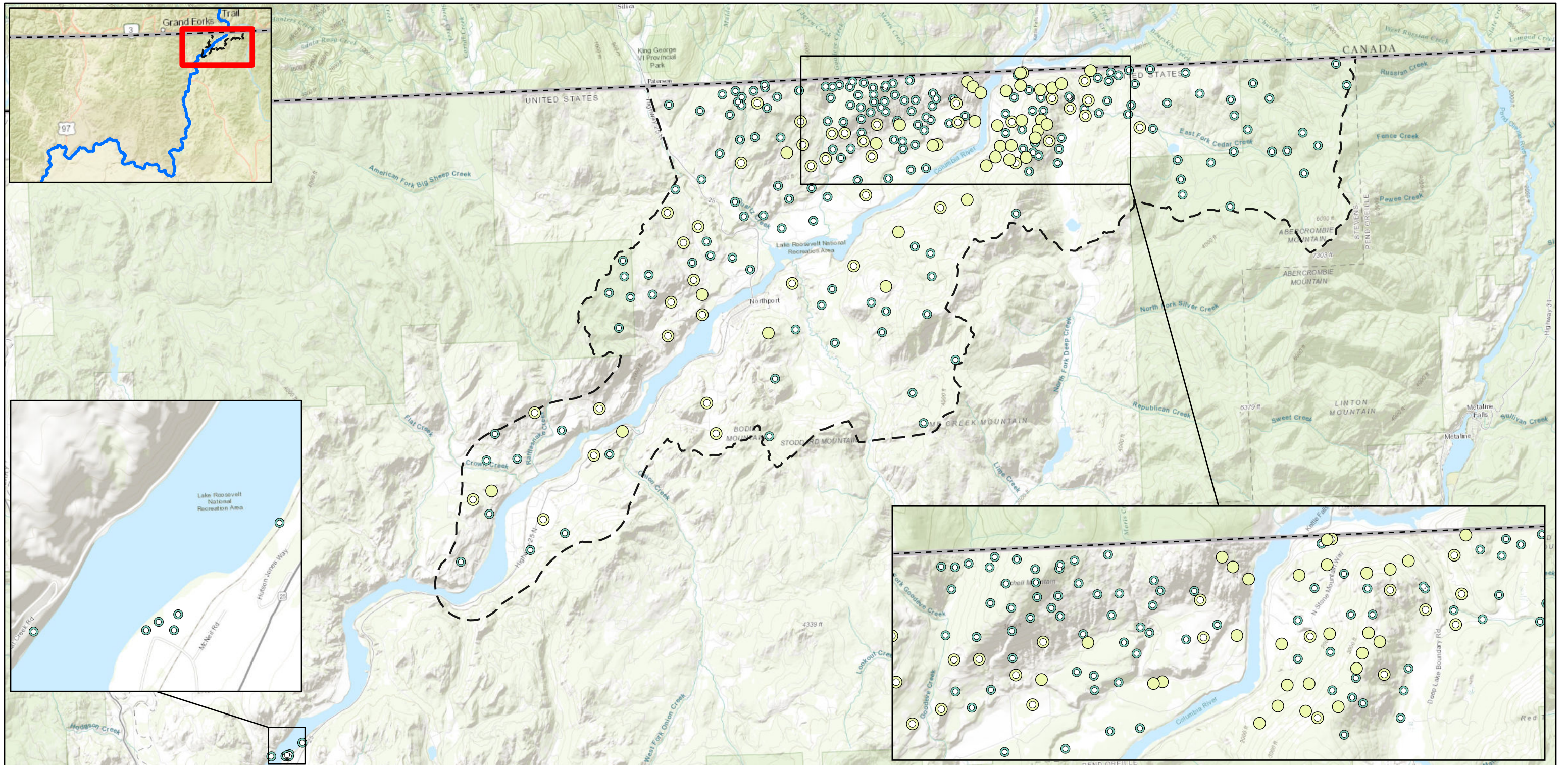
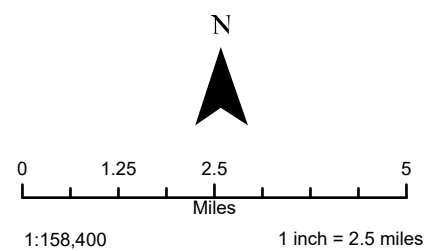


Maps

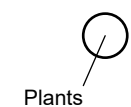


Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



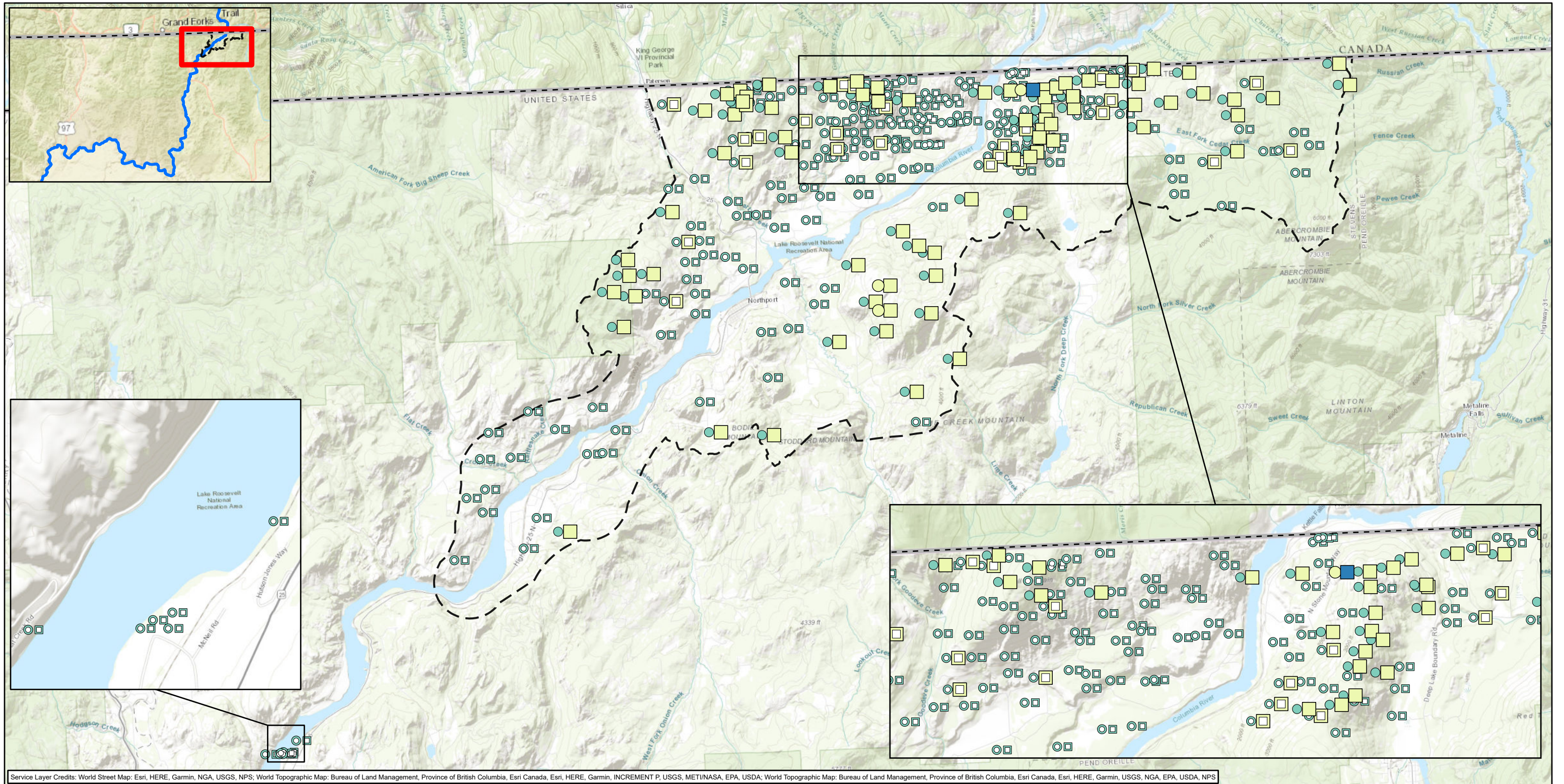
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV

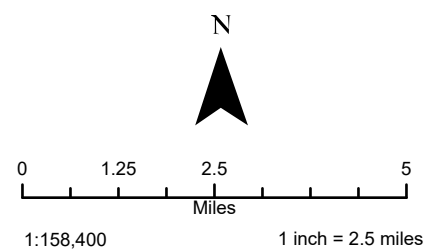


Plants

MAP ES-1. Summary of Maximum Arsenic HQs for Plants
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

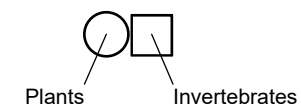
— Aerial deposition area as defined in
 - - - 2014 UCR Upland Soil Study QAPP (TAI 2014a)

Plants HQ

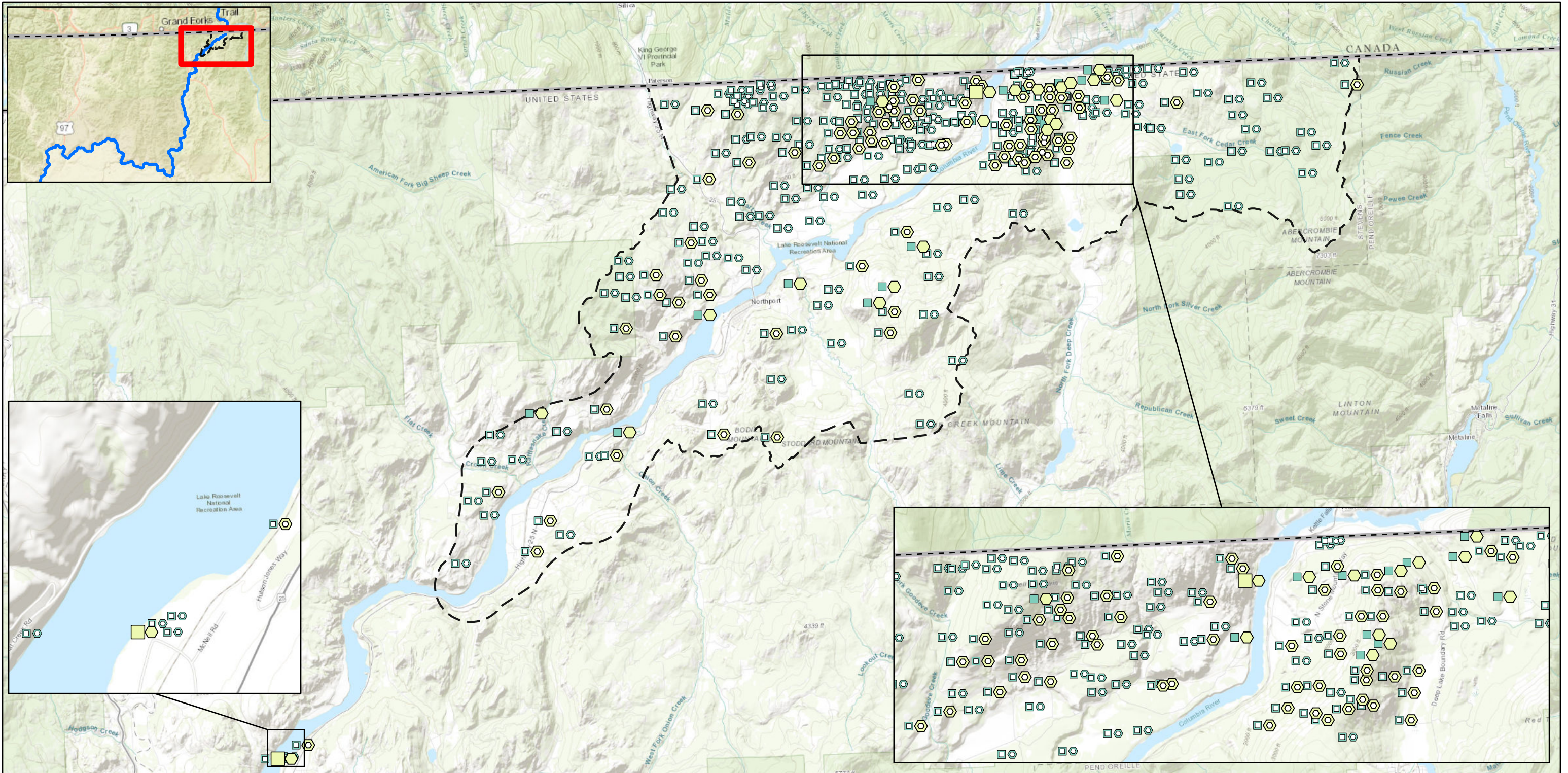
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

Invertebrates HQ

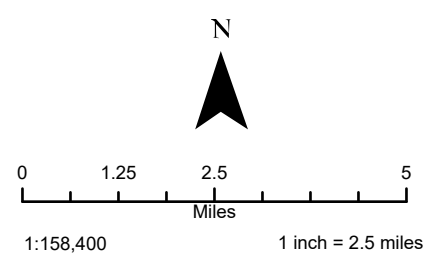
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP ES-2. Summary of Maximum Barium HQs for Plants and Invertebrates
 Final Upland BERA
 Upper Columbia River, Washington



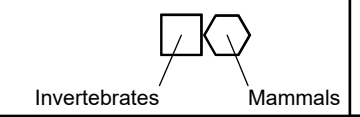
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USA



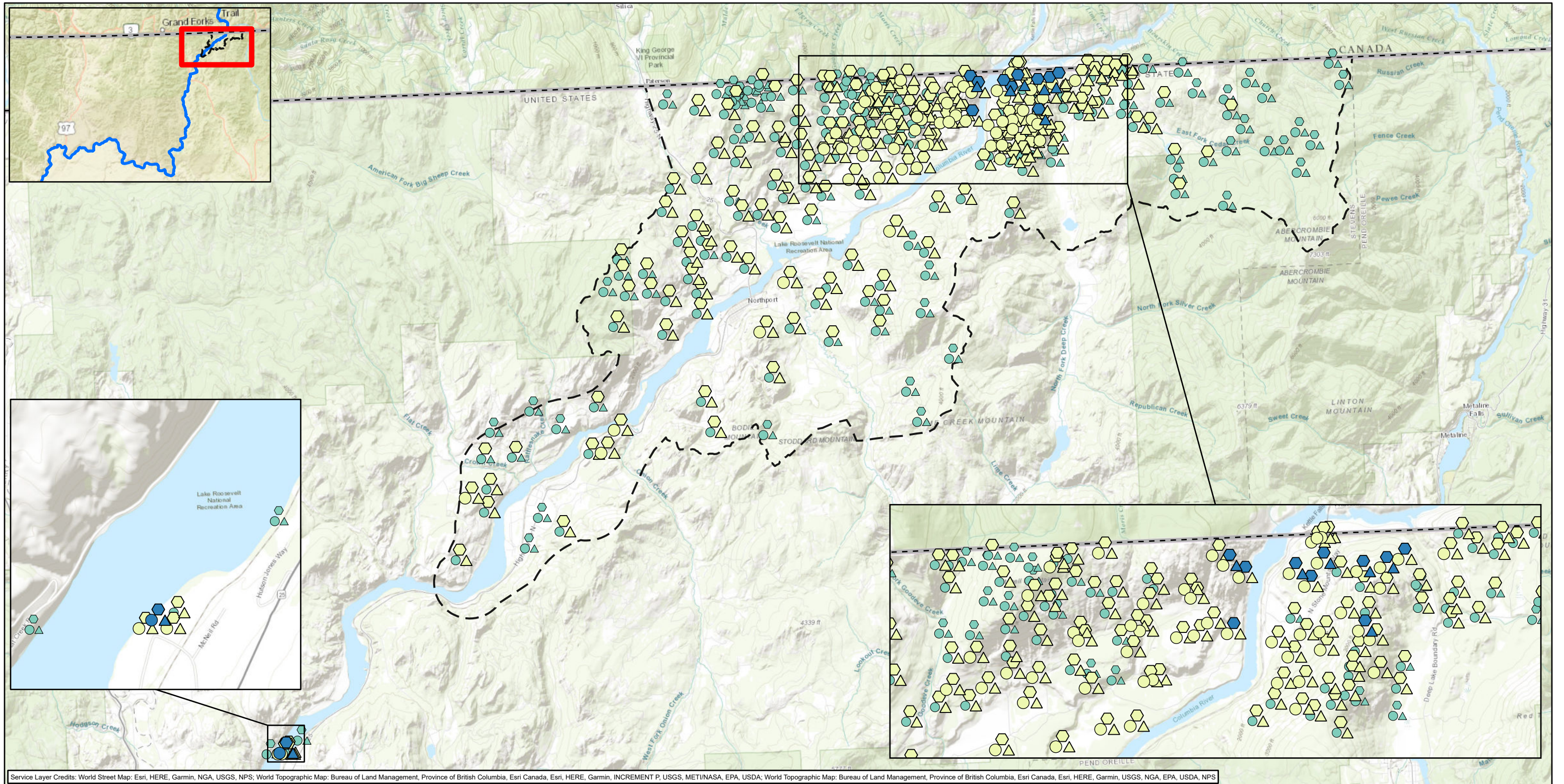
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

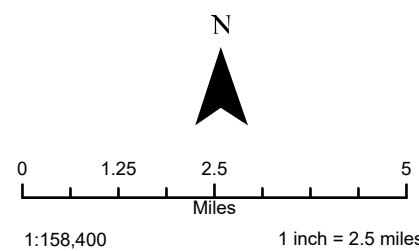
- Mammals HQ**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV



MAP ES-4. Summary of Maximum Copper HQs for Invertebrates and Mammals
 Final Upland BERA
 Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

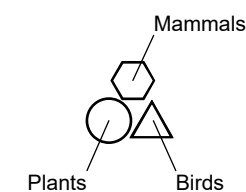


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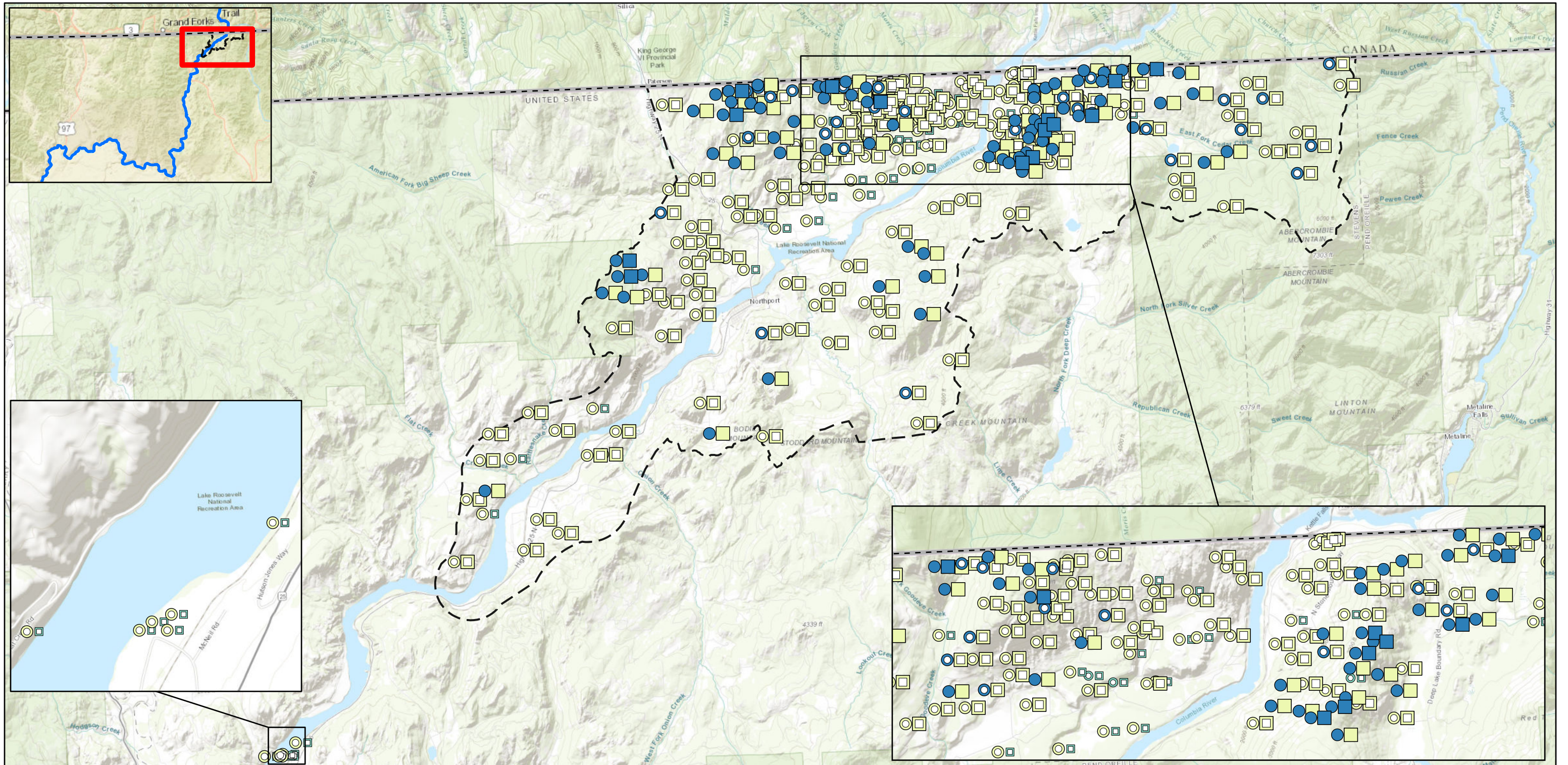
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Birds HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

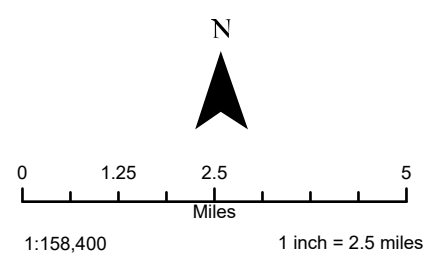
- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP ES-5. Summary of Maximum Lead HQs for Plants, Birds, and Mammals
Final Upland BERA
Upper Columbia River, Washington



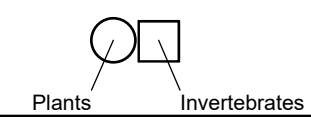
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USA



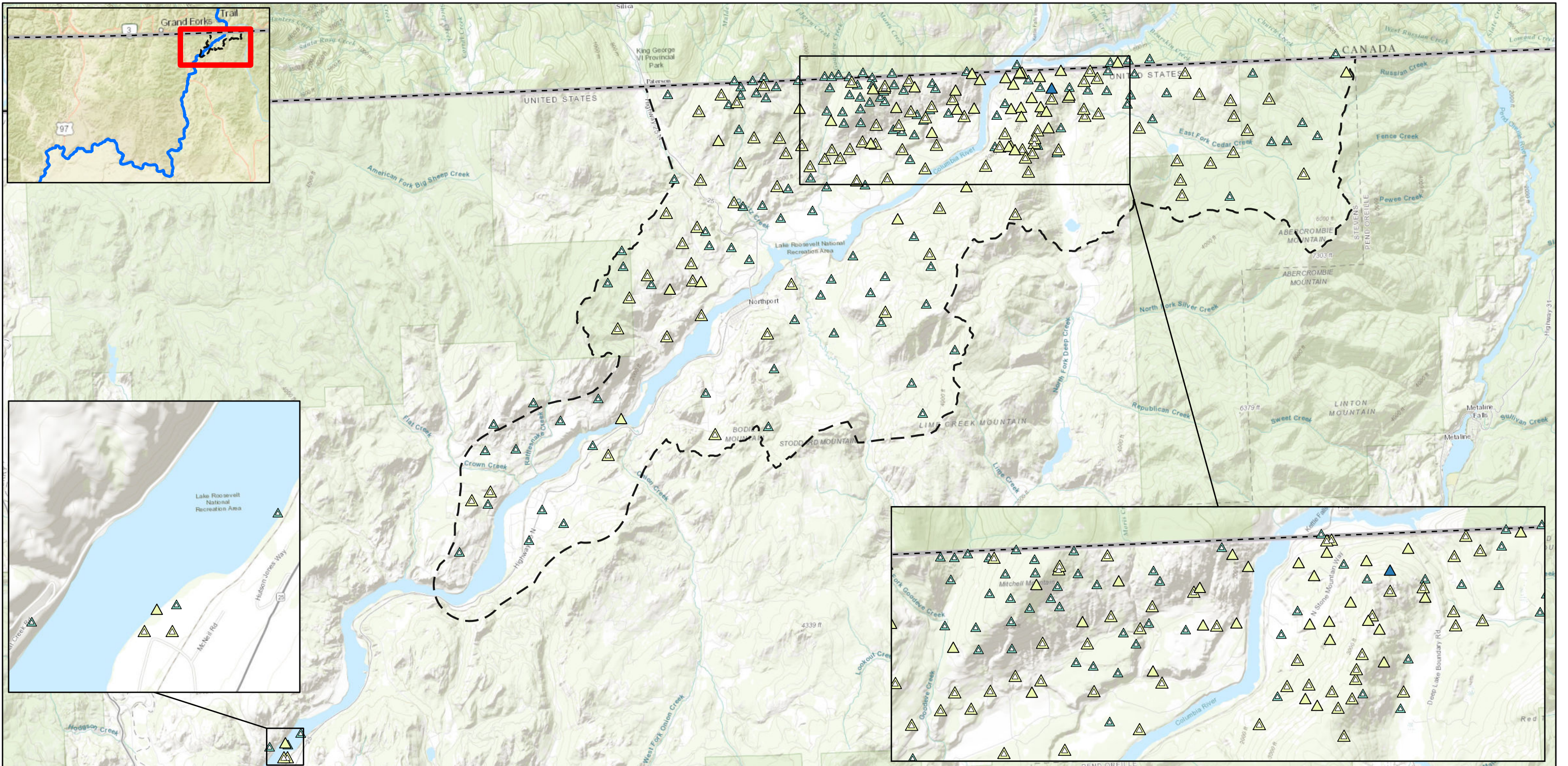
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

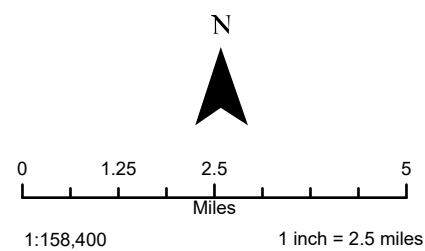
- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 5 and > BTV



MAP ES-6. Summary of Maximum Manganese HQs for Plants and Invertebrates
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USA, NPS

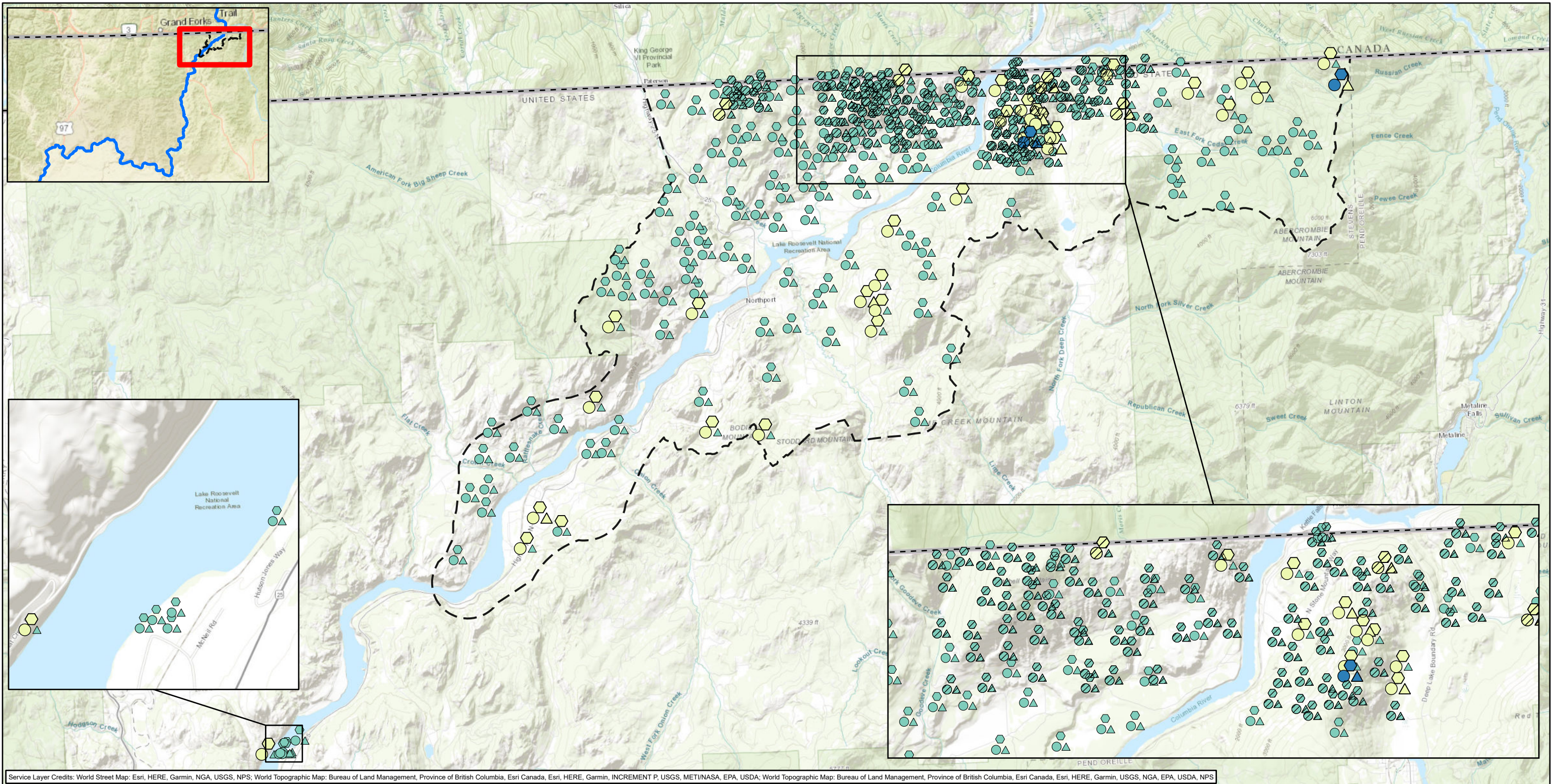


LEGEND

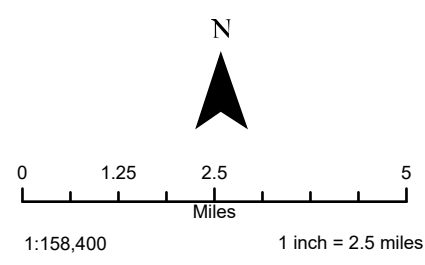
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP ES-7. Summary of Maximum Mercury HQs for Birds
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

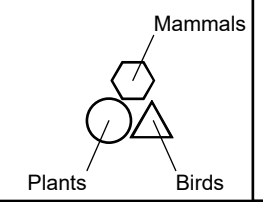


LEGEND

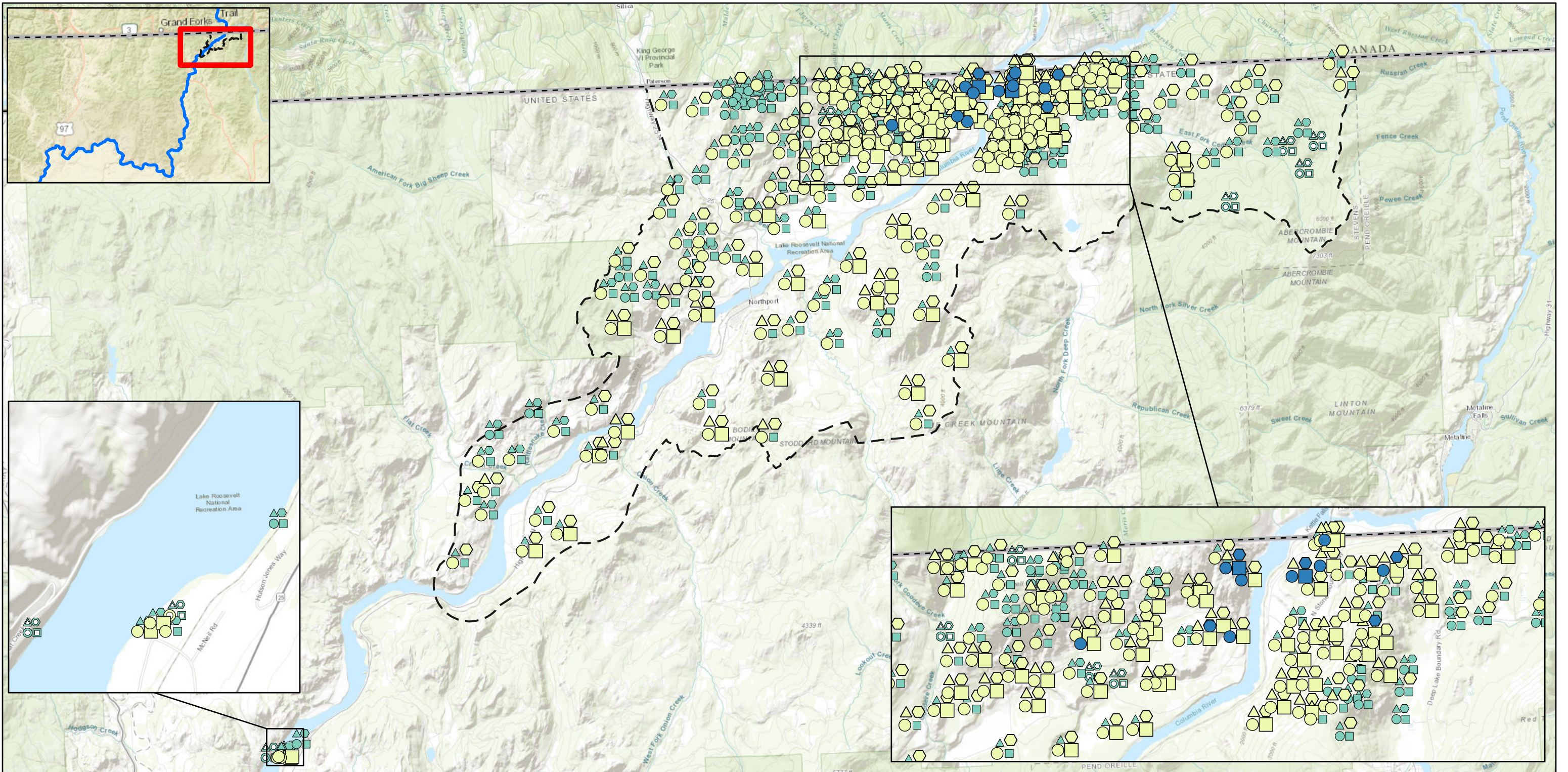
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV
- Hatched symbol indicates non-detect results.

