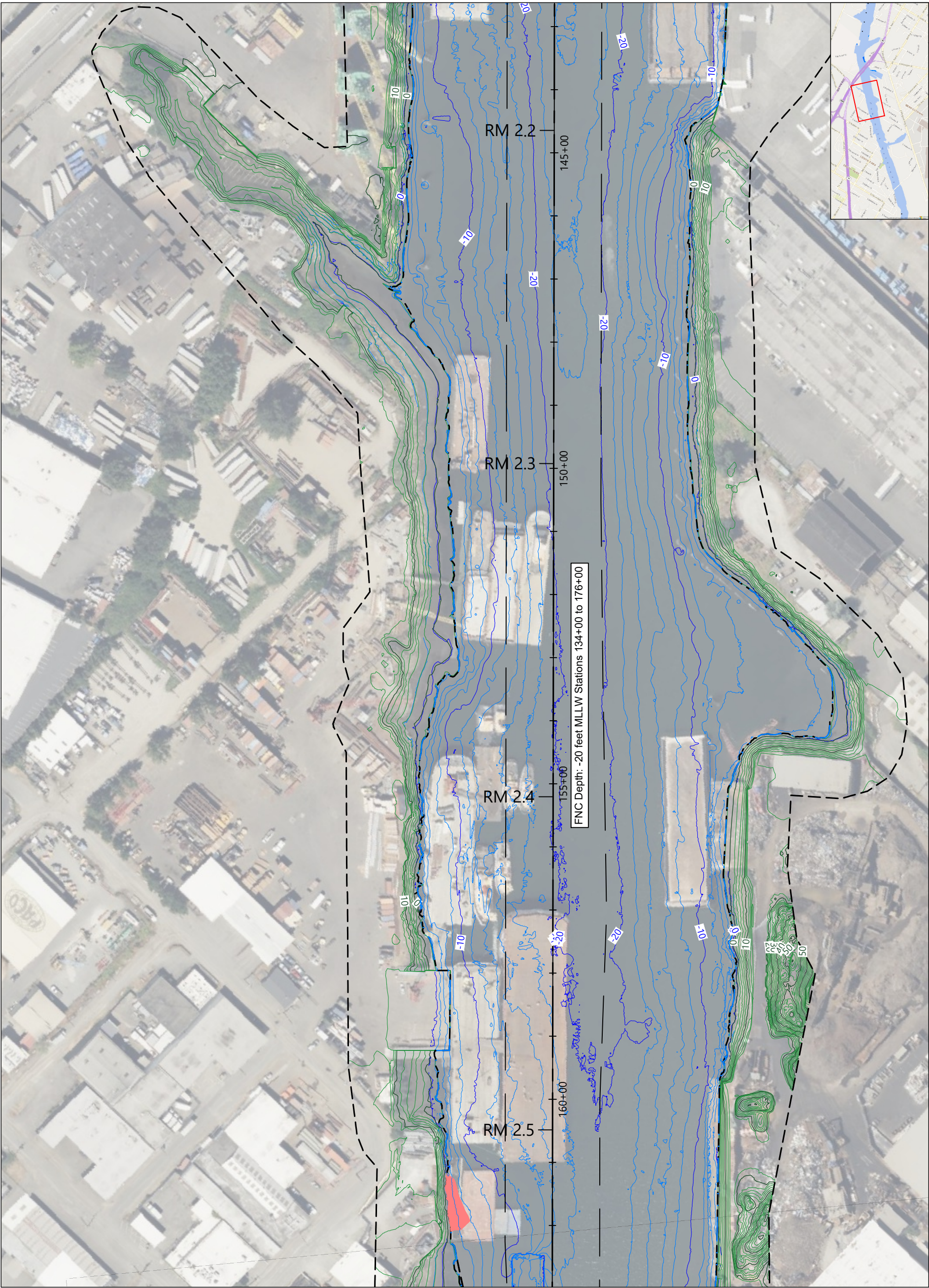


Figure 2-4b. Bathymetric and Topographic Survey Map, RM 1.9 to RM 2.2

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 23, 2026



Source: Miller Creek Associates (photogrammetric survey, site flow on June 6, 2024) and True North Surveying (ground survey, shots collected on August 19-23, 2024). Northwest Hydro performed the bathymetric survey in 2021, as well as the bathymetric surveys between January and June 2023.

Legend:

- Federal Navigation Channel
- 2024 Topography Survey Limits
- 10— 2024 Topography (2' & 10' Intervals)
- 10— 2021/2023 Bathymetry (2' & 10' Intervals)
- Waterward extent of topographic survey
- Interpolated Areas

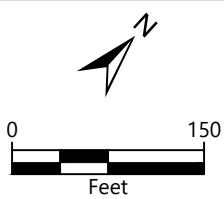
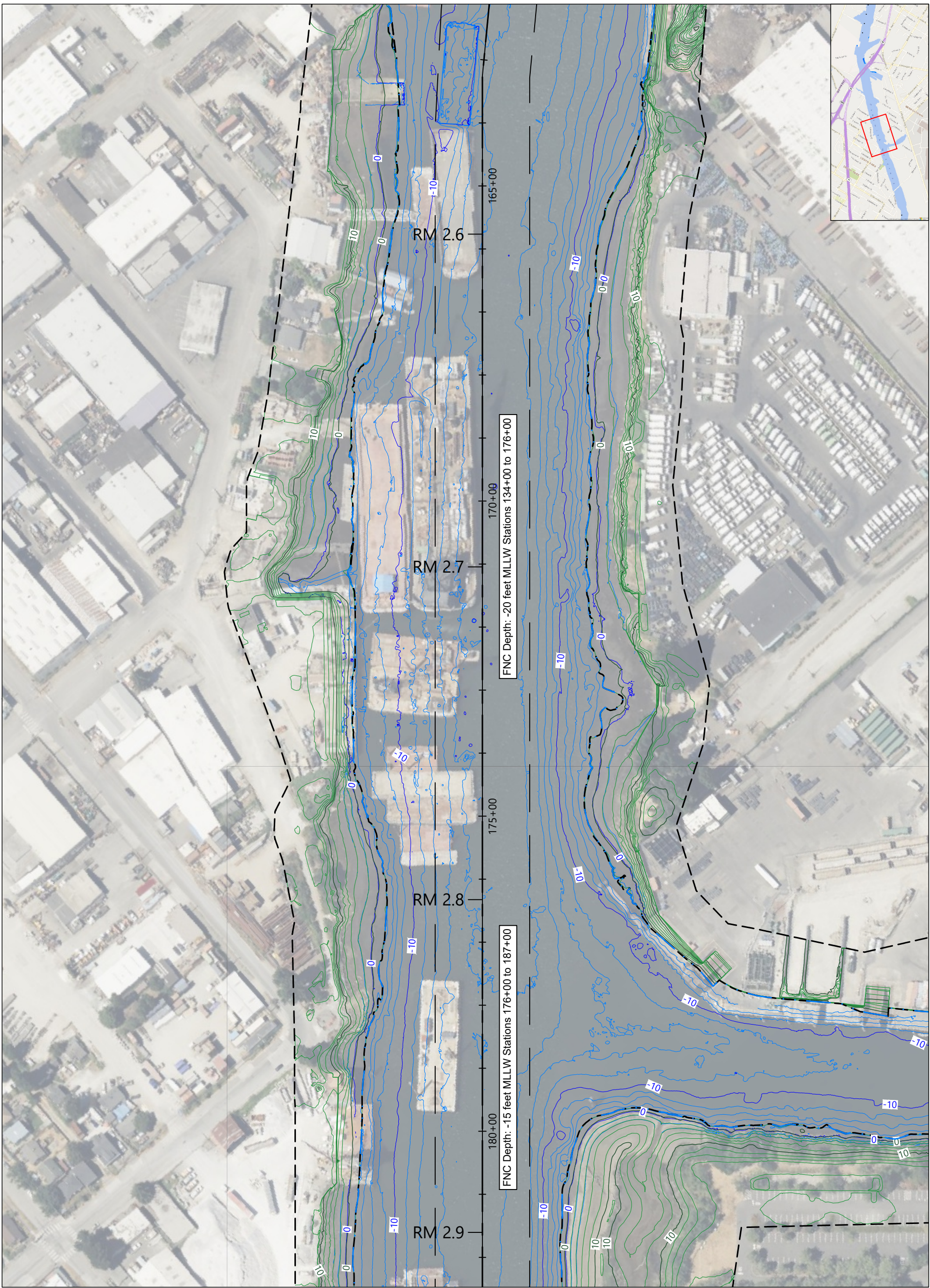


Figure 2-4c. Bathymetric and Topographic Survey Map, RM 2.2 to RM 2.5

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 23, 2026



Source: Miller Creek Associates (photogrammetric survey, site flow on June 6, 2024) and True North Surveying (ground survey, shots collected on August 19-23, 2024). Northwest Hydro performed the bathymetric survey in 2021, as well as the bathymetric surveys between January and June 2023.

Legend:

- Federal Navigation Channel
- 2024 Topography Survey Limits
- 10— 2024 Topography (2' & 10' Intervals)
- 10— 2021/2023 Bathymetry (2' & 10' Intervals)
- Waterward extent of topographic survey
- Interpolated Areas

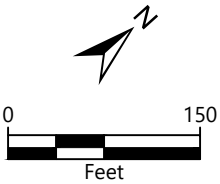
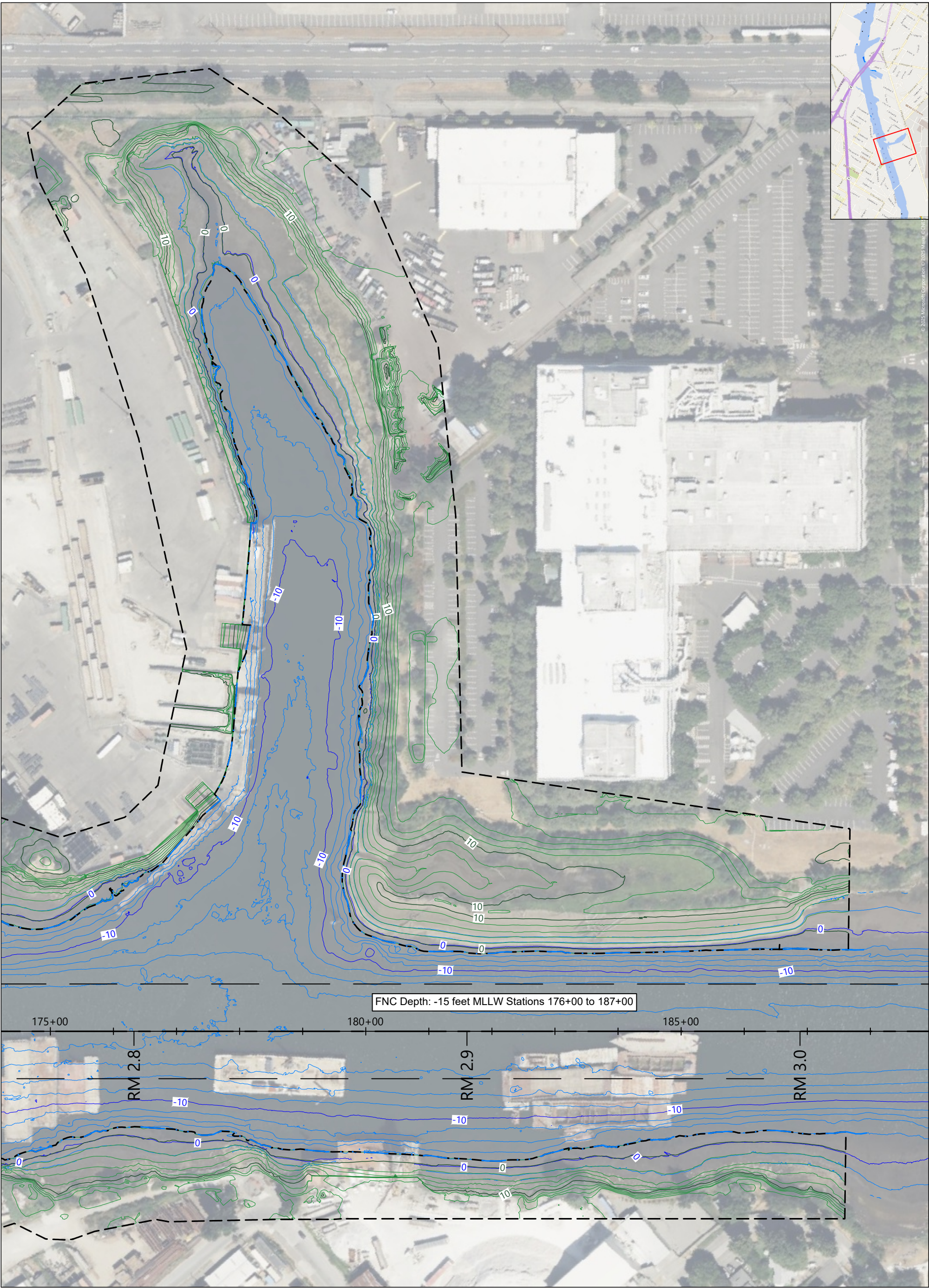


Figure 2-4d. Bathymetric and Topographic Survey Map, RM 2.6 to RM 2.9

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF
DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 23, 2026



Source: Miller Creek Associates (photogrammetric survey, site flow on June 6, 2024) and True North Surveying (ground survey, shots collected on August 19-23, 2024). Northwest Hydro performed the bathymetric survey in 2021, as well as the bathymetric surveys between January and June 2023.

Legend:

- Federal Navigation Channel
- 2024 Topography Survey Limits
- 2024 Topography (2' & 10' Intervals)
- 2021/2023 Bathymetry (2' & 10' Intervals)
- Channel Centerline and Stationing
- Waterward extent of topographic survey
- Interpolated Areas

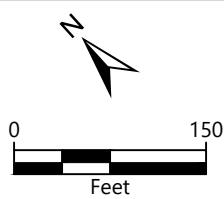


Figure 2-4e. Bathymetric and Topographic Survey Map, RM 2.8 to RM 3.0

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 23, 2026

Prepared by CEH 7/30/2026; I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\02-5a 7719 Habitat Types

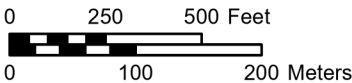
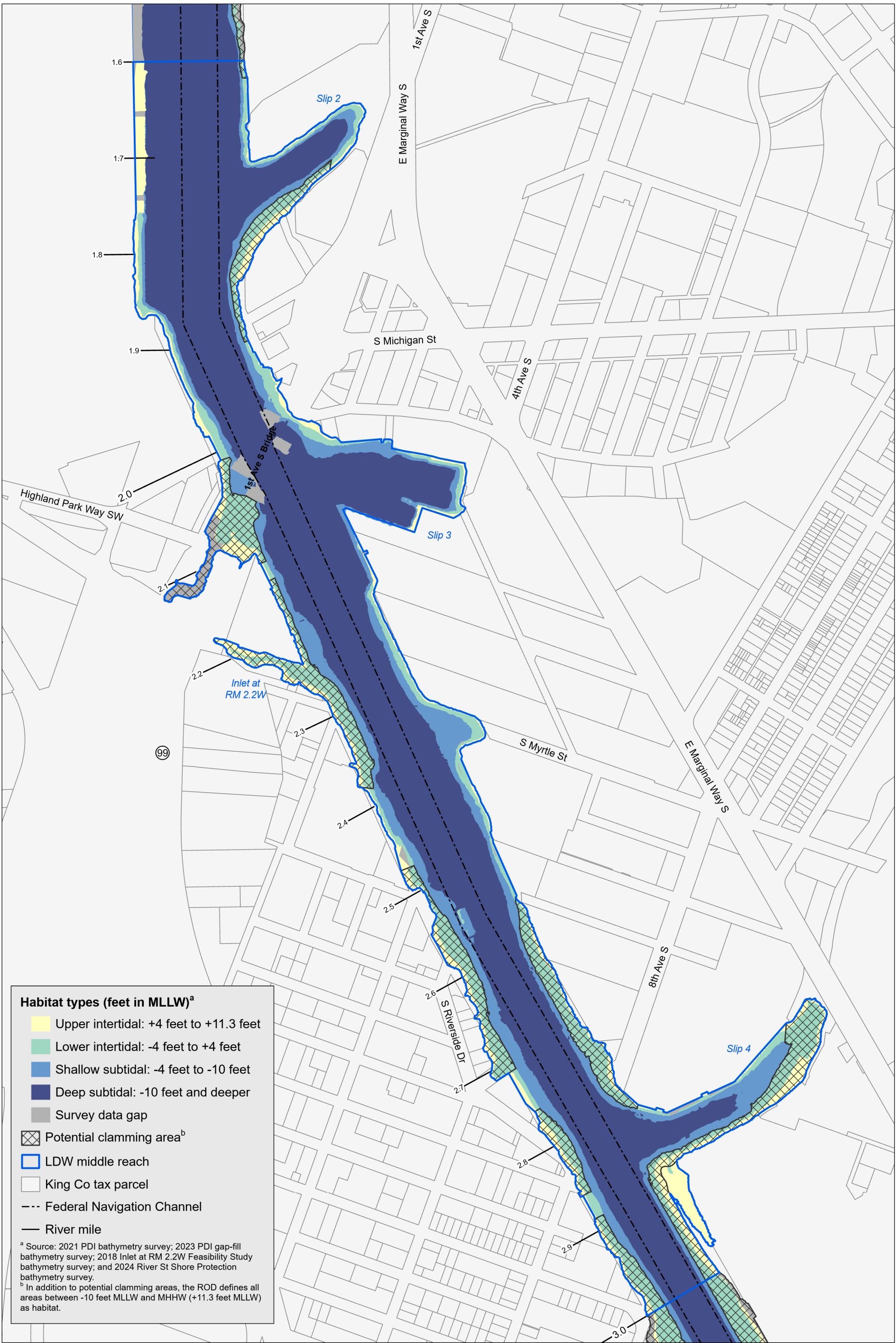


Figure 2-5a. Existing Habitat Types and ROD-Defined Habitat Areas

Prepared by CEH 7/29/2026; I:\Client\LDWG\Work_Orders\KOC5 Middle Reach Design\Map and Analyses\Design\02-5b 7719 Clamming Restoration Shoreline

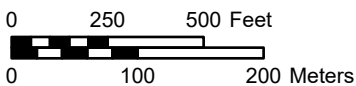
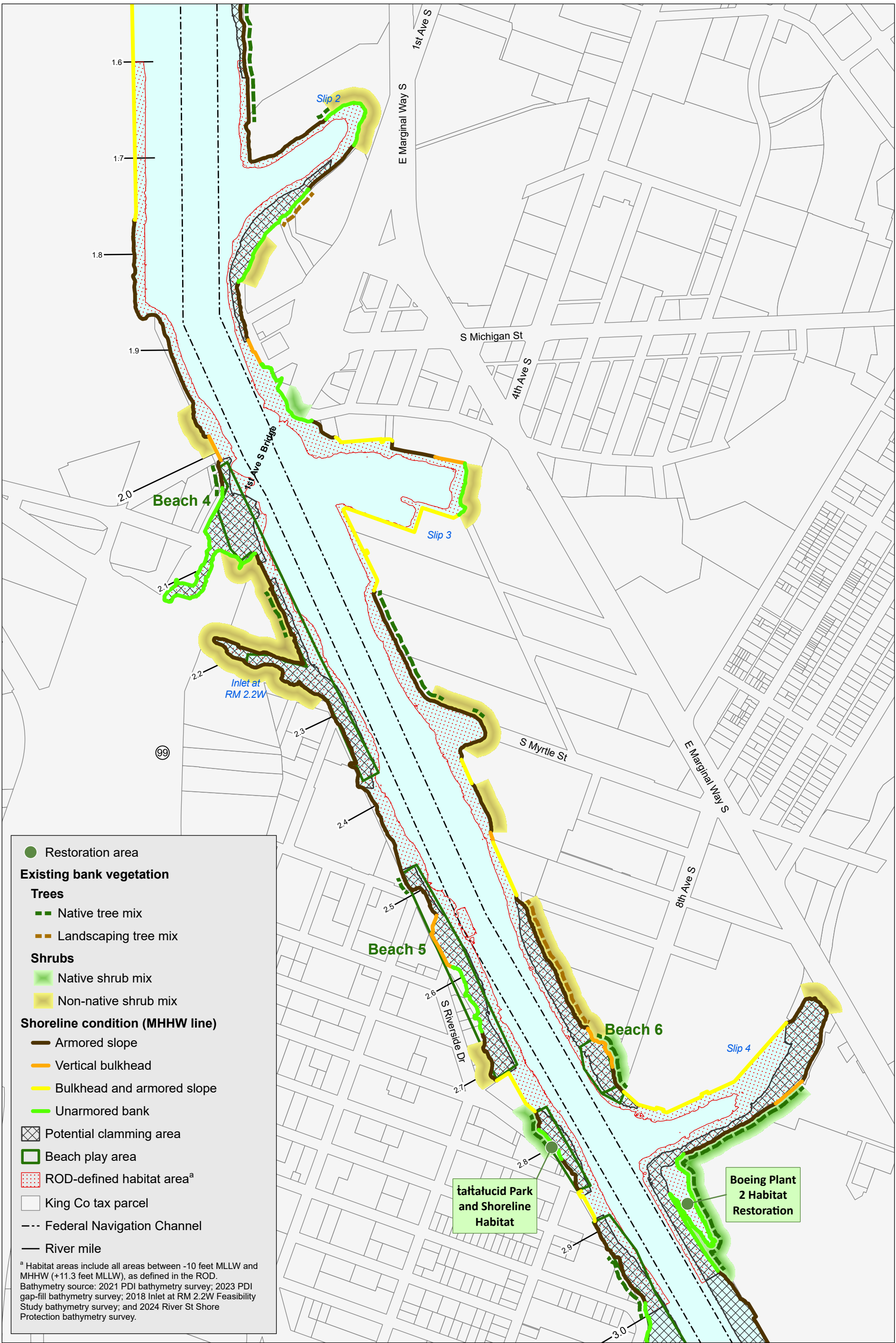


Figure 2-5b. Existing Potential Clamming Areas, Restoration Areas, and Shoreline Conditions

Prepared by CEH 7/29/2026; I:\Client\DL\DWG\Work_Orders\AOC5 Middle Reach Design\Map and Analyses\Design\03 Percent Design\Fig 04-1 7718 PHII Interpolation - combined Th poly

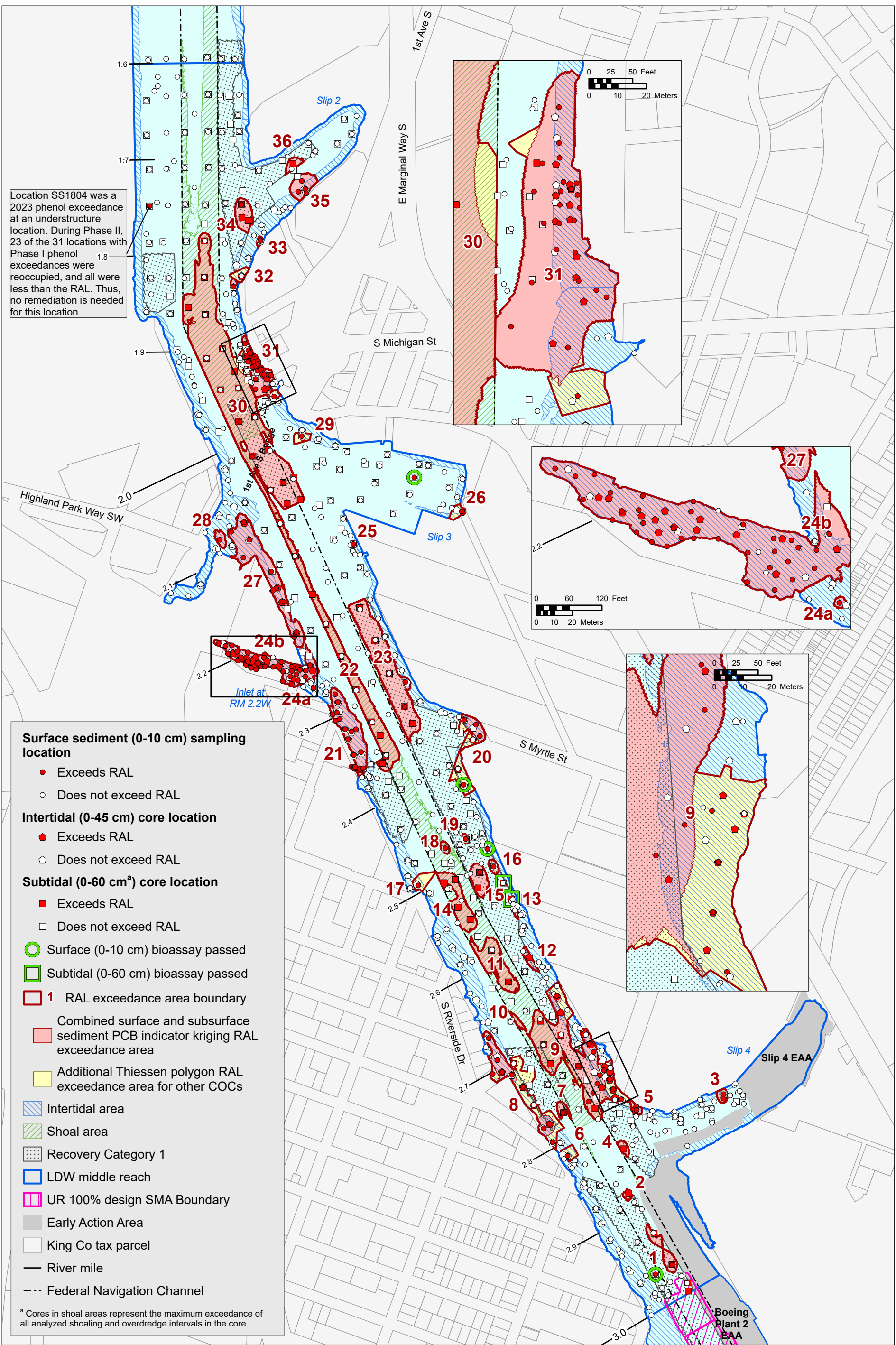
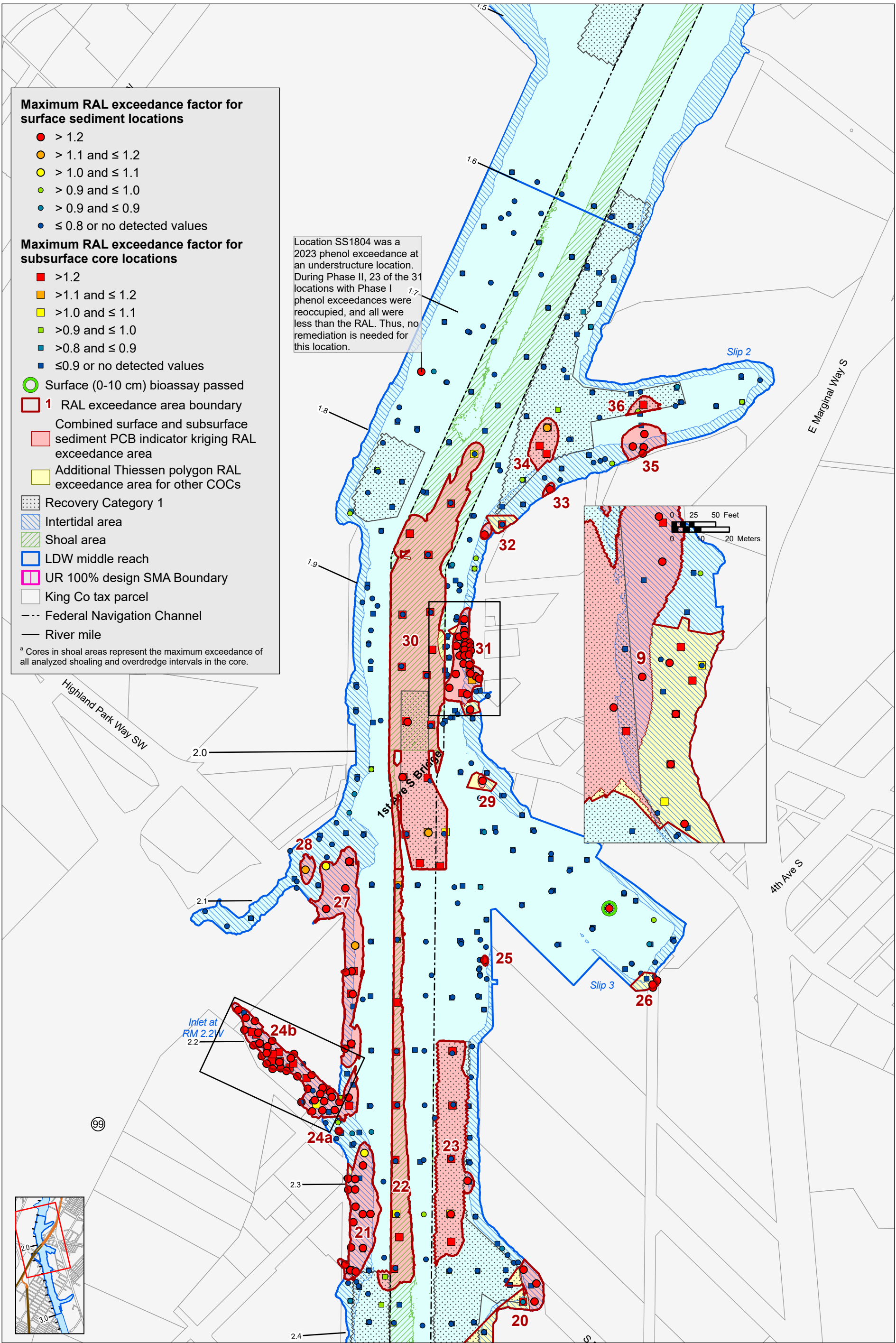