- Birds HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

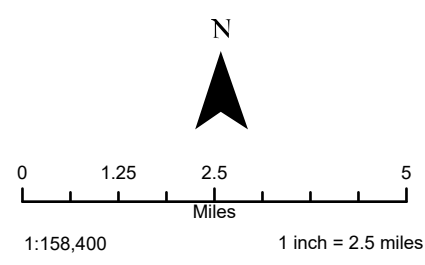
- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP ES-8. Summary of Maximum Selenium HQs for Plants, Birds, and Mammals
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



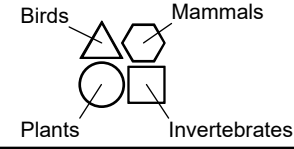
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

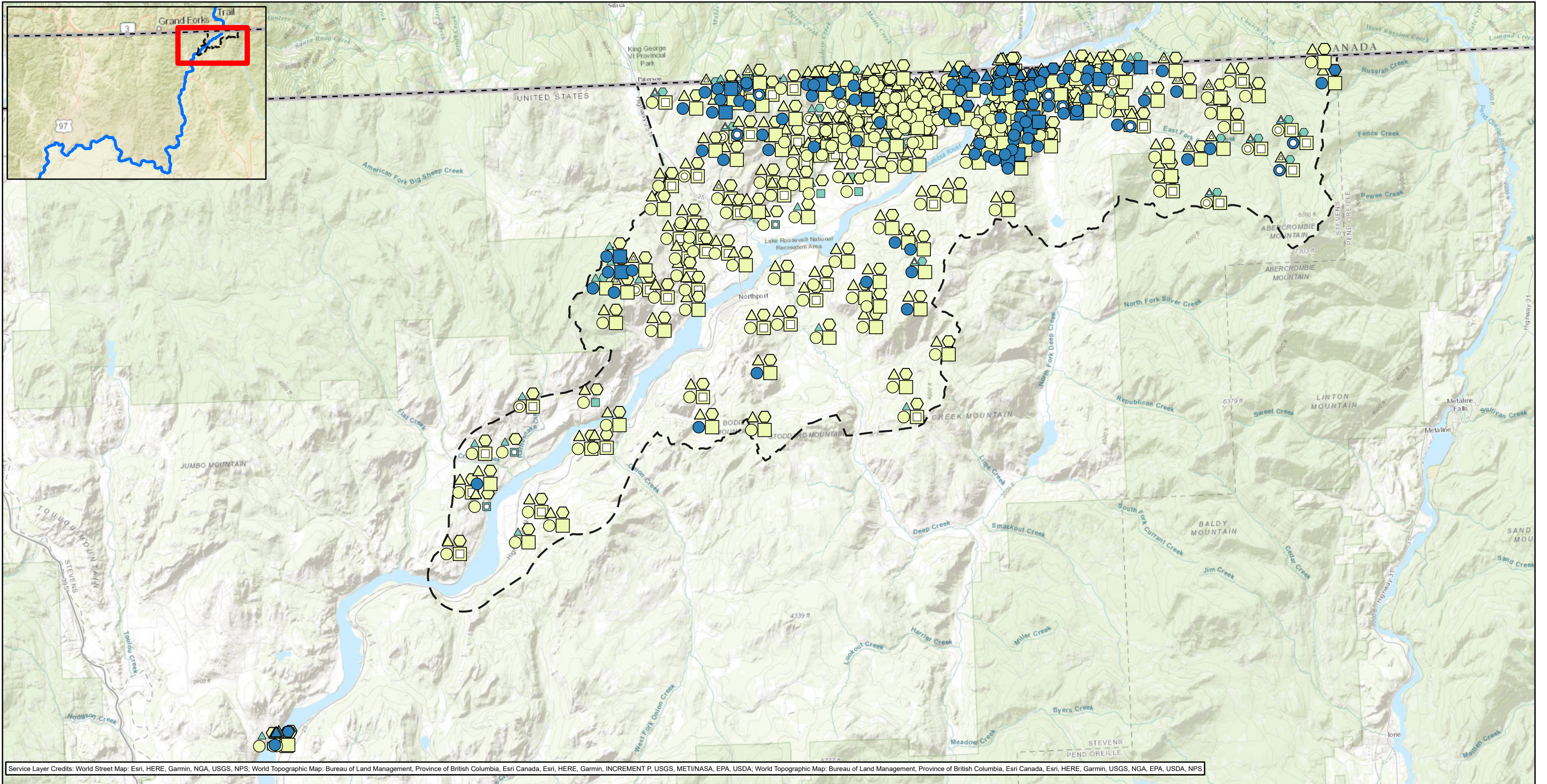
- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

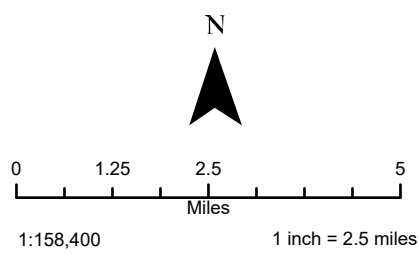
- Mammals HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP ES-9. Summary of Maximum Zinc HQs for Plants, Invertebrates, Birds, and Mammals
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

Plants HQ

- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

Invertebrates HQ

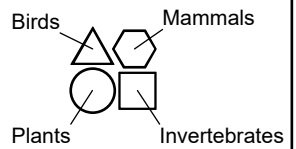
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

Birds HQ

- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

Mammals HQ

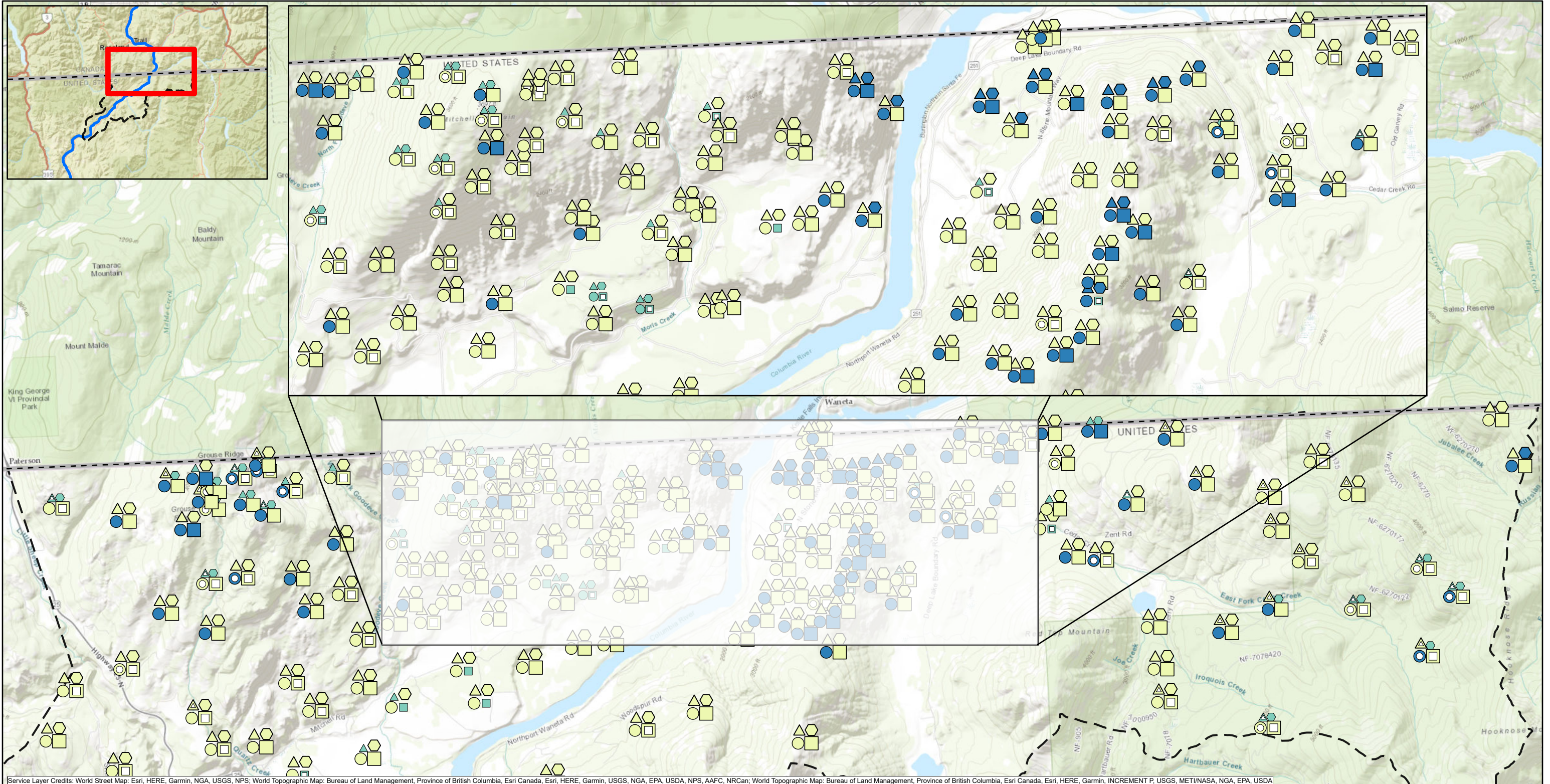
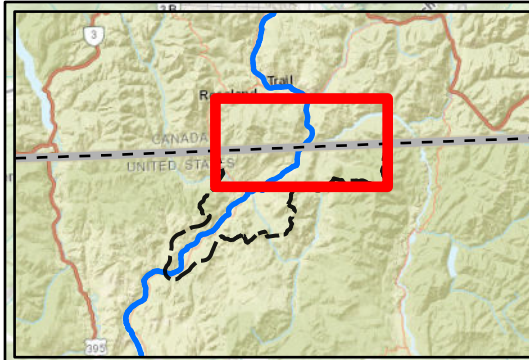
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



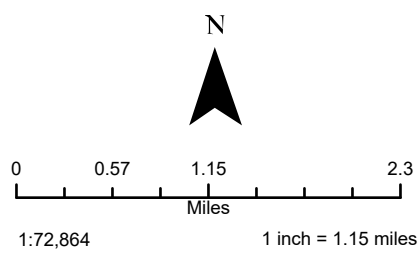
Note: For each receptor group and endpoint, the maximum HQ among COC concentrations exceeding the BTV is shown; if no COC concentrations exceed the BTV, then the maximum HQ among COC concentrations less than the BTV is shown.

MAP ES-10a. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



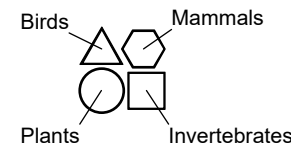
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

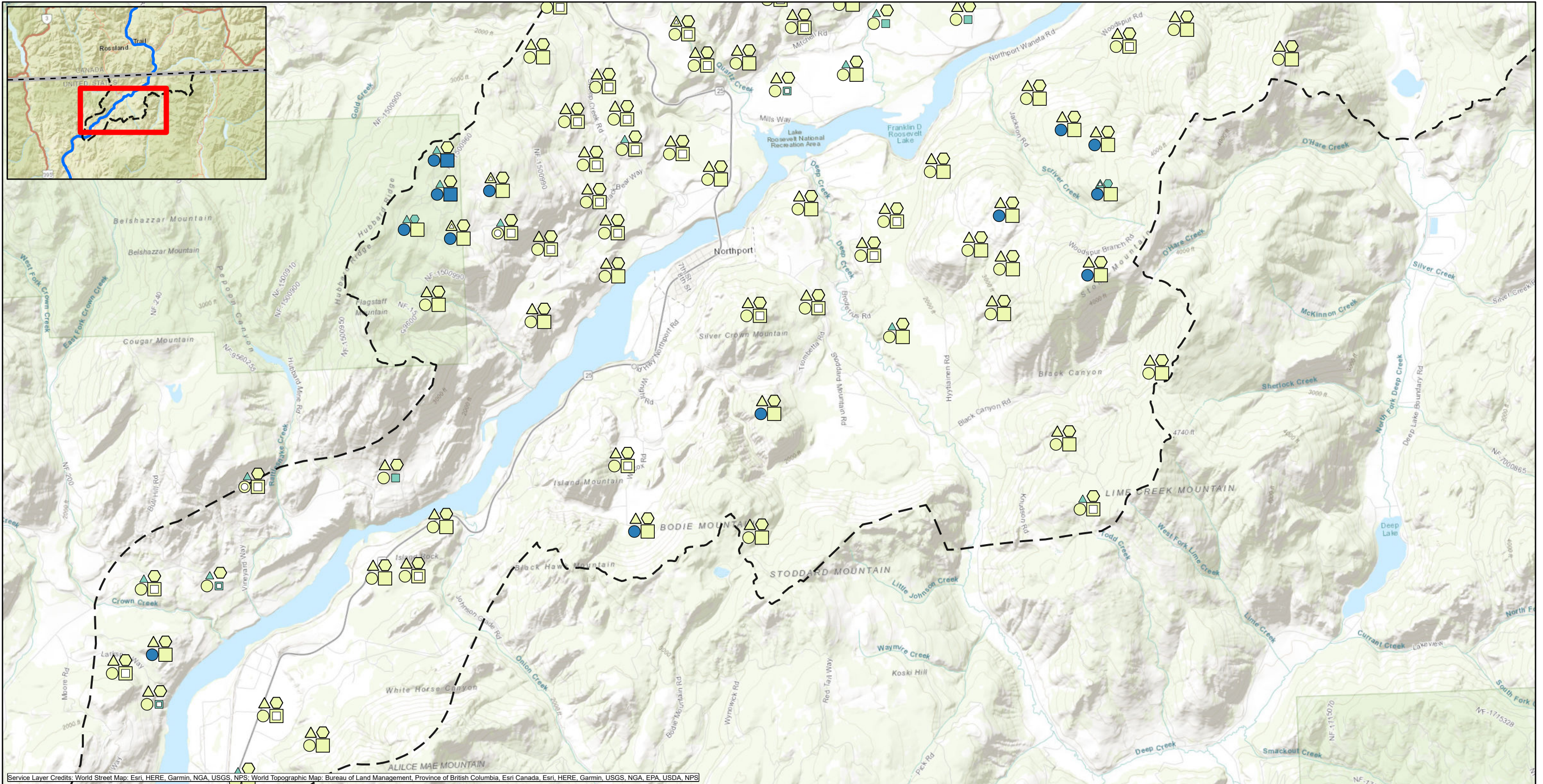
- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



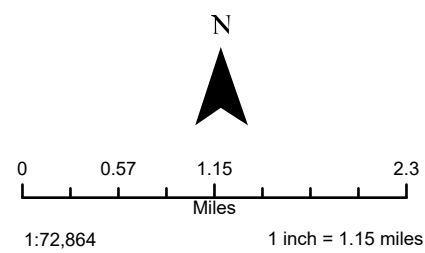
Note: For each receptor group and endpoint, the maximum HQ among COC concentrations exceeding the BTV is shown; if no COC concentrations exceed the BTV, then the maximum HQ among COC concentrations less than the BTV is shown.

MAP ES-10b. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



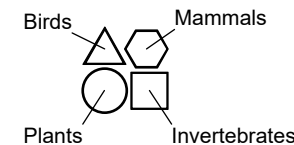
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV

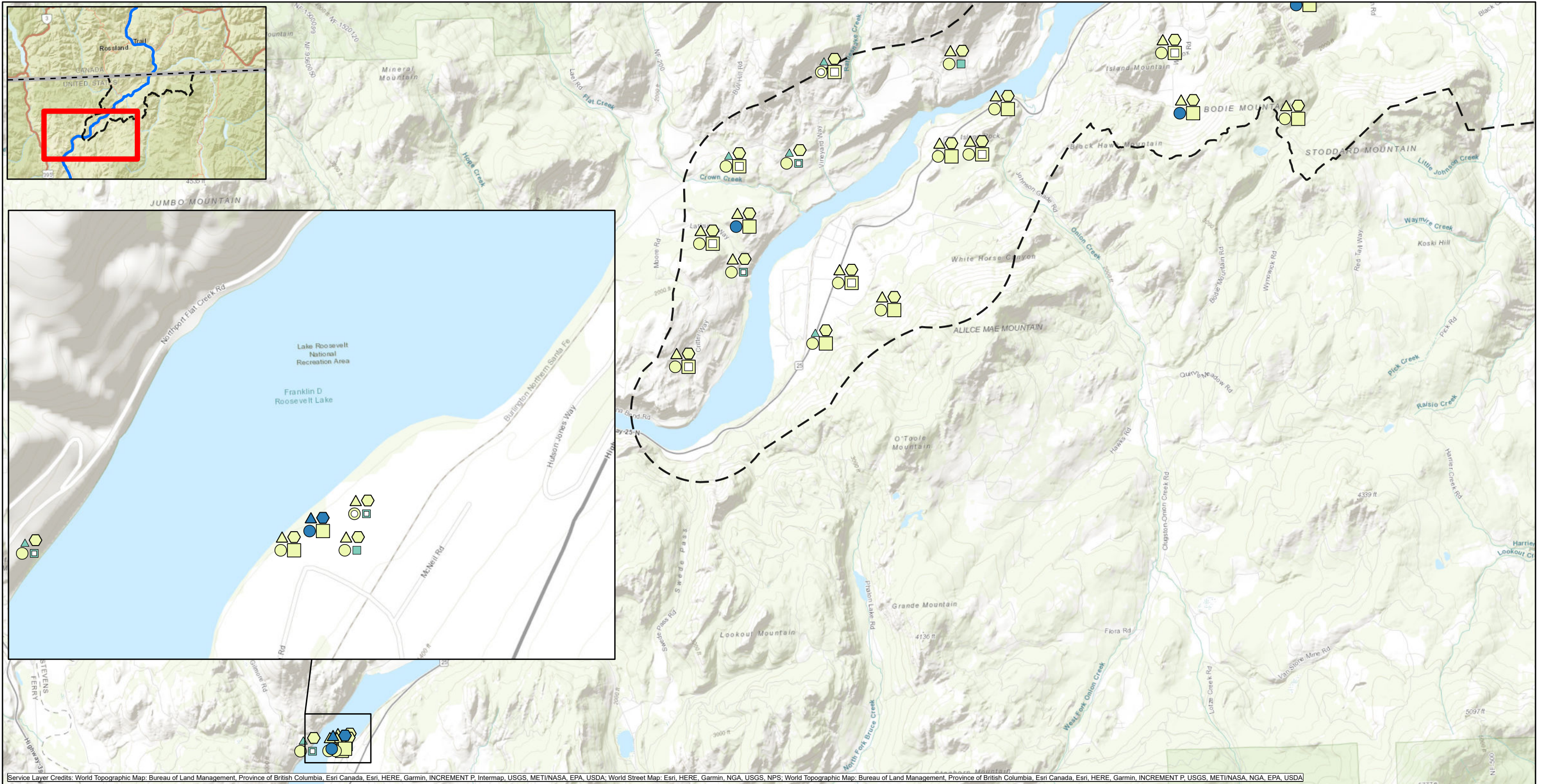
- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV



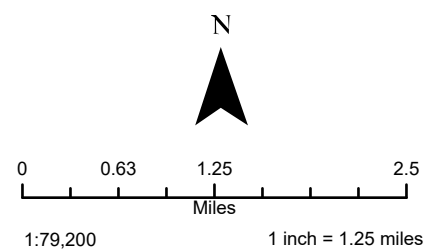
Note: For each receptor group and endpoint, the maximum HQ among COC concentrations exceeding the BTV is shown; if no COC concentrations exceed the BTV, then the maximum HQ among COC concentrations less than the BTV is shown.

MAP ES-10c. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA; World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



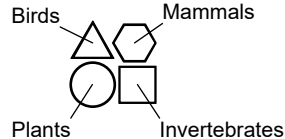
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV

- Birds HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

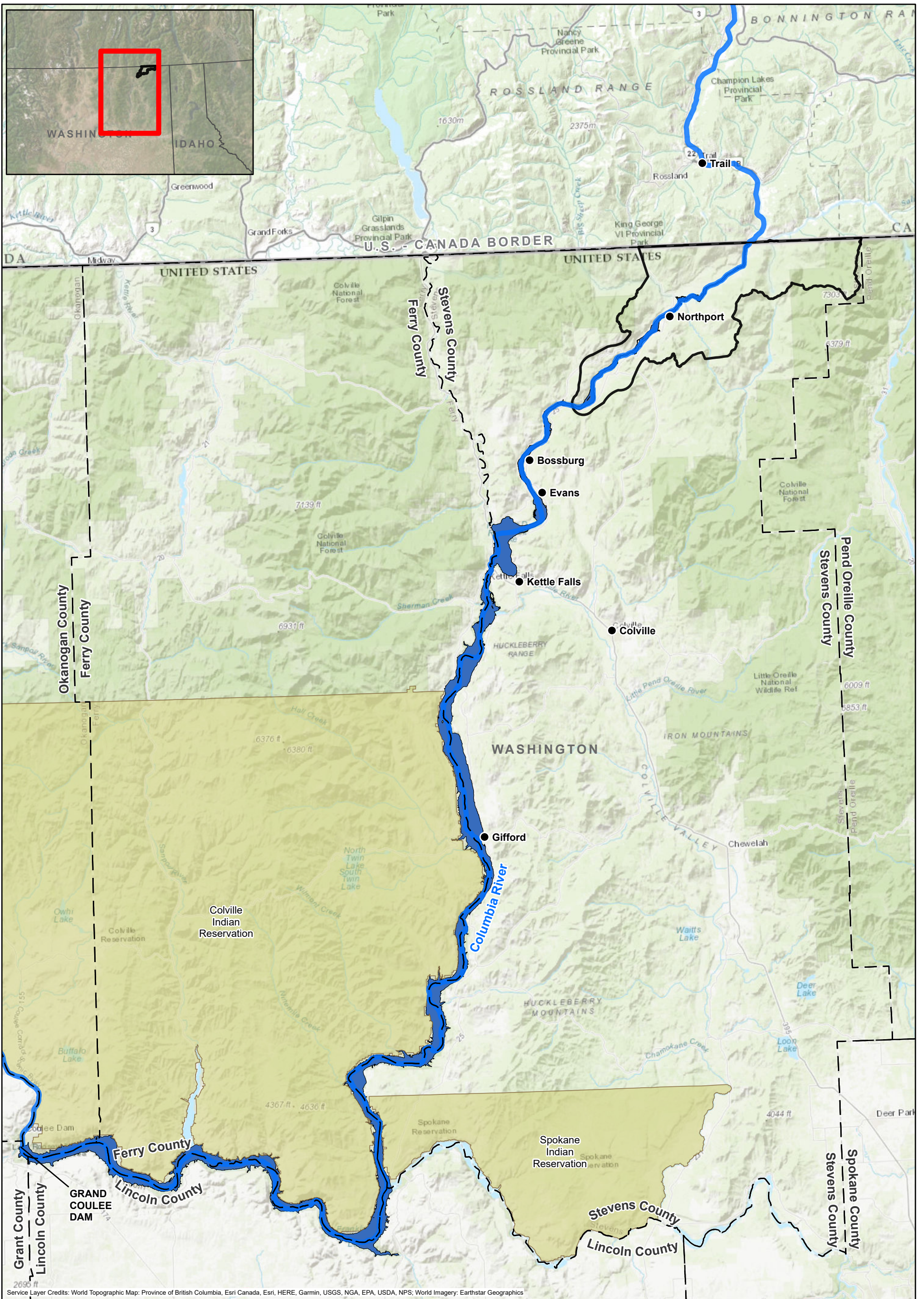
- Mammals HQ**
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



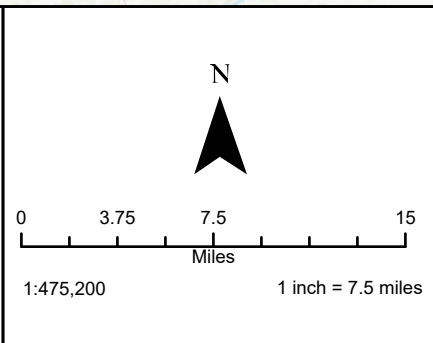
MAP ES-10d. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington

Note: For each receptor group and endpoint, the maximum HQ among COC concentrations exceeding the BTV is shown; if no COC concentrations exceed the BTV, then the maximum HQ among COC concentrations less than the BTV is shown.



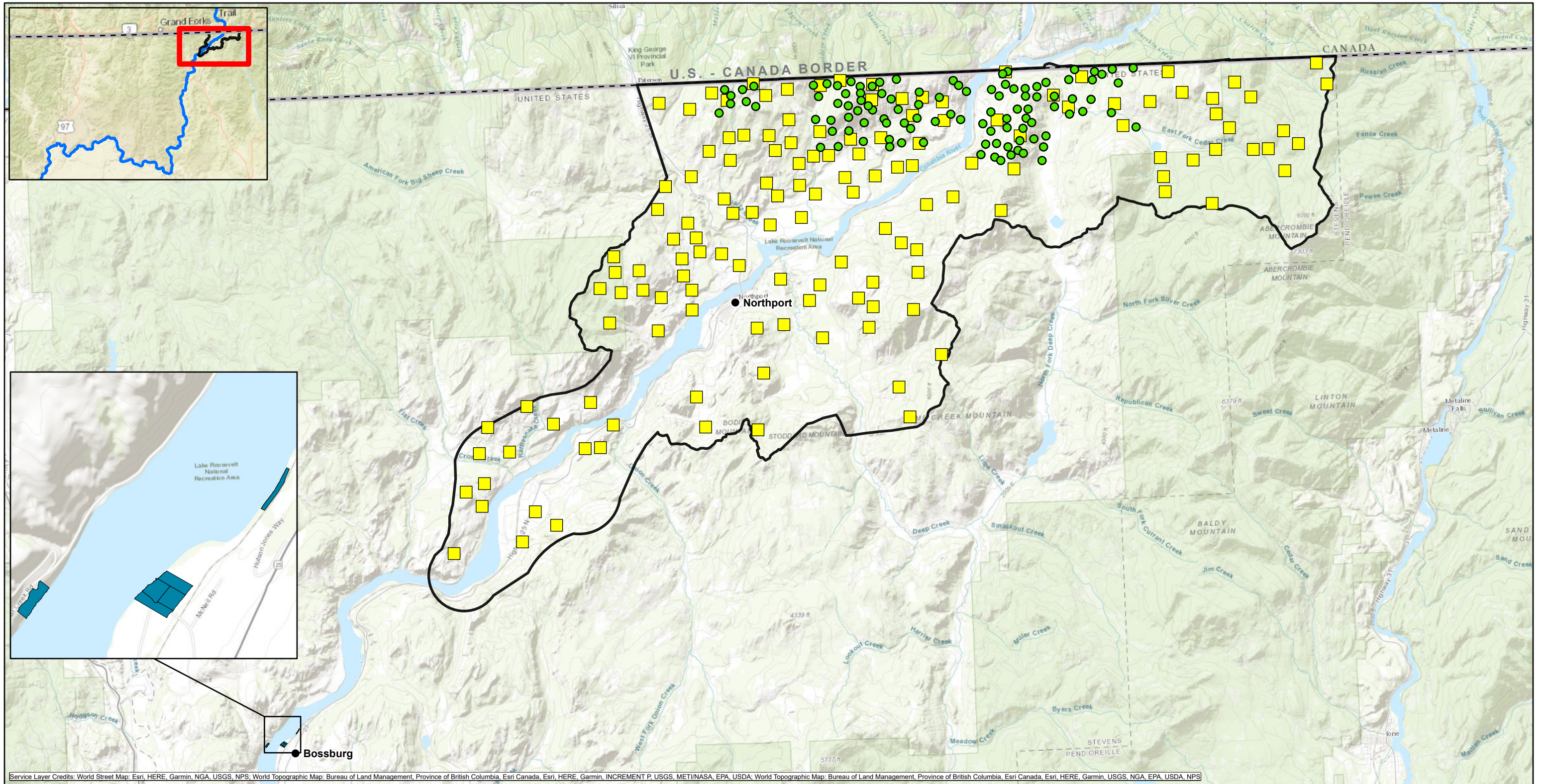
Service Layer Credits: World Topographic Map: Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Imagery: Earthstar Geographics



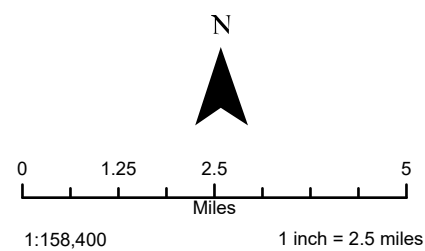
LEGEND

- City/Town
- Columbia River
- Lake Roosevelt
- County Boundary
- State Boundary
- Tribal Reservation
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

MAP 1-1. Regional Map of the UCR Site
 Final Upland BERA
 Upper Columbia River, Washington



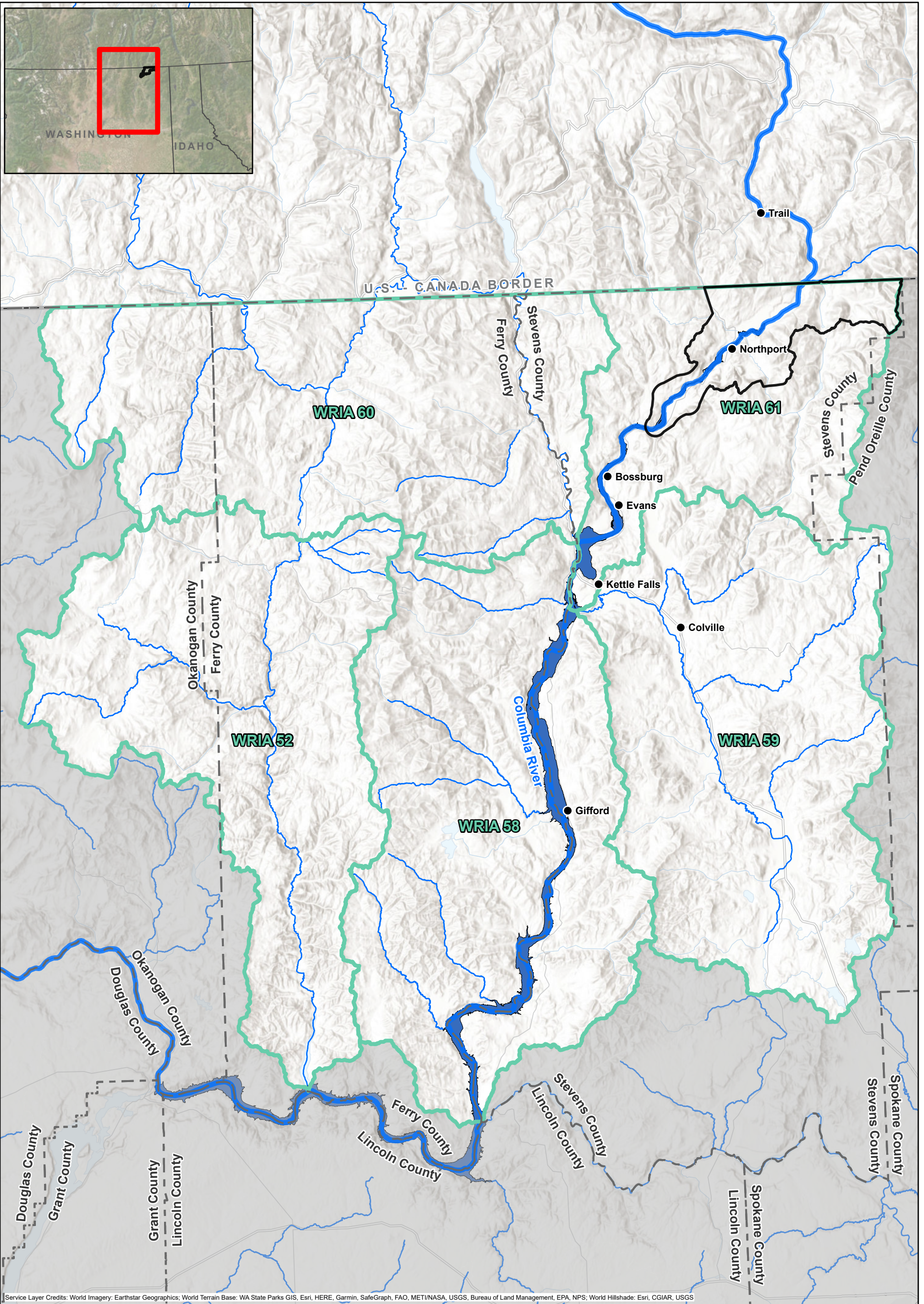
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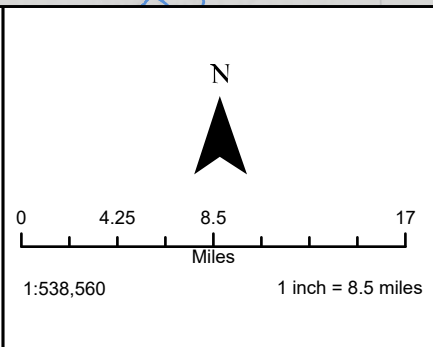
LEGEND

- City/Town
- Ecology Soil Study sample location
- Upland Soil Study ADA decision unit
- Bossburg Refined Soil and Sediment Study - Upland Soil Decision Unit
- ▭ Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

**MAP 2-1. Terrestrial Study Area
Sampling Locations**
Final Upland BERA
Upper Columbia River, Washington



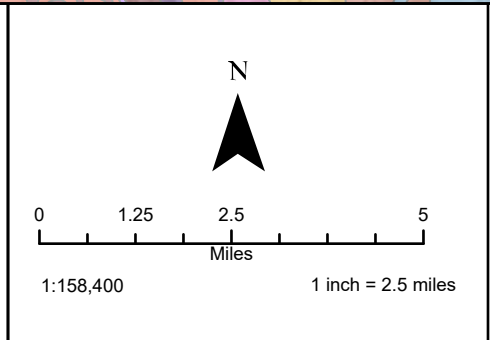
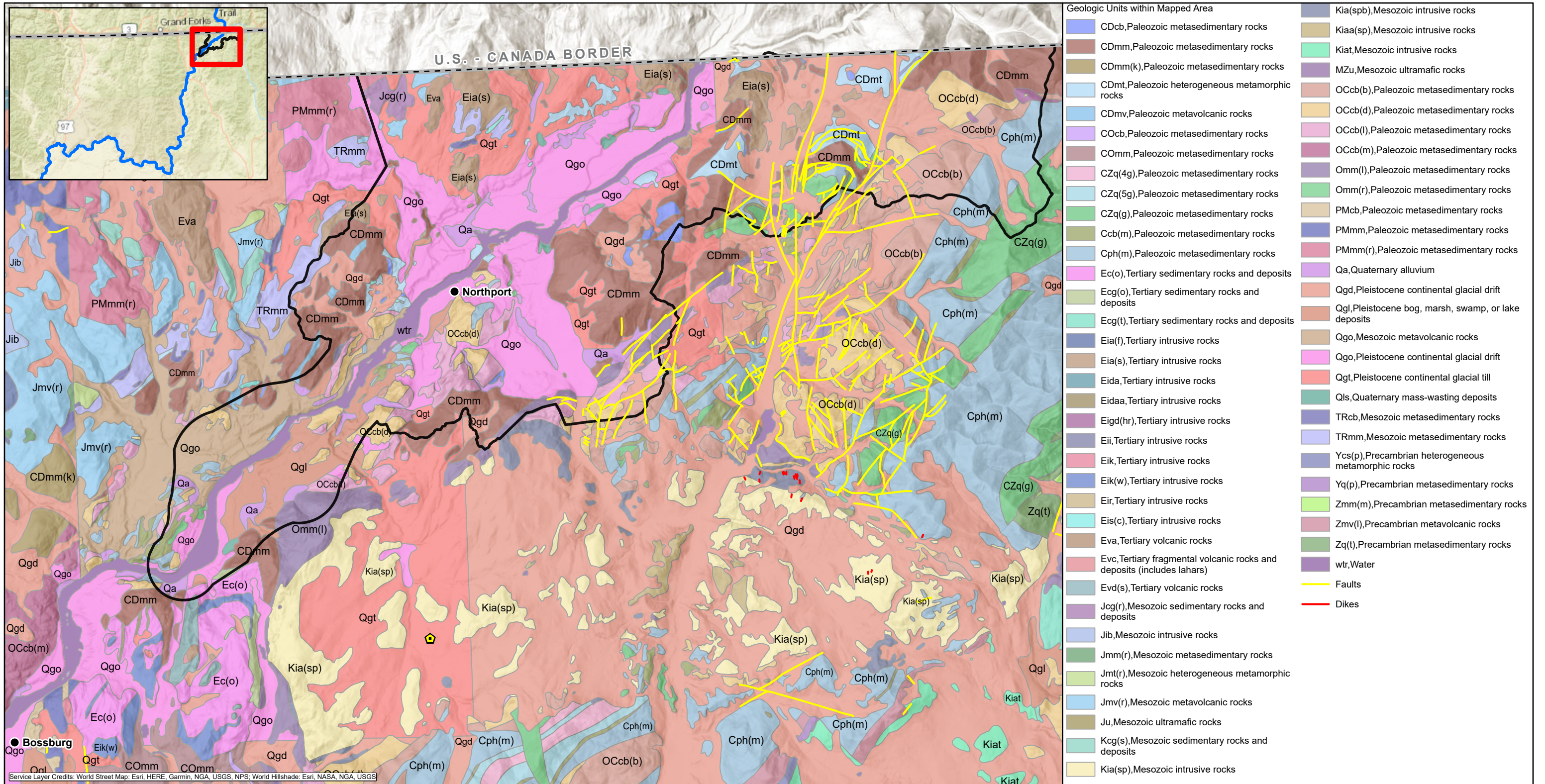
Service Layer Credits: World Imagery: Earthstar Geographics; World Terrain Base: WA State Parks GIS, Esri, HERE, Garmin, SafeGraph, FAO, MET/NASA, USGS, Bureau of Land Management, EPA, NPS; World Hillshade: Esri, CGIAR, USGS



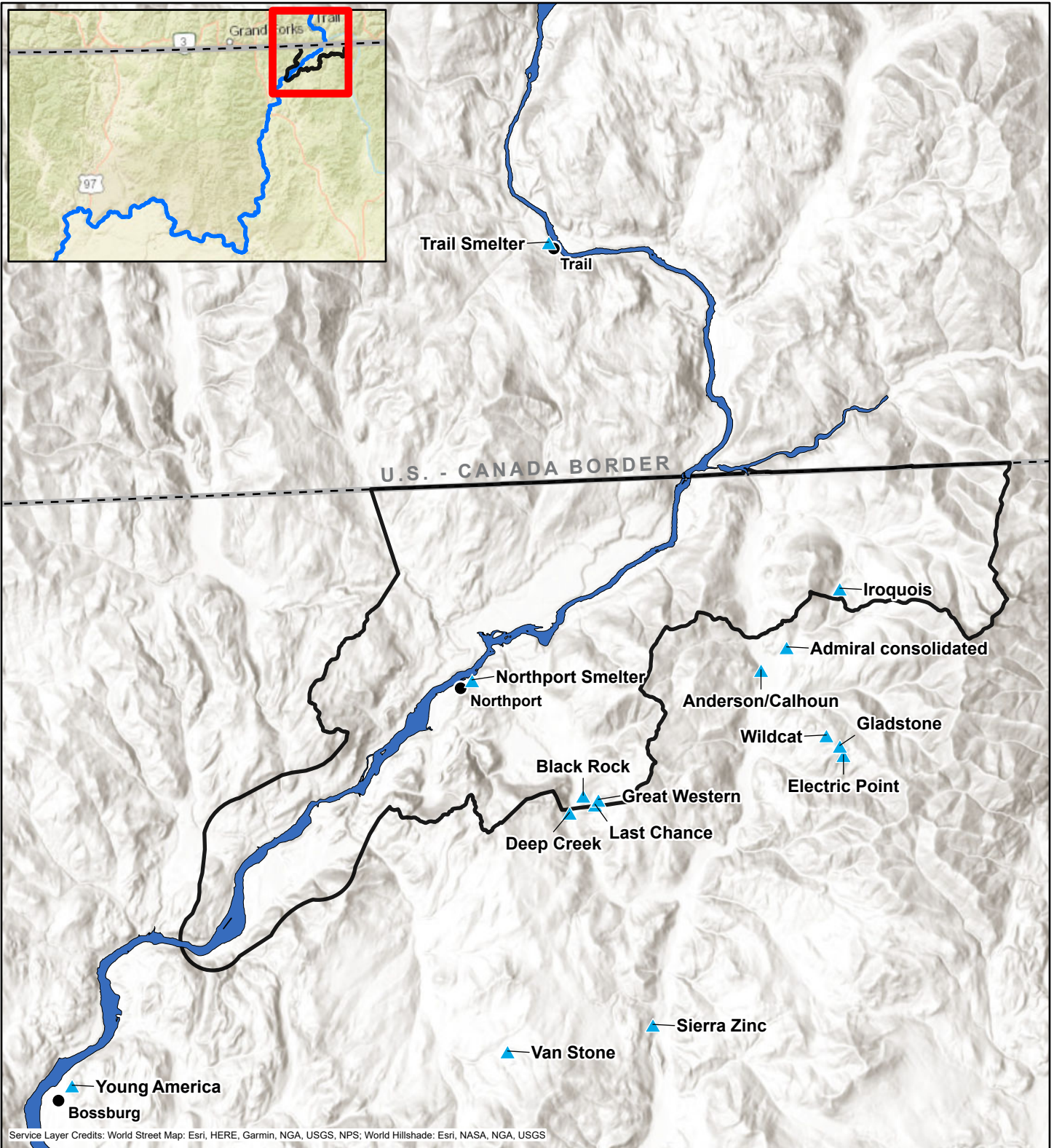
LEGEND

- City/Town
- Major Streams
- Columbia River
- Lake Roosevelt
- ▭ Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- - - County Boundary
- ▭ Water Resource Inventory Areas (WRIA)

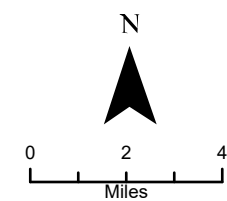
MAP 2-2. Hydrological Setting of the Upper Columbia River Site
 Final Upland BERA
 Upper Columbia River, Washington



MAP 2-3. Surficial geology in the Terrestrial Study Area
 Final Upland BERA
 Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Hillshade: Esri, NASA, NGA, USGS

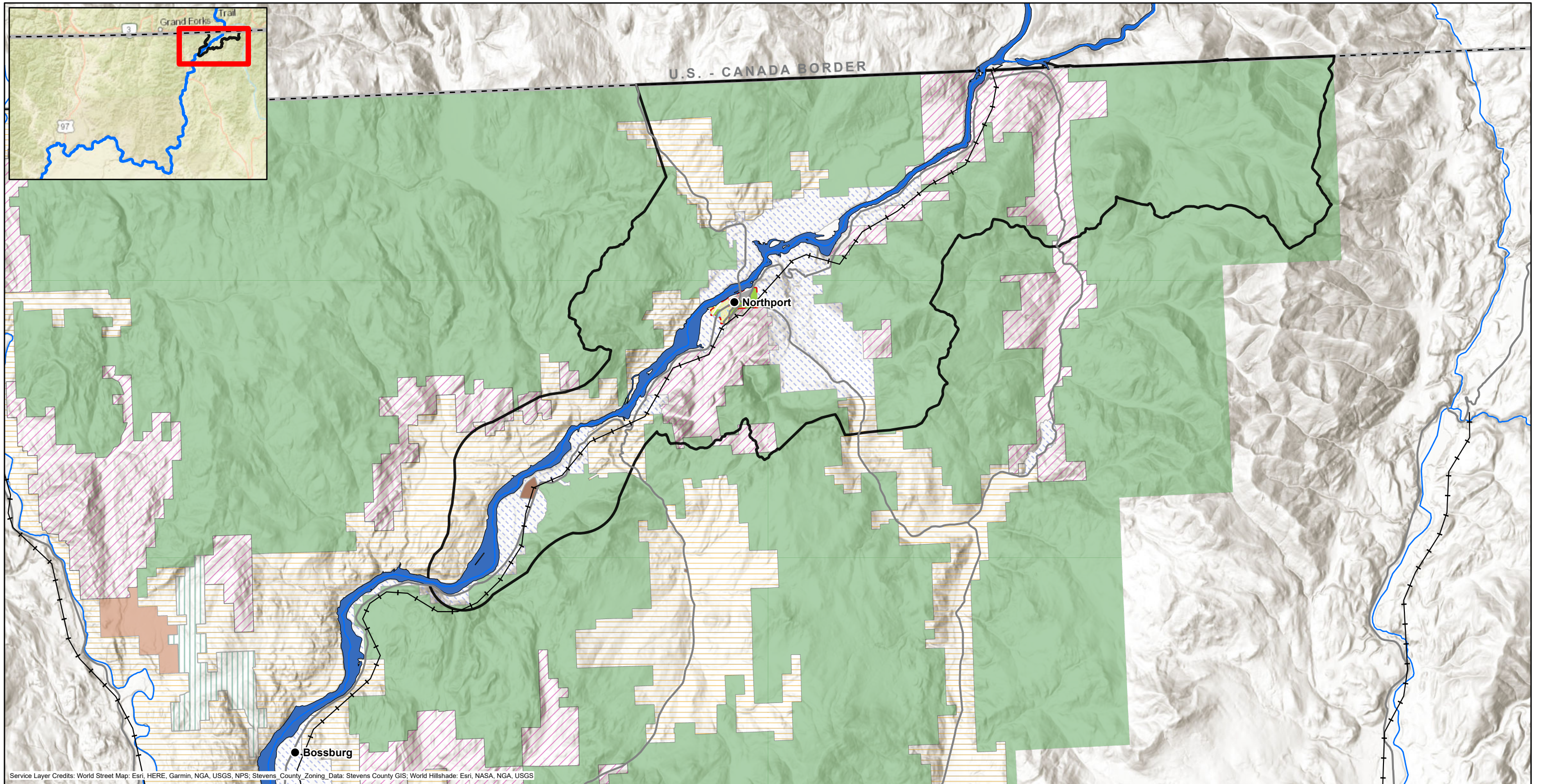


1:253,440 1 inch = 4 miles

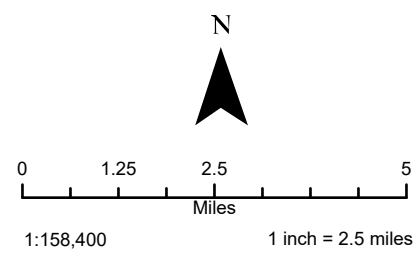
LEGEND

- ▲ Inactive and Abandoned Mines Site
- City/Town
- Columbia River and Lake Roosevelt
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

MAP 2-4. Mines, Mills and Smelters in the Terrestrial Study Area
 Final Upland BERA
 Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; Stevens County Zoning Data: Stevens County GIS; World Hillshade: Esri, NASA, NGA, USGS



LEGEND

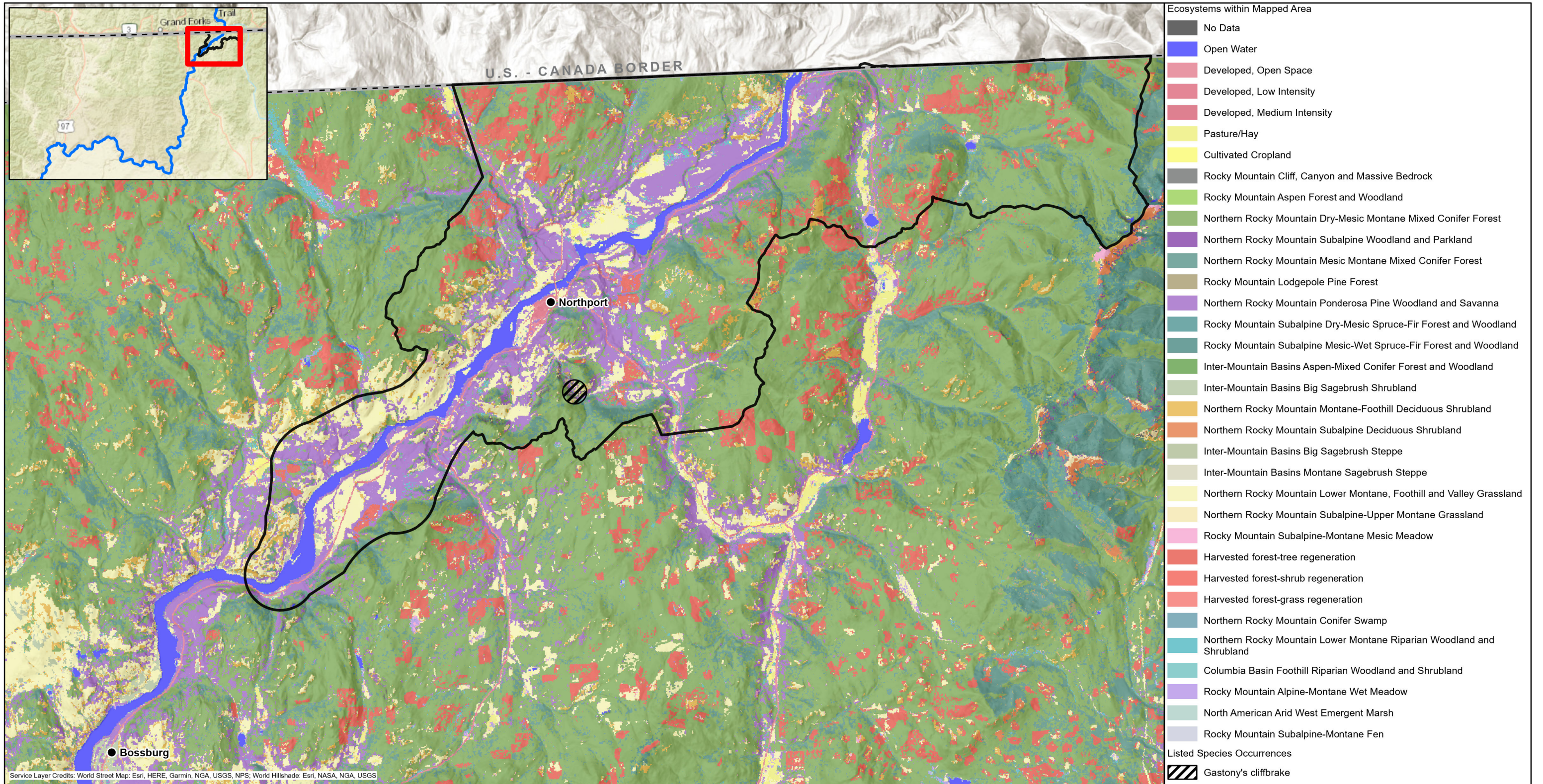
- City/Town
- Railroads
- Major Roads
- Major Streams
- Open Water

▭ Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

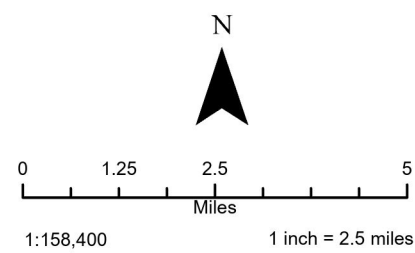
- ▭ Cities
- Commercial
- Industrial
- Open
- Public
- Residential
- Multi-Family

- Stevens County Zoning**
- ▭ RA-10 - Rural Area 10 acre lot size
 - ▭ NR-Forest - Forest
 - ▭ NR-Ag - Agricultural
 - ▭ RA-20 - Rural Area 20 acre lot size
 - ▭ AR-10
 - ▭ RA-5 - Rural Area 5 acre lot size
 - ▭ CR - Crossroads Area (small scale commercial, retail/service businesses)

MAP 2-5. Land Use and Zoning in the Terrestrial Study Area
Final Upland BERA
Upper Columbia River, Washington



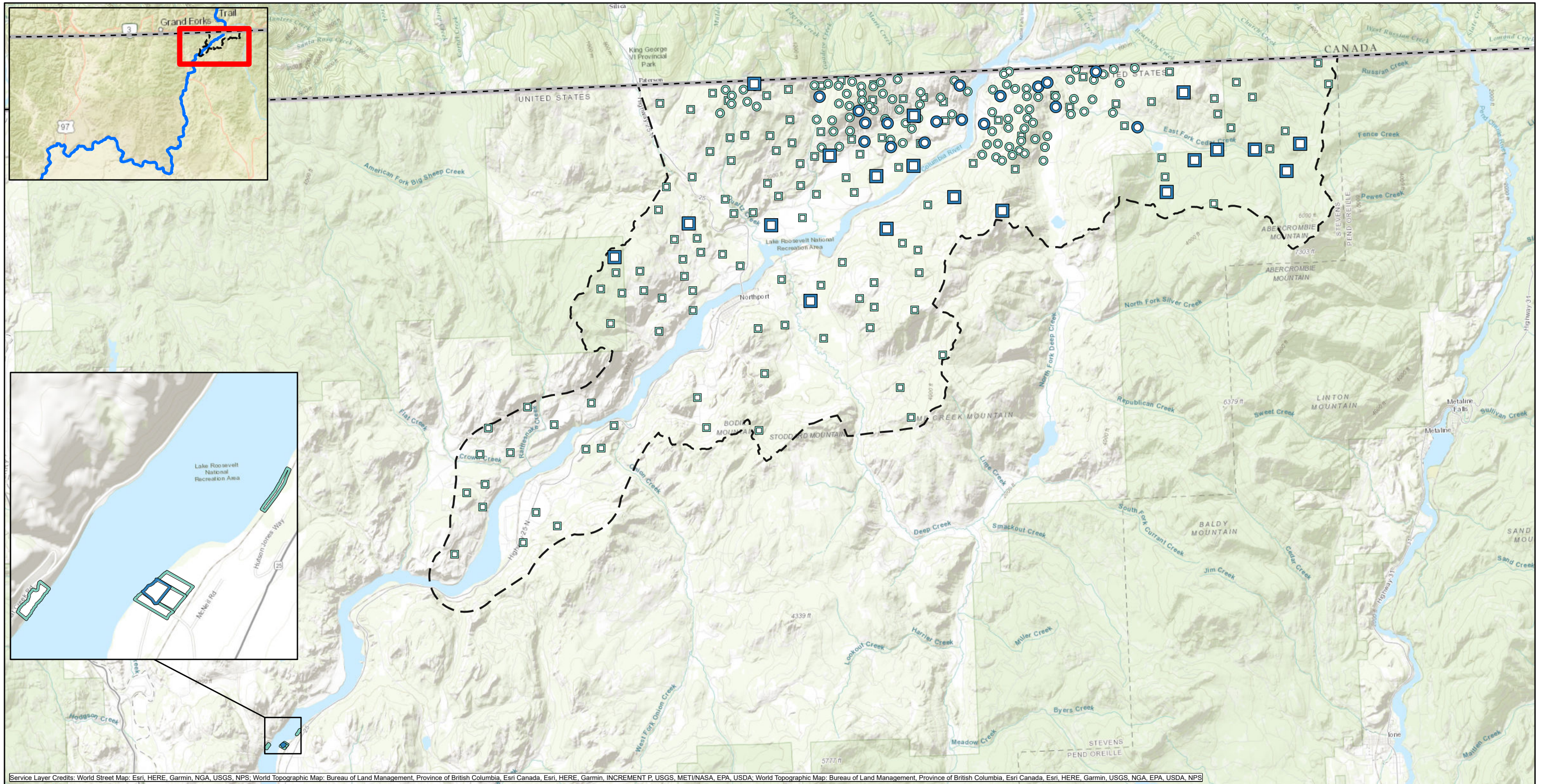
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Hillshade: Esri, NASA, NGA, USGS



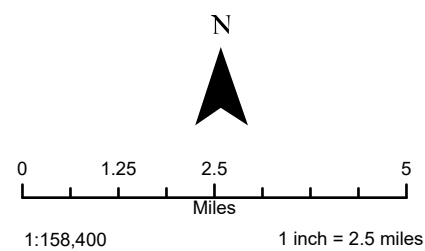
LEGEND

- City/Town
- ▭ Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

MAP 2-6. Terrestrial Ecosystems in the Terrestrial Study Area
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



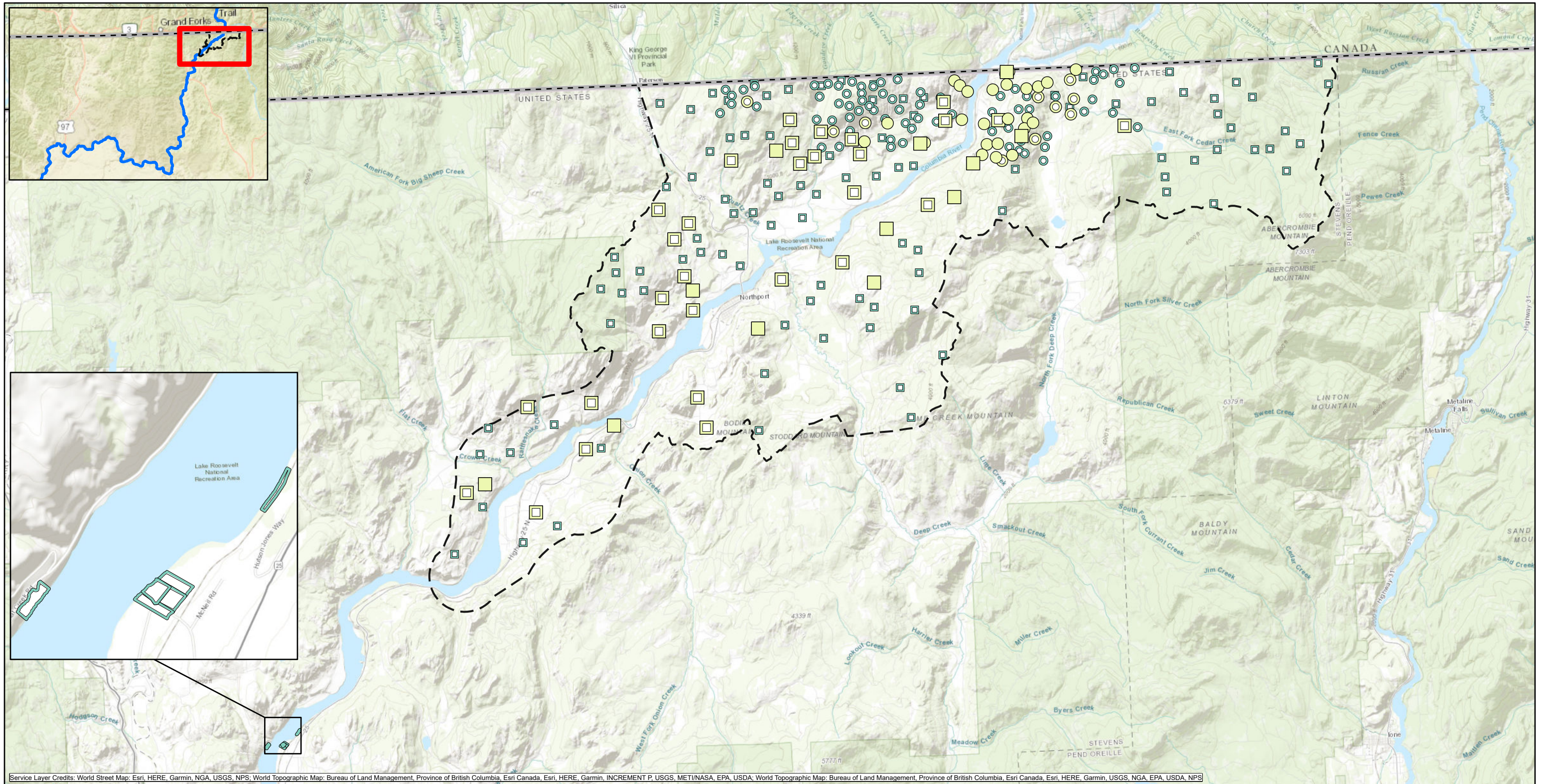
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location
- pH ≥ 5.5 and \leq BTV
- pH < 5.5 and \leq BTV

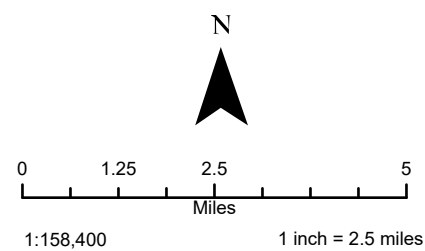
- Upland Soil Study ADA Decision Unit**
- pH ≥ 5.5 and \leq BTV
- pH < 5.5 and \leq BTV
- Bosburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
- pH ≥ 5.5 and \leq BTV
- pH < 5.5 and \leq BTV

Note: No locations exceed BTV

MAP 6-1. Distribution of Aluminum Eco-SSL pH Screening for Plants
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



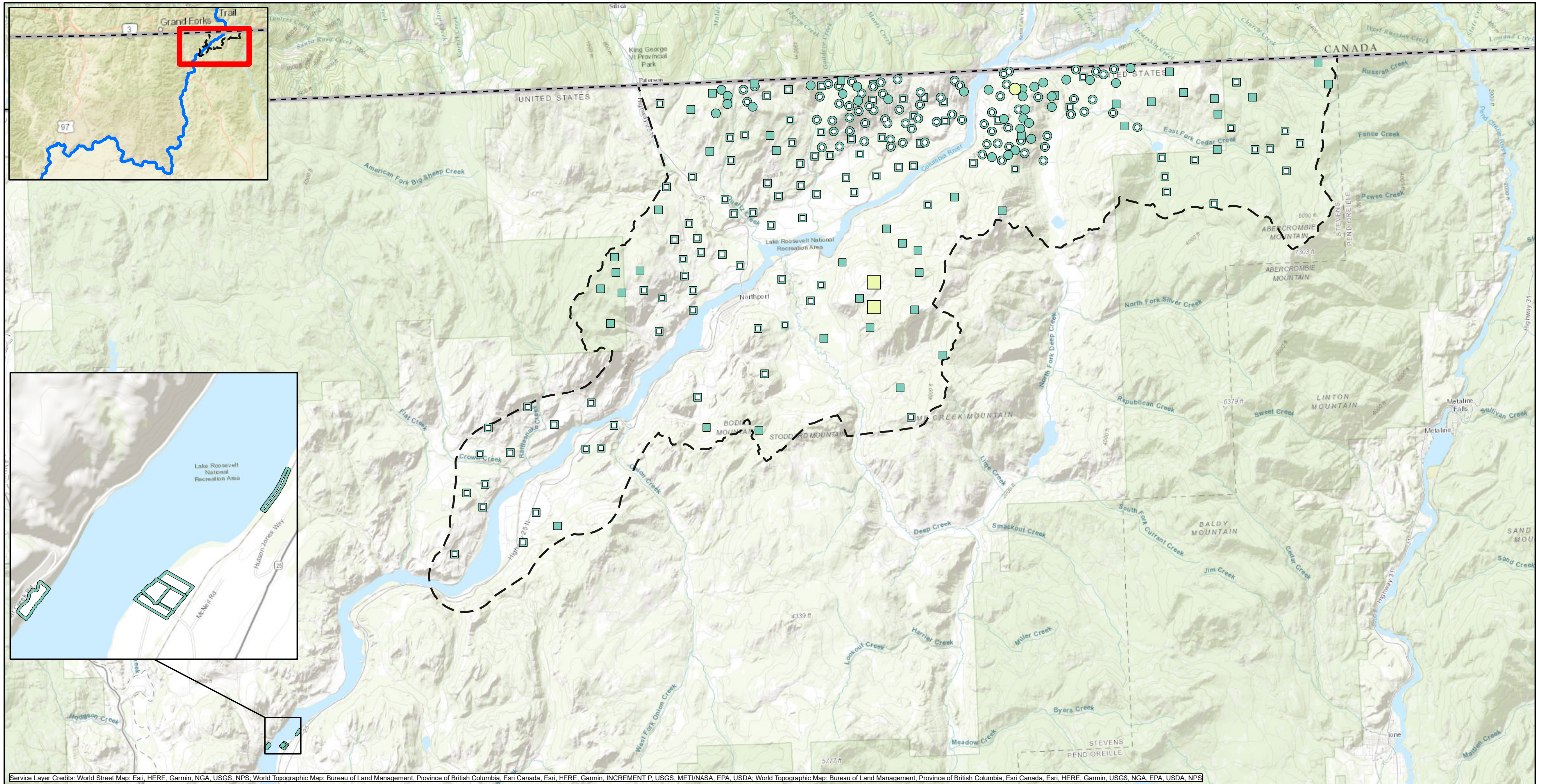
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV

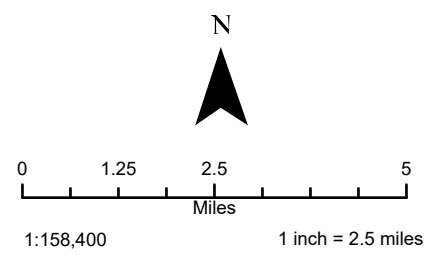
- Upland Soil Study ADA Decision Unit**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV

- Bosburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
- HQ < 1 and ≤ BTV

MAP 6-2. Distribution of Arsenic Eco-SSL HQs for Plants
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



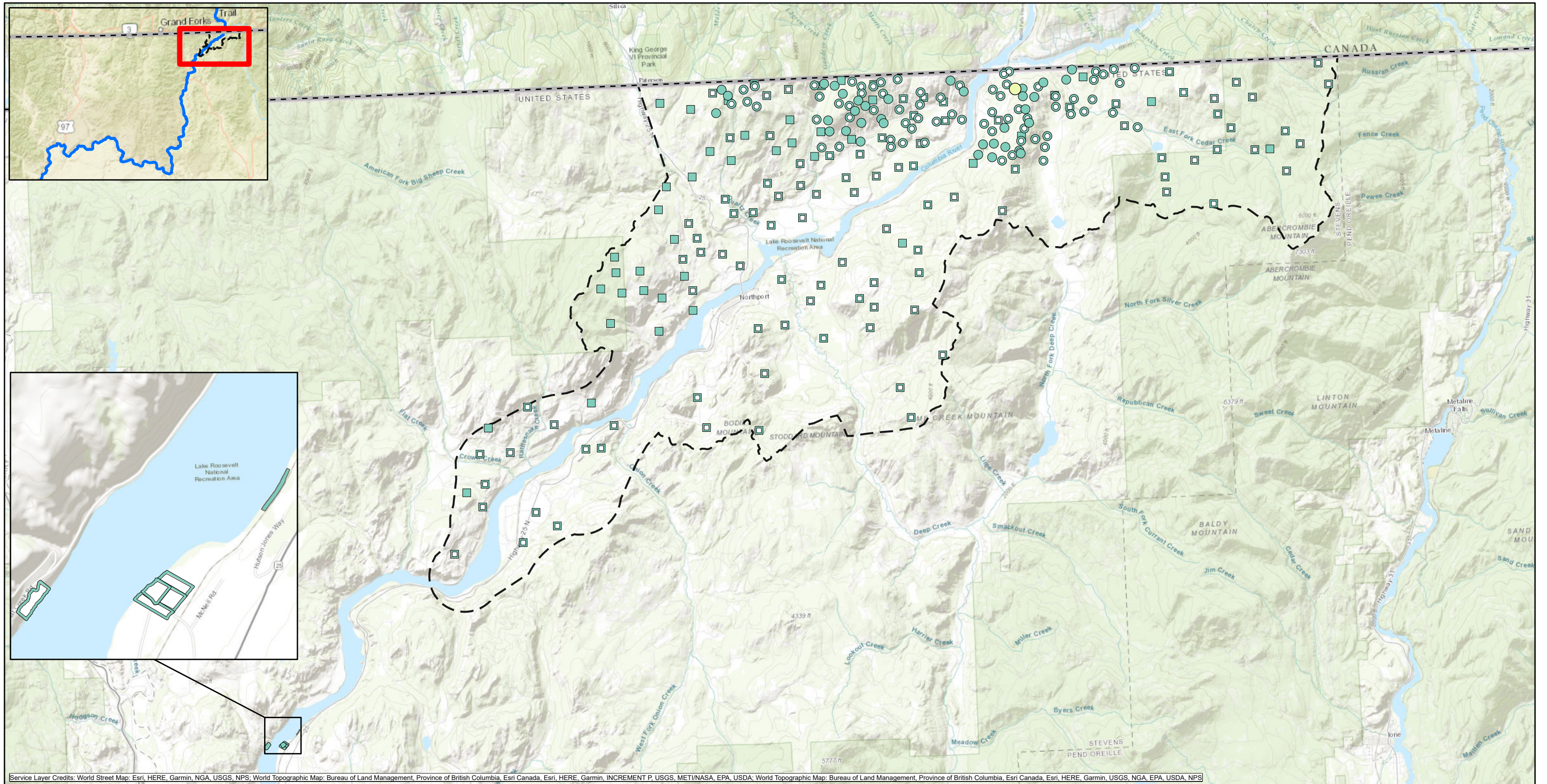
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

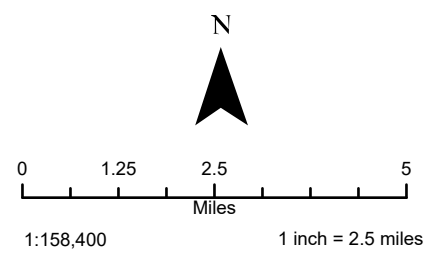
- Upland Soil Study ADA Decision Unit**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

- Bosburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
- HQ < 1 and ≤ BTV

MAP 6-3. Distribution of Barium Eco-SSL HQs for Plants
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



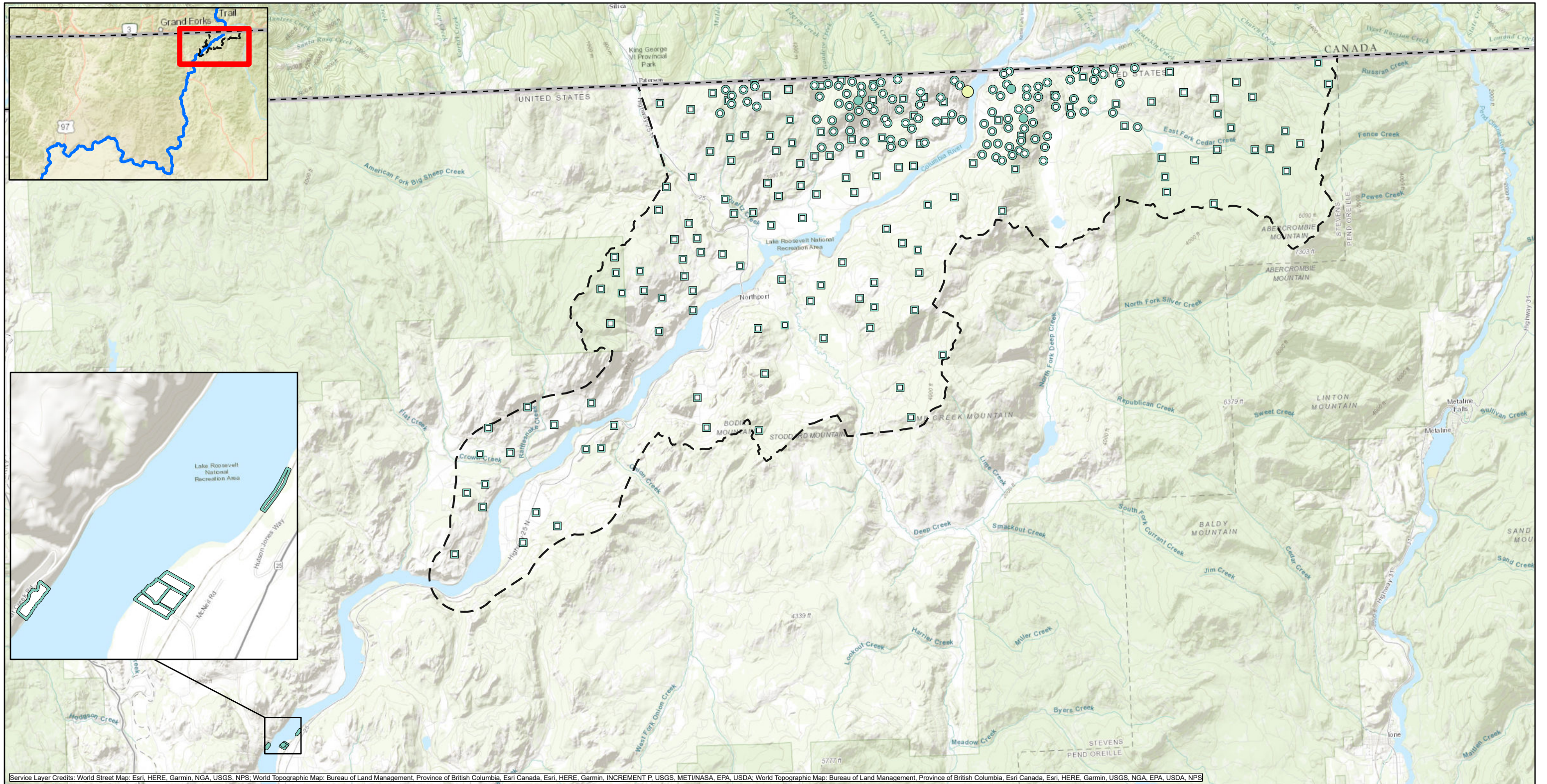
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location
 - HQ < 1 and ≤ BTV
 - HQ < 1 and > BTV
 - HQ ≥ 1 and HQ < 5 and > BTV

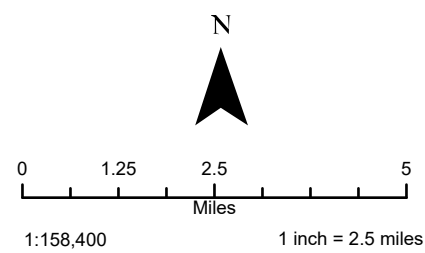
- Upland Soil Study ADA Decision Unit**
 - HQ < 1 and ≤ BTV
 - HQ < 1 and > BTV

- Bosburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
 - HQ < 1 and ≤ BTV
 - HQ < 1 and > BTV

MAP 6-4. Distribution of Chromium Eco-SSL HQs for Plants
 Final Upland BERA
 Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

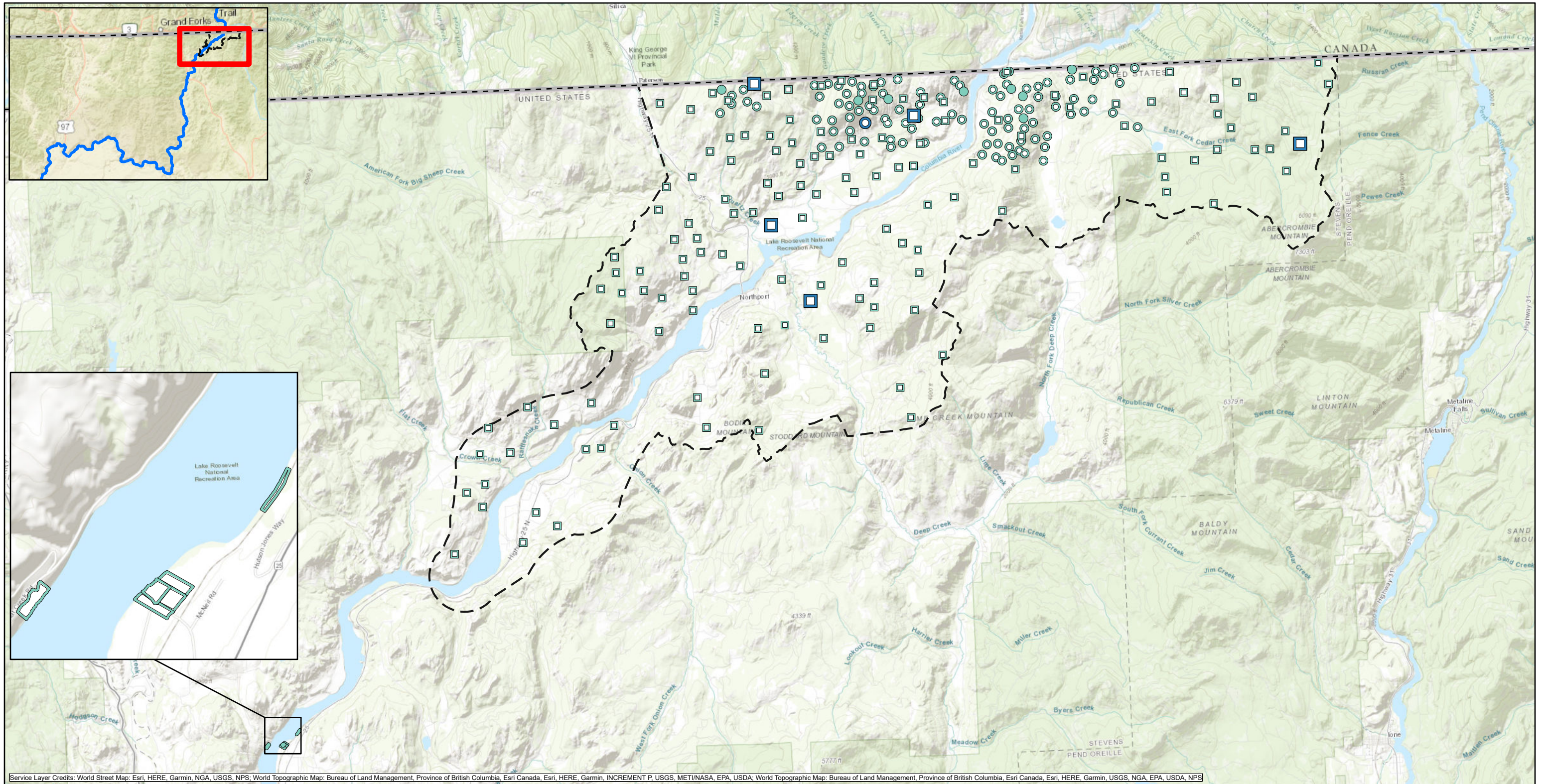


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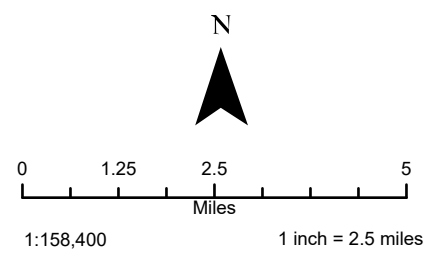
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Upland Soil Study ADA Decision Unit
- Ecology Soil Study Sample Location
- PAF < 5% and ≤ BTV
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- Bossburg Refined Soil and Sediment Study - Upland Soil Decision Unit
- PAF < 5% and ≤ BTV

Note: The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.

MAP 6-5. Distribution of PAFs for Plants from Cobalt Exposure
Final Upland BERA
Upper Columbia River, Washington



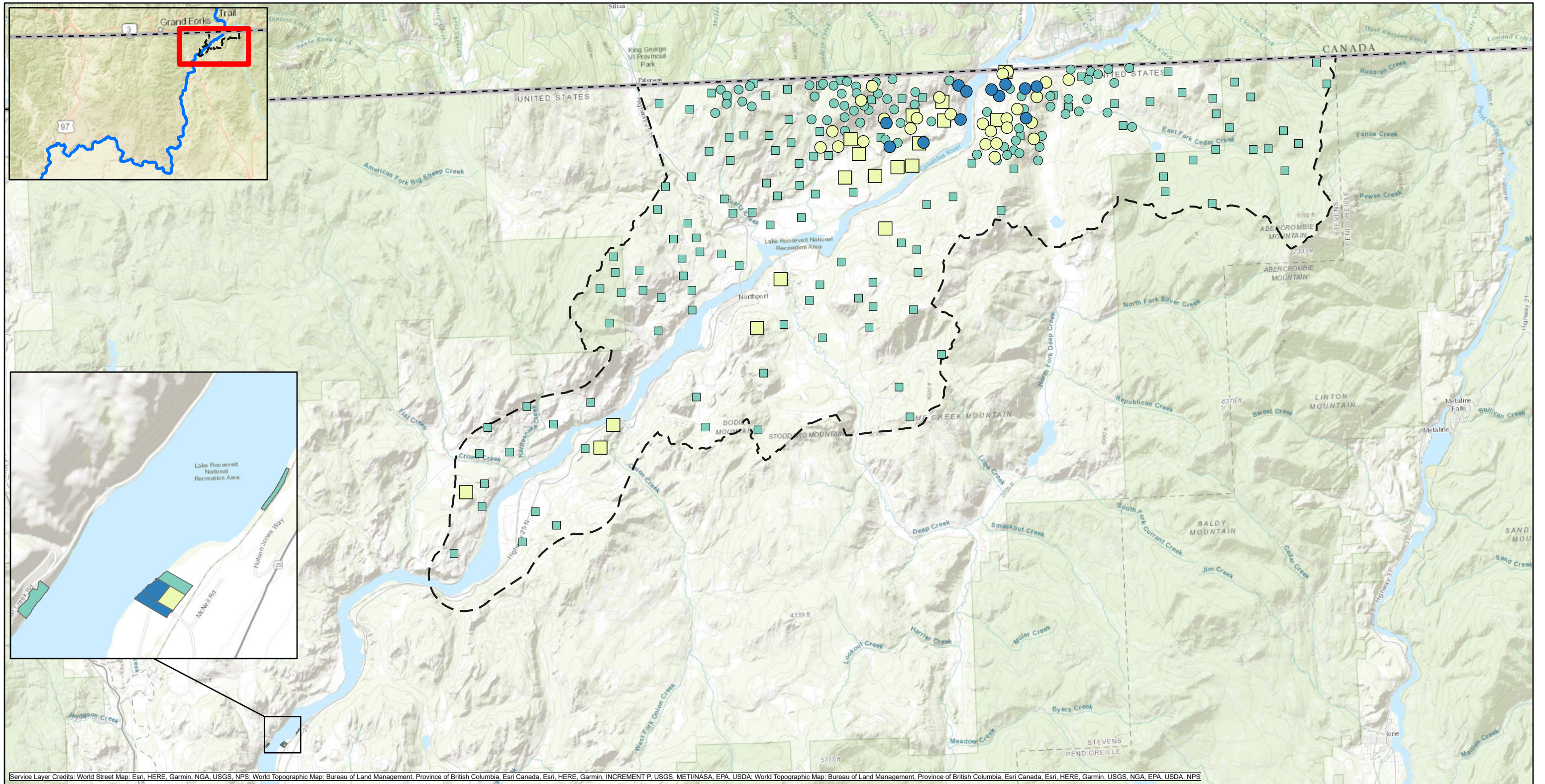
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



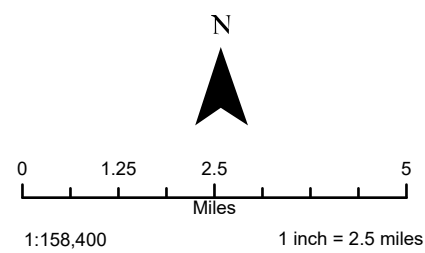
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location
 - pH ≥ 5 and ≤ BTV
 - pH ≥ 5 and > BTV
 - pH < 5 and ≤ BTV
- Upland Soil Study ADA Decision Unit
 - pH ≥ 5 and ≤ BTV
 - pH < 5 and ≤ BTV
- Bossburg Refined Soil and Sediment Study - Upland Soil Decision Unit
 - pH ≥ 5 and ≤ BTV

MAP 6-6. Distribution of Iron Eco-SSL pH Screening for Plants
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



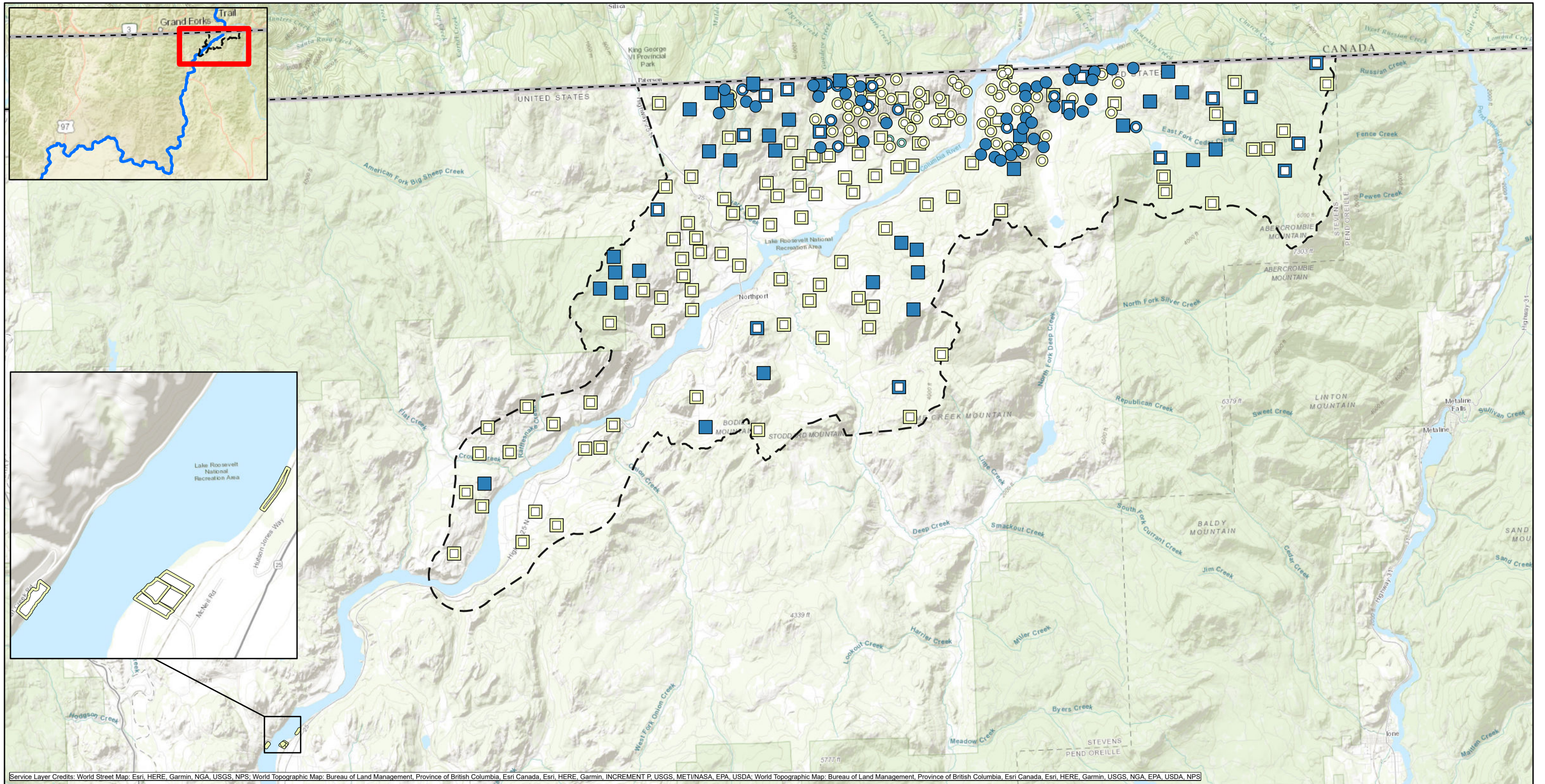
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- PAF ≥ 20% and > BTV

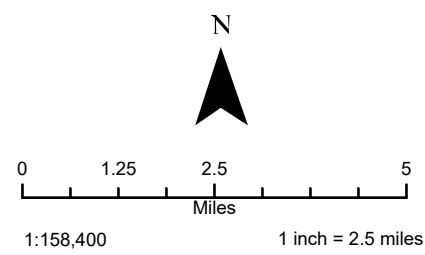
- Upland Soil Study ADA Decision Unit**
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- Bosburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- PAF ≥ 20% and > BTV

Note: The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.