Figure 4-1. Total PCB Combined Surface and Subsurface Sediment Indicator Kriging Interpolation with Thiessen Polygons for Other COCs for the Middle Reach

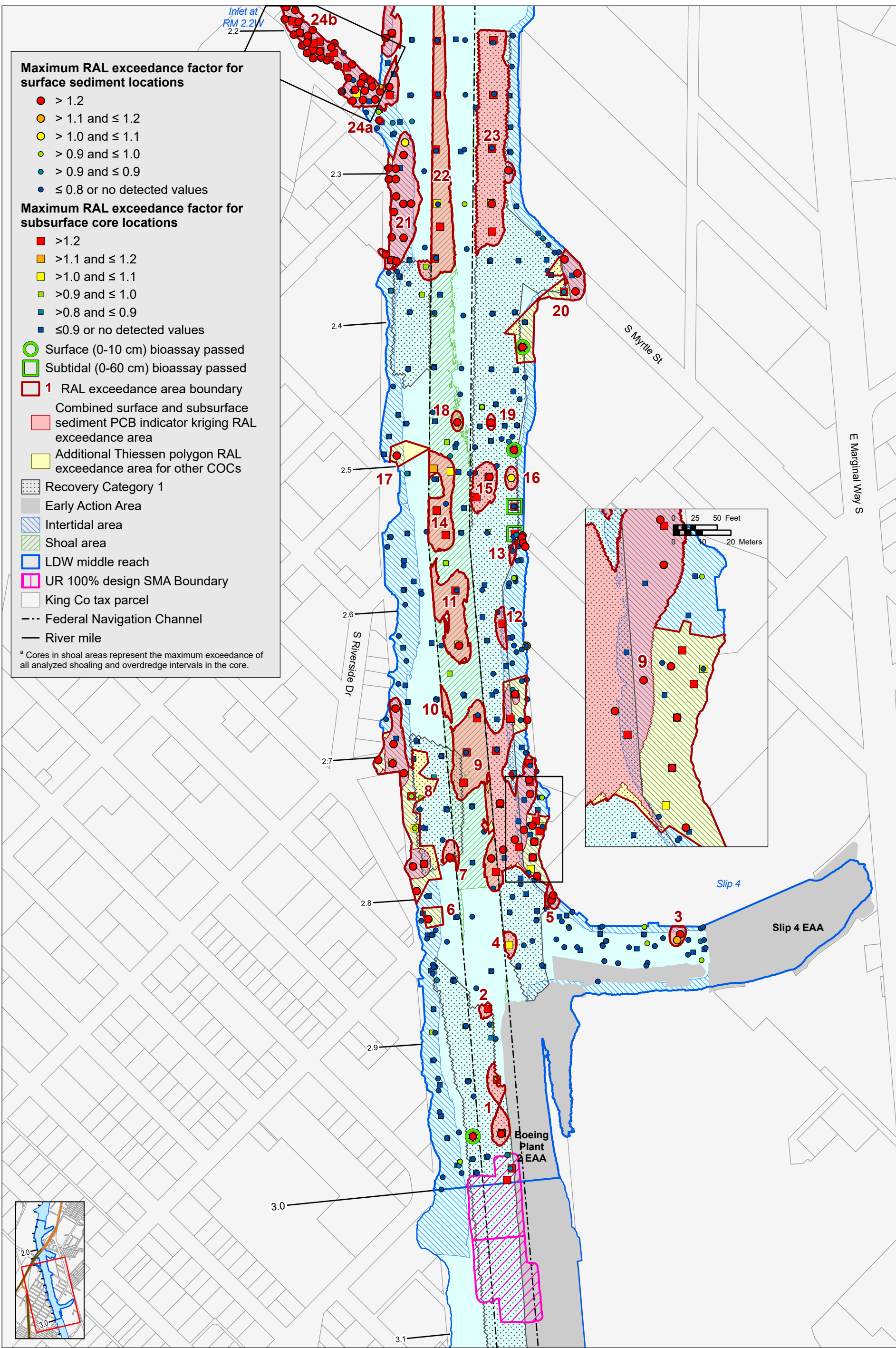
INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026

Prepared by CEH 7/29/2026; I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Map and Analyses\Design\04-2 7718 PHII Interpolation - combined Th poly w EFs



Prepared by CEH 7/29/2026; I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Map and Analyses\Design\04-2 7718 PH11 Interpolation - combined Th poly w EFs



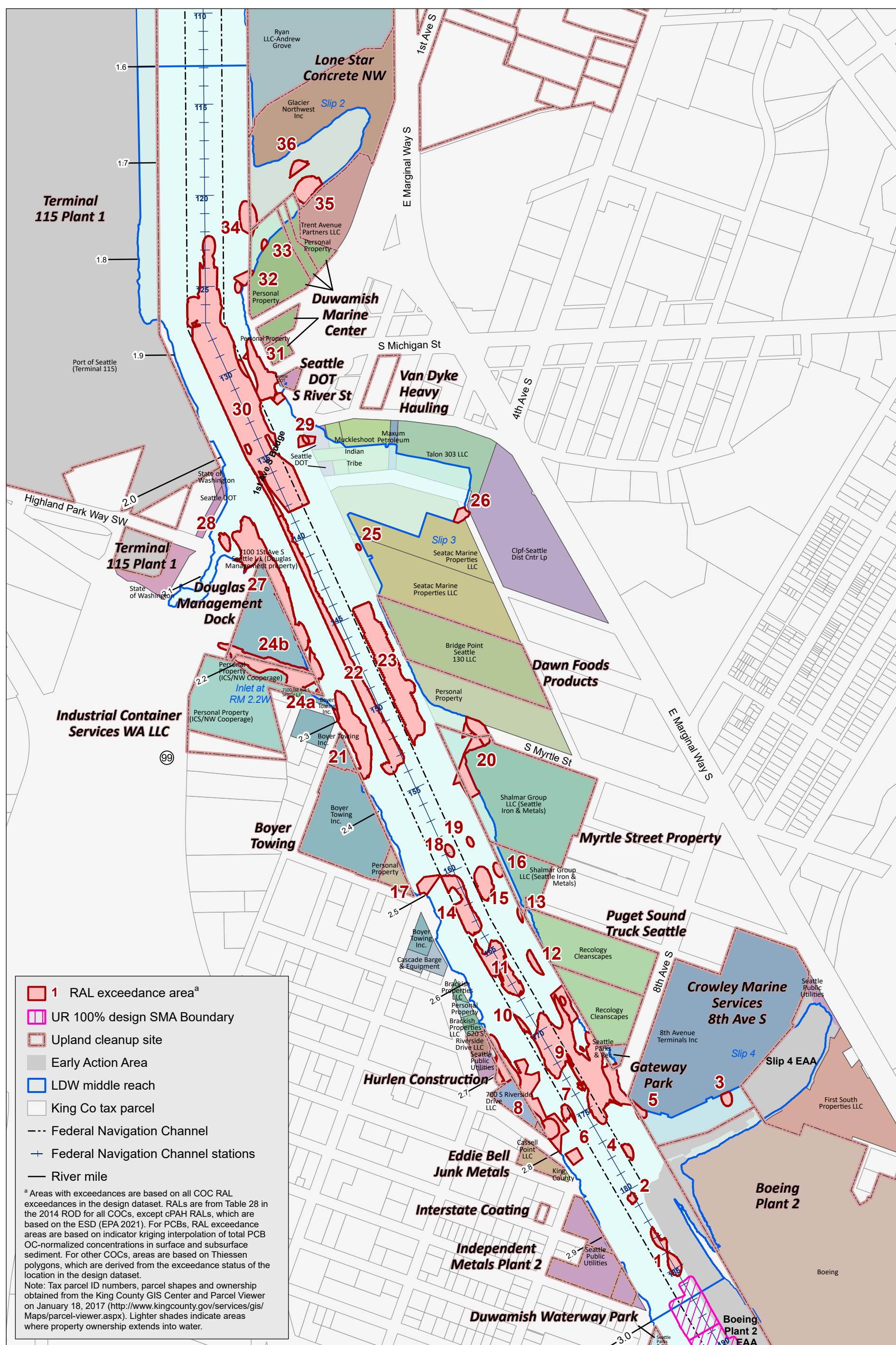
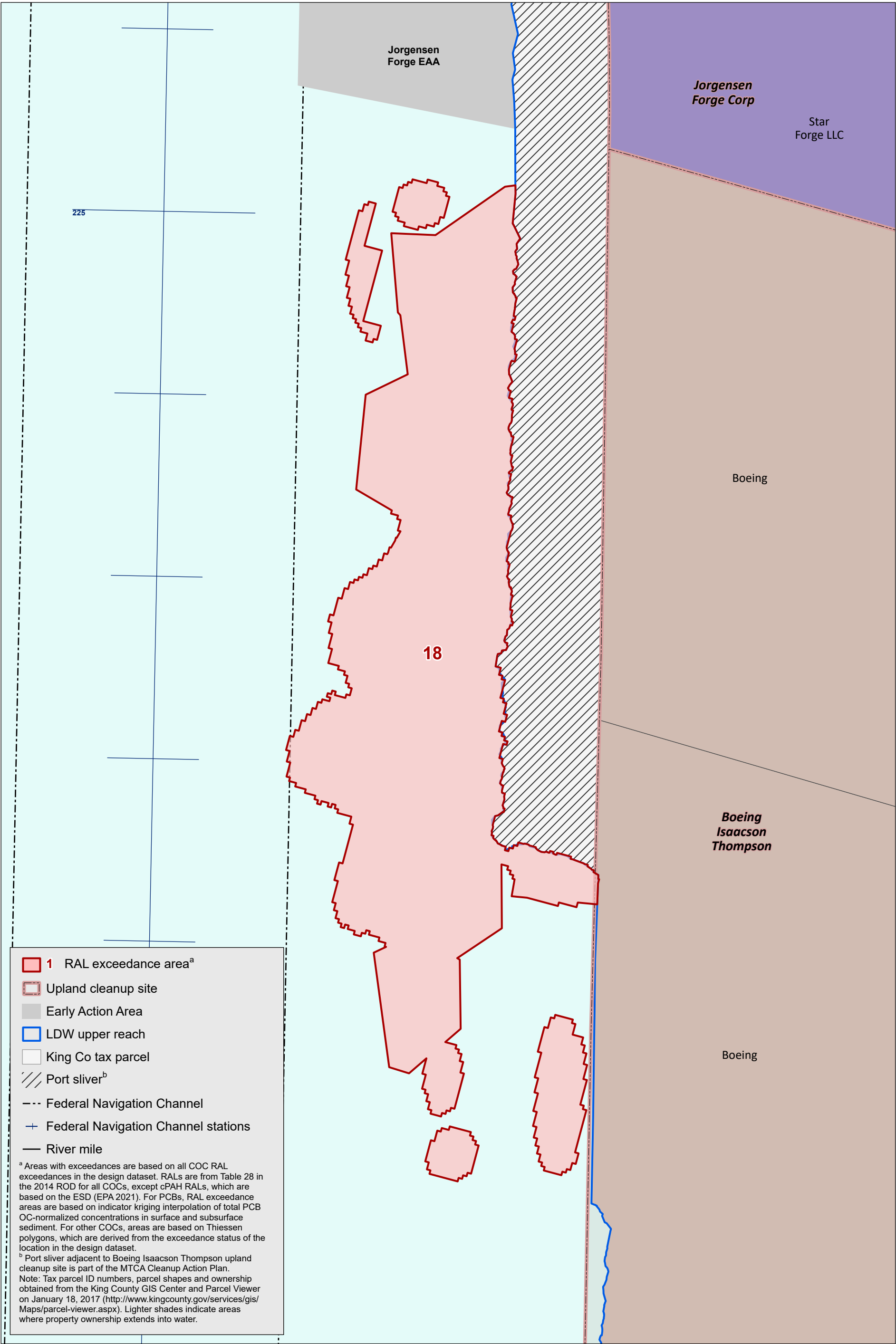