MAP 6-7. Distribution of PAFs for Plants from Lead Exposure
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



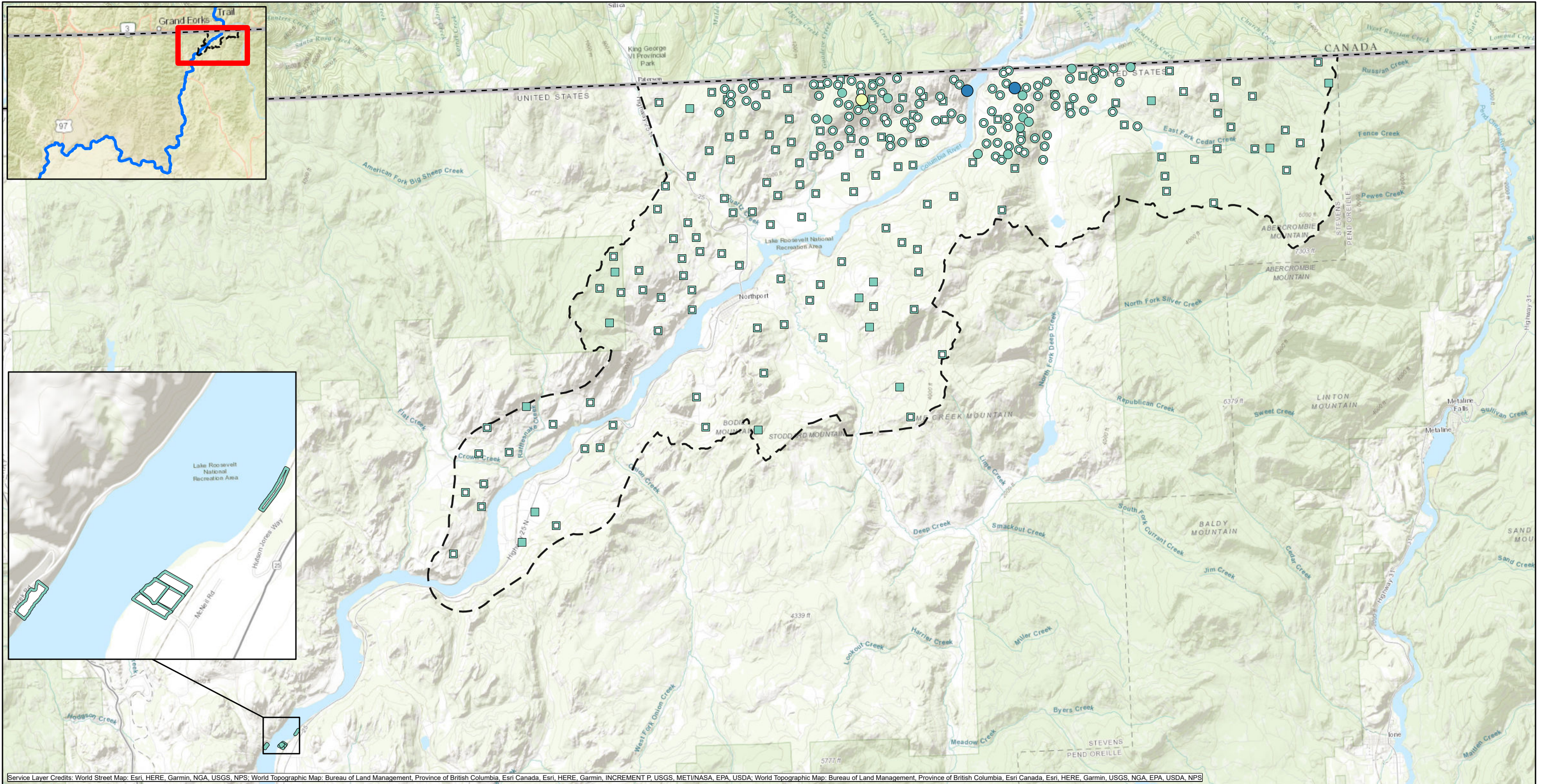
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

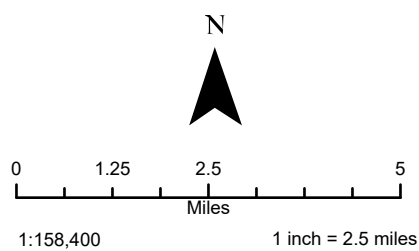
- Upland Soil Study ADA Decision Unit**
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

- Bossburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
- HQ ≥ 1 and HQ < 5 and ≤ BTV

MAP 6-8. Distribution of Manganese Eco-SSL HQs for Plants
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

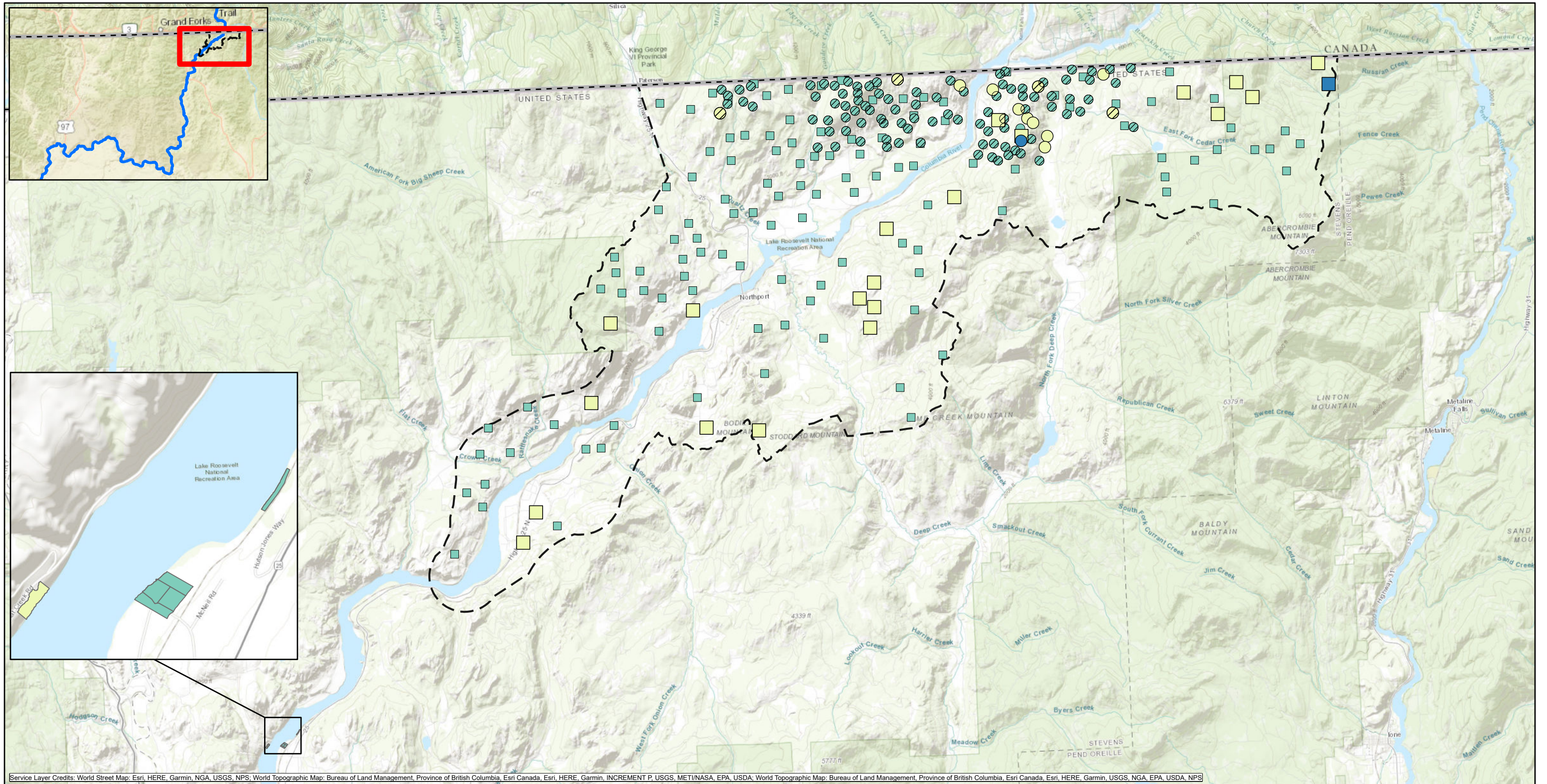


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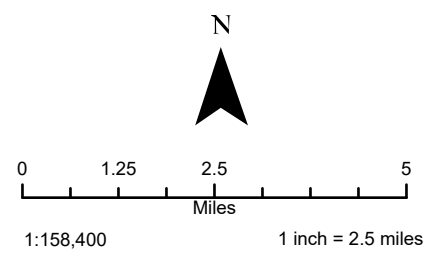
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location
 - PAF < 5% and ≤ BTV
 - PAF < 5% and > BTV
 - PAF ≥ 5% and PAF < 20% and > BTV
 - PAF ≥ 20% and > BTV
- Upland Soil Study ADA Decision Unit
 - PAF < 5% and ≤ BTV
 - PAF < 5% and > BTV
- Bossburg Refined Soil and Sediment Study - Upland Soil Decision Unit
 - PAF < 5% and ≤ BTV

Note: The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.

MAP 6-9. Distribution of PAFs for Plants from Nickel Exposure
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



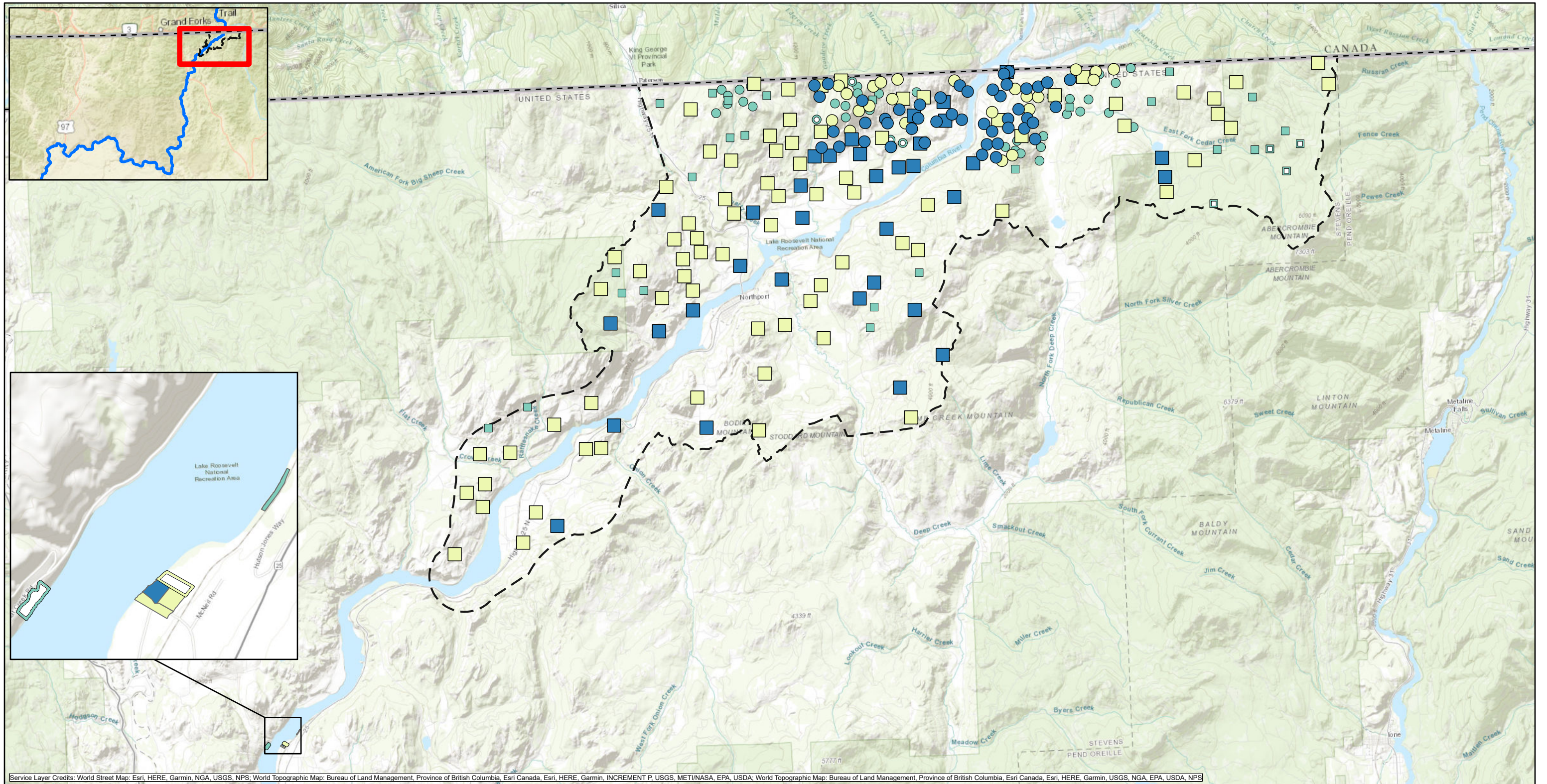
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV
- Hatched symbol indicates non-detect results.

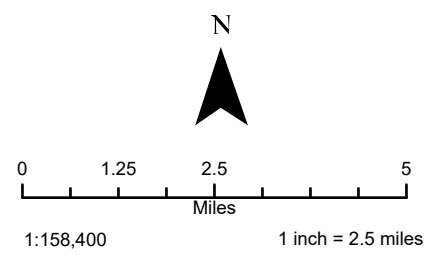
- Upland Soil Study ADA Decision Unit**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Bosburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

MAP 6-10. Distribution of Selenium Eco-SSL HQs for Plants
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

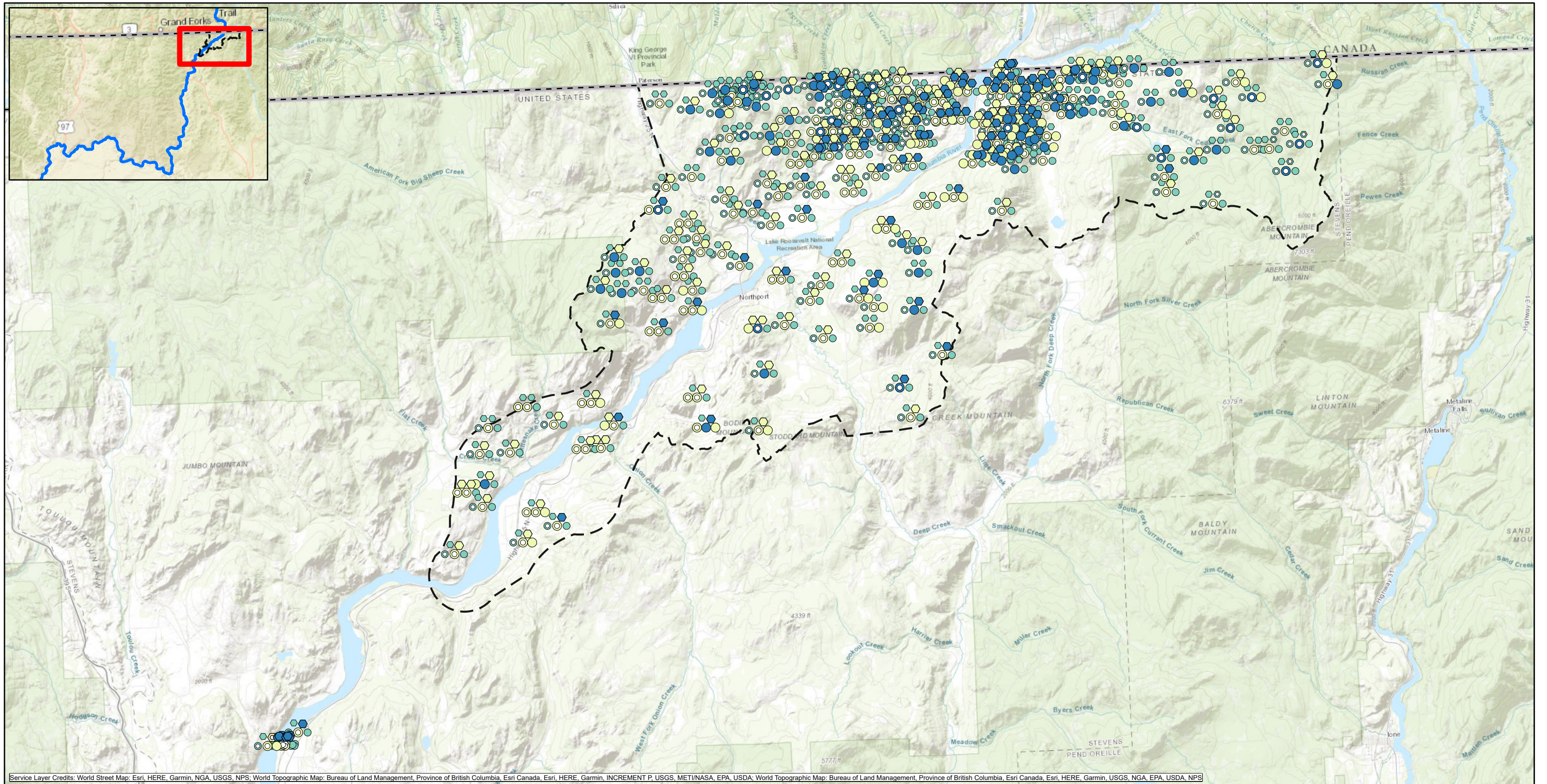
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- PAF < 5% and ≤ BTV
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- PAF ≥ 20% and > BTV

- Upland Soil Study ADA Decision Unit**
- PAF < 5% and ≤ BTV
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- PAF ≥ 20% and > BTV

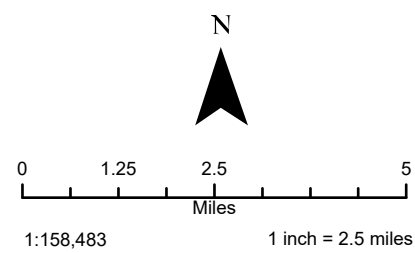
- Bossburg Refined Soil and Sediment Study - Upland Soil Decision Unit**
- PAF < 5% and ≤ BTV
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and ≤ BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- PAF ≥ 20% and > BTV

Note: The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.

MAP 6-11. Distribution of PAFs for Plants from Zinc Exposure
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

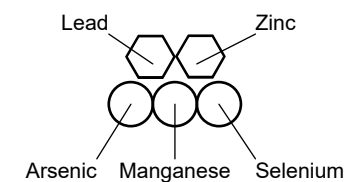


LEGEND

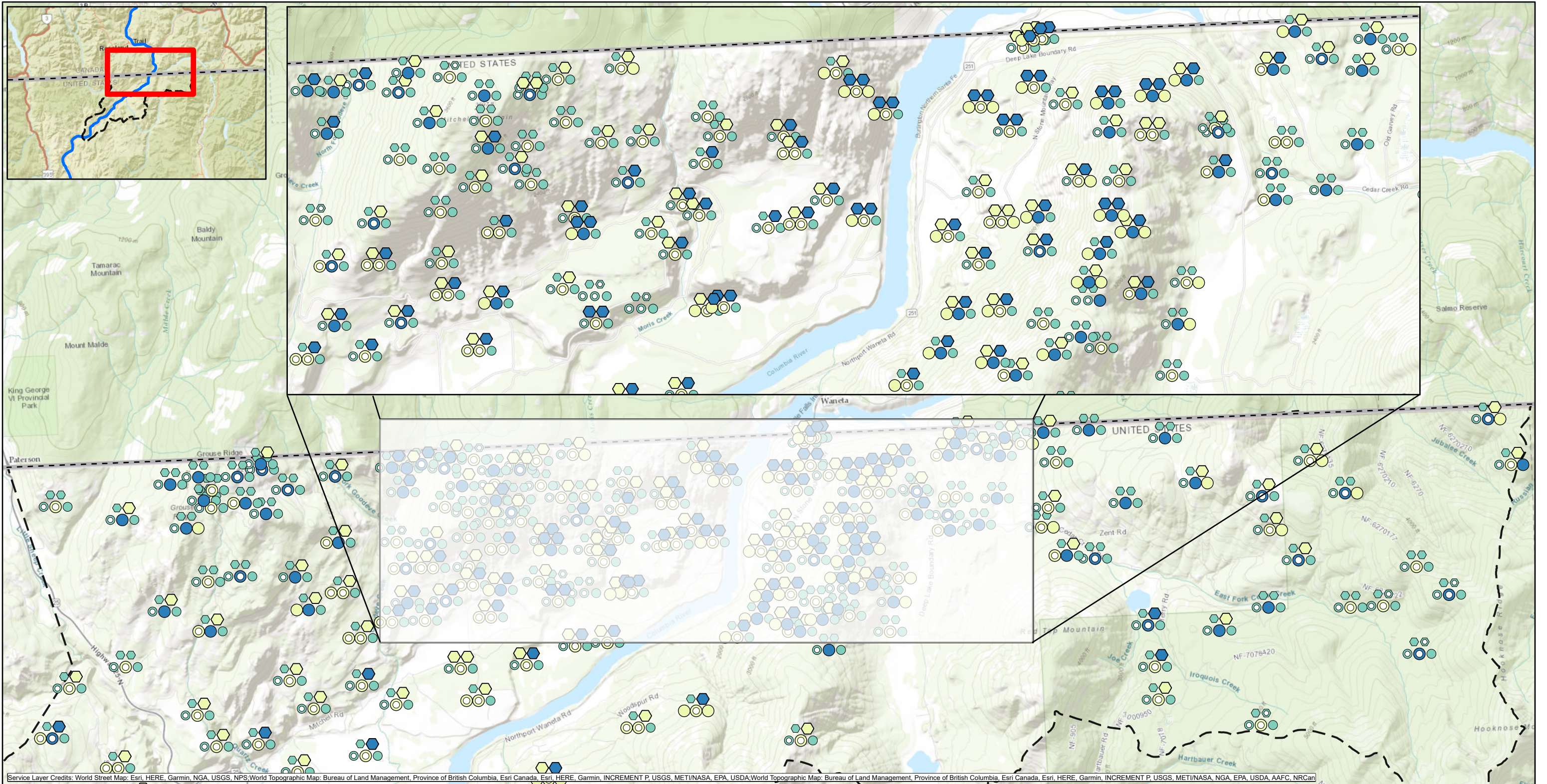
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
 - For Pb and Zn: PAF < 5; For As, Mn, and Se: HQ < 1
 - For Pb and Zn: PAF ≥ 5 and PAF < 20; For As, Mn, and Se: HQ ≥ 1 and HQ < 5
 - For Pb and Zn: PAF ≥ 20; For As, Mn, and Se: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

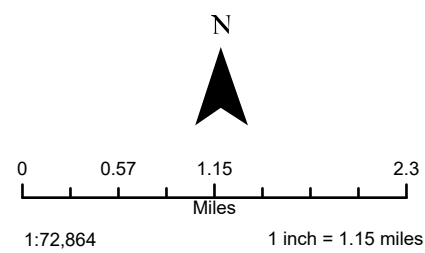
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.



MAP 6-12a. Summary of Benchmark Exceedances for Plant COCs
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS, World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA, World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCan

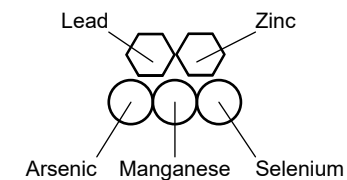


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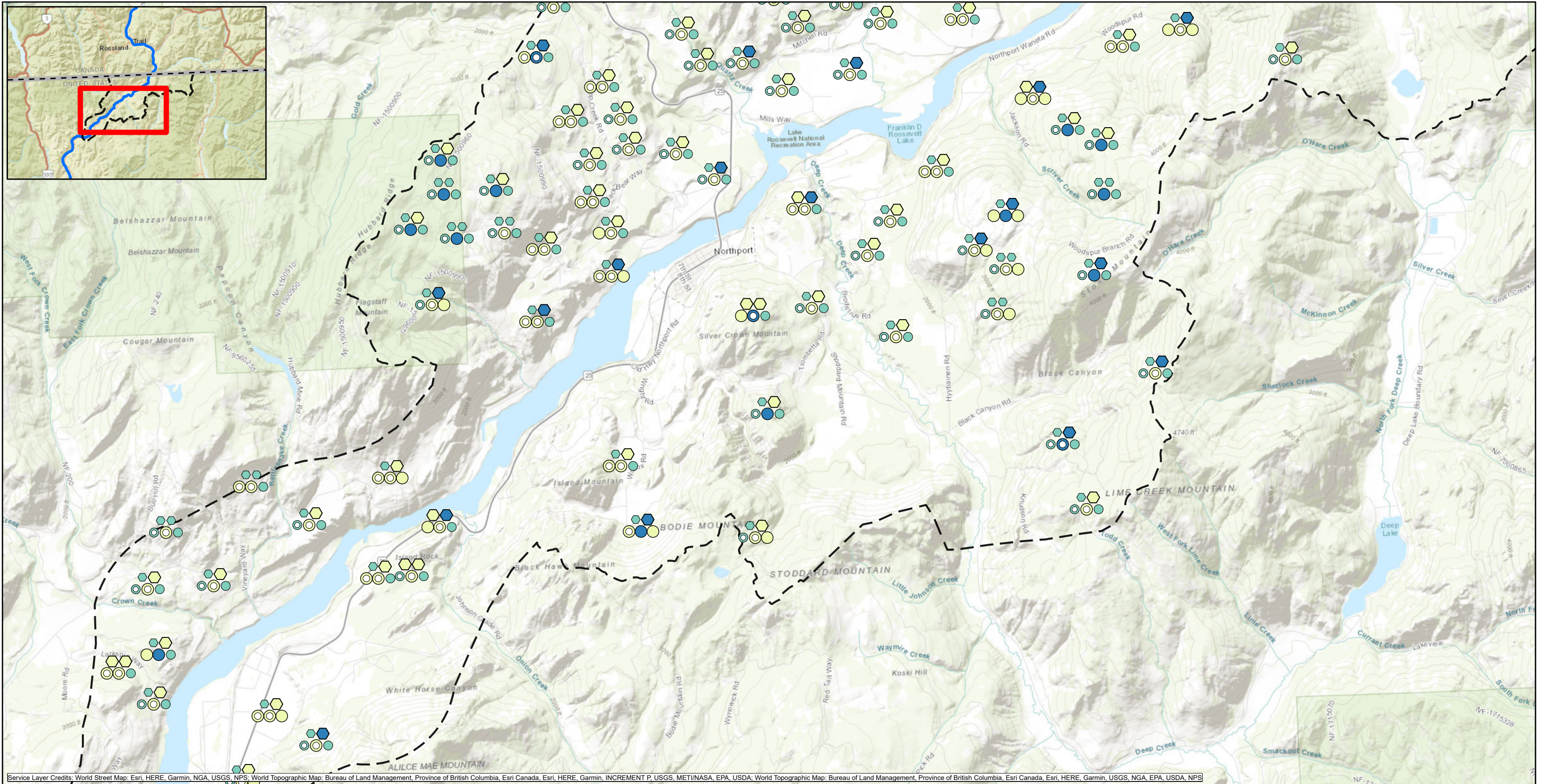
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- For Pb and Zn: PAF < 5; For As, Mn, and Se: HQ < 1
- For Pb and Zn: PAF ≥ 5 and PAF < 20; For As, Mn, and Se: HQ ≥ 1 and HQ < 5
- For Pb and Zn: PAF ≥ 20; For As, Mn, and Se: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

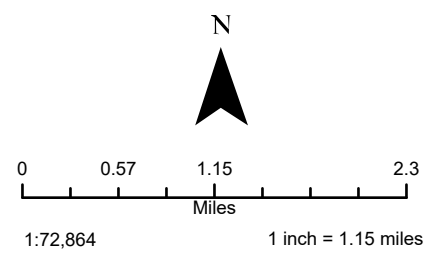
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.



MAP 6-12b. Summary of Benchmark Exceedances for Plant COCs
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

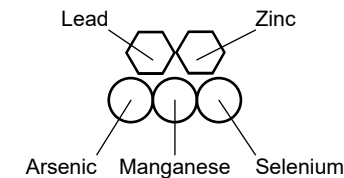


LEGEND

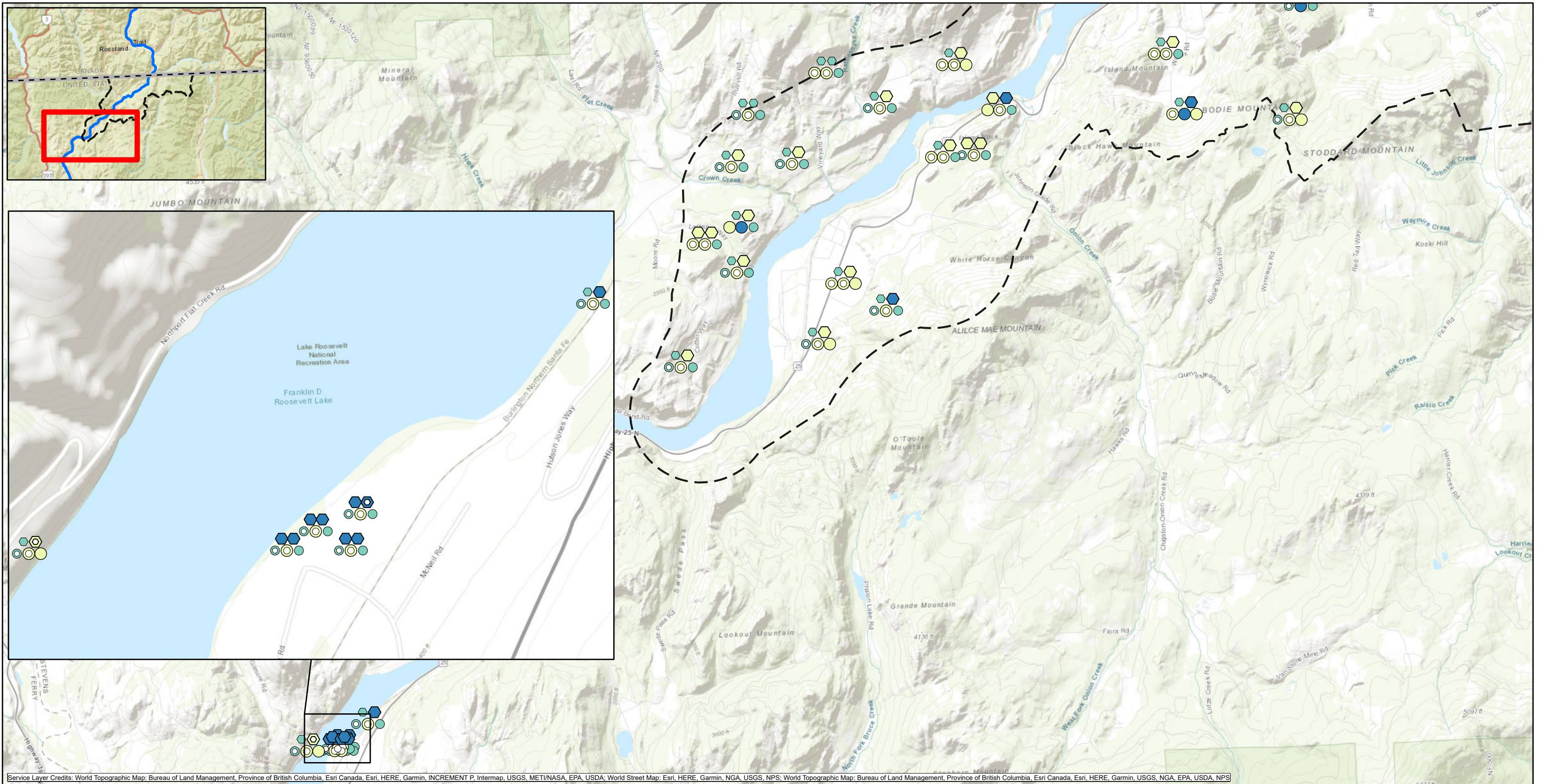
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- For Pb and Zn: PAF < 5; For As, Mn, and Se: HQ < 1
- For Pb and Zn: PAF ≥ 5 and PAF < 20; For As, Mn, and Se: HQ ≥ 1 and HQ < 5
- For Pb and Zn: PAF ≥ 20; For As, Mn, and Se: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

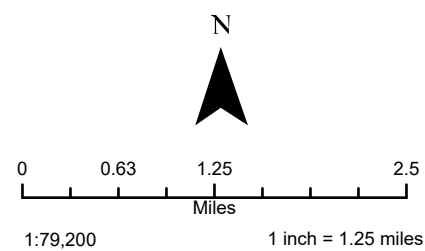
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.



MAP 6-12c. Summary of Benchmark Exceedances for Plant COCs
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA; World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

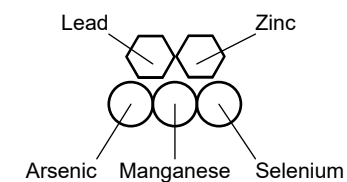


LEGEND

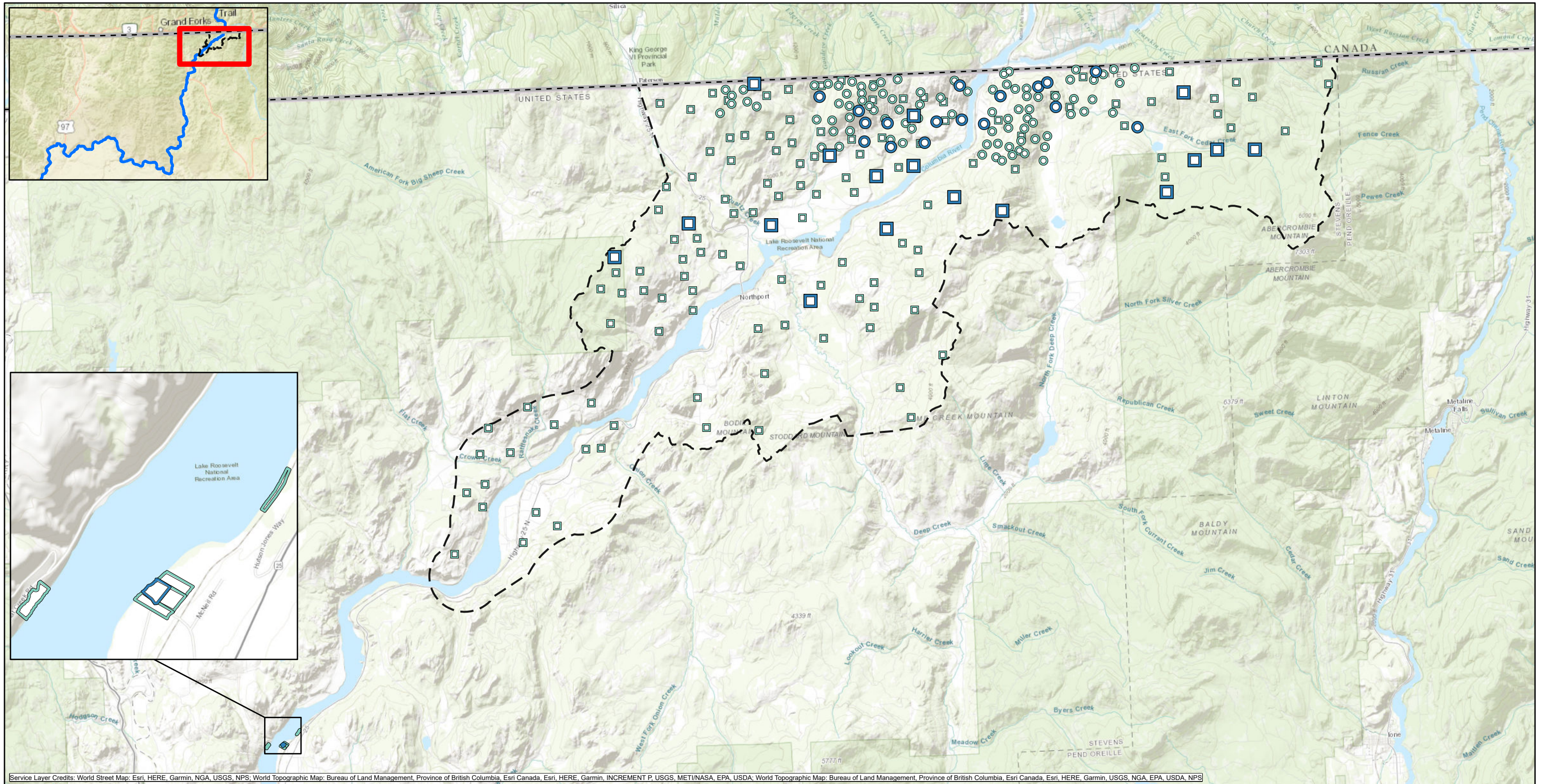
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- For Pb and Zn: PAF < 5; For As, Mn, and Se: HQ < 1
- For Pb and Zn: PAF ≥ 5 and PAF < 20; For As, Mn, and Se: HQ ≥ 1 and HQ < 5
- For Pb and Zn: PAF ≥ 20; For As, Mn, and Se: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

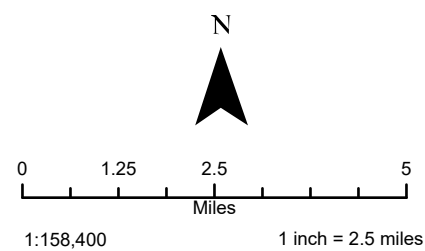
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ >= 1 but close to 1.0.