Figure 4-3a. RAL Exceedance Areas in the Middle Reach

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026

Prepared by CEH 7/30/2026: I:\Client\LDW\GWork_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\Fig 04-3b 7546 RAL exceedance areas w property ownership_SMA10



Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

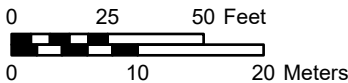


Figure 4-3b. RAL Exceedance Area for SMA 10

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF
DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026



LEGEND:

- 118+00 USACE CHANNEL CENTERLINE
- FEDERAL NAVIGATION CHANNEL
- RM 1.7 RIVER MILE LABEL
- MEAN HIGHER HIGH WATER LINE
- EXISTING GRADE CONTOURS IN FEET MLLW (2' & 10' INTERVALS)
- DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
- ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
- DREDGE SLOPE SYMBOL
- DREDGE
- PARTIAL DREDGE & CAP
- ENGINEERED CAP
- ENHANCED NATURAL RECOVERY
- UTILITY CROSSING COVER
- 9C RAA LABEL
- PH2 RAL EXCEEDANCE AREA (2/27/26)
- 35 RAL EXCEEDANCE AREA NUMBER

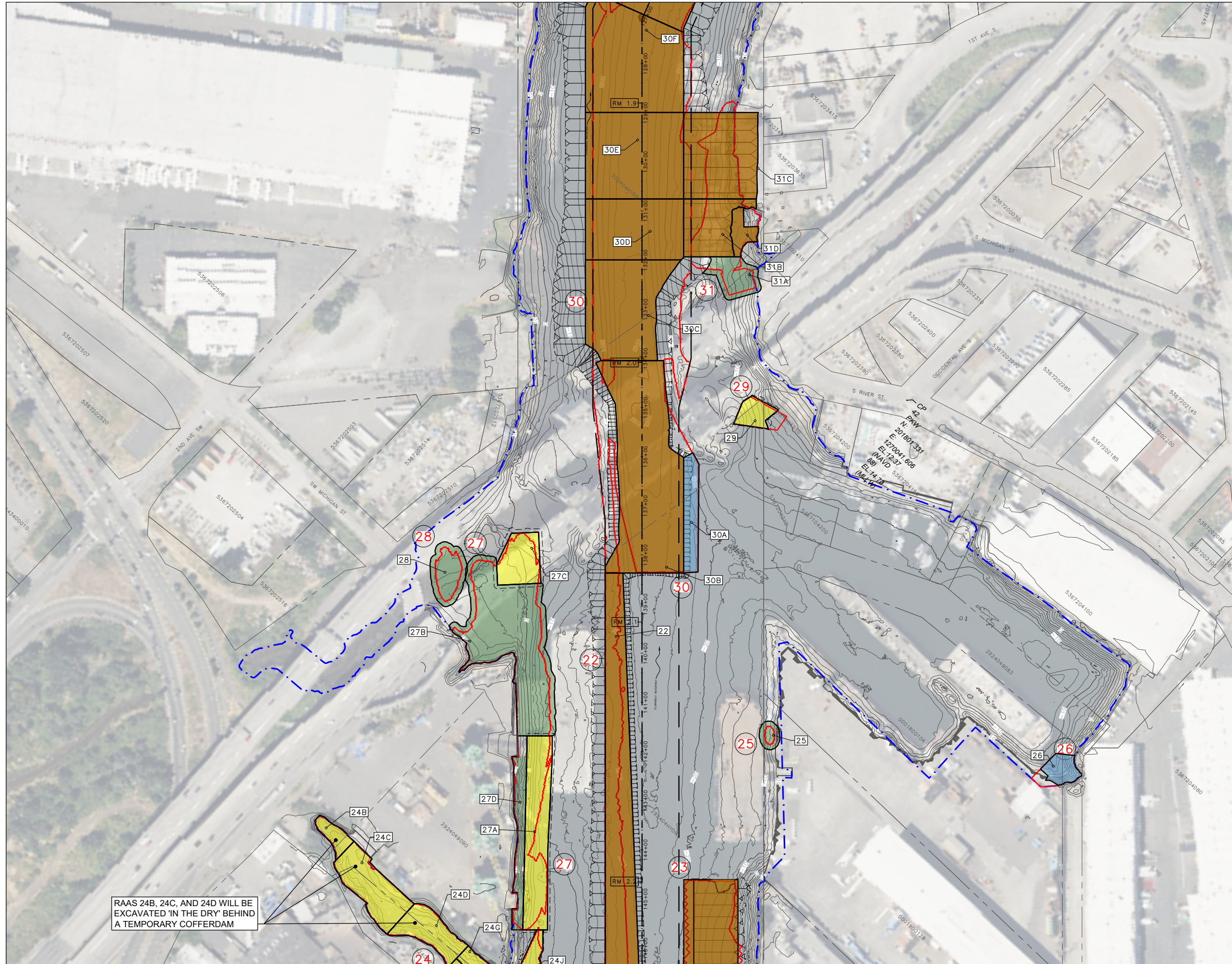
- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 - VERTICAL DATUM: MLLW
 - AERIAL IMAGE BY BING MAPS.
 - DREDGED AREAS WILL EITHER RECEIVE BACKFILL OR RMC.
 - ENHANCED NATURAL RECOVERY AREAS MAY BE AMENDED WITH ACTIVATED CARBON.
 - ENGINEERED CAPS IN AREAS SHALLOWER THAN -10 FEET MLLW WILL BE MODIFIED TO INCLUDE A 45-CM HABITAT LAYER.

Figure 5-1a. Remedial Action Areas, RM 1.6 to RM 1.9

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH JULY 23, 2026

ANCHOR QEA BARR

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company



LEGEND:

- 118+00 USACE CHANNEL CENTERLINE
- FEDERAL NAVIGATION CHANNEL
- RM 1.7 RIVER MILE LABEL
- MEAN HIGHER HIGH WATER LINE
- EXISTING GRADE CONTOURS IN FEET MLLW (2' & 10' INTERVALS)
- DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
- ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
- DREDGE SLOPE SYMBOL
- DREDGE
- PARTIAL DREDGE & CAP
- ENGINEERED CAP
- ENHANCED NATURAL RECOVERY
- UTILITY CROSSING COVER
- 9C RAA LABEL
- PH2 RAL EXCEEDANCE AREA (2/27/26)
- 35 RAL EXCEEDANCE AREA NUMBER

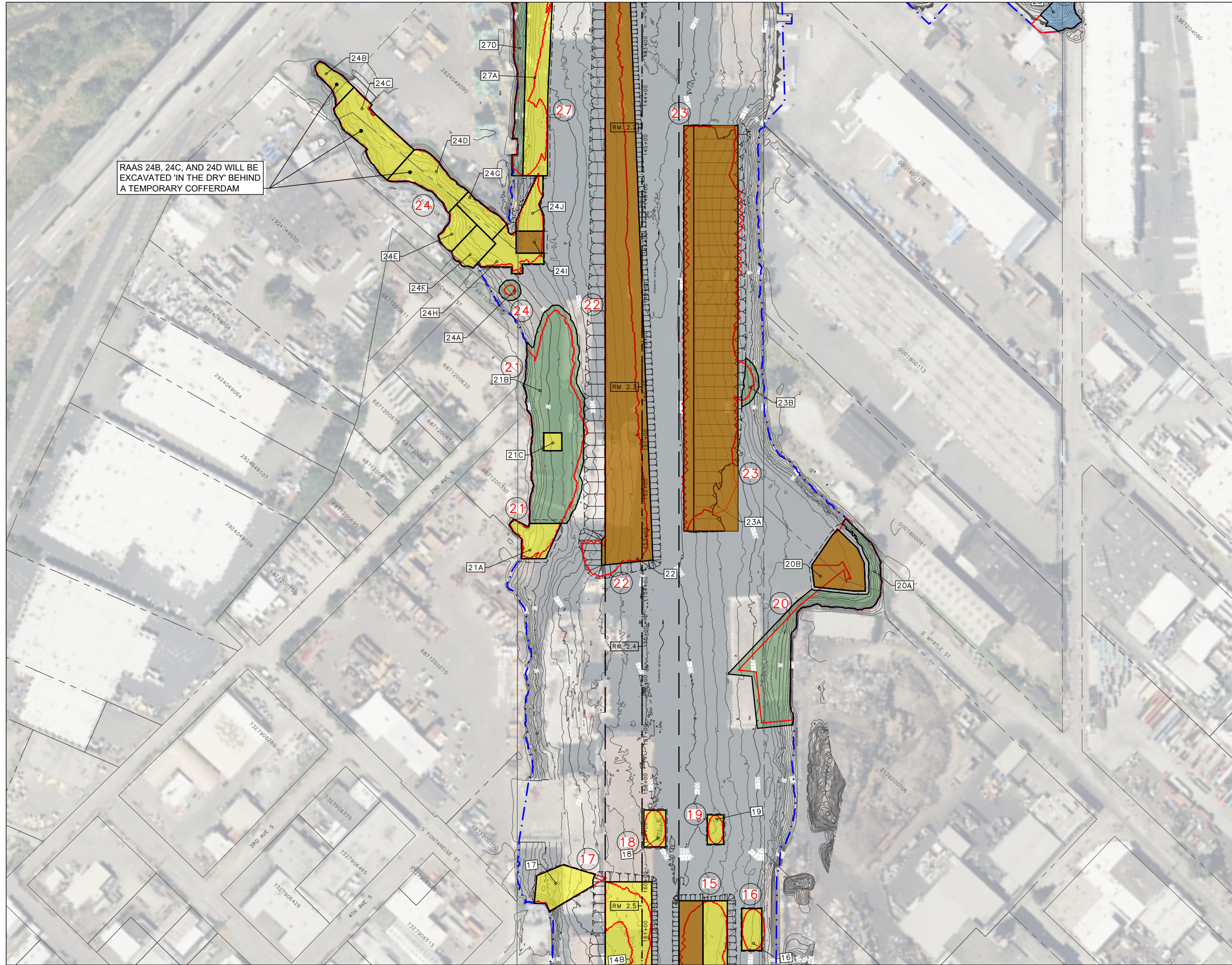
- NOTES:**
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 - VERTICAL DATUM: MLLW
 - AERIAL IMAGE BY BING MAPS.
 - DREDGED AREAS WILL EITHER RECEIVE BACKFILL OR RMC.
 - ENHANCED NATURAL RECOVERY AREAS MAY BE AMENDED WITH ACTIVATED CARBON.
 - ENGINEERED CAPS IN AREAS SHALLOWER THAN -10 FEET MLLW WILL BE MODIFIED TO INCLUDE A 45-CM HABITAT LAYER.

Figure 5-1b. Remedial Action Areas, RM 1.9 to RM 2.2

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH JULY 23, 2026

ANCHOR QEA **BARR**

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company



LEGEND:

- 118+00 USACE CHANNEL CENTERLINE
- FEDERAL NAVIGATION CHANNEL
- RM 1.7 RIVER MILE LABEL
- MEAN HIGHER HIGH WATER LINE
- EXISTING GRADE CONTOURS IN FEET MLLW (2' & 10' INTERVALS)
- DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
- ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
- DREDGE SLOPE SYMBOL
- DREDGE
- PARTIAL DREDGE & CAP
- ENGINEERED CAP
- ENHANCED NATURAL RECOVERY
- UTILITY CROSSING COVER
- 9C RAA LABEL
- PH2 RAL EXCEEDANCE AREA (2/27/26)
- 35 RAL EXCEEDANCE AREA NUMBER

- NOTES:**
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 - VERTICAL DATUM: MLLW
 - AERIAL IMAGE BY BING MAPS.
 - DREDGED AREAS WILL EITHER RECEIVE BACKFILL OR RMC.
 - ENHANCED NATURAL RECOVERY AREAS MAY BE AMENDED WITH ACTIVATED CARBON.
 - ENGINEERED CAPS IN AREAS SHALLOWER THAN -10 FEET MLLW WILL BE MODIFIED TO INCLUDE A 45-CM HABITAT LAYER.

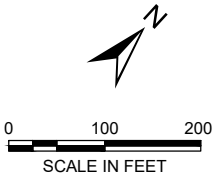
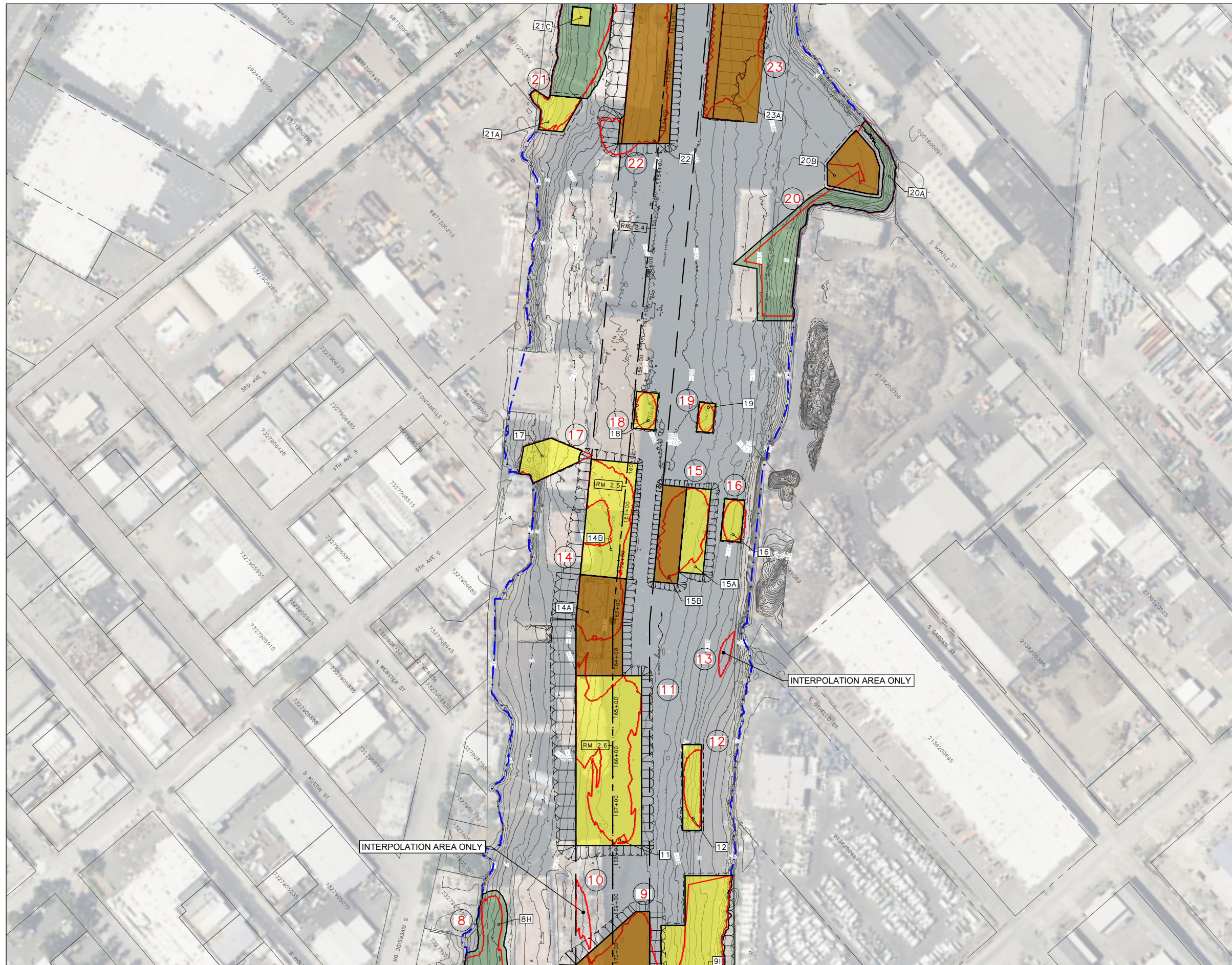


Figure 5-1c. Remedial Action Areas, RM 2.2 to RM 2.4

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH JULY 23, 2026

ANCHOR QEA **BARR**

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company



LEGEND:

118+00 USACE CHANNEL CENTERLINE

FEDERAL NAVIGATION CHANNEL

RM 1.7 RIVER MILE LABEL

MEAN HIGHER HIGH WATER LINE

EXISTING GRADE CONTOURS IN FEET MLLW (2' & 10' INTERVALS)

DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)

ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY

DREDGE SLOPE SYMBOL

DREDGE

PARTIAL DREDGE & CAP

ENGINEERED CAP

ENHANCED NATURAL RECOVERY

UTILITY CROSSING COVER

9C RAA LABEL

PH2 RAL EXCEEDANCE AREA (2/27/26)

35 RAL EXCEEDANCE AREA NUMBER

- NOTES:
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL IMAGE BY BING MAPS.
 4. DREDGED AREAS WILL EITHER RECEIVE BACKFILL OR RMC.
 5. ENHANCED NATURAL RECOVERY AREAS MAY BE AMENDED WITH ACTIVATED CARBON.
 6. ENGINEERED CAPS IN AREAS SHALLOWER THAN -10 FEET MLLW WILL BE MODIFIED TO INCLUDE A 45-CM HABITAT LAYER.

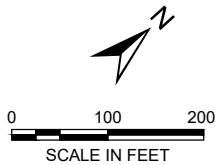


Figure 5-1d. Remedial Action Areas, RM 2.4 to RM 2.6

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH JULY 23, 2026

ANCHOR QEA BARR

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company



LEGEND:

118+00 USACE CHANNEL CENTERLINE

FEDERAL NAVIGATION CHANNEL

RM 1.7 RIVER MILE LABEL

MEAN HIGHER HIGH WATER LINE

EXISTING GRADE CONTOURS IN FEET MLLW (2' & 10' INTERVALS)

DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)

ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY

DREDGE SLOPE SYMBOL

DREDGE

PARTIAL DREDGE & CAP

ENGINEERED CAP

ENHANCED NATURAL RECOVERY

UTILITY CROSSING COVER

RAA LABEL

PH2 RAL EXCEEDANCE AREA (2/27/26)

35 RAL EXCEEDANCE AREA NUMBER

- NOTES:
1. HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 2. VERTICAL DATUM: MLLW
 3. AERIAL IMAGE BY BING MAPS.
 4. DREDGED AREAS WILL EITHER RECEIVE BACKFILL OR RMC.
 5. ENHANCED NATURAL RECOVERY AREAS MAY BE AMENDED WITH ACTIVATED CARBON.
 6. ENGINEERED CAPS IN AREAS SHALLOWER THAN -10 FEET MLLW WILL BE MODIFIED TO INCLUDE A 45-CM HABITAT LAYER.

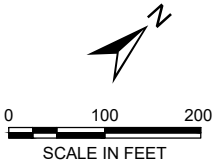
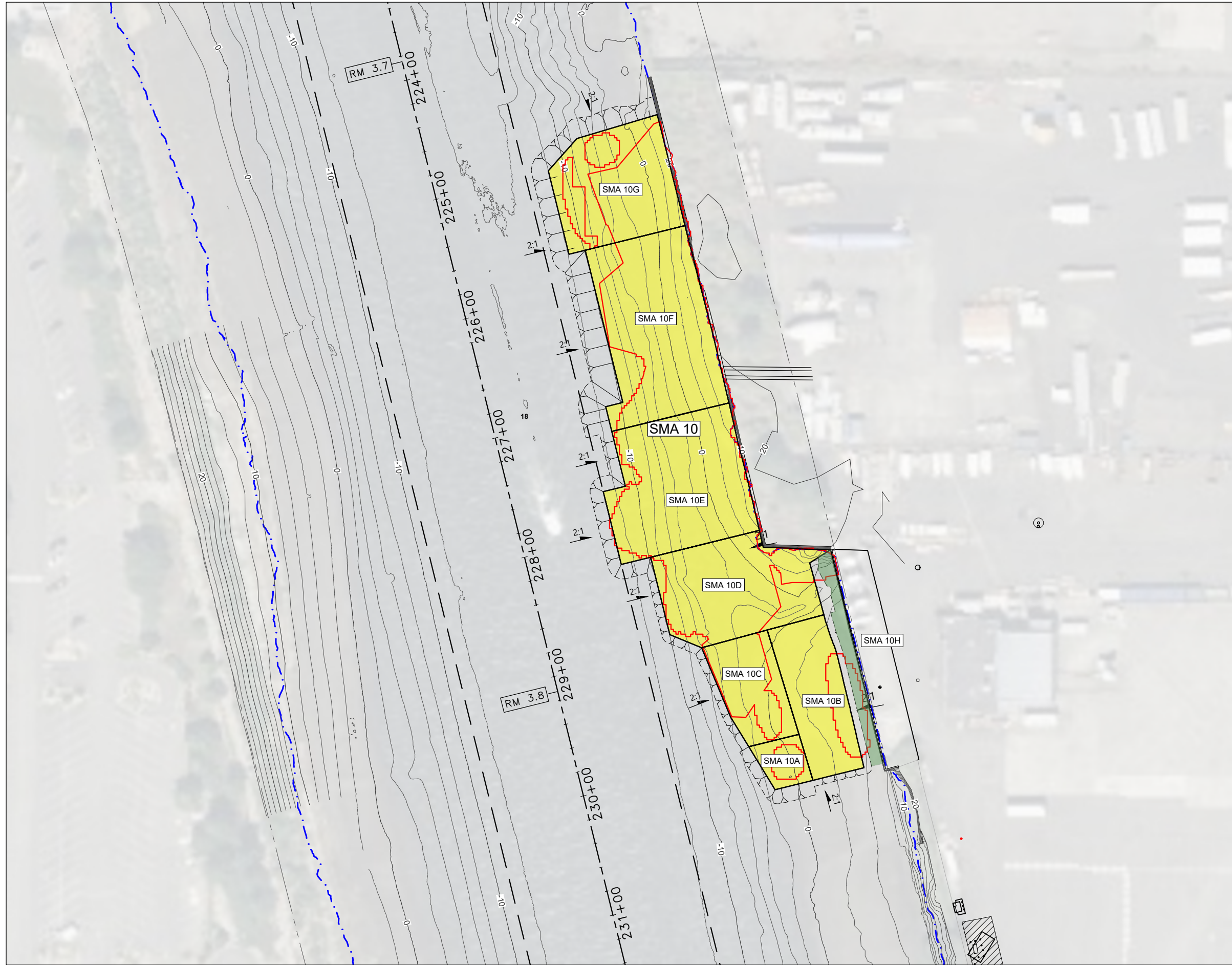


Figure 5-1e. Remedial Action Areas, RM 2.6 to RM 3.0

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH JULY 23, 2026

ANCHOR QEA **BARR**

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company



LEGEND:

- 118+00 USACE CHANNEL CENTERLINE
- FEDERAL NAVIGATION CHANNEL
- RM 1.7 RIVER MILE LABEL
- MEAN HIGHER HIGH WATER LINE
- EXISTING GRADE CONTOURS IN FEET MLLW (2' & 10' INTERVALS)
- DREDGE PRISM FOOTPRINT BOUNDARY (TOE OF CUT)
- ESTIMATED DREDGE PRISM DAYLIGHT BOUNDARY
- DREDGE SLOPE SYMBOL
- DREDGE
- ENHANCED NATURAL RECOVERY
- RAL EXCEEDANCE AREA (5/26/23)

- NOTES:
- HORIZONTAL DATUM: WASHINGTON STATE PLANE NORTH ZONE, NAD83 (2011), U.S. SURVEY FEET
 - VERTICAL DATUM: MLLW
 - AERIAL IMAGE BY BING MAPS.
 - DREDGED AREAS WILL EITHER RECEIVE BACKFILL OR RMC.
 - ENHANCED NATURAL RECOVERY AREAS MAY BE AMENDED WITH ACTIVATED CARBON.
 - ENGINEERED CAPS IN AREAS SHALLOWER THAN -10 FEET MLLW WILL BE MODIFIED TO INCLUDE A 45-CM HABITAT LAYER.

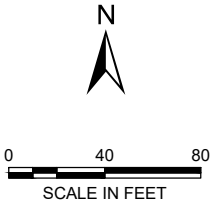


Figure 5-1f. Remedial Action Areas, RM 3.7 to RM 3.9

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH JULY 23, 2026

ANCHOR QEA BARR

Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

Prepared by CEH 7/29/2026; I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Map and Analyses\Design\00 Percent Design.aprx|Fig 05-2 7392 RAA tech assignments

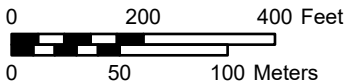
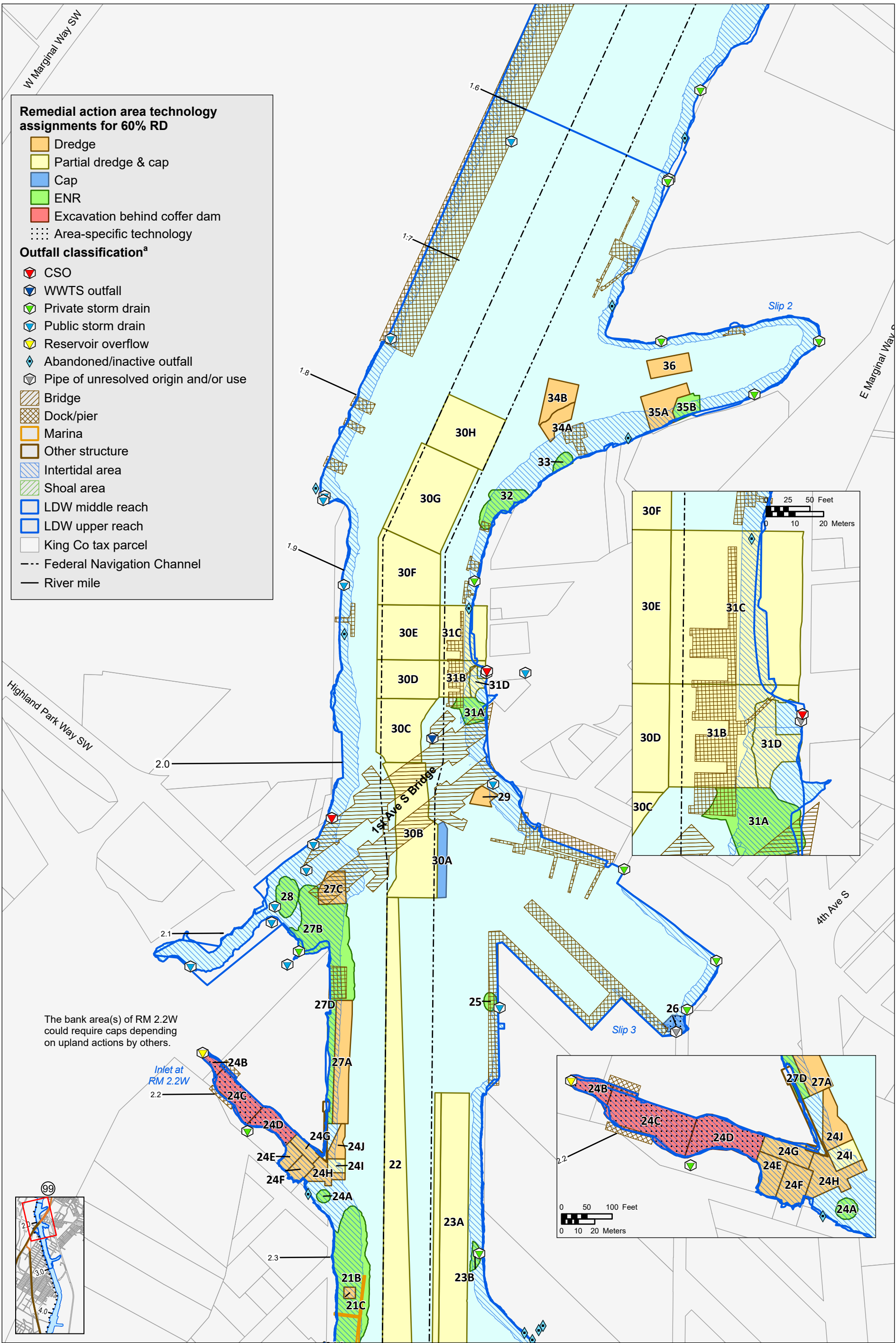