MAP 6-12d. Summary of Benchmark Exceedances for Plant COCs
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



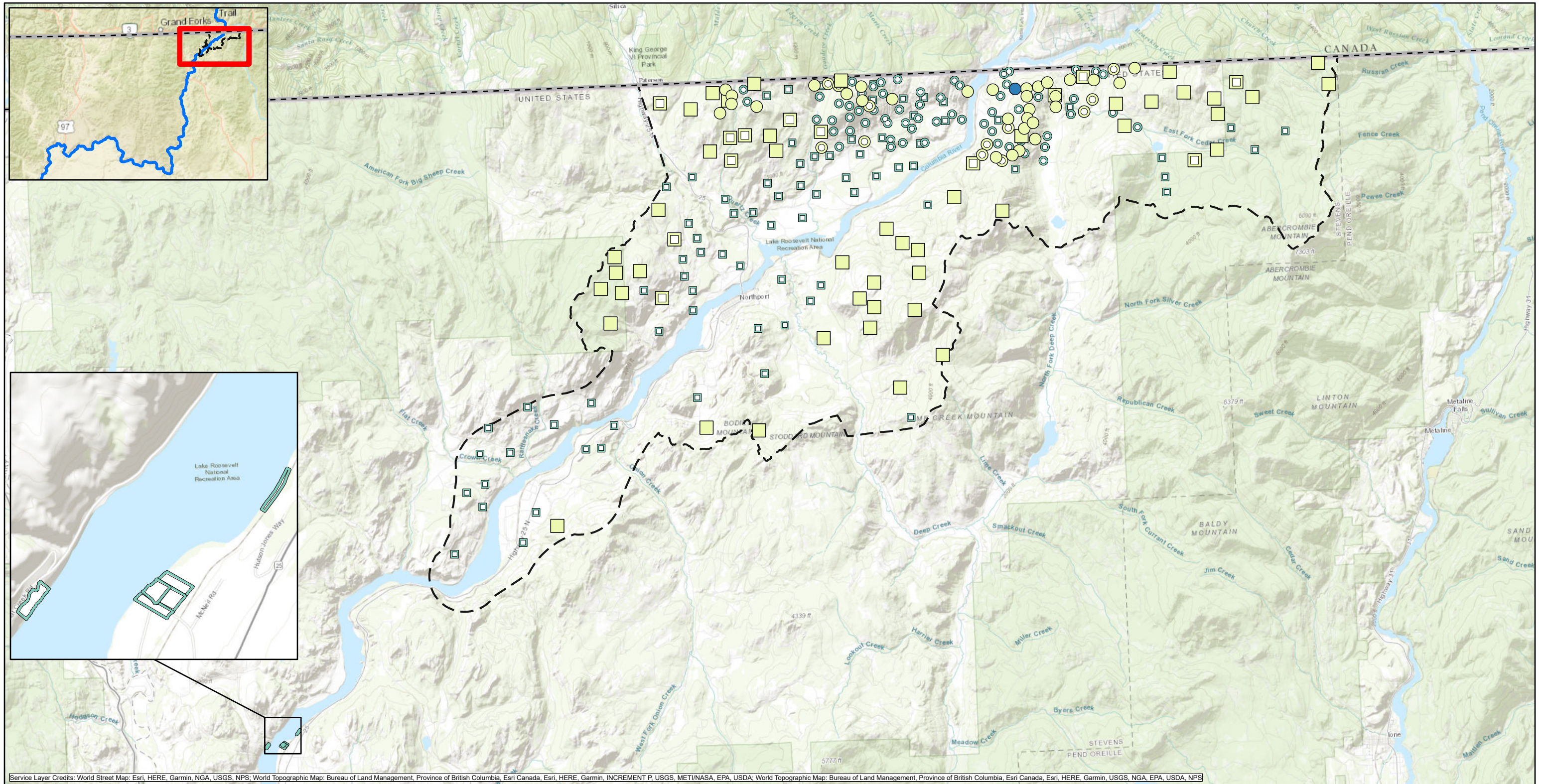
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- pH ≥ 5.5 and ≤ BTV
- pH < 5.5 and ≤ BTV

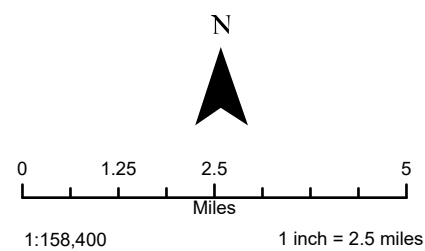
- Upland Soil Study ADA Decision Unit**
- pH ≥ 5.5 and ≤ BTV
- pH < 5.5 and ≤ BTV
- Bosburg Refined Soil And Sediment Study - Upland Soil Decision Unit**
- pH ≥ 5.5 and ≤ BTV
- pH < 5.5 and ≤ BTV

Note: No locations exceed BTV

MAP 7-1. Distribution of Aluminum Eco-SSL pH Screening for Invertebrates
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

— Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

Ecology Soil Study Sample Location

- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

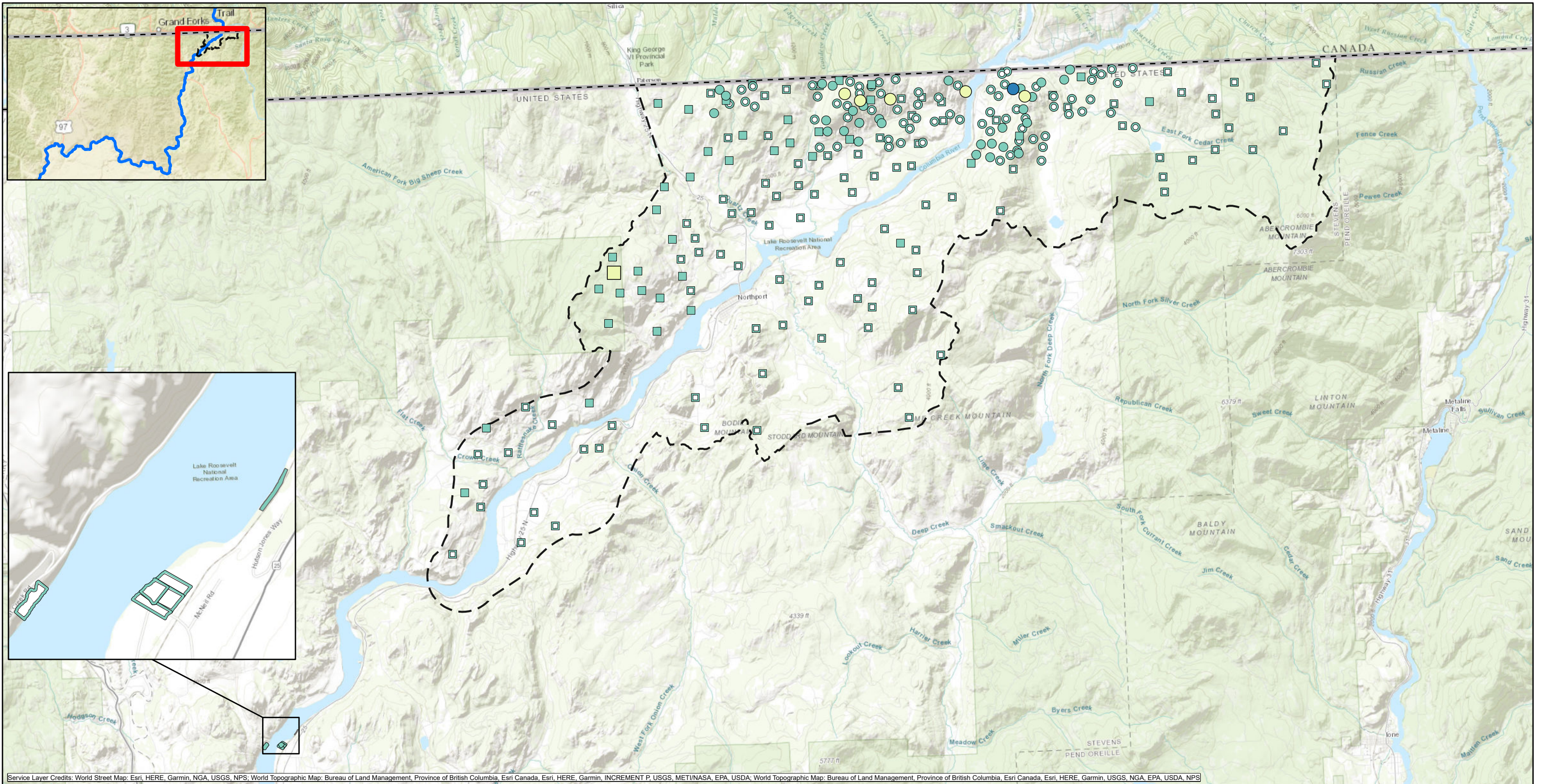
Upland Soil Study ADA Decision Unit

- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV

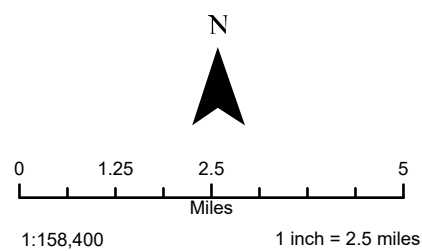
Bosburg Refined Soil And Sediment Study - Upland Soil Decision Unit

- HQ < 1 and ≤ BTV

MAP 7-2. Distribution of Barium Eco-SSL HQs for Invertebrates
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

— Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

Ecology Soil Study Sample Location

- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

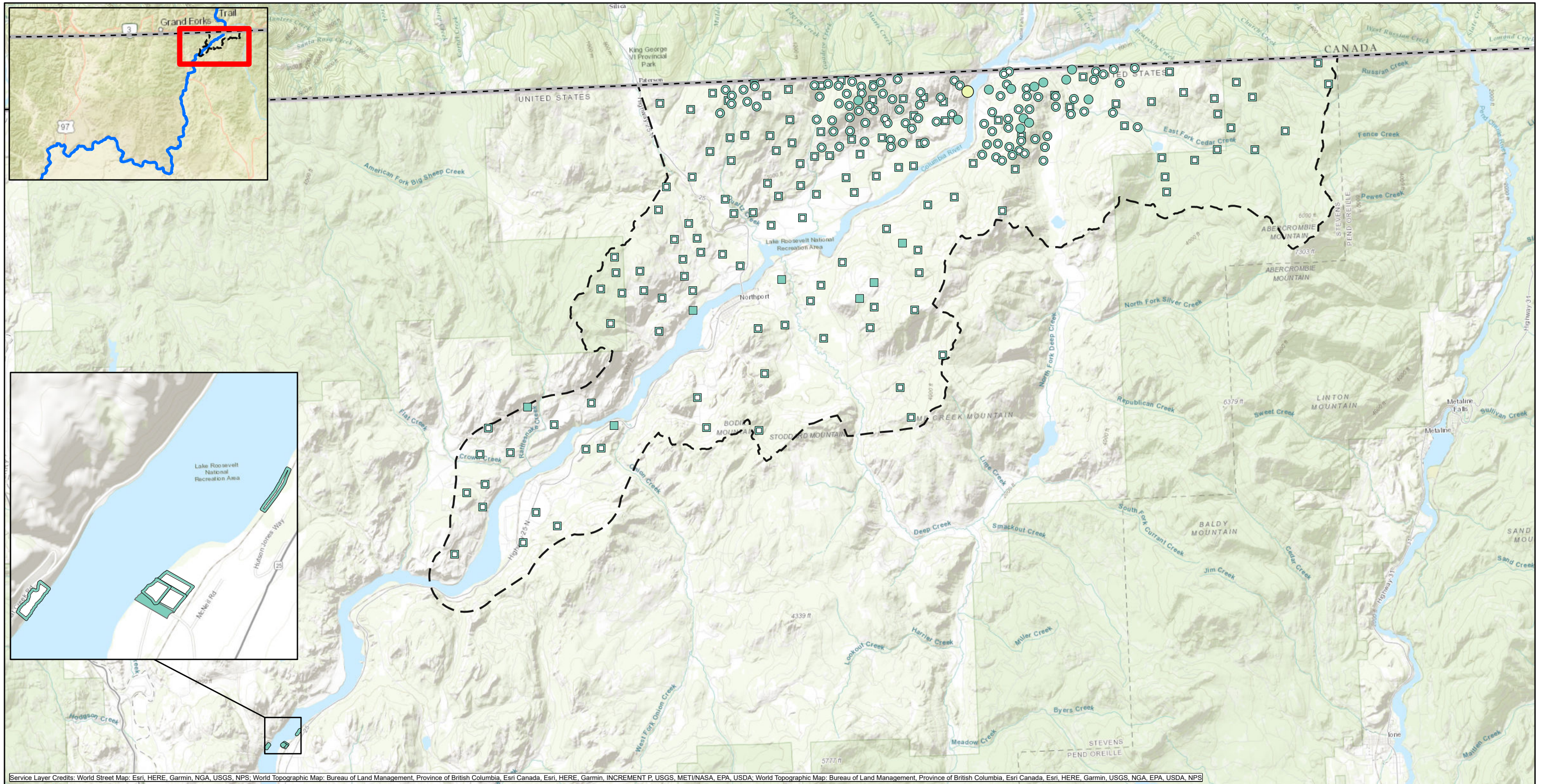
Upland Soil Study ADA Decision Unit

- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

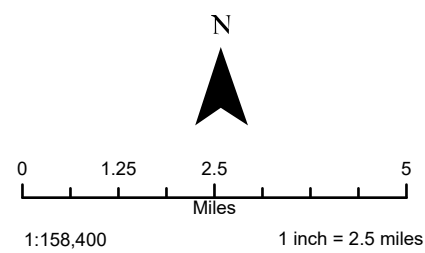
Bosburg Refined Soil And Sediment Study - Upland Soil Decision Unit

- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV

**MAP 7-3. Distribution of Chromium
Eco-SSL HQs for Invertebrates**
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

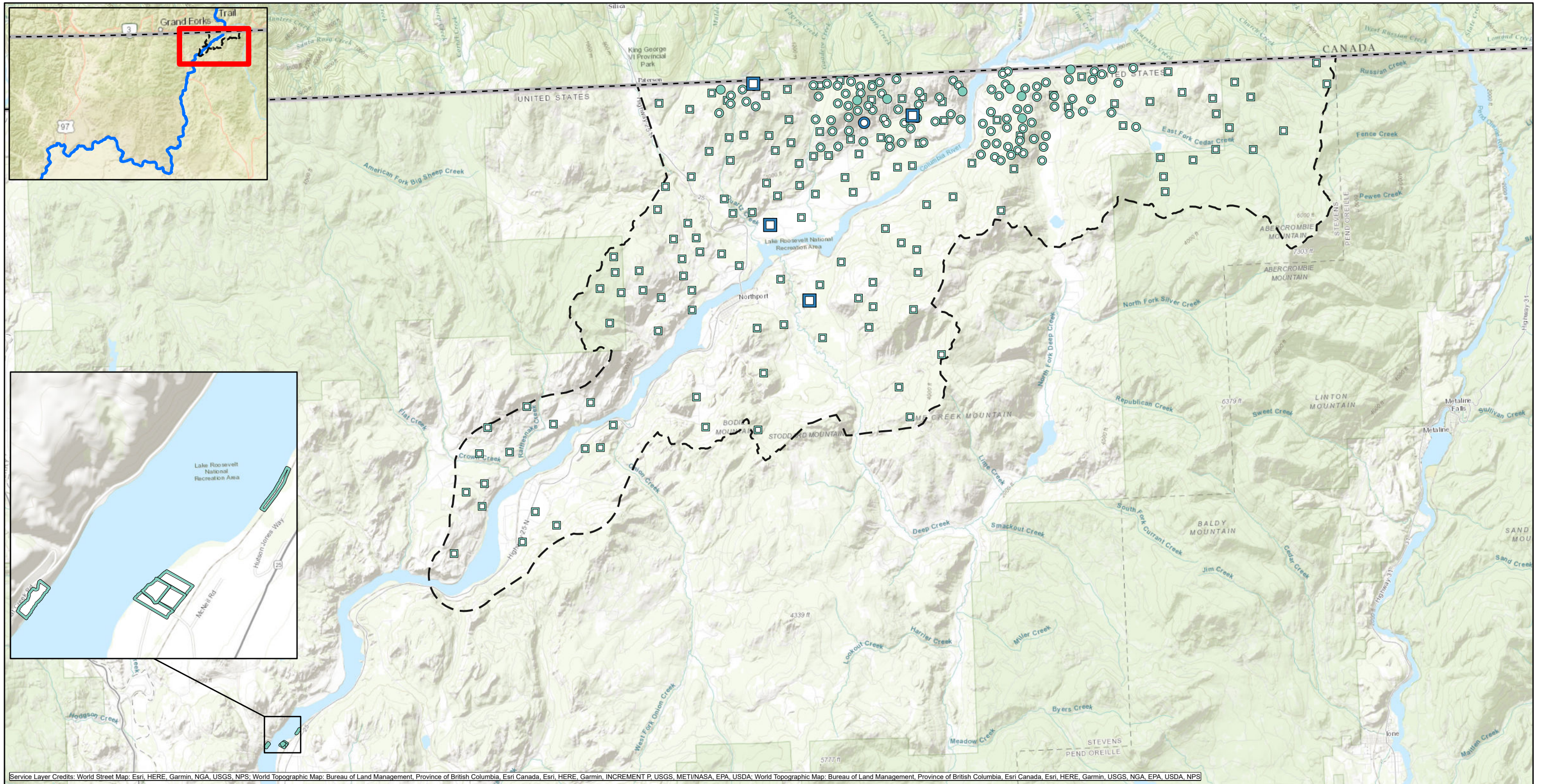


LEGEND

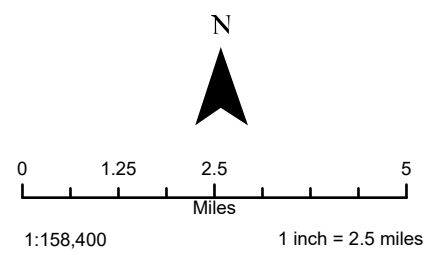
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location
 - PAF < 5% and ≤ BTV
 - PAF < 5% and > BTV
 - PAF ≥ 5% and PAF < 20% and > BTV
- Upland Soil Study ADA Decision Unit
 - PAF < 5% and ≤ BTV
 - PAF < 5% and > BTV
- Bossburg Refined Soil And Sediment Study - Upland Soil Decision Unit
 - PAF < 5% and ≤ BTV
 - PAF < 5% and > BTV

Note: The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.

MAP 7-4. Distribution of PAFs for Invertebrates from Copper Exposure
 Final Upland BERA
 Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

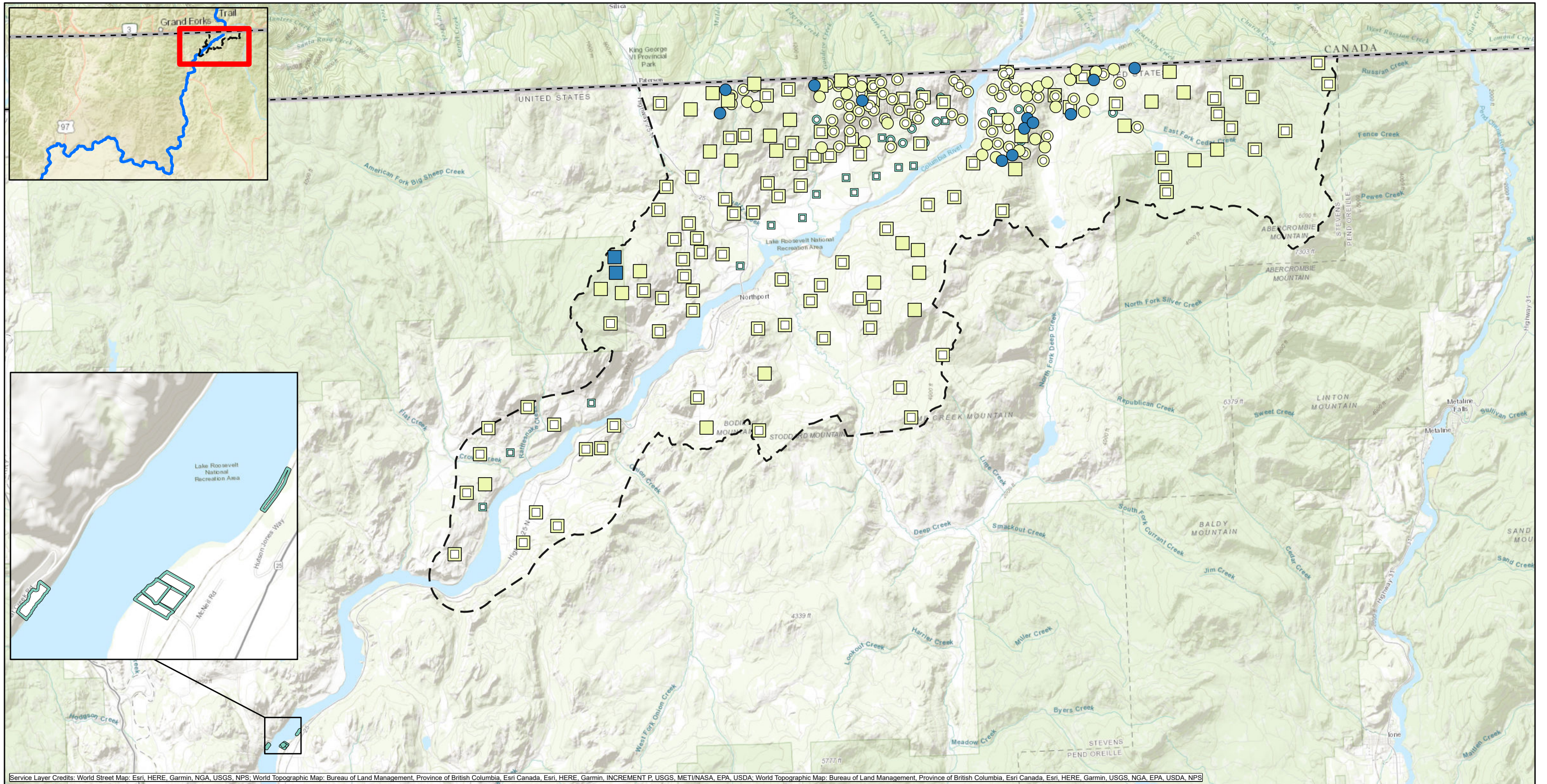


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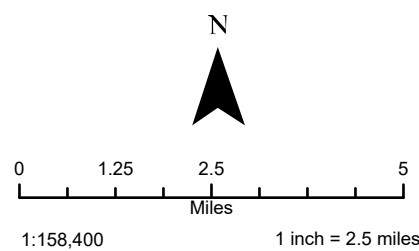
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- pH ≥ 5 and ≤ BTV
- pH ≥ 5 and > BTV
- pH < 5 and ≤ BTV

- Upland Soil Study ADA Decision Unit**
- pH ≥ 5 and ≤ BTV
- pH < 5 and ≤ BTV
- Bossburg Refined Soil And Sediment Study - Upland Soil Decision Unit**
- pH ≥ 5 and ≤ BTV

MAP 7-5. Distribution of Iron Eco-SSL pH Screening for Invertebrates
 Final Upland BERA
 Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

— Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

Ecology Soil Study Sample Location

- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

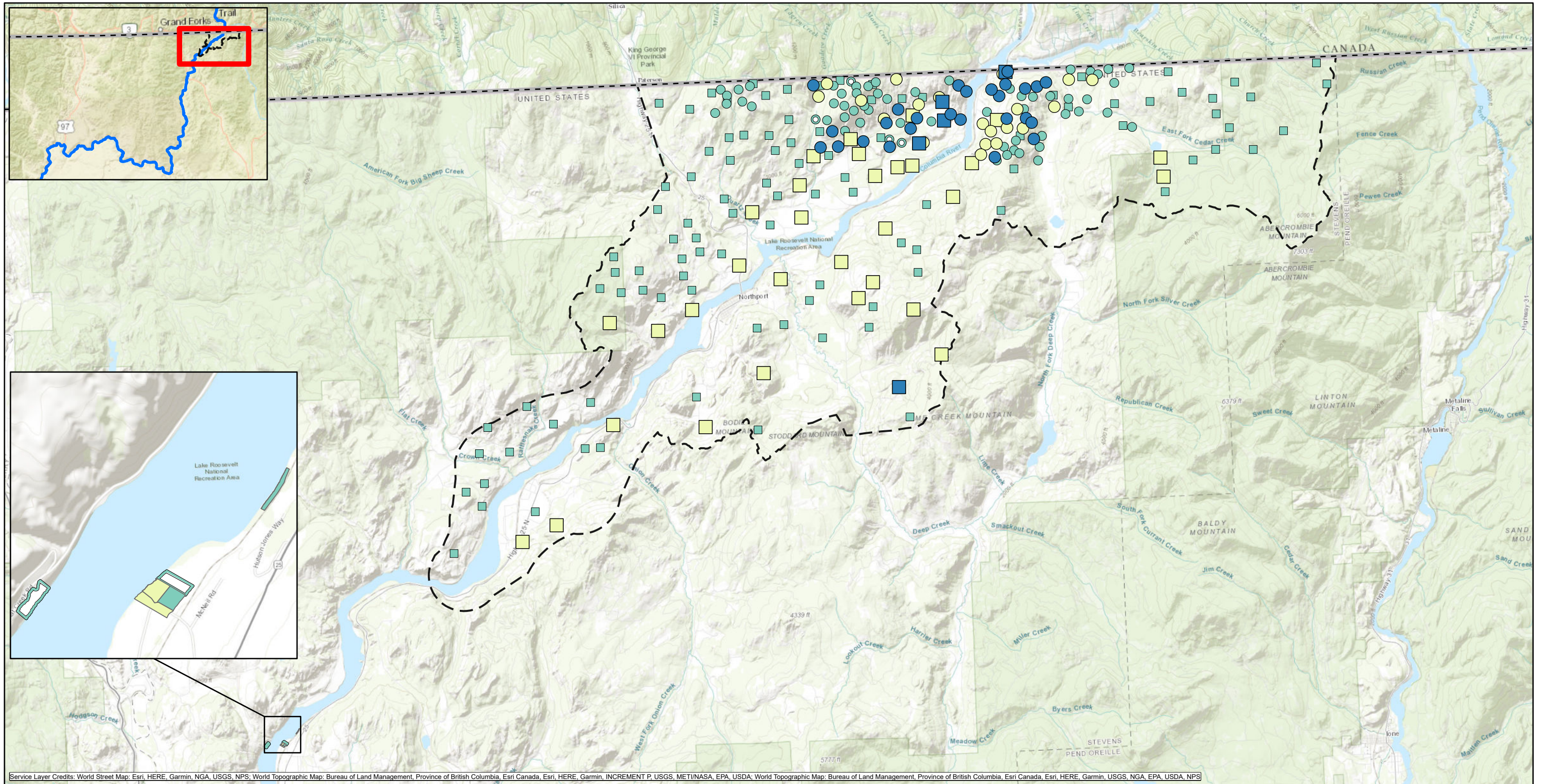
Upland Soil Study ADA Decision Unit

- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

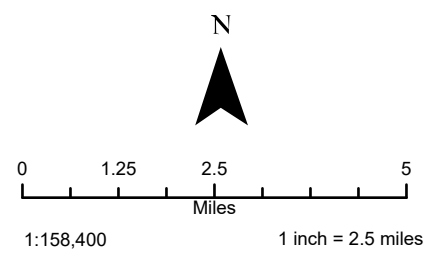
Bossburg Refined Soil And Sediment Study - Upland Soil Decision Unit

- HQ < 1 and ≤ BTV

MAP 7-6. Distribution of Manganese Eco-SSL HQs for Invertebrates
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

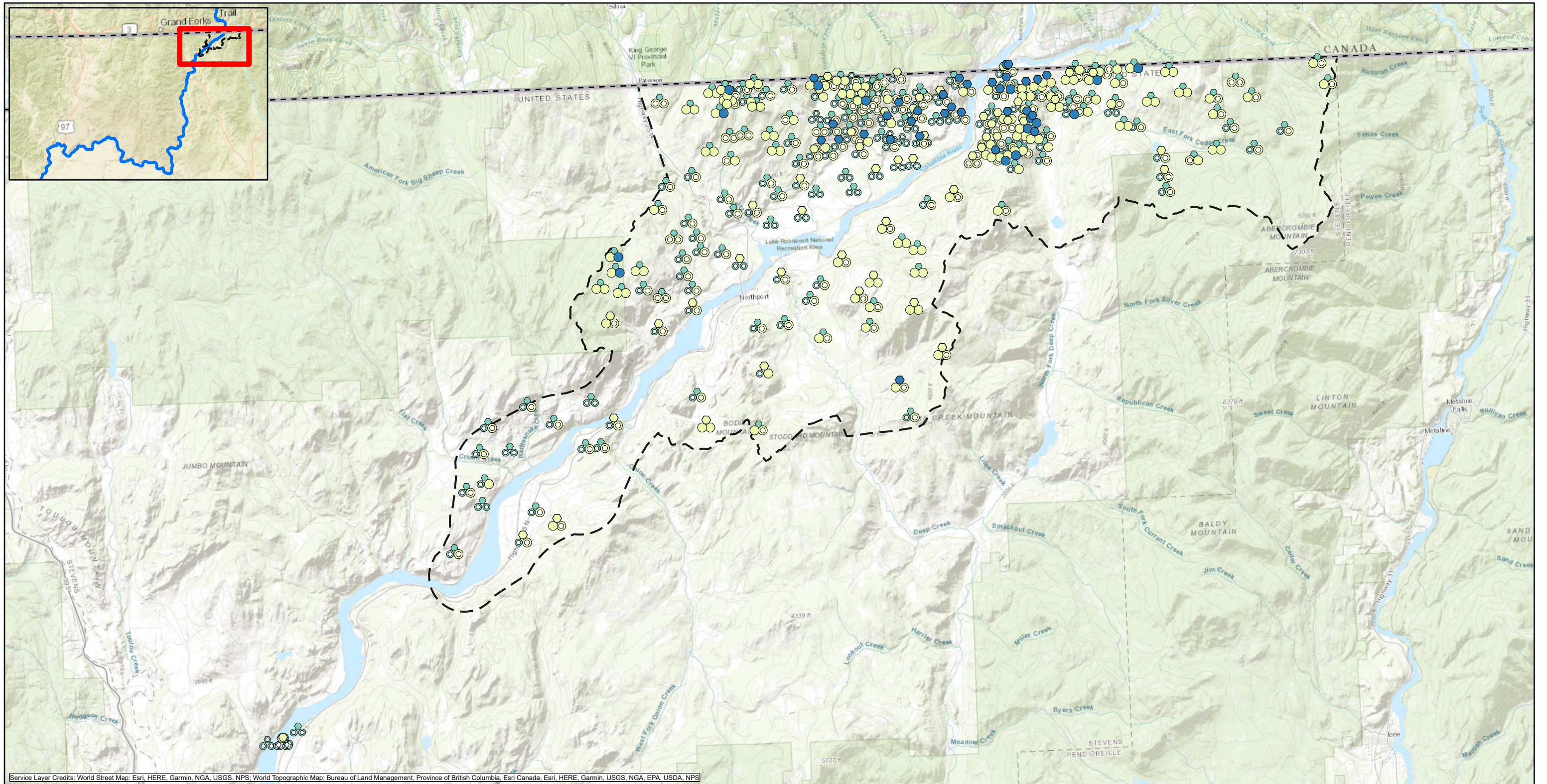
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Ecology Soil Study Sample Location**
- PAF < 5% and ≤ BTV
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- PAF ≥ 20% and > BTV

- Upland Soil Study ADA Decision Unit**
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV
- PAF ≥ 20% and > BTV

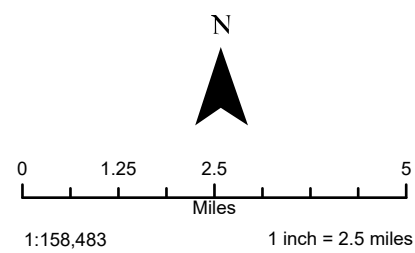
- Bossburg Refined Soil And Sediment Study - Upland Soil Decision Unit**
- PAF < 5% and ≤ BTV
- PAF < 5% and > BTV
- PAF ≥ 5% and PAF < 20% and > BTV

Note: The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.

MAP 7-7. Distribution of PAFs for Invertebrates from Zinc Exposure
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

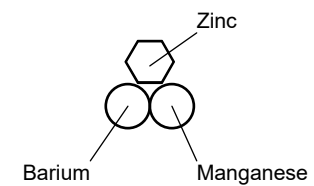


LEGEND

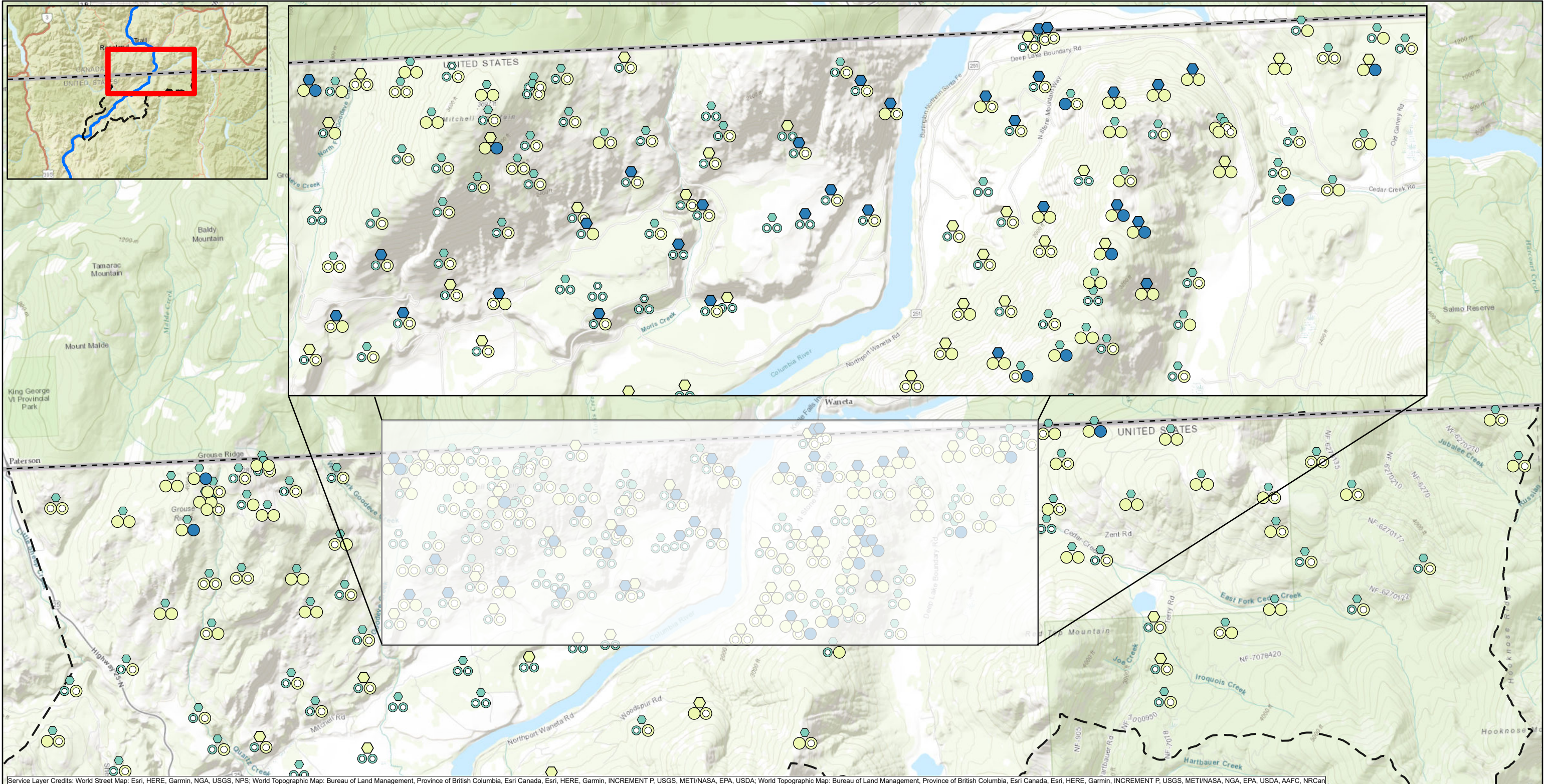
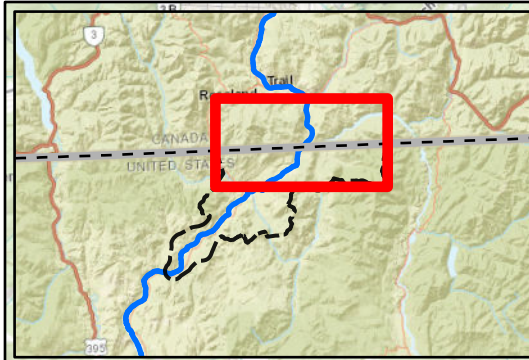
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
 - For Zn: PAF < 5; For Ba and Mn: HQ < 1
 - For Zn: PAF ≥ 5 and PAF < 20; For Ba and Mn: HQ ≥ 1 and HQ < 5
 - For Zn: PAF ≥ 20; For Ba and Mn: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

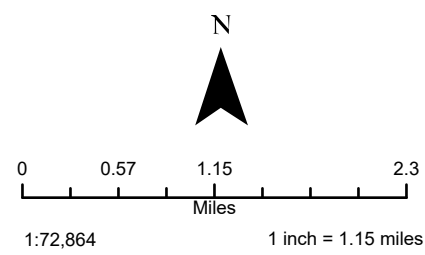
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.