Figure 5-2a. Technology Assignment by Remedial Action Area, RM 1.6 to RM 2.3

Prepared by CEH 7/29/2026: I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\60 Percent Design.aprx|Fig 05-2 7392 RAA tech assignments

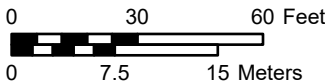
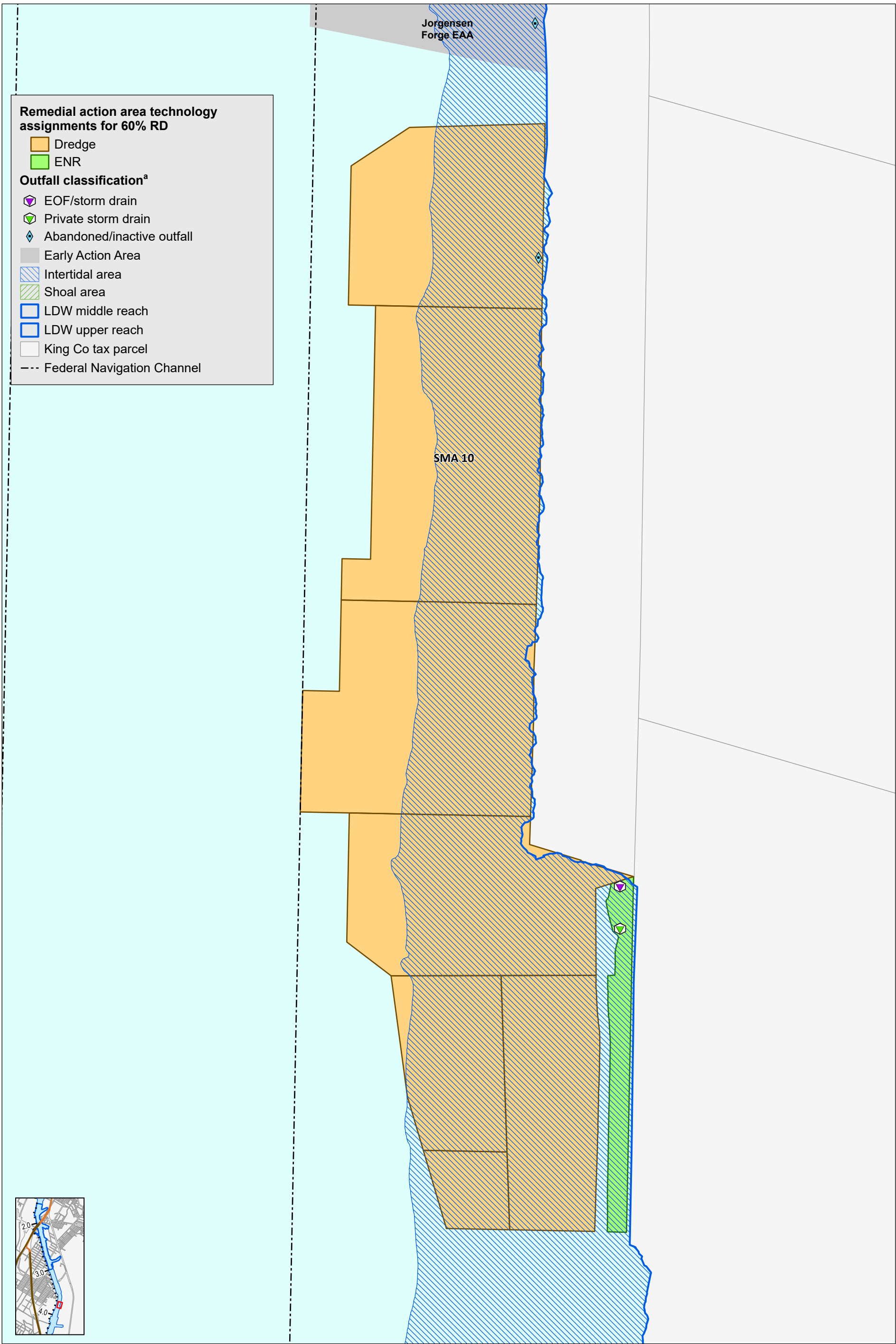
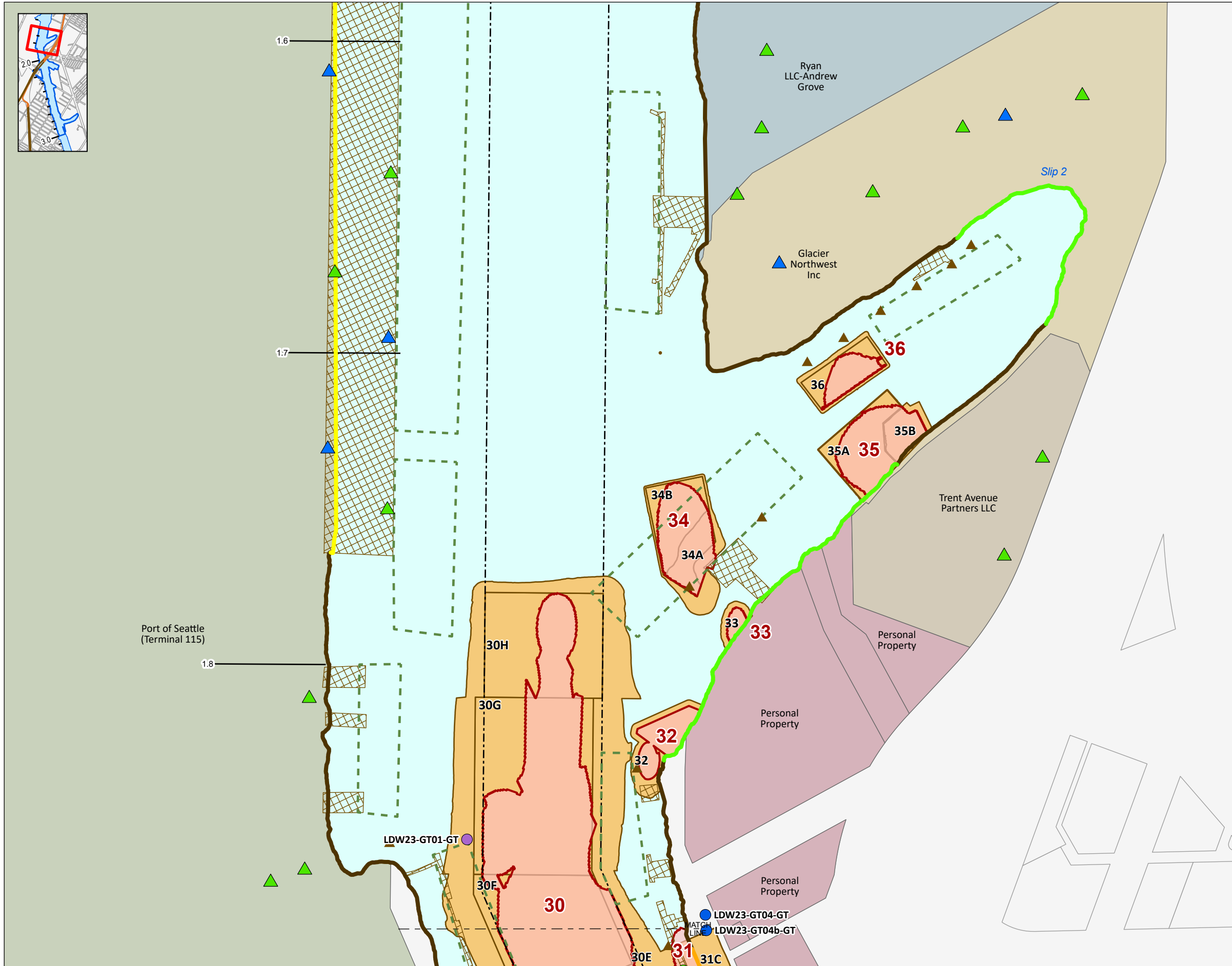


Figure 5-2c. Technology Assignment by Remedial Action Area, Sediment Management Area 10

Prepared by CEH 7/31/2026 I:\Client\LDWG\Work Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\60 percent\60 Percent Design.aprx\Fig 07-1 7702 Geotechnical data locations



Phase II PDI geotechnical data collection locations

- Cone penetrometer test location
- Geotechnical boring location
- Vane shear location

Previous geotechnical studies by others

- Cone penetrometer test location
- Standard penetration test location

1 RAL exceedance area

60% RD RAA boundary^a

Bank condition

- Armored slope
- Vertical bulkhead
- Bulkhead and armored slope
- Unarmored bank

Overwater structures

- Dock/pier
- Berthing area (approximate)
- Pile^b
- Dolphin^b
- King Co tax parcel
- Federal Navigation Channel
- River mile

^a Includes dredging side slopes and overplacement limits.

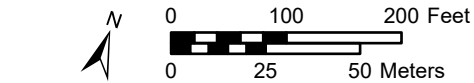


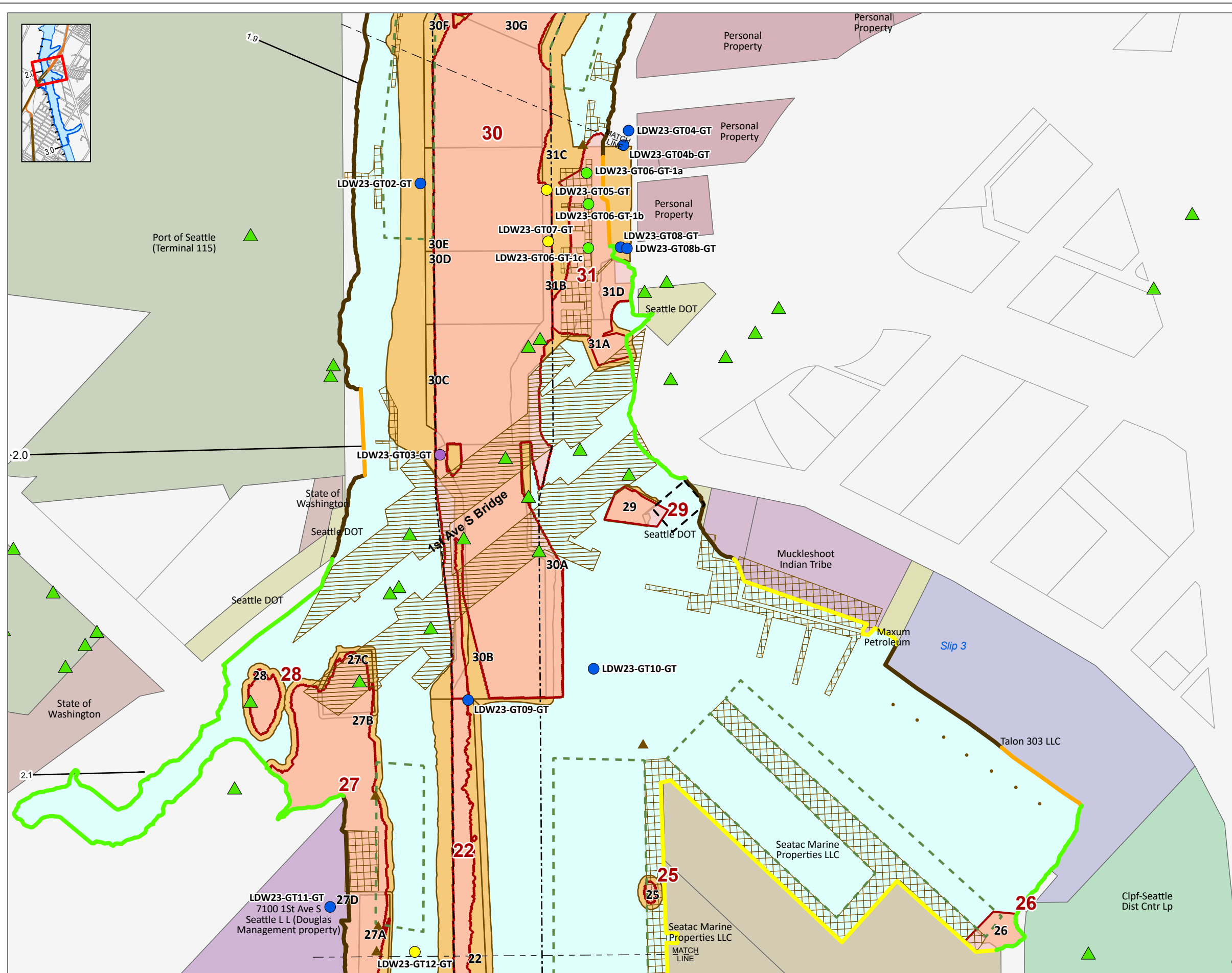
Figure 7-1a. Middle Reach Geotechnical Data Locations, RM 1.6 to RM 1.85

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF
DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026



Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company



Phase II PDI geotechnical data collection locations

- Cone penetrometer test location
- Geotechnical boring location
- Vane shear location
- Full-flow penetrometer location

Previous geotechnical studies by others

-  Standard penetration test location

-  **1** RAL exceedance area
-  60% RD RAA boundary^a

Bank condition

- Armored slope
- Vertical bulkhead
- Bulkhead and armored slope
- Unarmored bank

Overwater structures

-  Bridge
-  Dock/pier
-  Berthing area (approximate)
-  Pile^b
-  Dolphin^b
-  King Co tax parcel
-  Federal Navigation Channel
-  River mile

^a Includes dredging side slopes and overplacement limits.

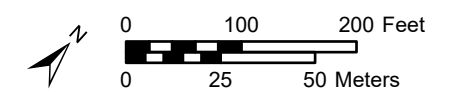


Figure 7-1b. Middle Reach Geotechnical Data Locations, RM 1.85 to RM 2.15

**INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF
DESIGN REPORT FOR THE LDW MIDDLE REACH**

JULY 31, 2026



Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

Prepared by CEH 7/31/2026: I:\Client\DWG\Work Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\60 percent\60 Percent Design.aprx\Fig 07-1 7702 Geotechnical data locations



Phase II PDI geotechnical data collection locations

- Cone penetrometer test location
- Geotechnical boring location
- Full-flow penetrometer location

Previous geotechnical studies by others

- ▲ Standard penetration test location

1 RAL exceedance area

60% RD RAA boundary^a

Bank condition

- Armored slope
- Bulkhead and armored slope
- Unarmored bank

Overwater structures

- Dock/pier
- Marina
- Berthing area (approximate)
- Pile^b
- ▲ Dolphin^b
- King Co tax parcel
- Federal Navigation Channel
- River mile

^a Includes dredging side slopes and overplacement limits.

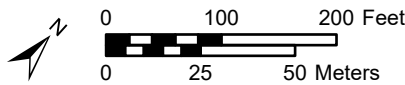


Figure 7-1c. Middle Reach Geotechnical Data Locations, RM 2.15 to RM 2.45

INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026



Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

Prepared by CEH 7/31/2026 I:\Client\DWG\Work Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\60 percent\60 Percent Design.aprx\Fig 07-1 7702 Geotechnical data locations



Phase II PDI geotechnical data collection locations

- Cone penetrometer test location
- Geotechnical boring location
- Full-flow penetrometer location

Previous geotechnical studies by others

- Cone penetrometer test location
- Standard penetration test location

1 RAL exceedance area

60% RD RAA boundary^a

Bank condition

- Armored slope
- Vertical bulkhead
- Bulkhead and armored slope
- Unarmored bank

Overwater structures

- Dock/pier
- Berthing area (approximate)
- Dolphin^b
- King Co tax parcel
- Federal Navigation Channel
- River mile

^a Includes dredging side slopes and overplacement limits.

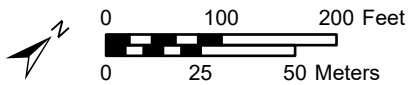


Figure 7-1d. Middle Reach Geotechnical Data Locations, RM 2.45 to RM 2.75

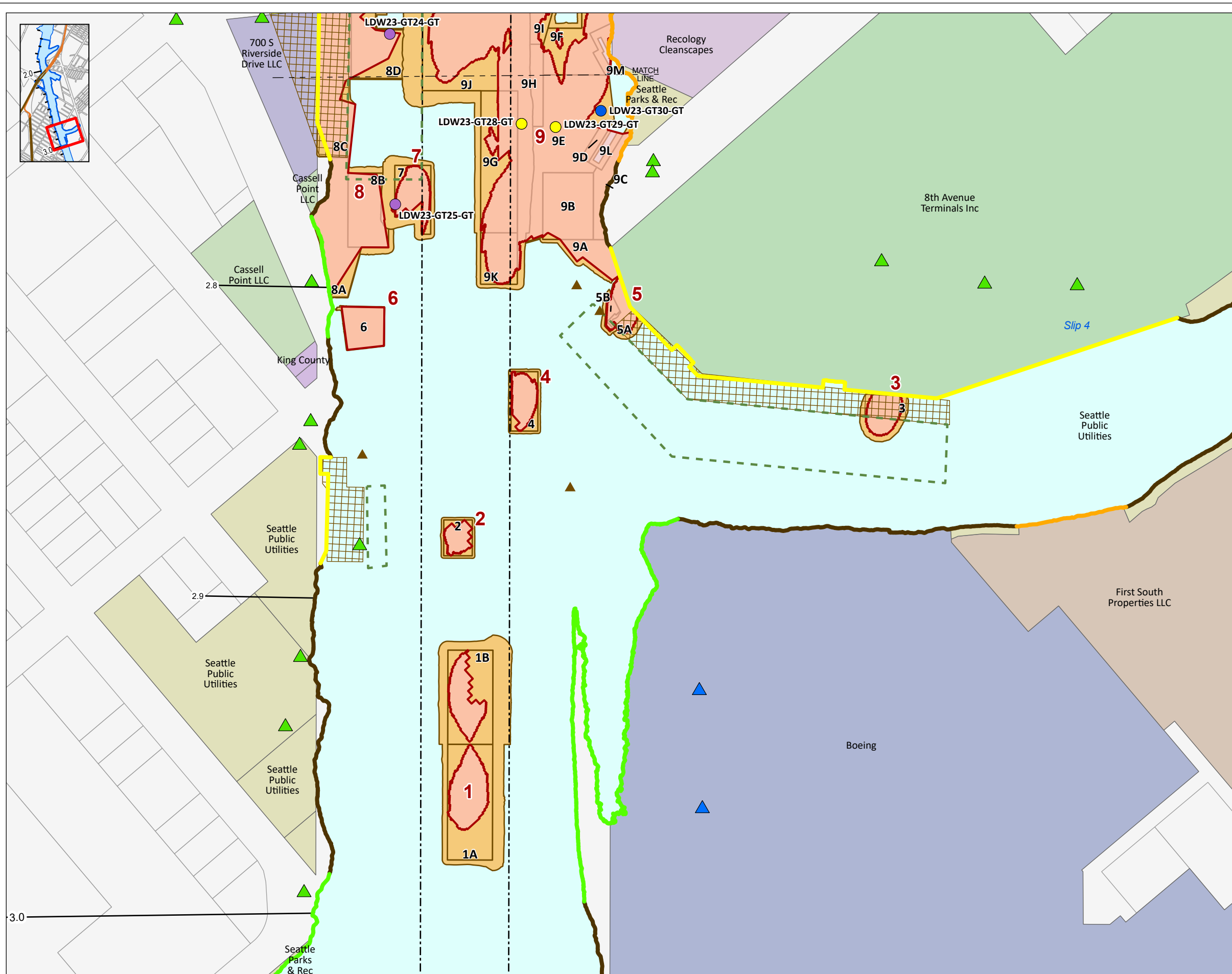
INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF
DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026



Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

Prepared by CEH 7/31/2026: I:\Client\DWG\Work Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\60 percent\60 Percent Design.aprx\Fig 07-1 7702 Geotechnical data locations



Phase II PDI geotechnical data collection locations

- Cone penetrometer test location
- Geotechnical boring location
- Full-flow penetrometer location

Previous geotechnical studies by others

- ▲ Cone penetrometer test location
- ▲ Standard penetration test location

1 RAL exceedance area

60% RD RAA boundary^a

Bank condition

- Armored slope
- Vertical bulkhead
- Bulkhead and armored slope
- Unarmored bank

Overwater structures

- Dock/pier
- Berthing area (approximate)
- ▲ Dolphin^b
- King Co tax parcel
- Federal Navigation Channel
- River mile

^a Includes dredging side slopes and overplacement limits.

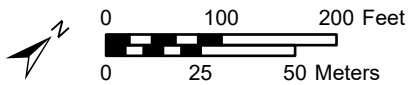


Figure 7-1e. Middle Reach Geotechnical Data Locations, RM 2.75 to RM 3.0

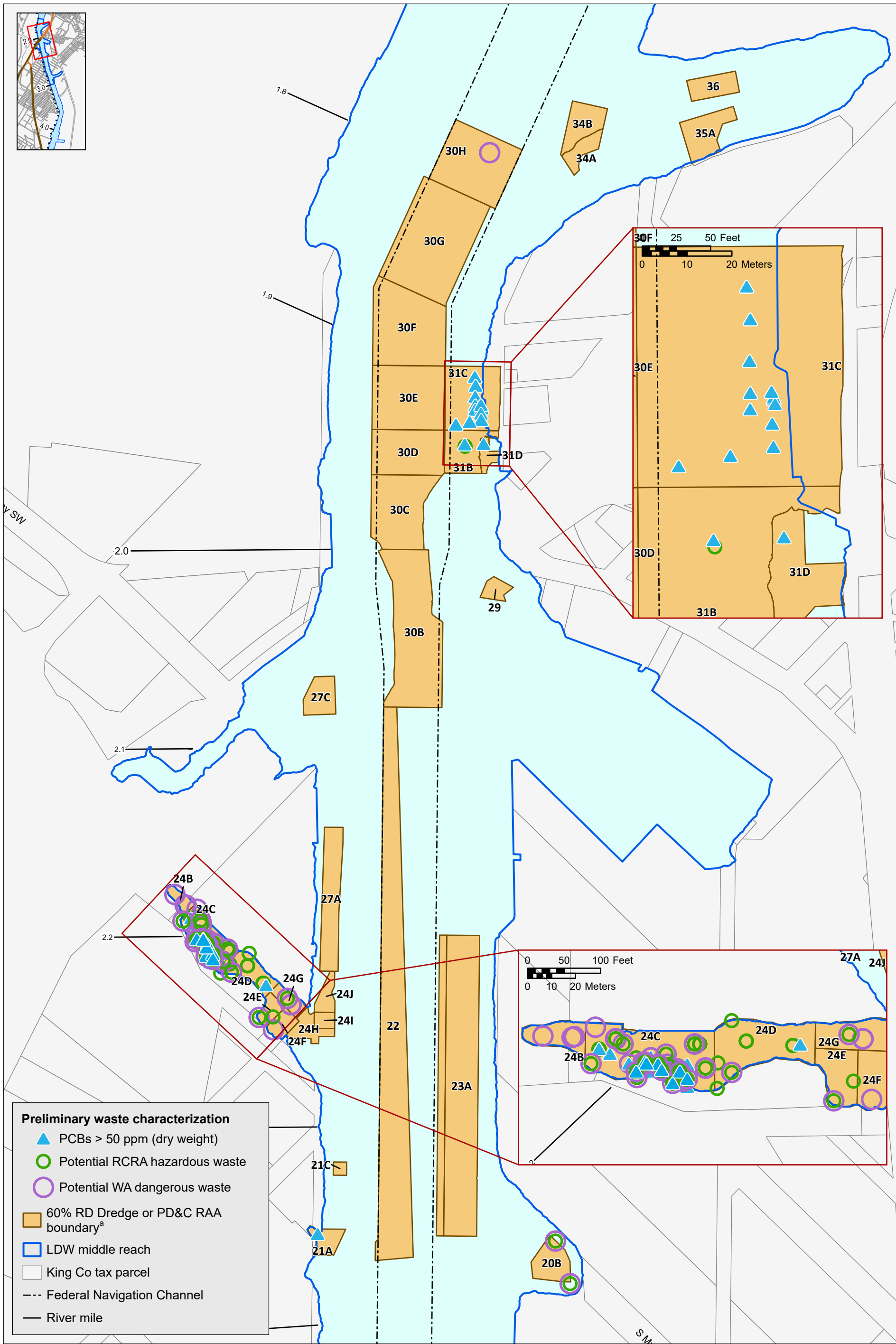
INTERMEDIATE (60%) REMEDIAL DESIGN BASIS OF DESIGN REPORT FOR THE LDW MIDDLE REACH

JULY 31, 2026



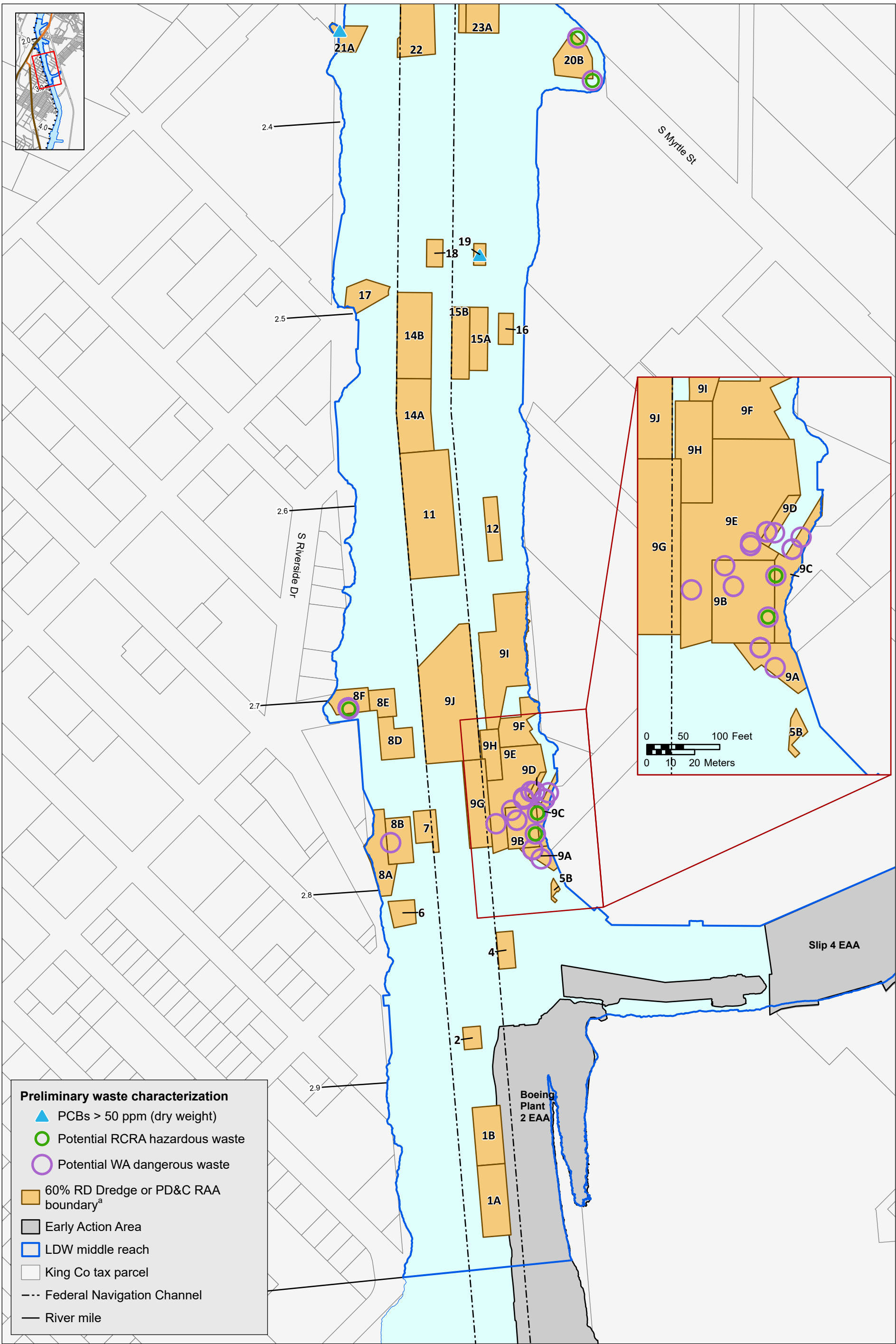
Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