MAP 7-8a. Summary of Benchmark Exceedances for Invertebrate COCs
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, NGA, EPA, USDA, AAFC, NRCan

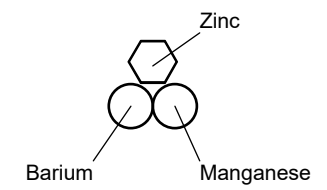


LEGEND

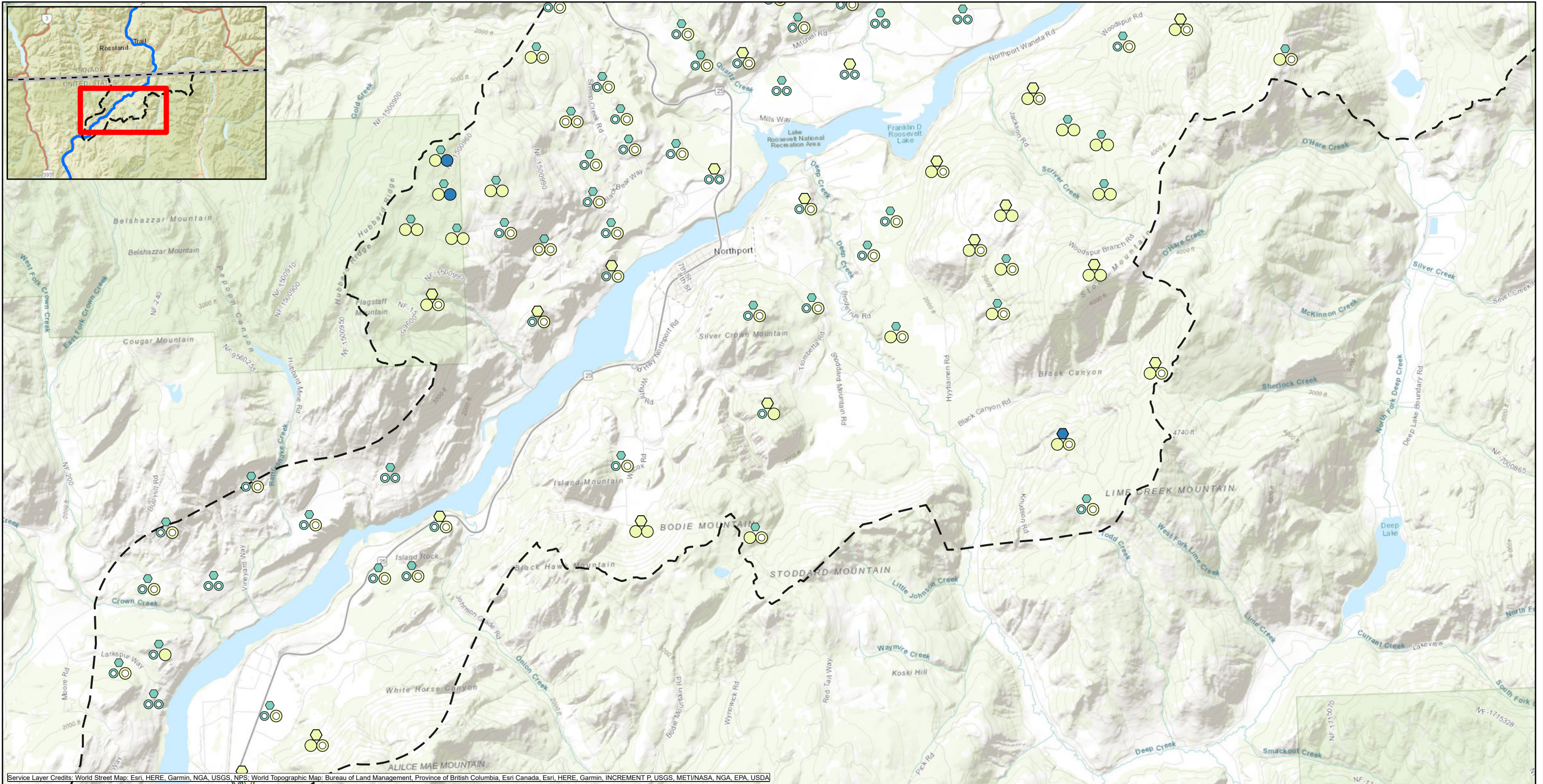
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- For Zn: PAF < 5; For Ba and Mn: HQ < 1
- For Zn: PAF ≥ 5 and PAF < 20; For Ba and Mn: HQ ≥ 1 and HQ < 5
- For Zn: PAF ≥ 20; For Ba and Mn: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

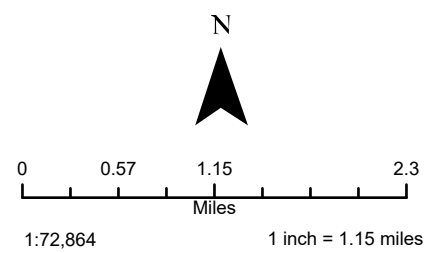
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.



MAP 7-8b. Summary of Benchmark Exceedances for Invertebrate COCs
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, NGA, EPA, USDA

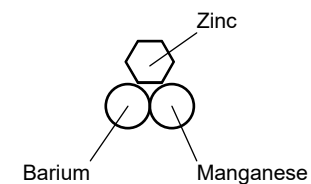


LEGEND

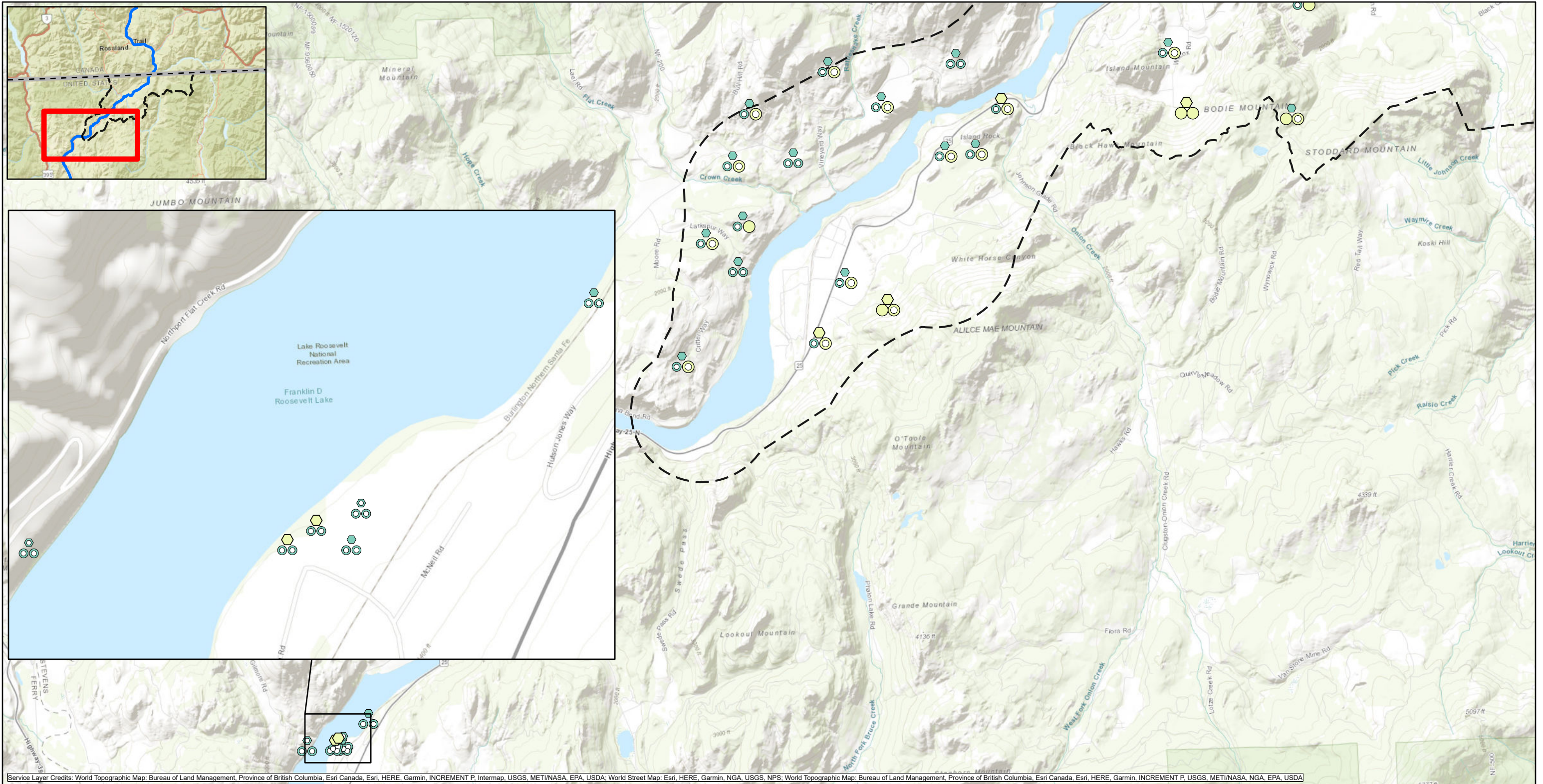
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- For Zn: PAF < 5; For Ba and Mn: HQ < 1
- For Zn: PAF ≥ 5 and PAF < 20; For Ba and Mn: HQ ≥ 1 and HQ < 5
- For Zn: PAF ≥ 20; For Ba and Mn: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

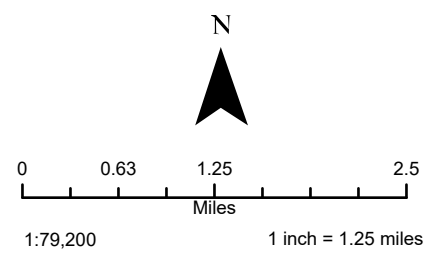
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.



MAP 7-8c. Summary of Benchmark Exceedances for Invertebrate COCs
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA; World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

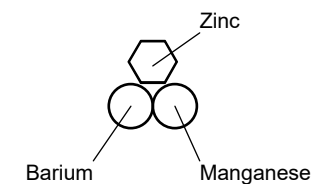


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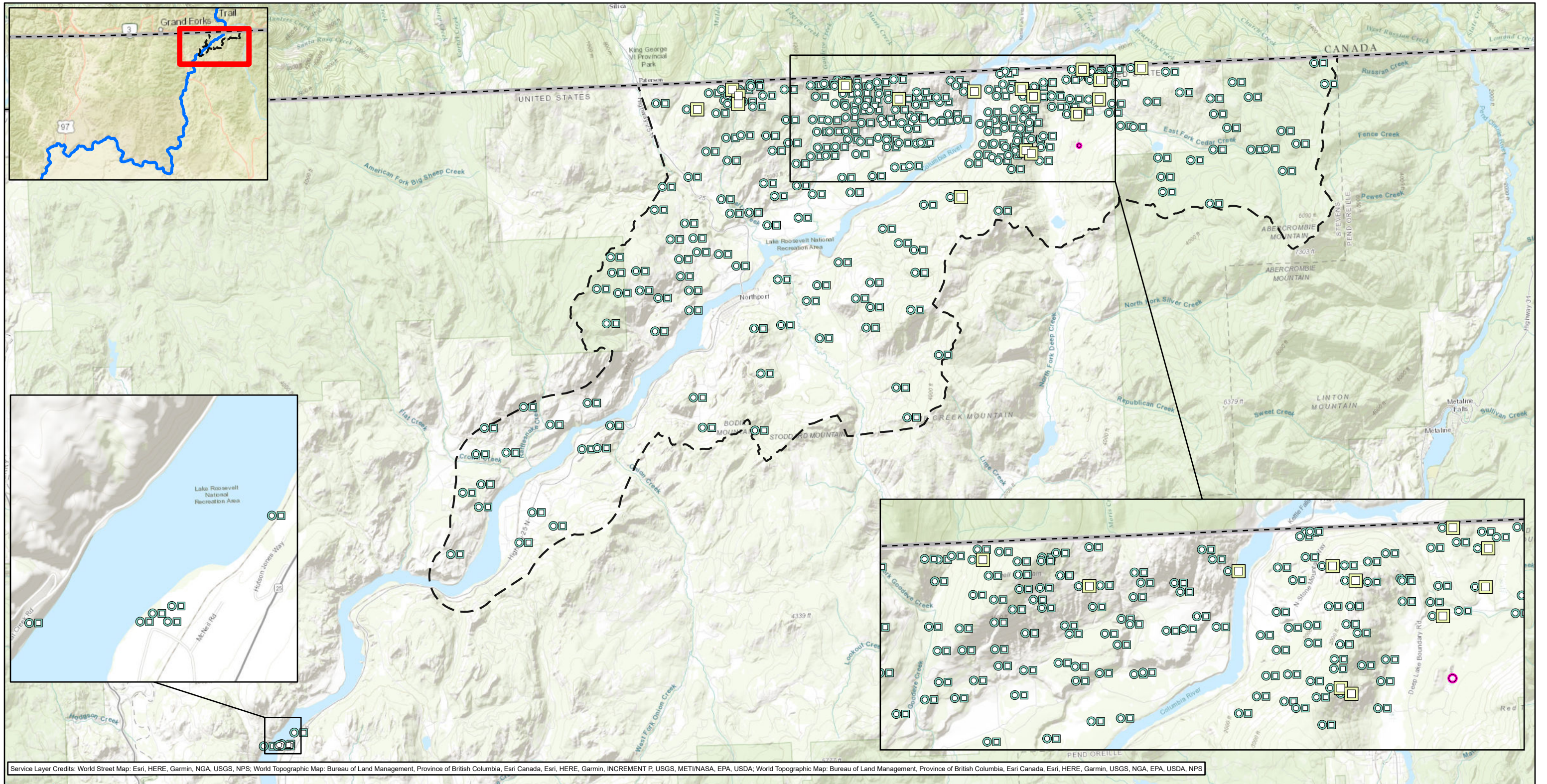
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
 - For Zn: PAF < 5; For Ba and Mn: HQ < 1
 - For Zn: PAF ≥ 5 and PAF < 20; For Ba and Mn: HQ ≥ 1 and HQ < 5
 - For Zn: PAF ≥ 20; For Ba and Mn: HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

Notes:

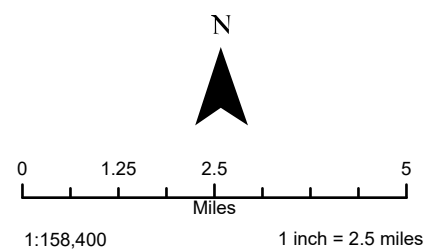
1. All sample locations are south of the US/Canada border regardless of how they appear on the map.
2. The count of PAFs ≥ 5% shown in figures and maps is less by a small number of samples than the number of BAB HQs ≥ 1 reported in Section 6 tables and text, because the Threshold Calculator output shows PAFs < 5% for some samples with BAB HQ ≥ 1 but close to 1.0.



MAP 7-8d. Summary of Benchmark Exceedances for Invertebrate COCs
Final Upland BERA
Upper Columbia River, Washington



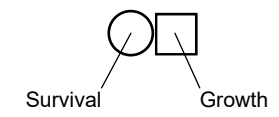
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



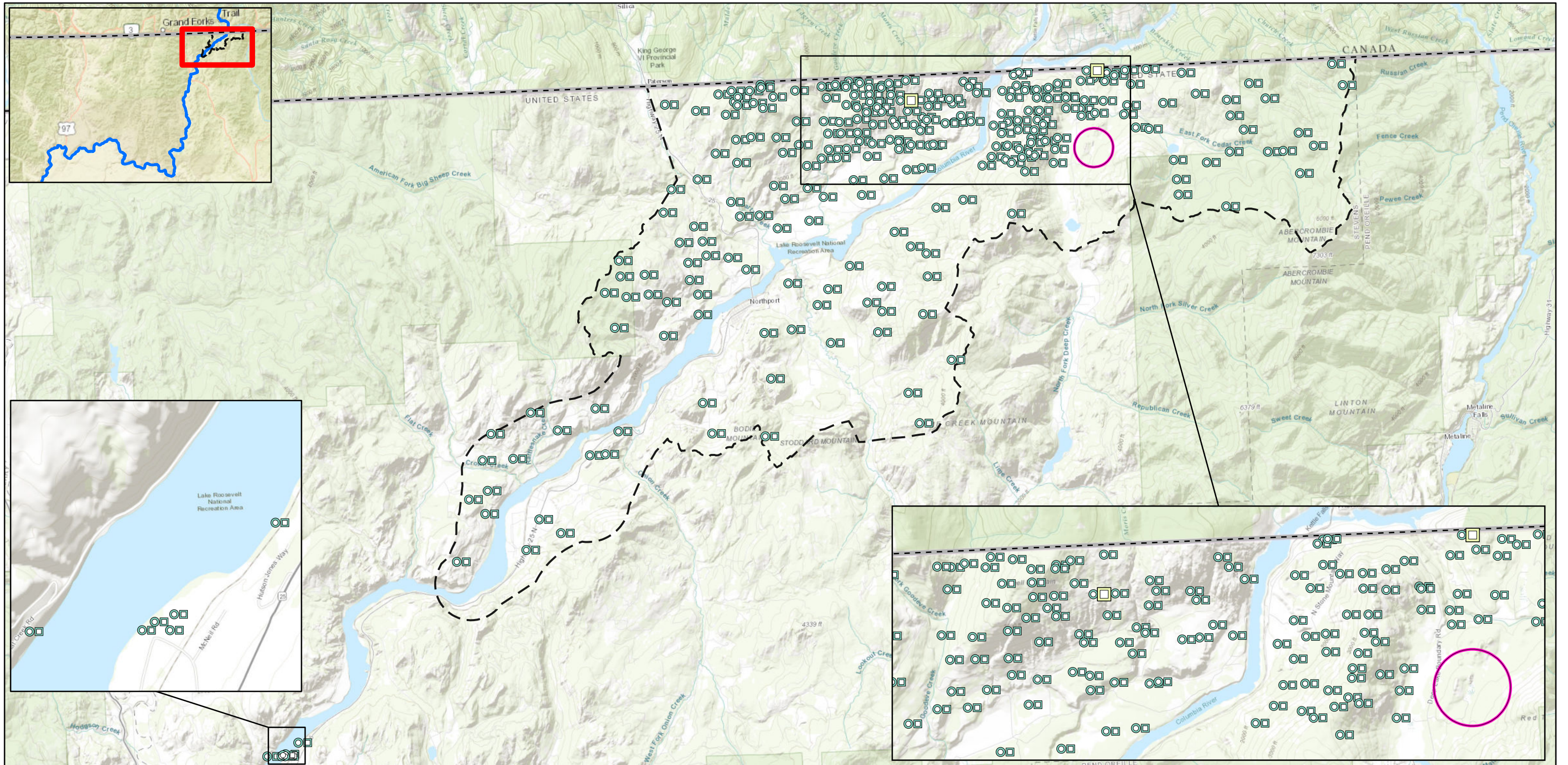
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20
ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- Receptor Home Range (5 Acres)
- TRV
HQ < 1 and ≤ BTV

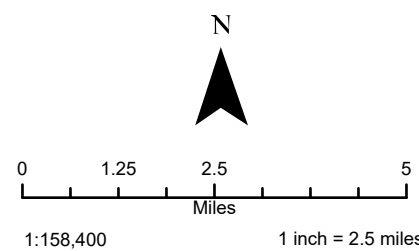
Note:
ED = effective dose
TRV = toxicity reference value



**MAP 8-1. Aluminum Dietary Exposure
HQs and EDs for American Robin**
Final Upland BERA
Upper Columbia River, Washington



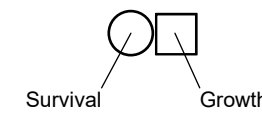
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



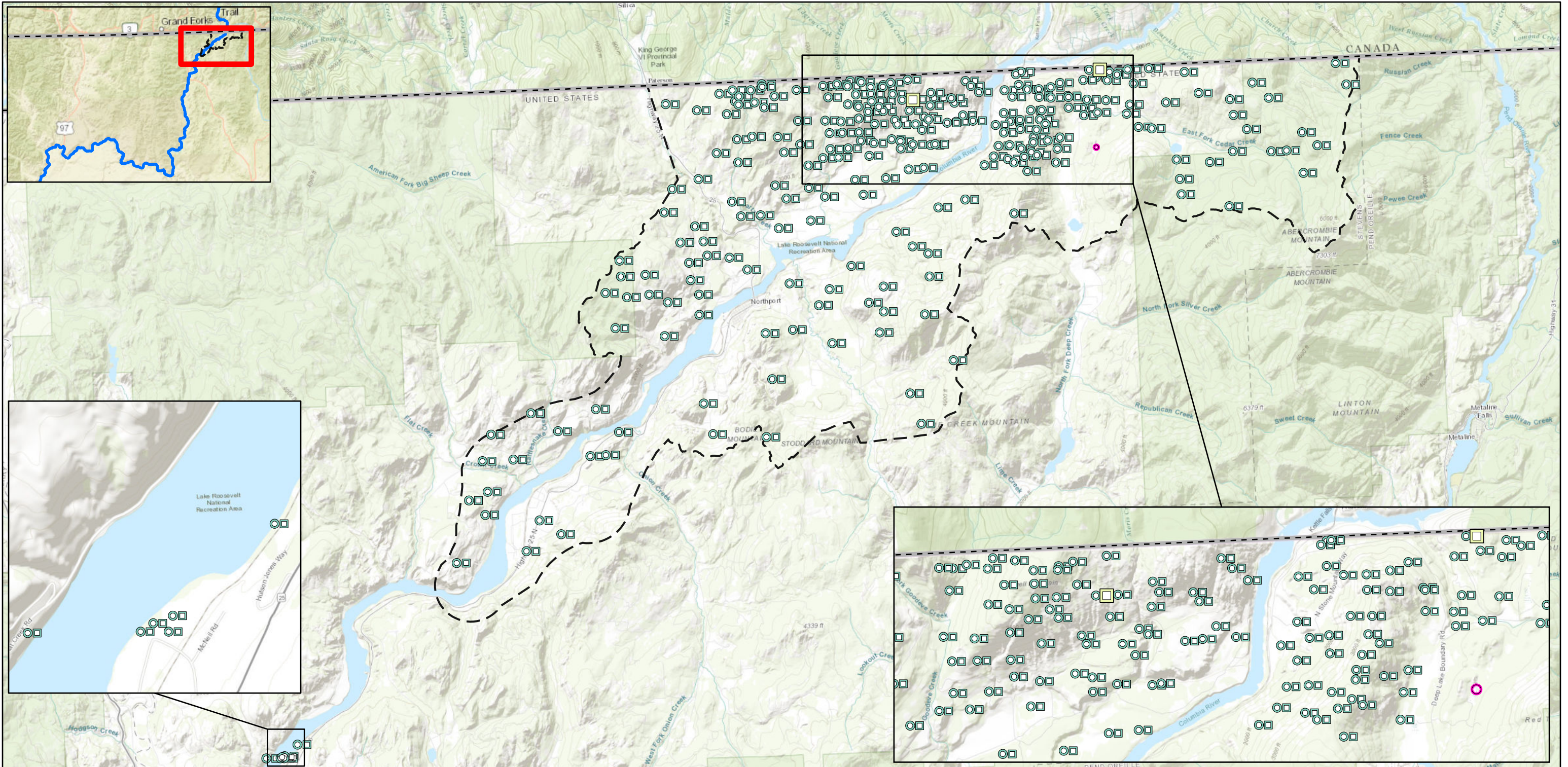
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (500 Acres)
- ED20**
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- HQ < 1 and ≤ BTV
- HQ > 1 and > BTV

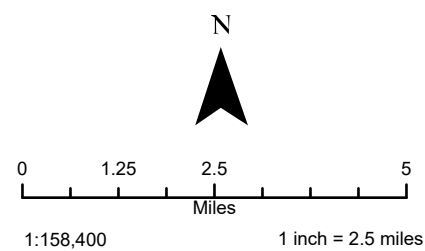
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-2. Aluminum Dietary Exposure HQs and EDs for American Kestrel
Final Upland BERA
Upper Columbia River, Washington



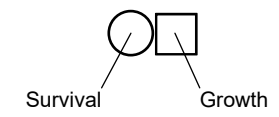
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



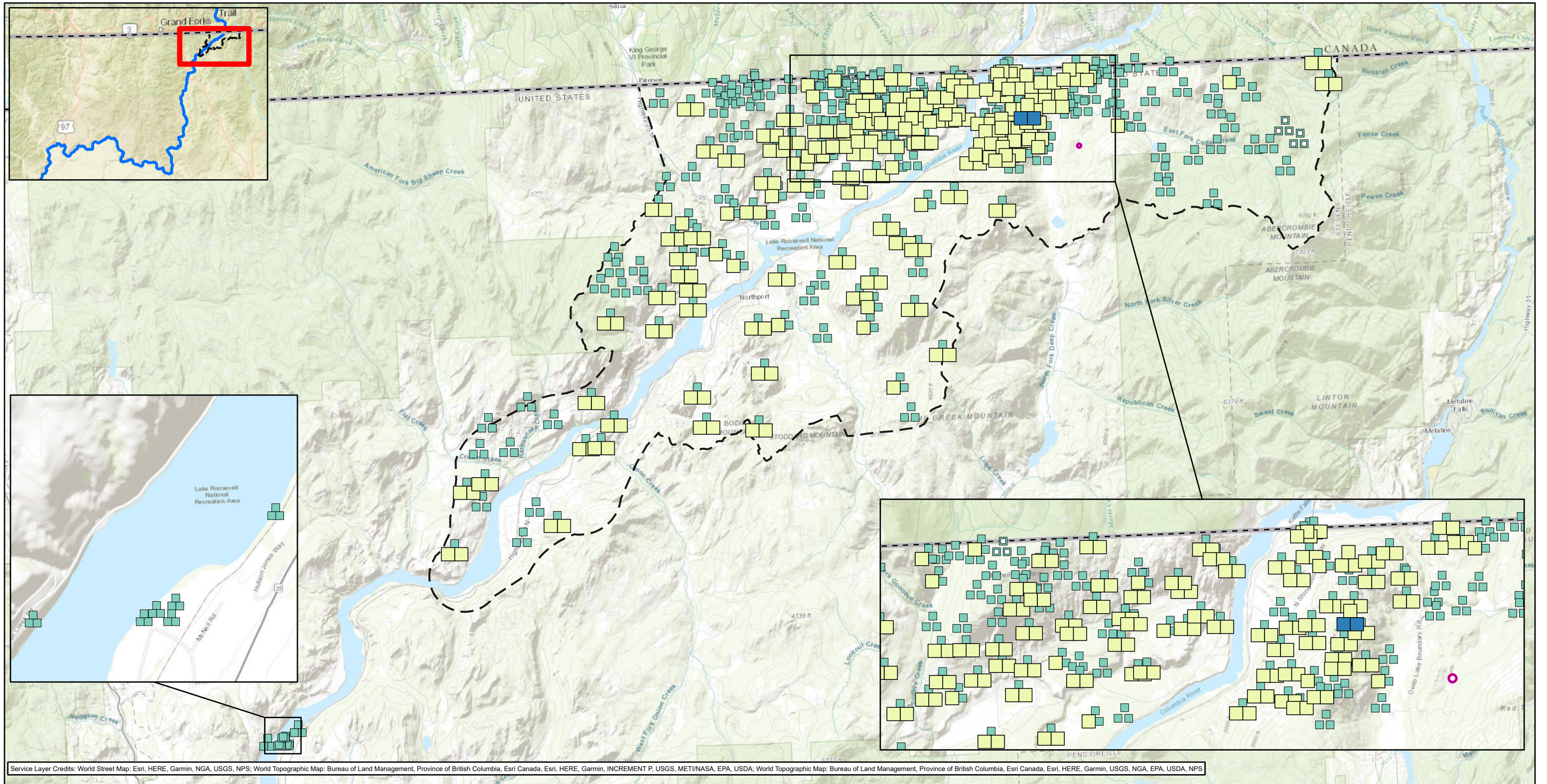
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- Receptor Home Range (7 Acres) TRV
- HQ < 1 and ≤ BTV

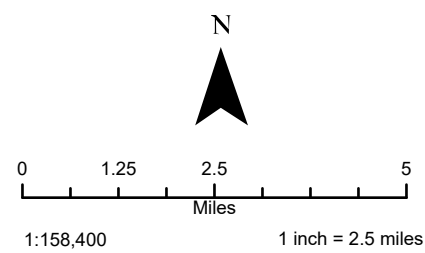
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-3. Aluminum Dietary Exposure HQs and EDs for Black-capped Chickadee
Final Upland BERA
Upper Columbia River, Washington



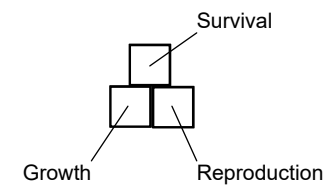
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



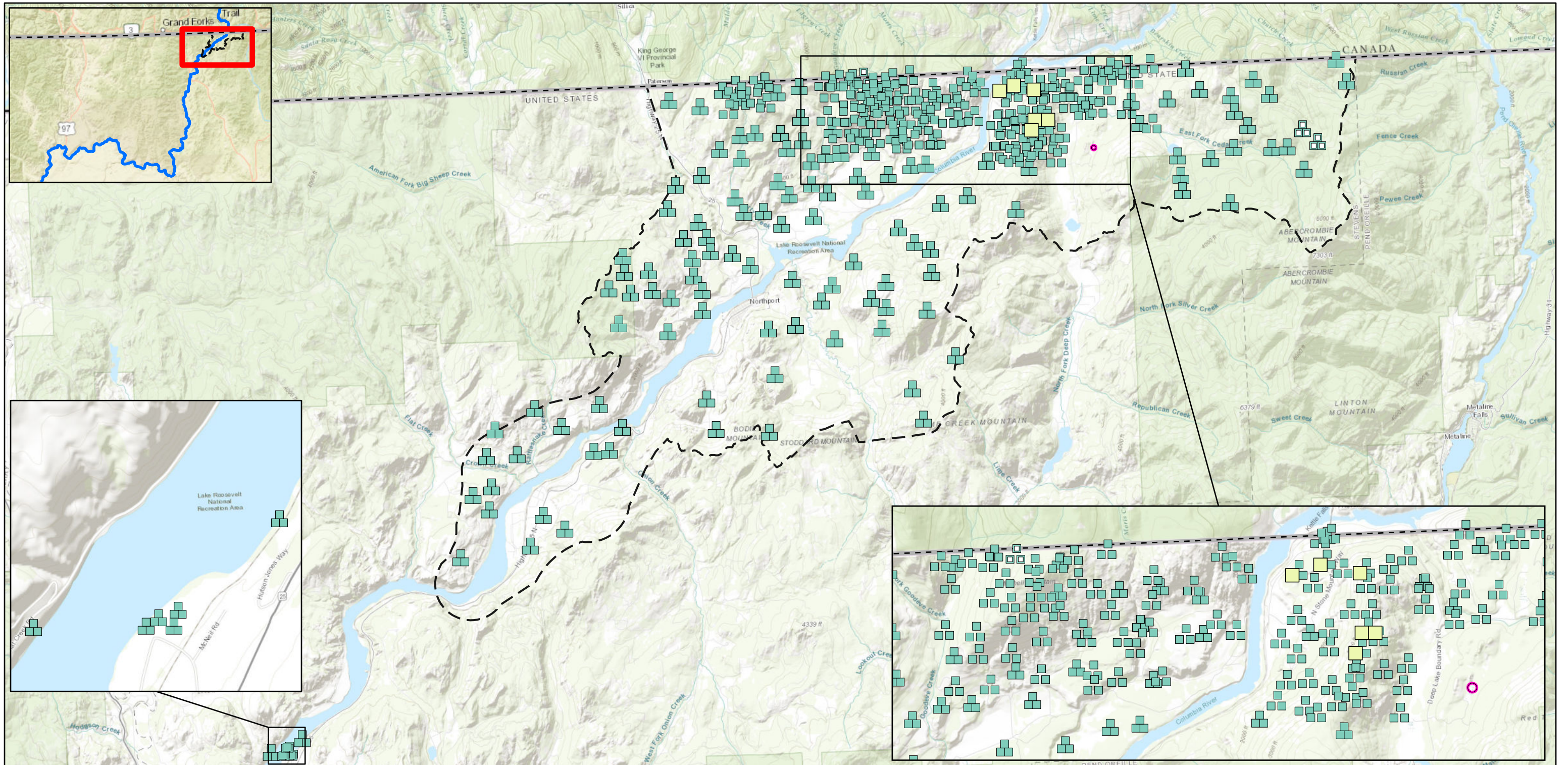
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (5 Acres)
- ED20**
- ED < 20% and ≤ BTV
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

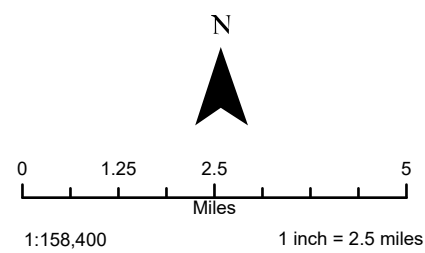
Note:
ED = effective dose



MAP 8-4. Cadmium Dietary Exposure EDs for American Robin
Final Upland BERA
Upper Columbia River, Washington



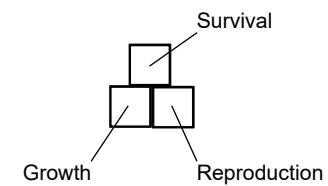
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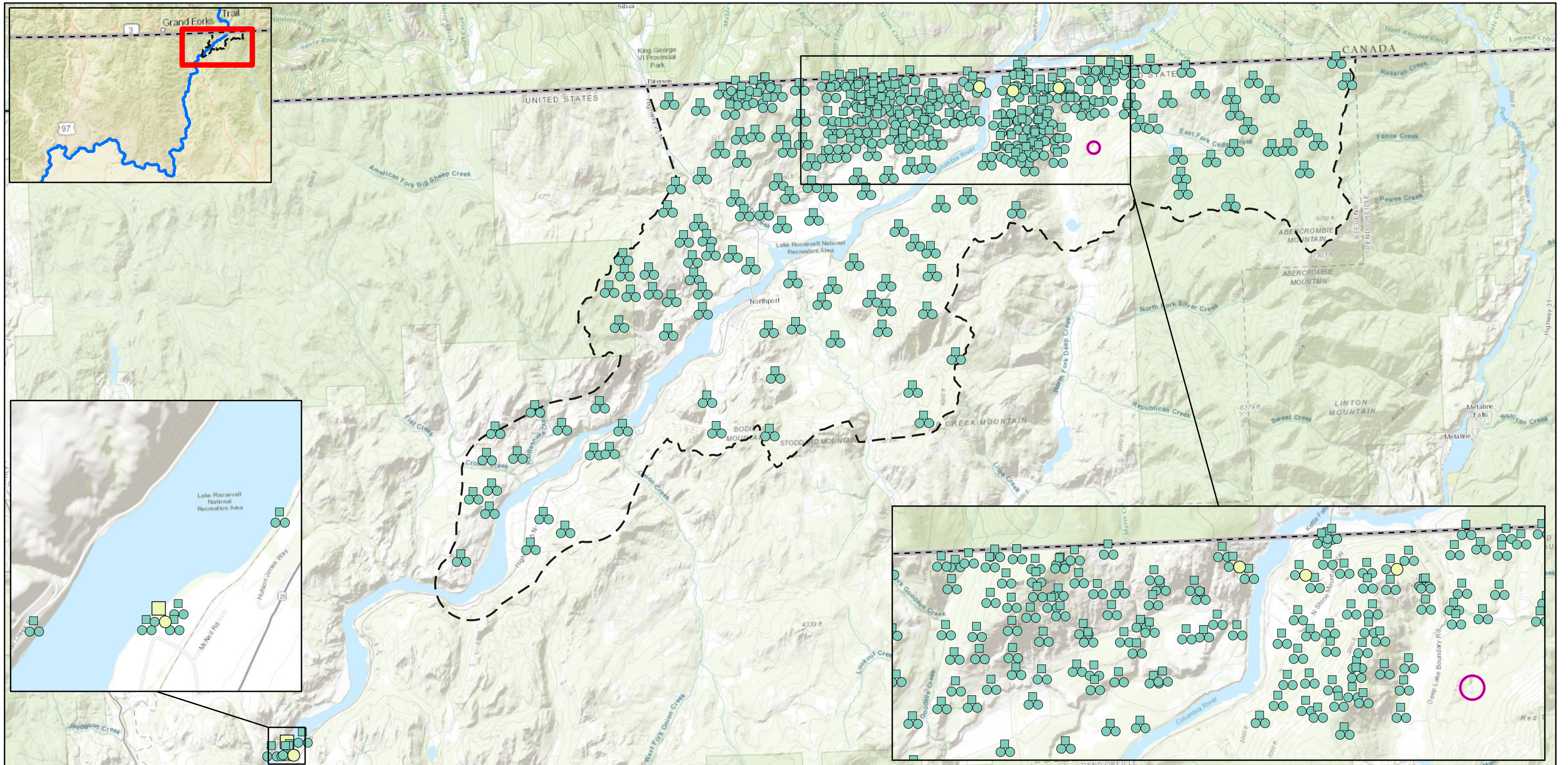
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (7 Acres)
- ED20**
- ED < 20% and ≤ BTV
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV

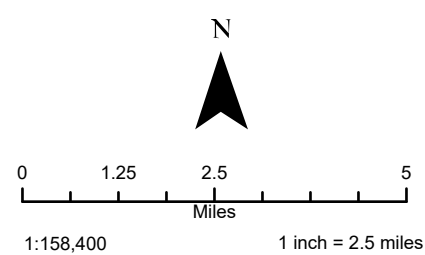
Note:
ED = effective dose



MAP 8-5. Cadmium Dietary Exposure EDs for Black-capped Chickadee
Final Upland BERA
Upper Columbia River, Washington



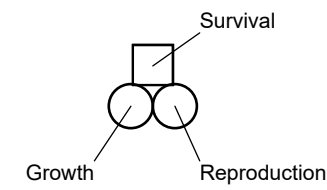
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



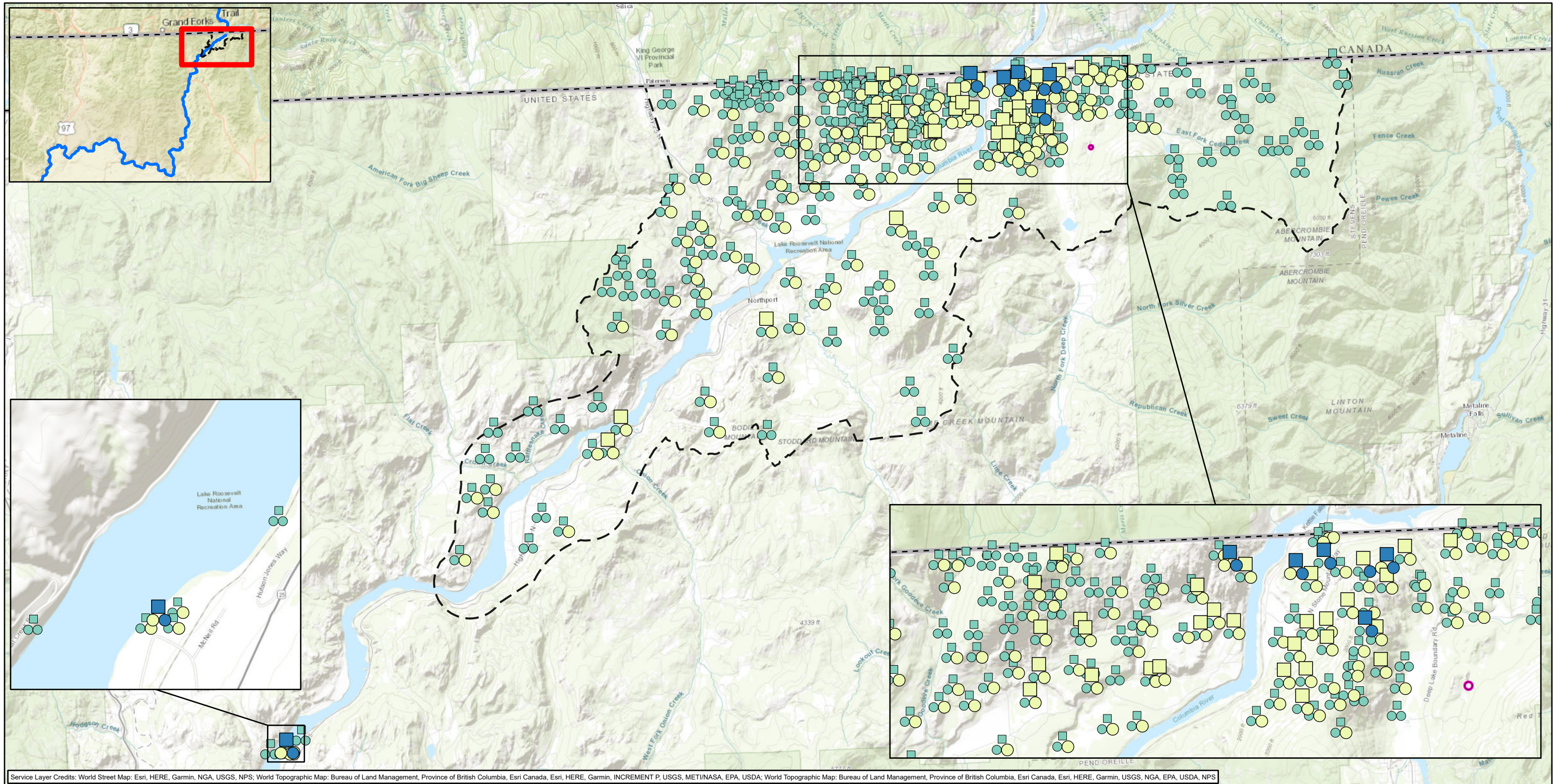
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- Receptor Home Range (49 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

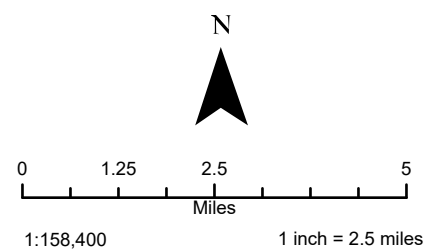
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-6. Lead Dietary Exposure HQs and EDs for California Quail
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

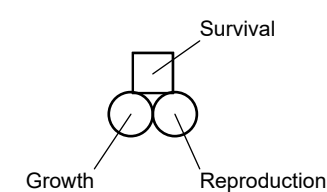


LEGEND

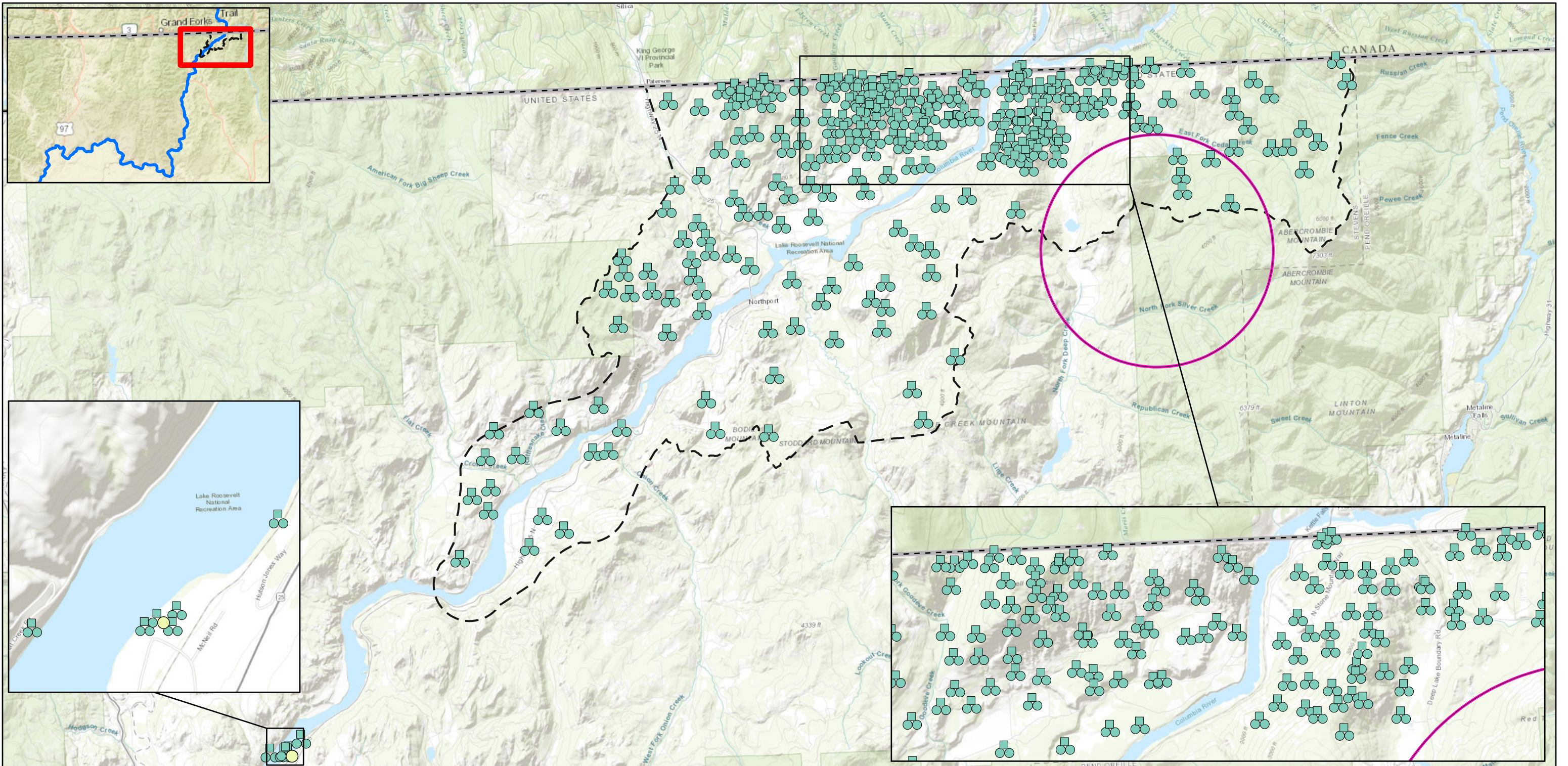
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

- Receptor Home Range (5 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ > 5 and > BTV

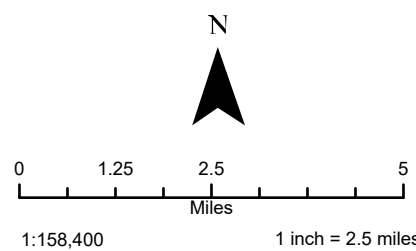
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-7. Lead Dietary Exposure HQs and EDs for American Robin
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



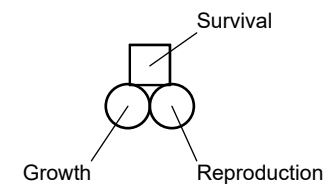
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

- ED20
- ED < 20% and > BTV

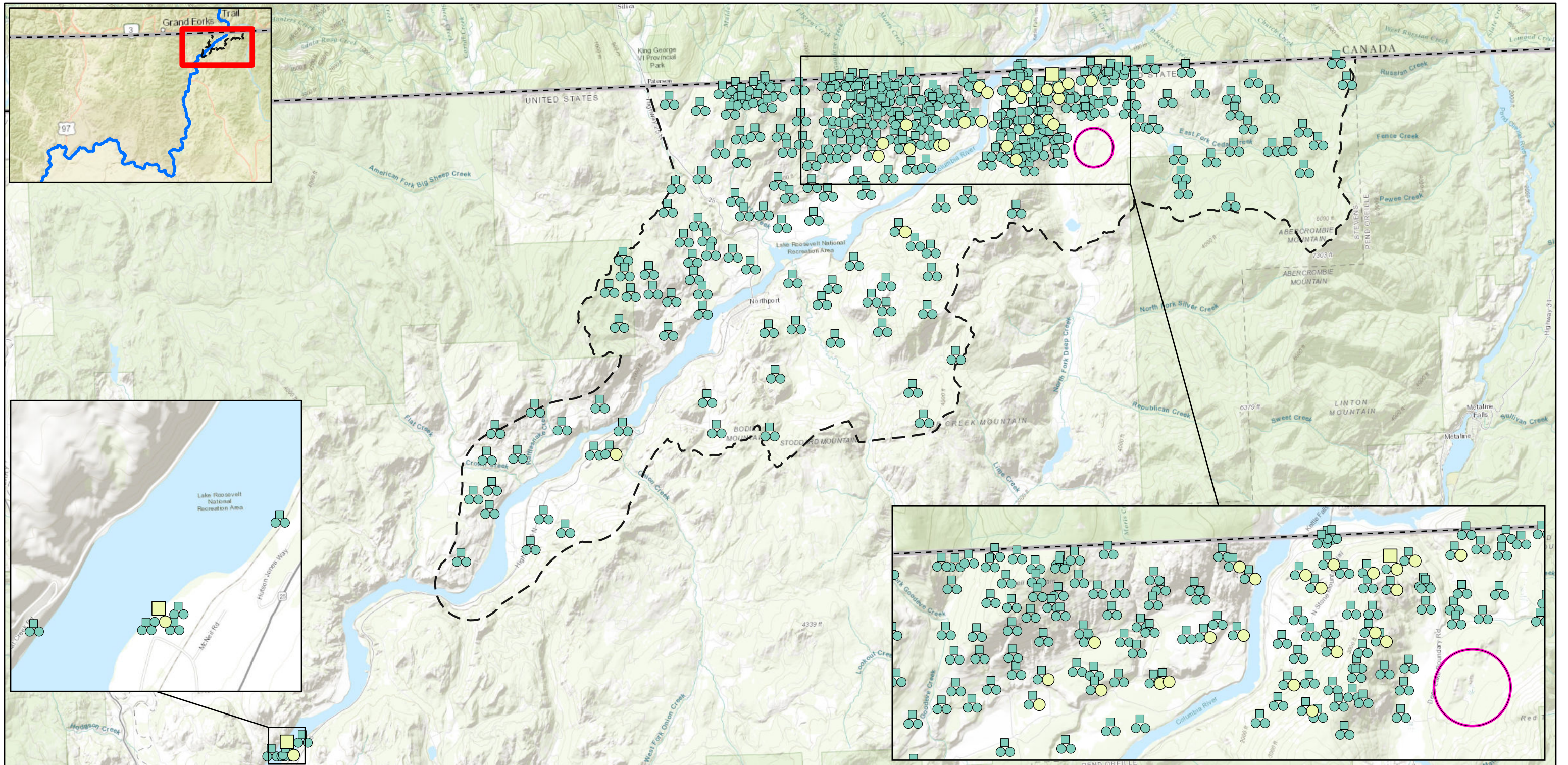
- Receptor Home Range (18,000 Acres)

- TRV
- HQ < 1 and > BTV
 - HQ ≥ 1 and HQ < 5 and > BTV

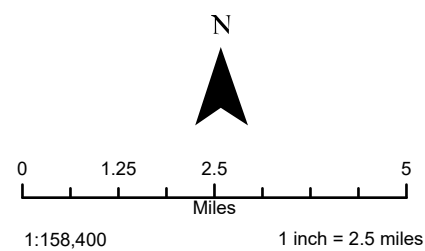


Note:
ED = effective dose
TRV = toxicity reference value

MAP 8-8. Lead Dietary Exposure HQs and EDs for Tree Swallow
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

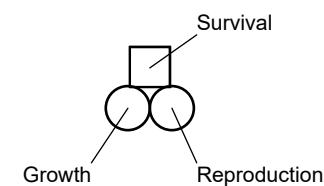


LEGEND

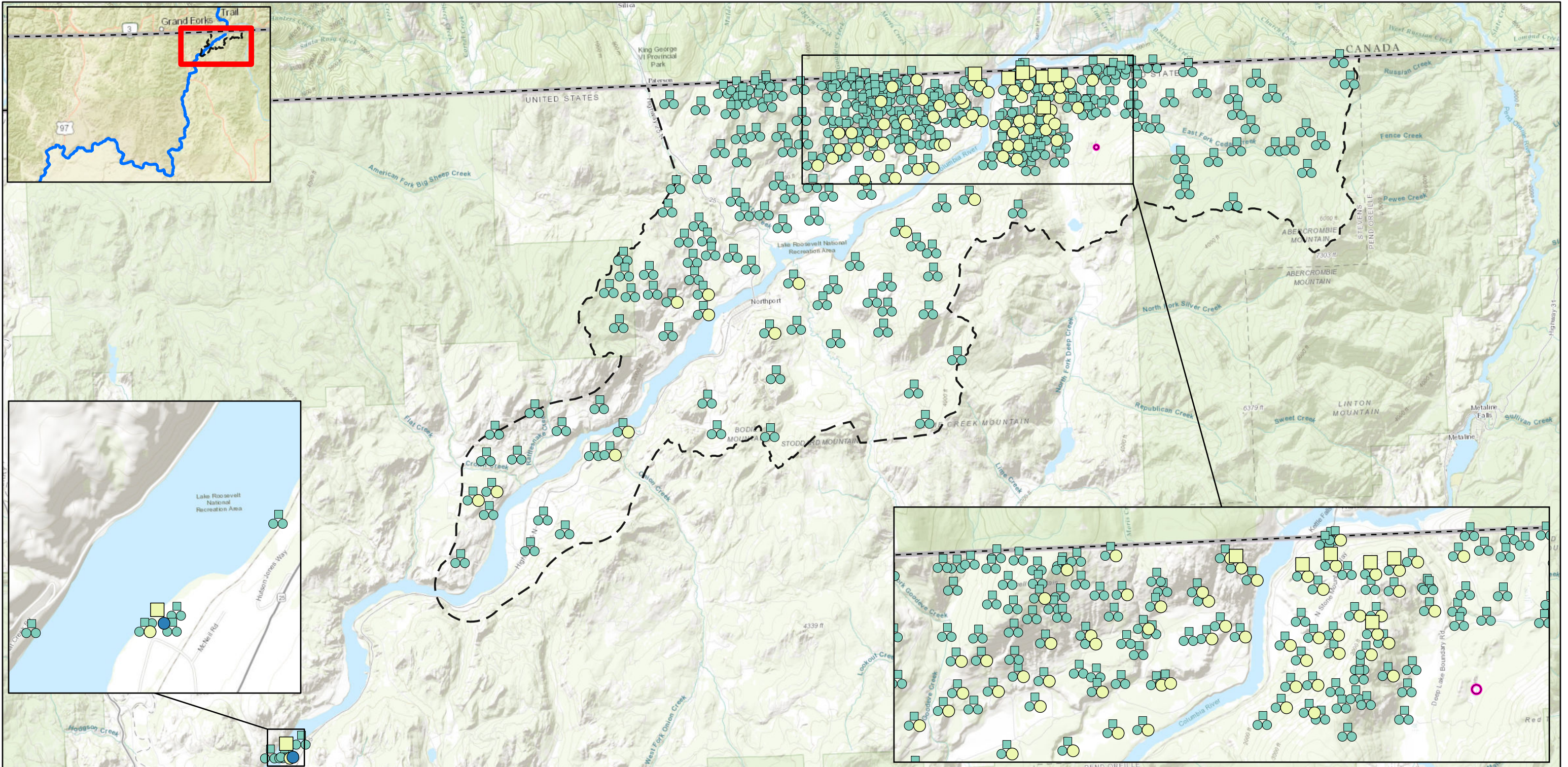
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV

- Receptor Home Range (500 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

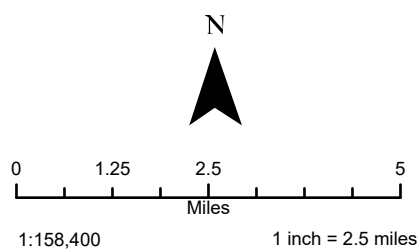
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-9. Lead Dietary Exposure HQs and EDs for American Kestrel
Final Upland BERA
Upper Columbia River, Washington



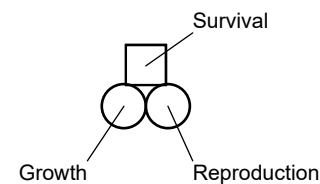
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



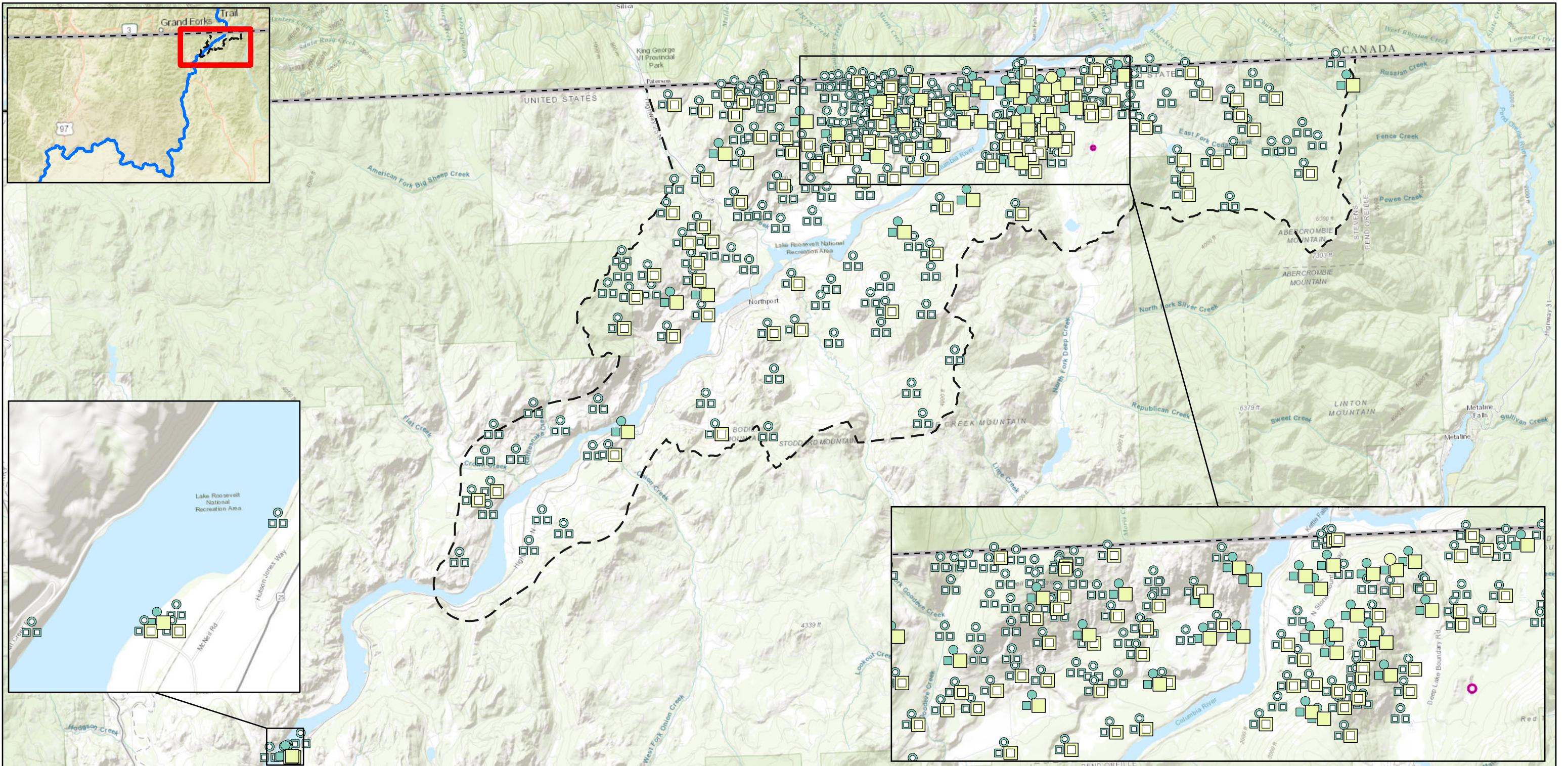
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- Receptor Home Range (7 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ > 5 and > BTV

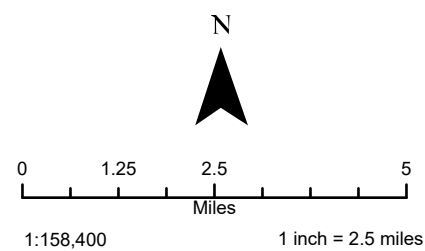
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-10. Lead Dietary Exposure HQs and EDs for Black-capped Chickadee
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

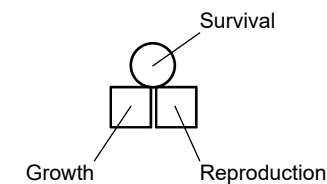


LEGEND

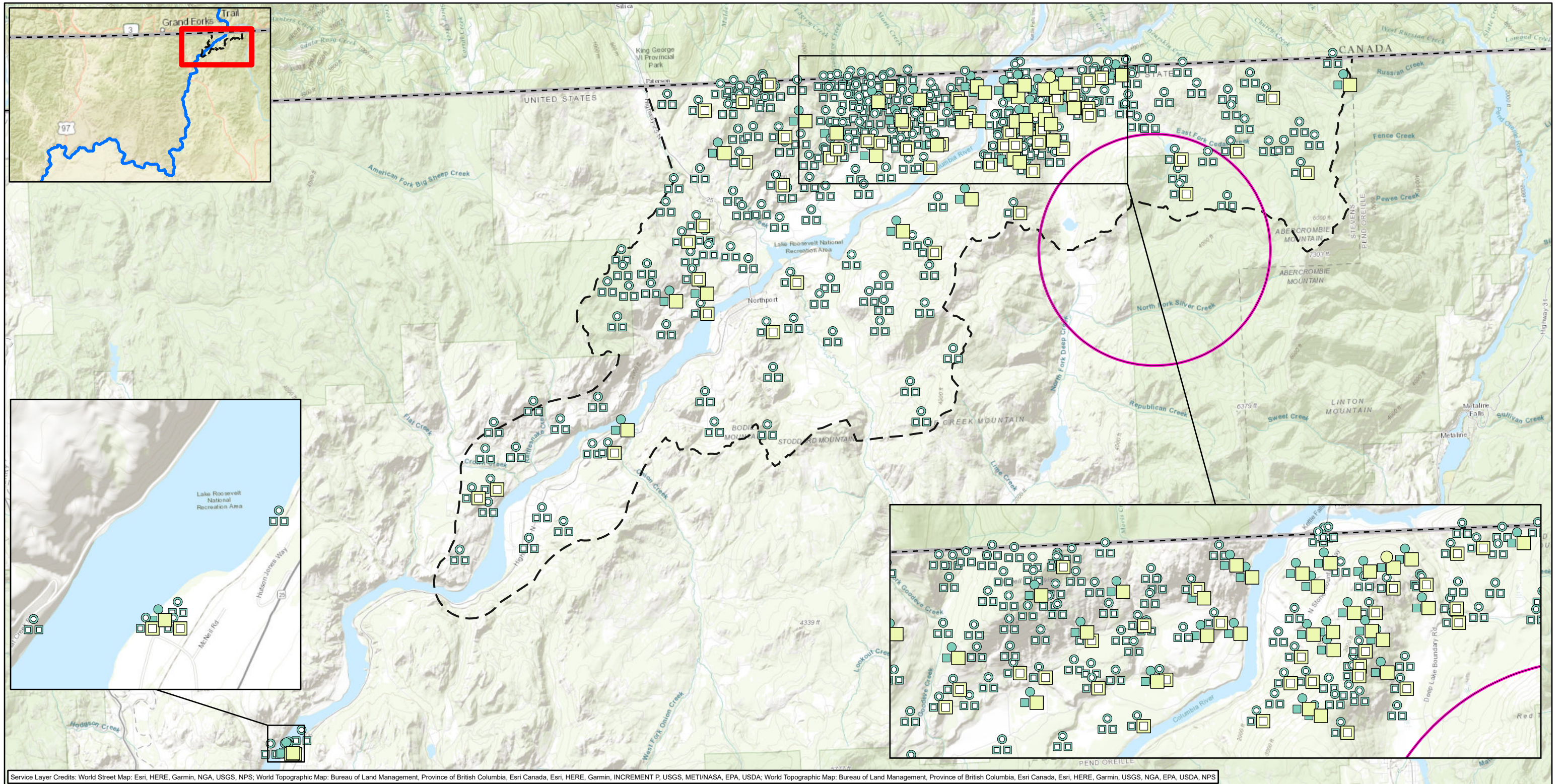
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- ED ≥ 20% and ED < 50% and > BTV

- Receptor Home Range (5 Acres)
- TRV**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

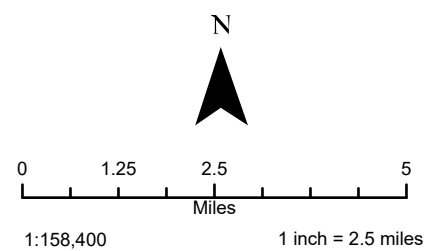
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-11. Mercury Dietary Exposure HQs and EDs for American Robin
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

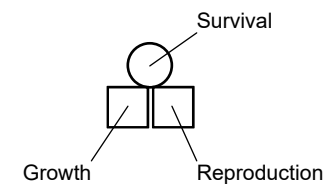


LEGEND

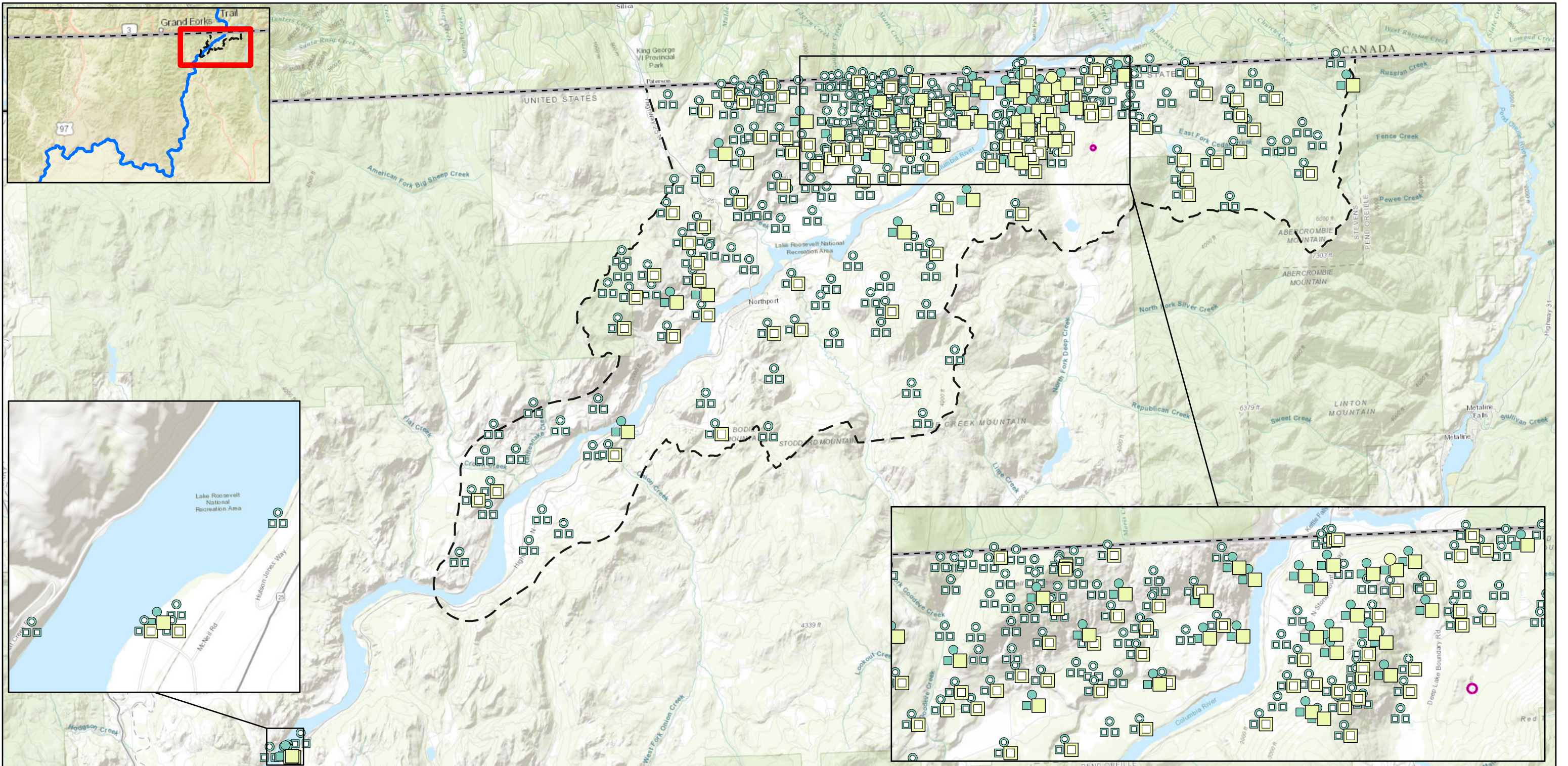
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- ED ≥ 20% and ED < 50% and > BTV

Note:
ED = effective dose
TRV = toxicity reference value

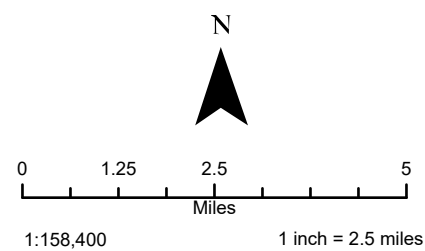
- Receptor Home Range (18,000 Acres)
- TRV**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV



MAP 8-12. Mercury Dietary Exposure HQs and EDs for Tree Swallow
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

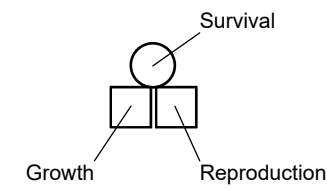


LEGEND

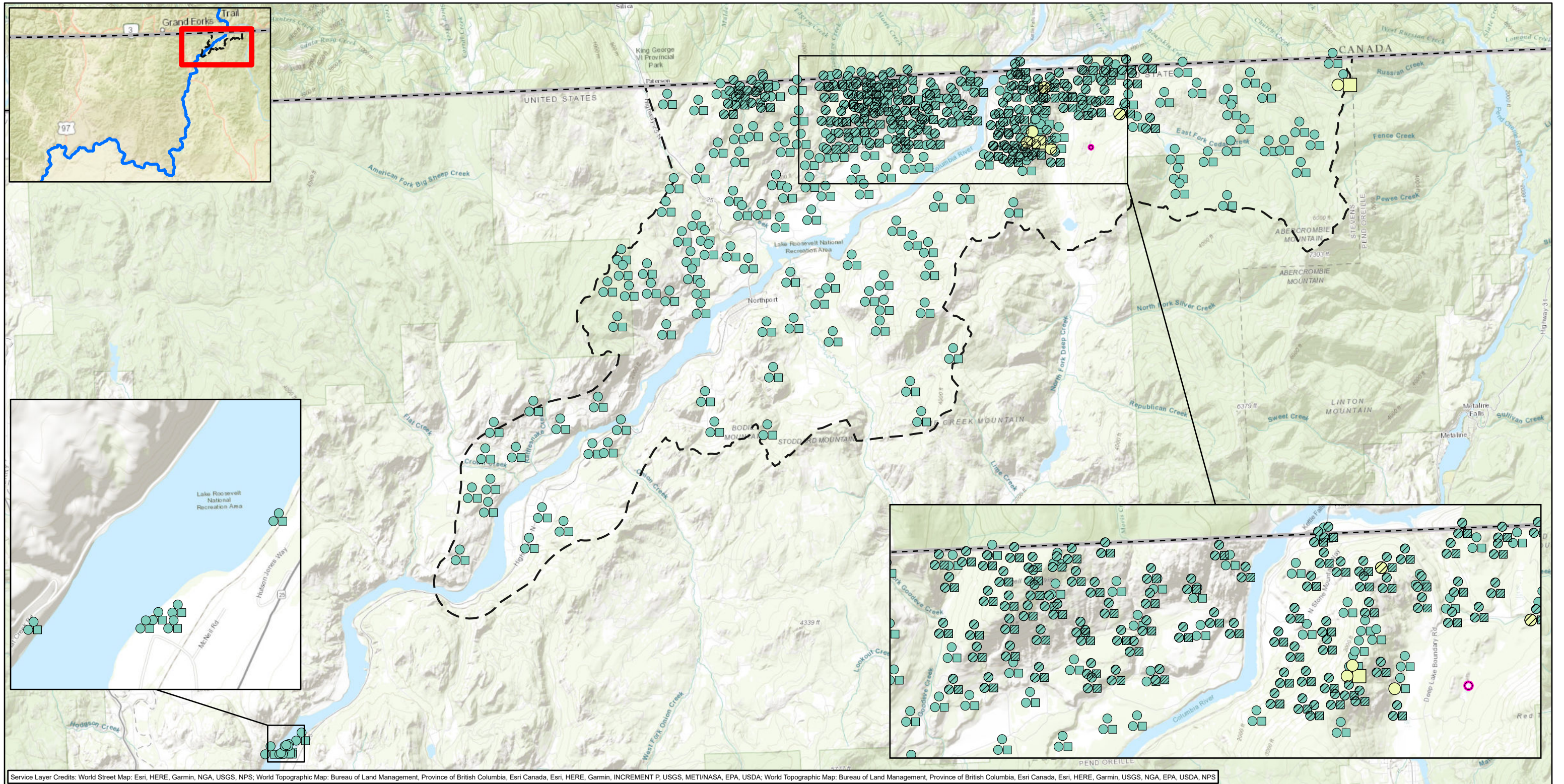
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- ED ≥ 20% and ED < 50% and > BTV

- Receptor Home Range (7 Acres)
- TRV**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

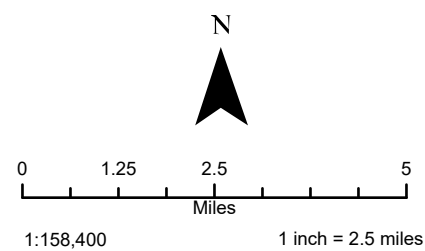
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-13. Mercury Dietary Exposure HQs and EDs for Black-capped Chickadee
Final Upland BERA
Upper Columbia River, Washington



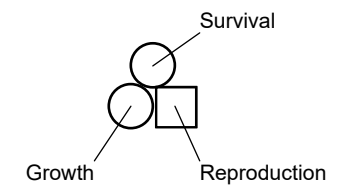
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



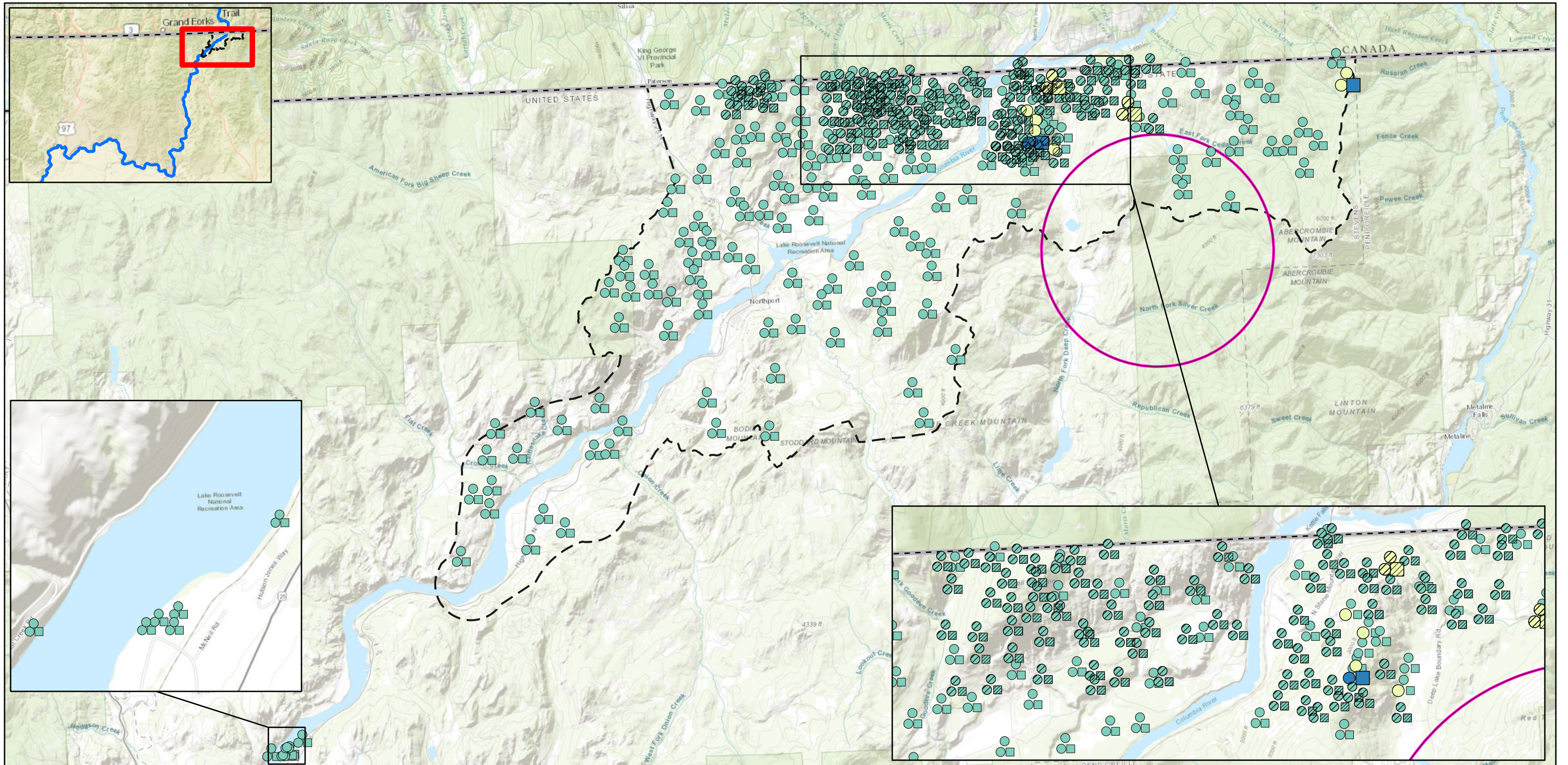
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- Hatched symbol indicates non-detect results.
- Receptor Home Range (5 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

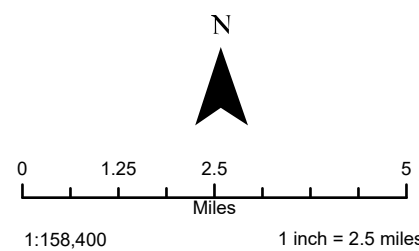
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-14. Selenium Dietary Exposure HQs and EDs for American Robin
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

— Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

ED20

- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

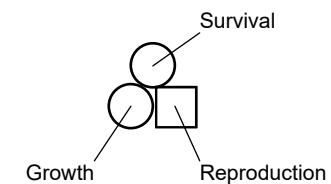
Hatched symbol indicates non-detect results.