Prepared by CEH 7/30/2026: I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Design\Fig 09-1a-1b 7741 Preliminary waste characterization



Lower Duwamish Waterway Group
City of Seattle / King County / The Boeing Company

Prepared by CEH 7/30/2026: I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\09-1ab 7741 Preliminary waste characterization



Prepared by CEH 7/30/2026: I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\Fig 09-1c 7741 Preliminary waste characterization SMA10

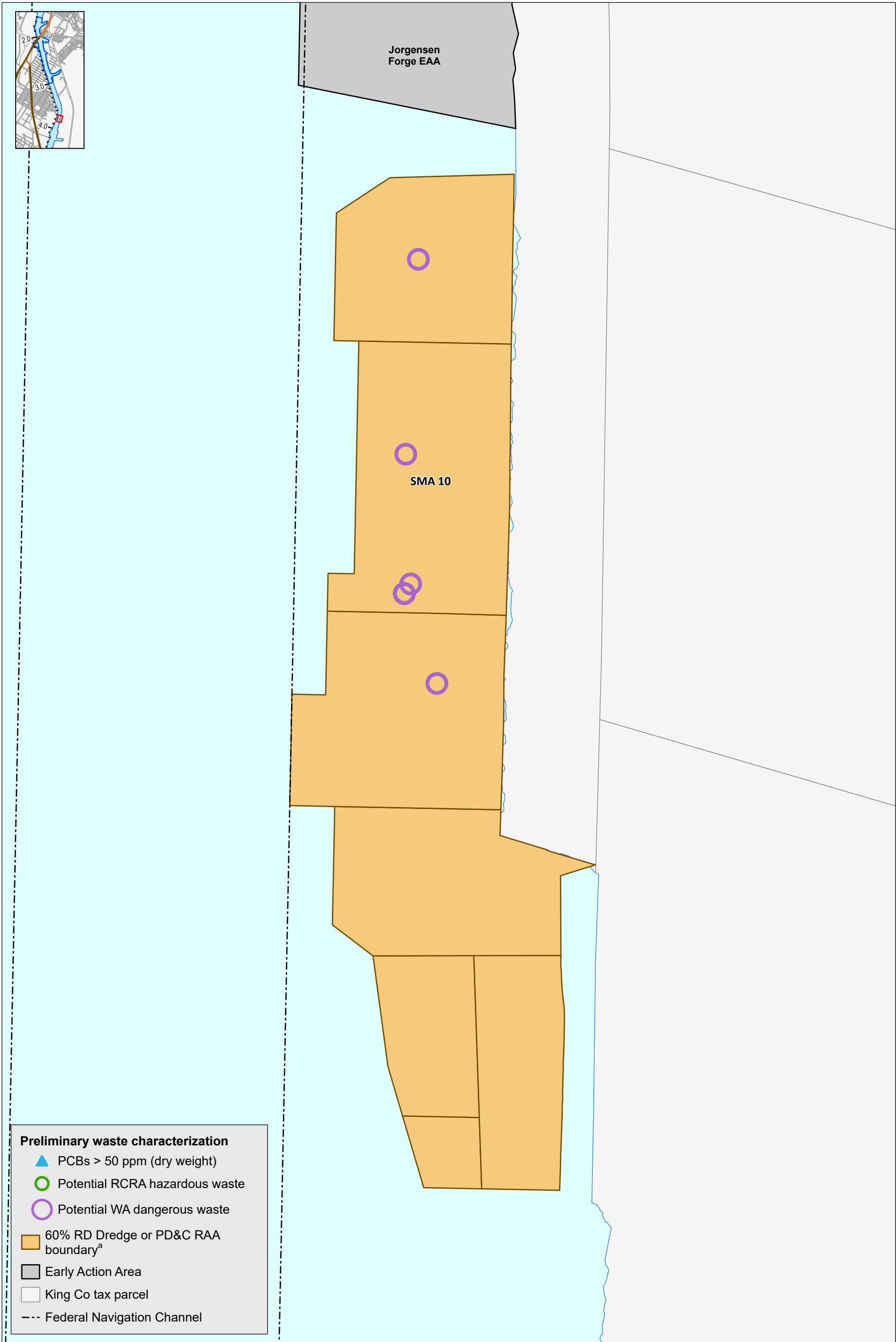


Figure 9-1c. Preliminary Waste Characterization of Dredged Material, SMA 10

Prepared by CEH, 7/29/2026; I:\Client\LDWG\Work_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\00 Percent Design\Fig 10-1a 7719 Habitat types

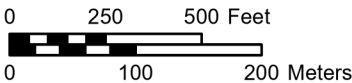
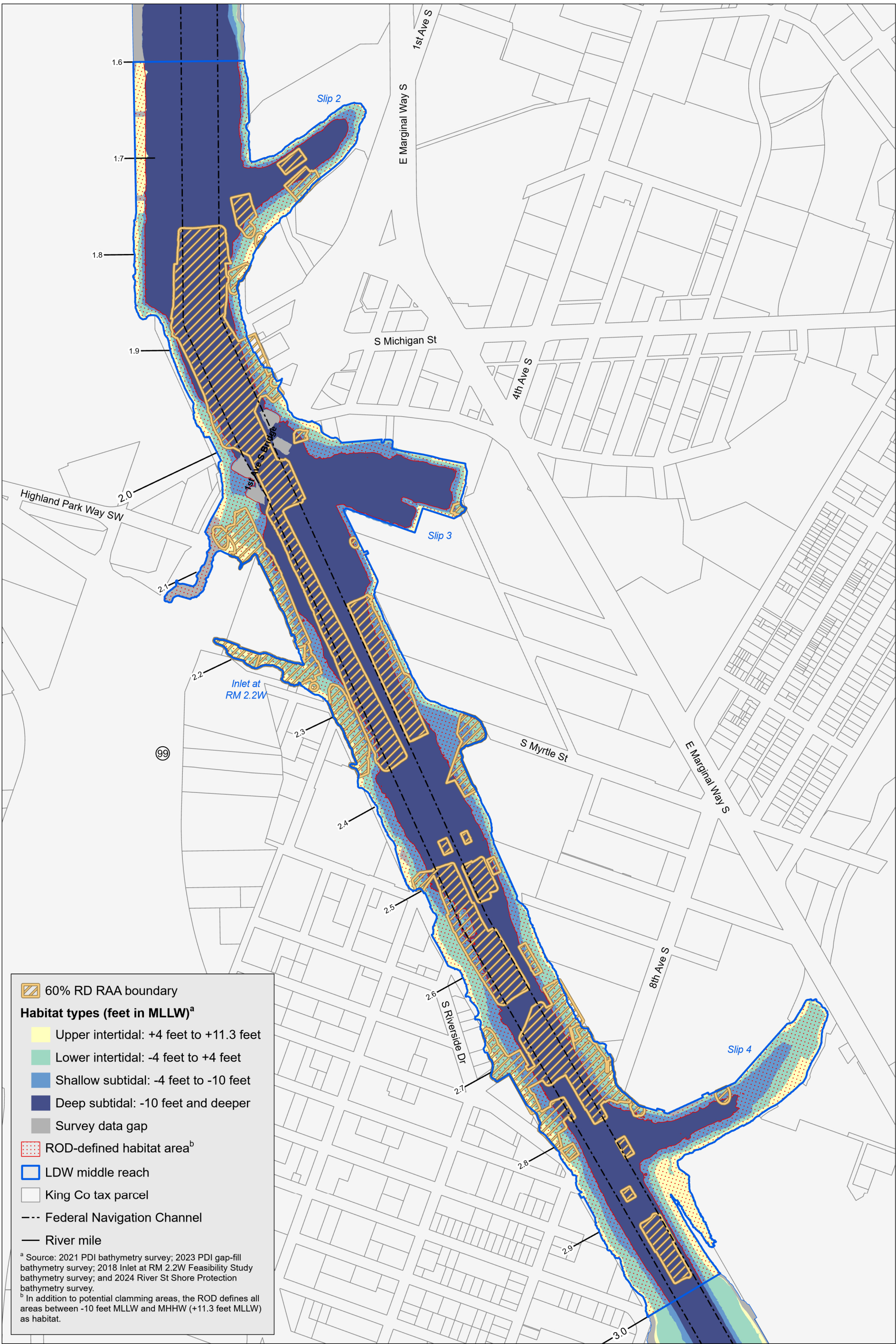


Figure 10-1a. Habitat Types and ROD-Defined Habitat Areas that Overlap with RAAs

Prepared by CEH 7/29/2026; I:\Client\LDW\G\Work_Orders\AOC5 Middle Reach Design\Maps and Analyses\Design\60 Percent Design.aprx\Fig 10-1b 7719 Clamming Restoration Shoreline

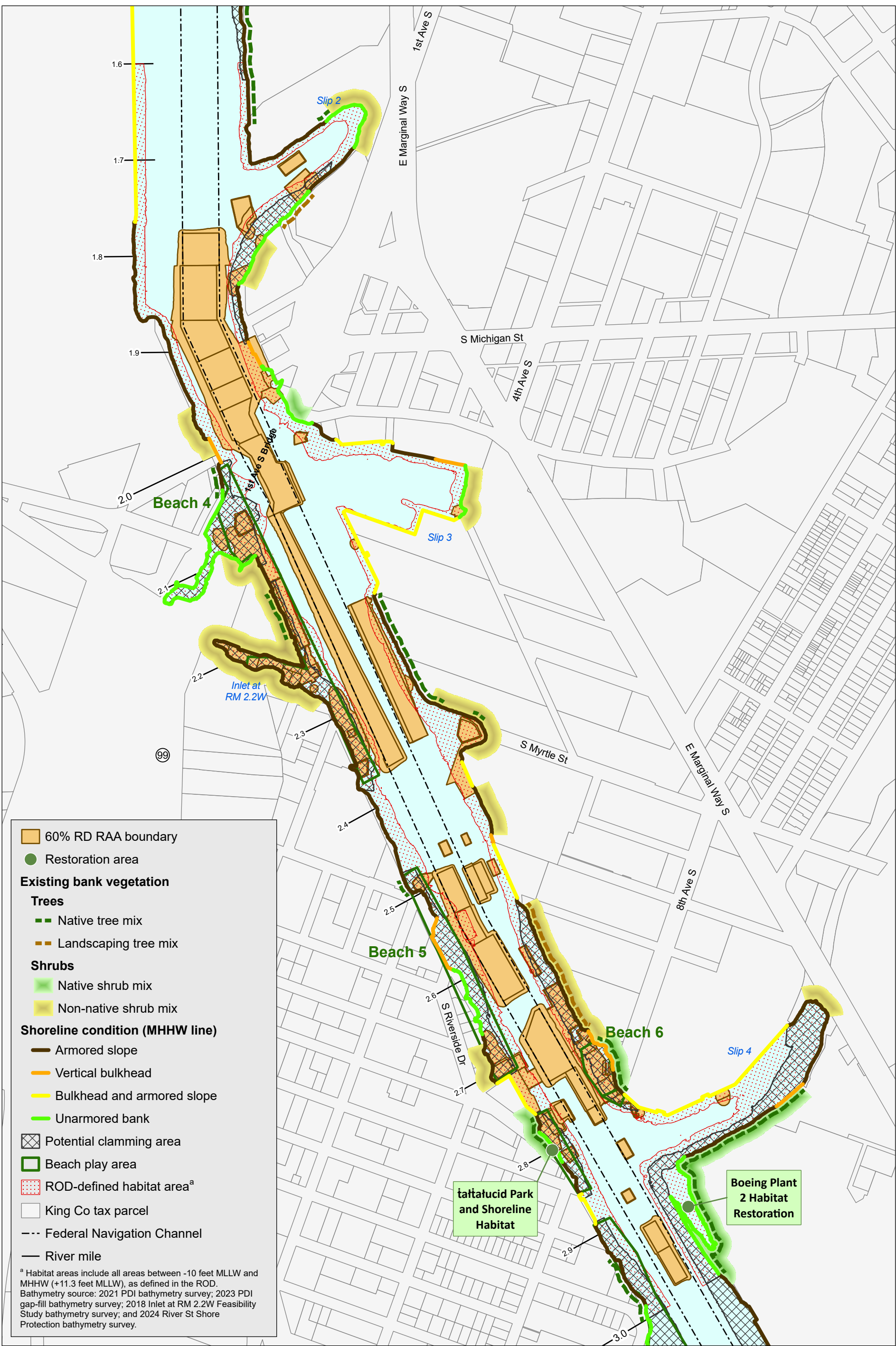


Figure 10-1b. Potential Clamming Areas and Shoreline Conditions that Overlap with RAAs