Note:
ED = effective dose
TRV = toxicity reference value

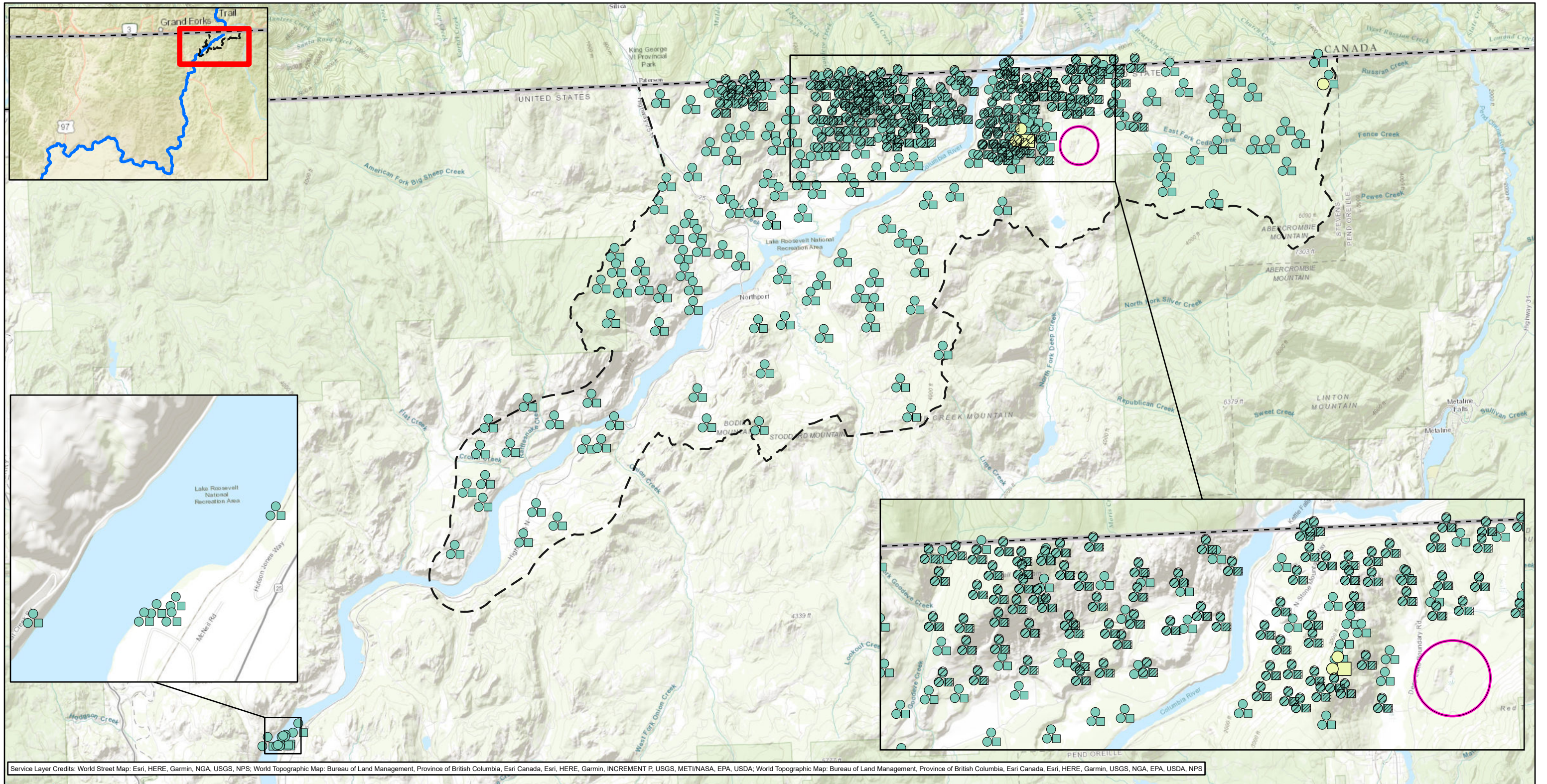
Receptor Home Range (18,000 Acres)

TRV

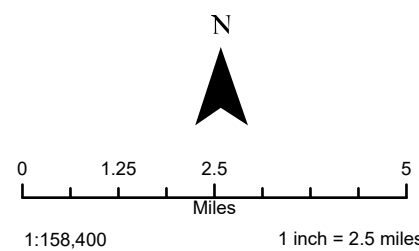
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ > 5 and > BTV



MAP 8-15. Selenium Dietary Exposure HQs and EDs for Tree Swallow
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

ED20

- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV

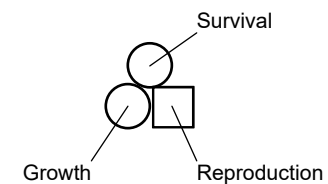
Hatched symbol indicates non-detect results.

Note:
ED = effective dose
TRV = toxicity reference value

- Receptor Home Range (500 Acres)

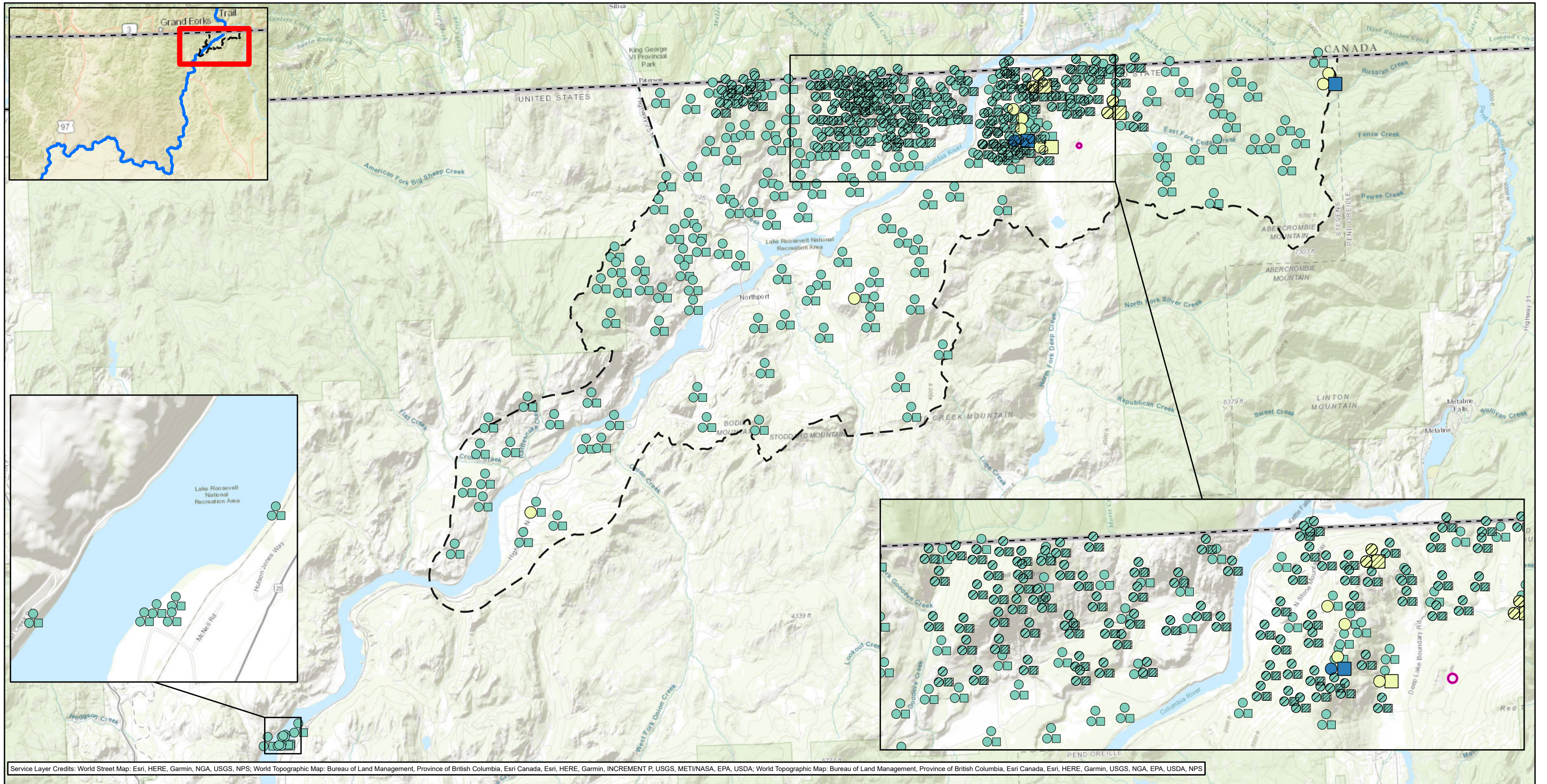
TRV

- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

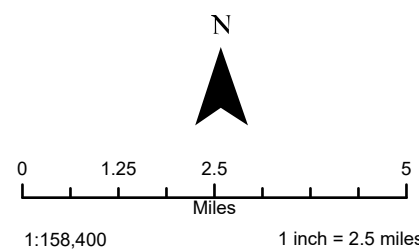


MAP 8-16. Selenium Dietary Exposure HQs and EDs for American Kestrel

Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

— Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

ED20

- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

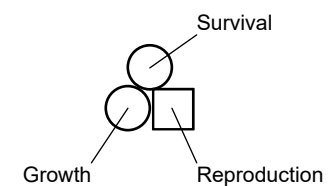
Hatched symbol indicates non-detect results.

Note:
ED = effective dose
TRV = toxicity reference value

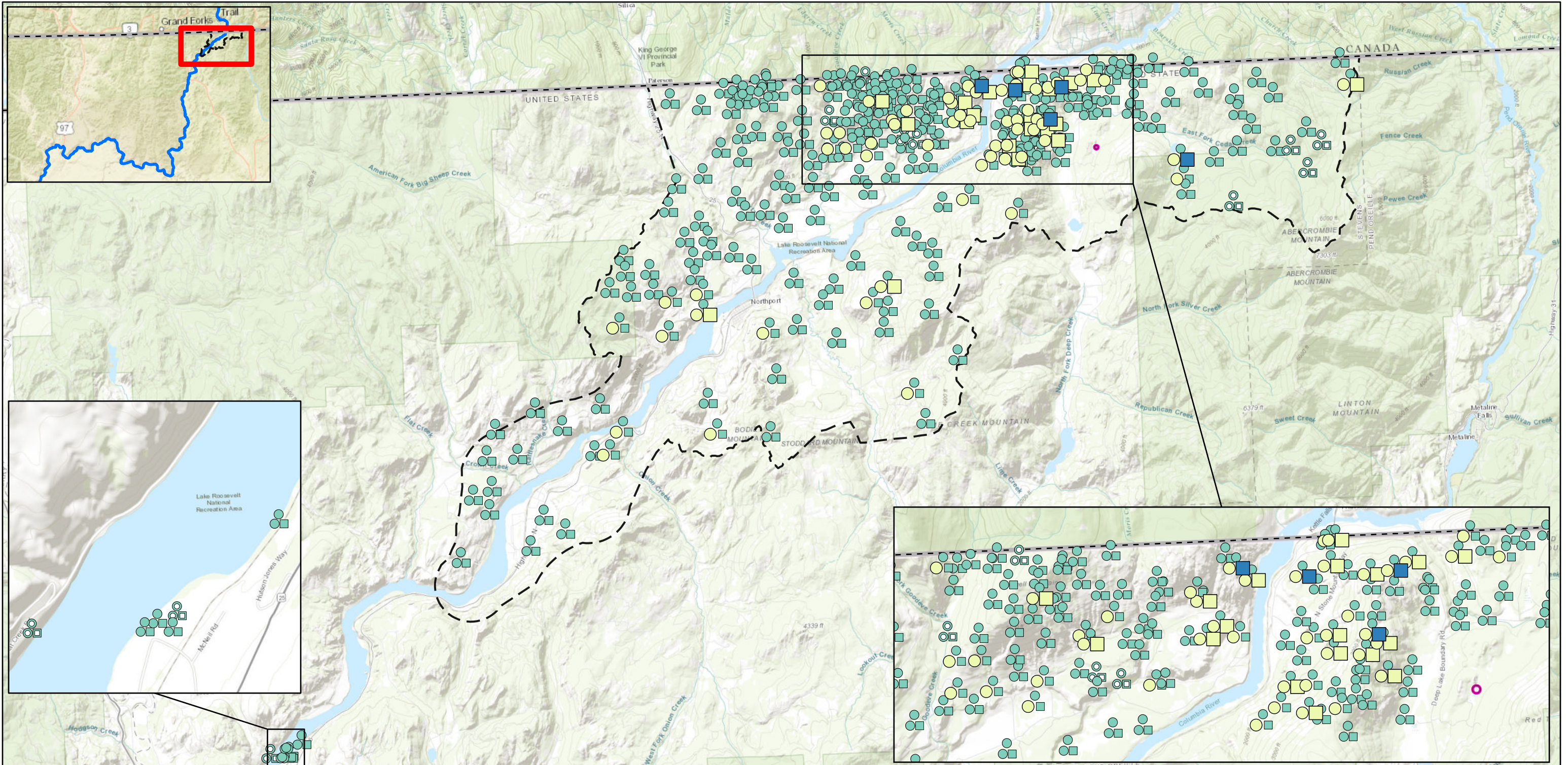
Receptor Home Range (7 Acres)

TRV

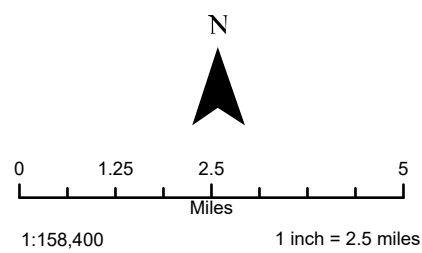
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ > 5 and > BTV



MAP 8-17. Selenium Dietary Exposure HQs and EDs for Black-capped Chickadee
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

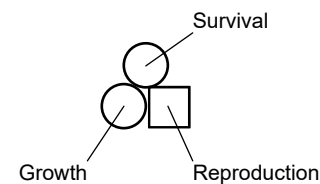


LEGEND

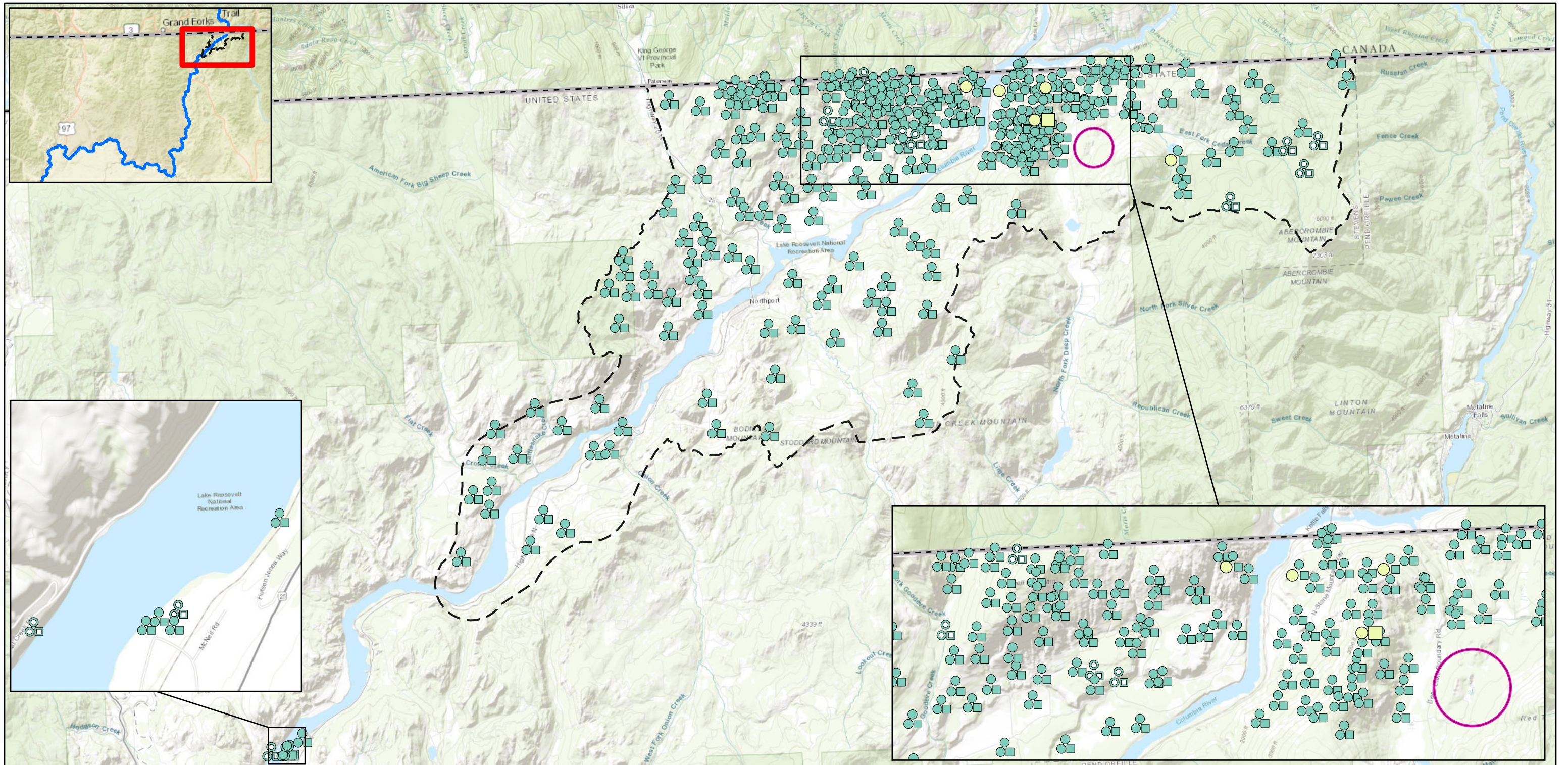
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and ≤ BTV
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

Note:
ED = effective dose
TRV = toxicity reference value

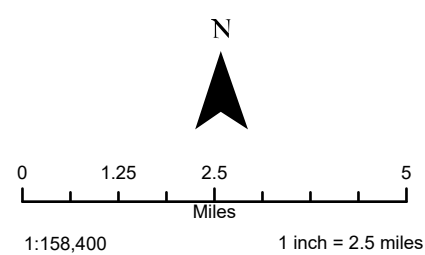
- Receptor Home Range (5 Acres)
- TRV**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV



MAP 8-18. Zinc Dietary Exposure HQs and EDs for American Robin
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

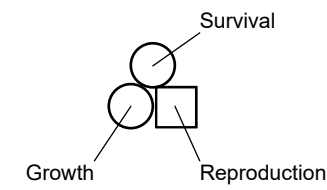


LEGEND

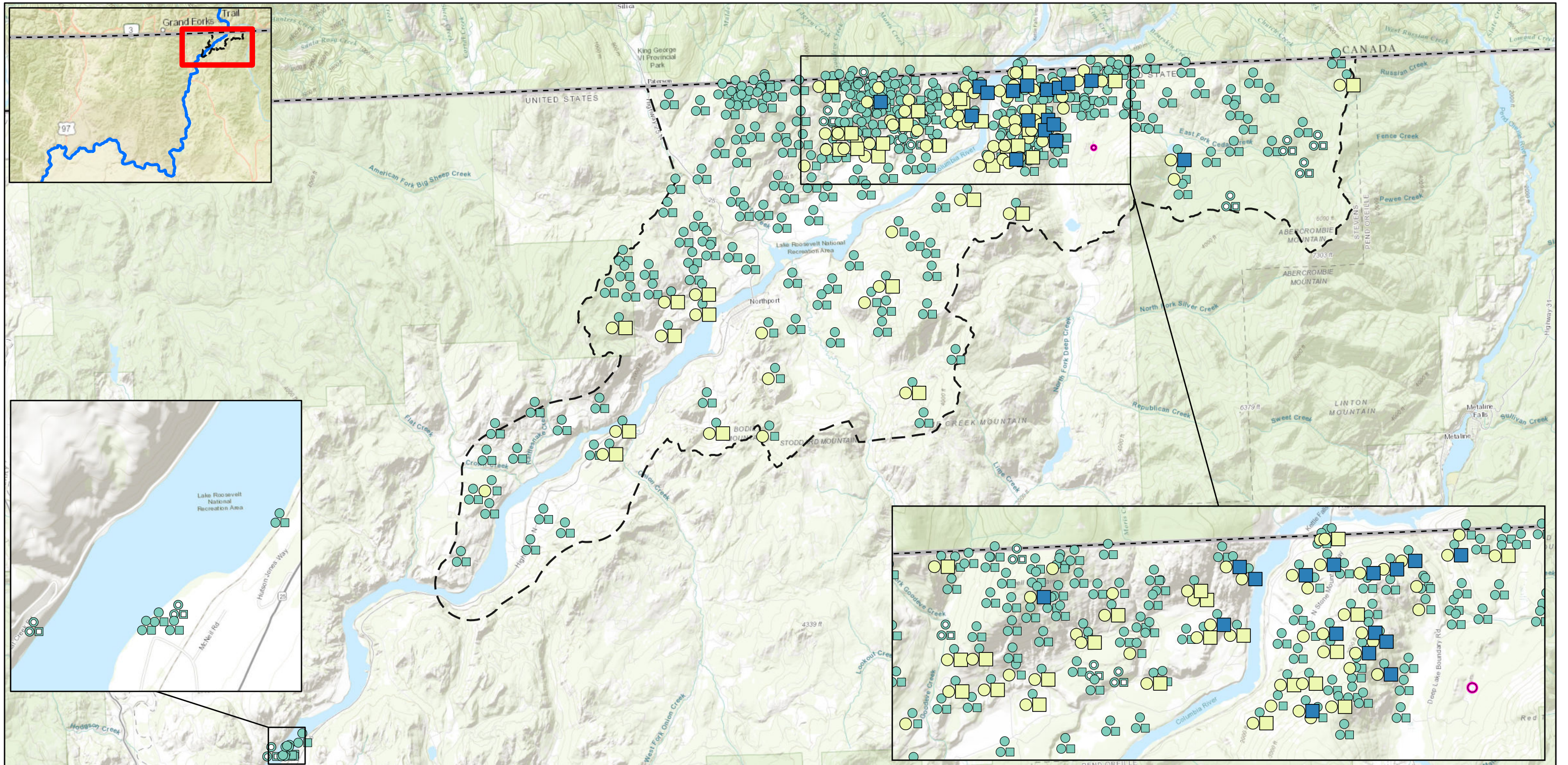
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and ≤ BTV
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV

- Receptor Home Range (500 Acres)
- TRV**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

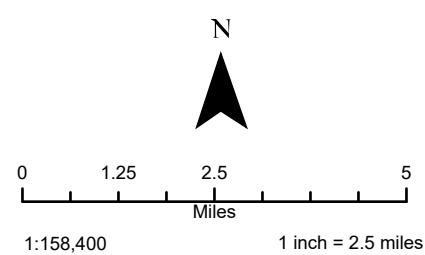
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-19. Zinc Dietary Exposure HQs and EDs for American Kestrel
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

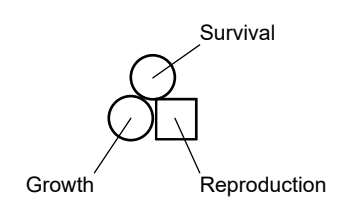


LEGEND

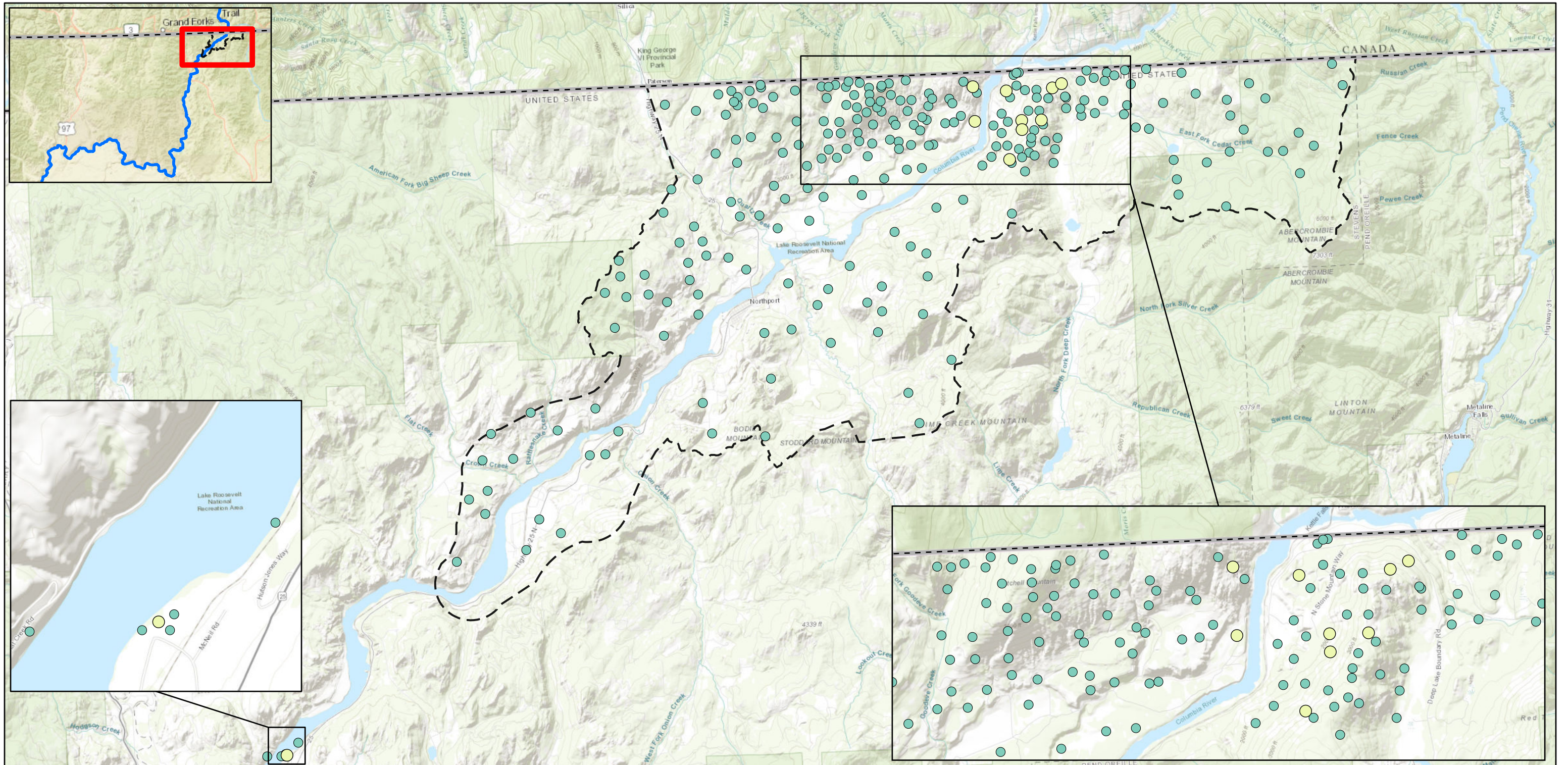
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and ≤ BTV
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

- Receptor Home Range (7 Acres)
- TRV**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

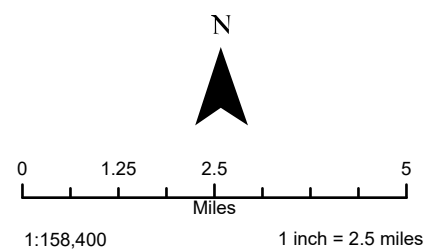
Note:
ED = effective dose
TRV = toxicity reference value



MAP 8-20. Zinc Dietary Exposure HQs and EDs for Black-capped Chickadee
Final Upland BERA
Upper Columbia River, Washington



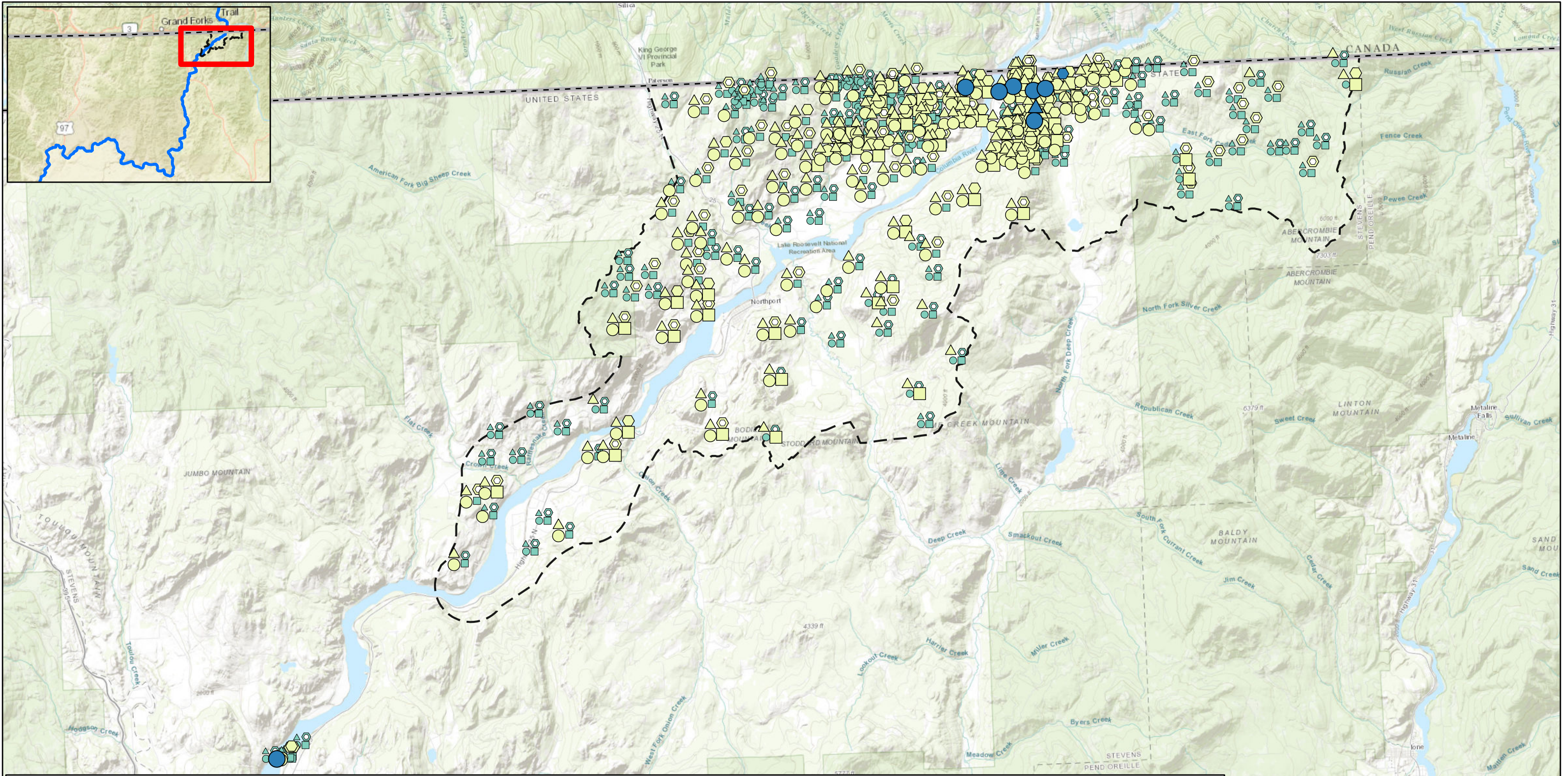
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



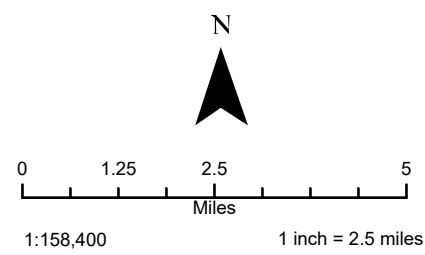
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- HQ < 1
- HQ ≥ 1

MAP 8-21. Refined Mercury Dietary Exposure HQs for American Robin Reproduction
 Final Upland BERA
 Upper Columbia River, Washington

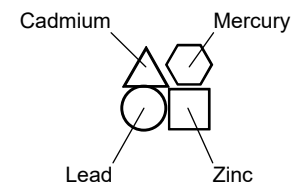


Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

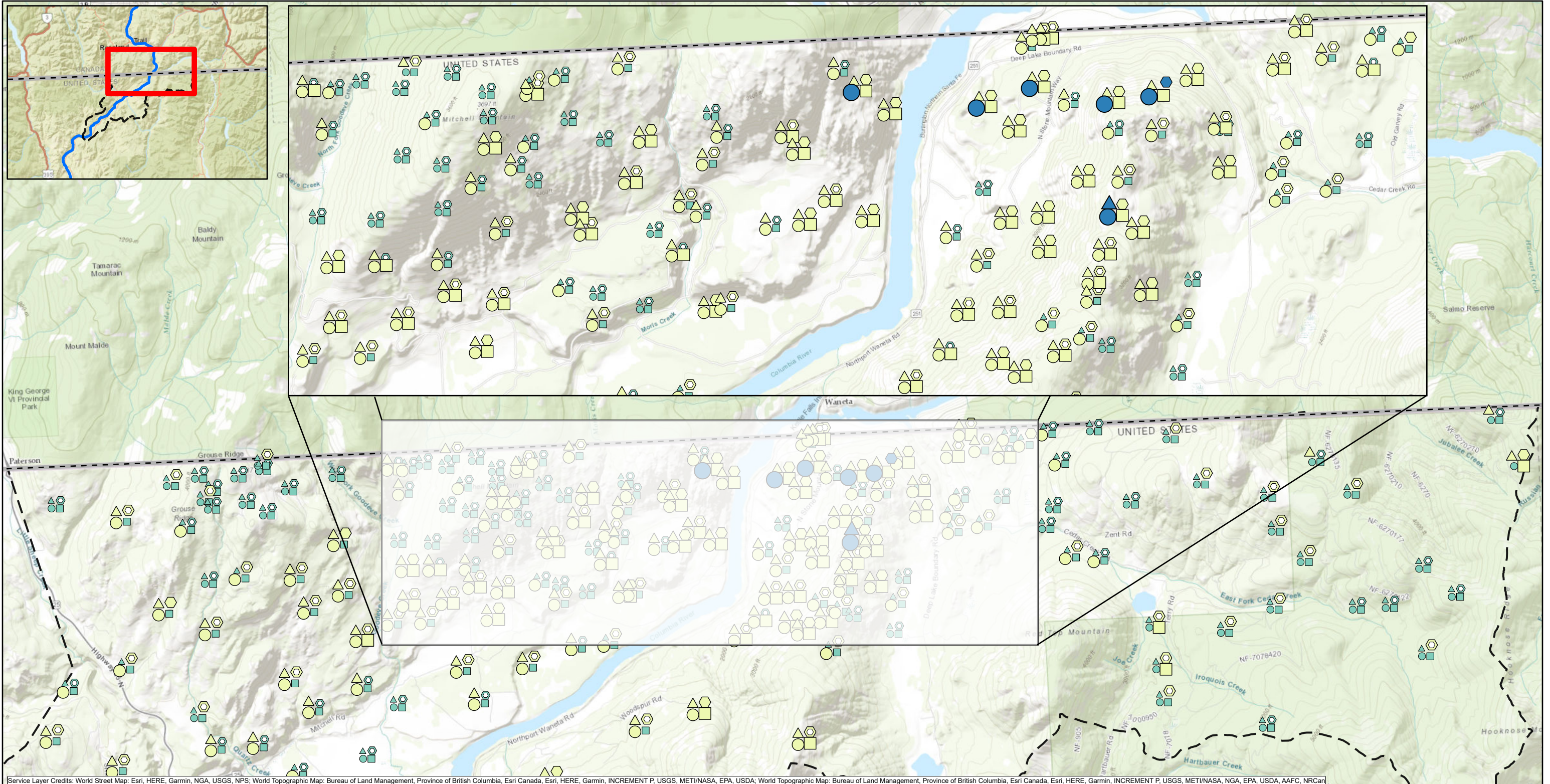


LEGEND

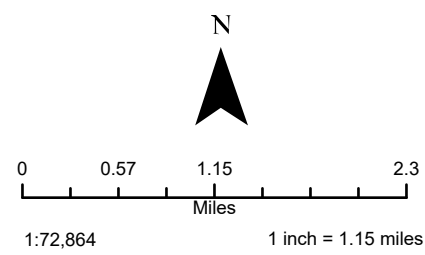
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- HQ < 1
- HQ ≥ 1 and HQ < 5
- HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV



MAP 8-22a. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Bird Receptor
Final Upland BERA
Upper Columbia River, Washington

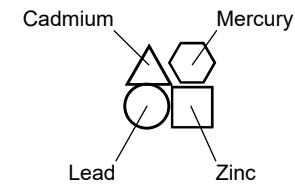


Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, NGA, EPA, USDA, AAFC, NRCan

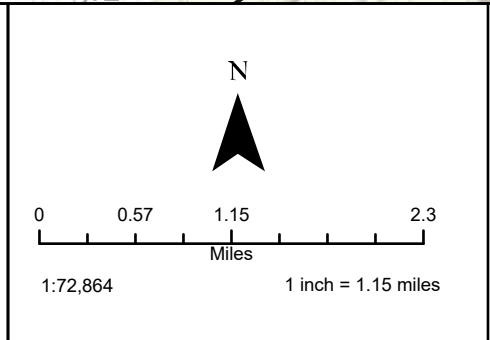
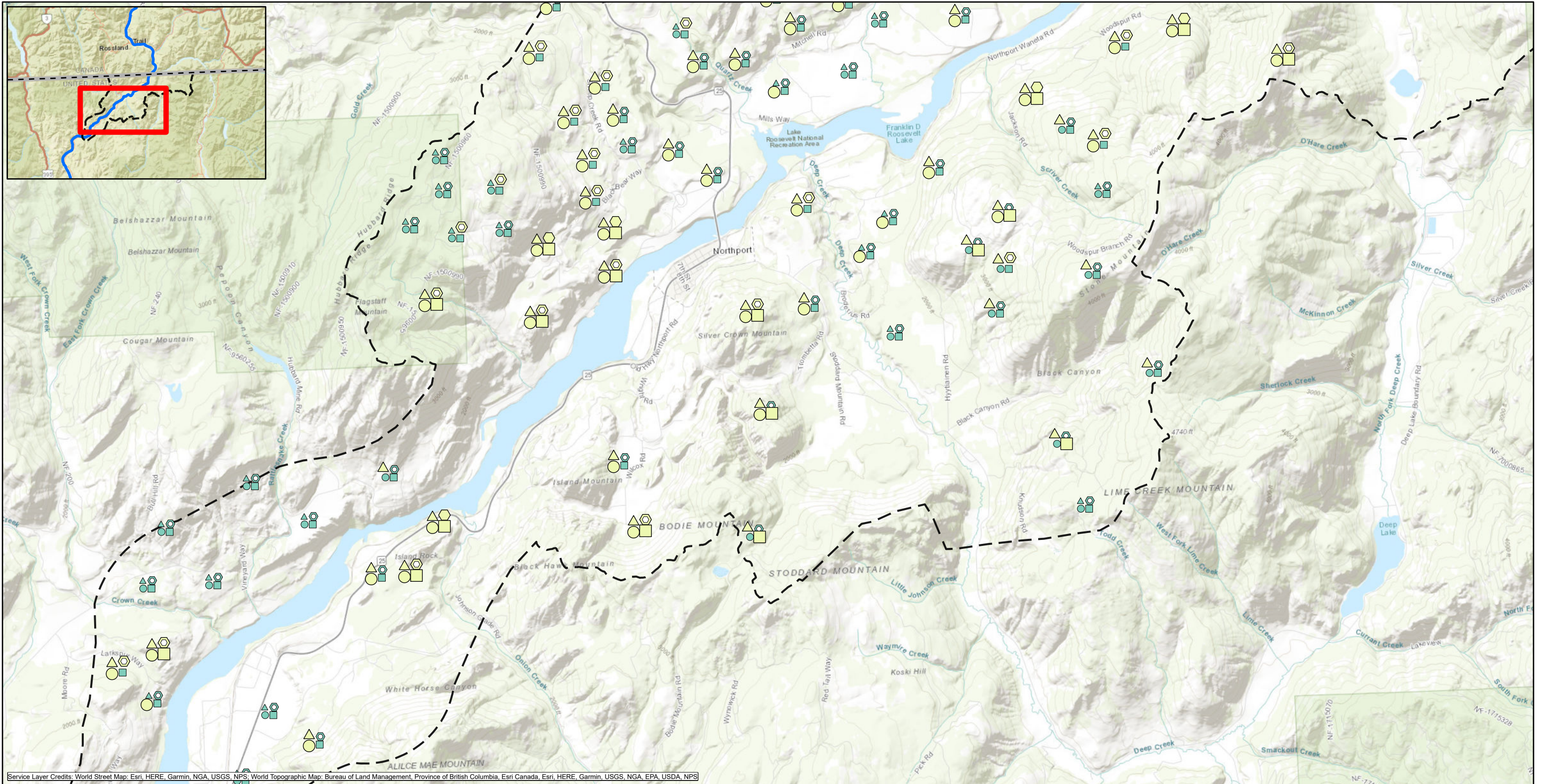


LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- HQ < 1
- HQ ≥ 1 and HQ < 5
- HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV



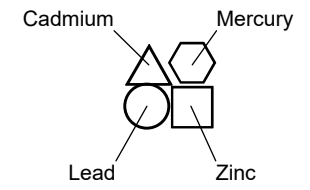
MAP 8-22b. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Bird Receptor
Final Upland BERA
Upper Columbia River, Washington



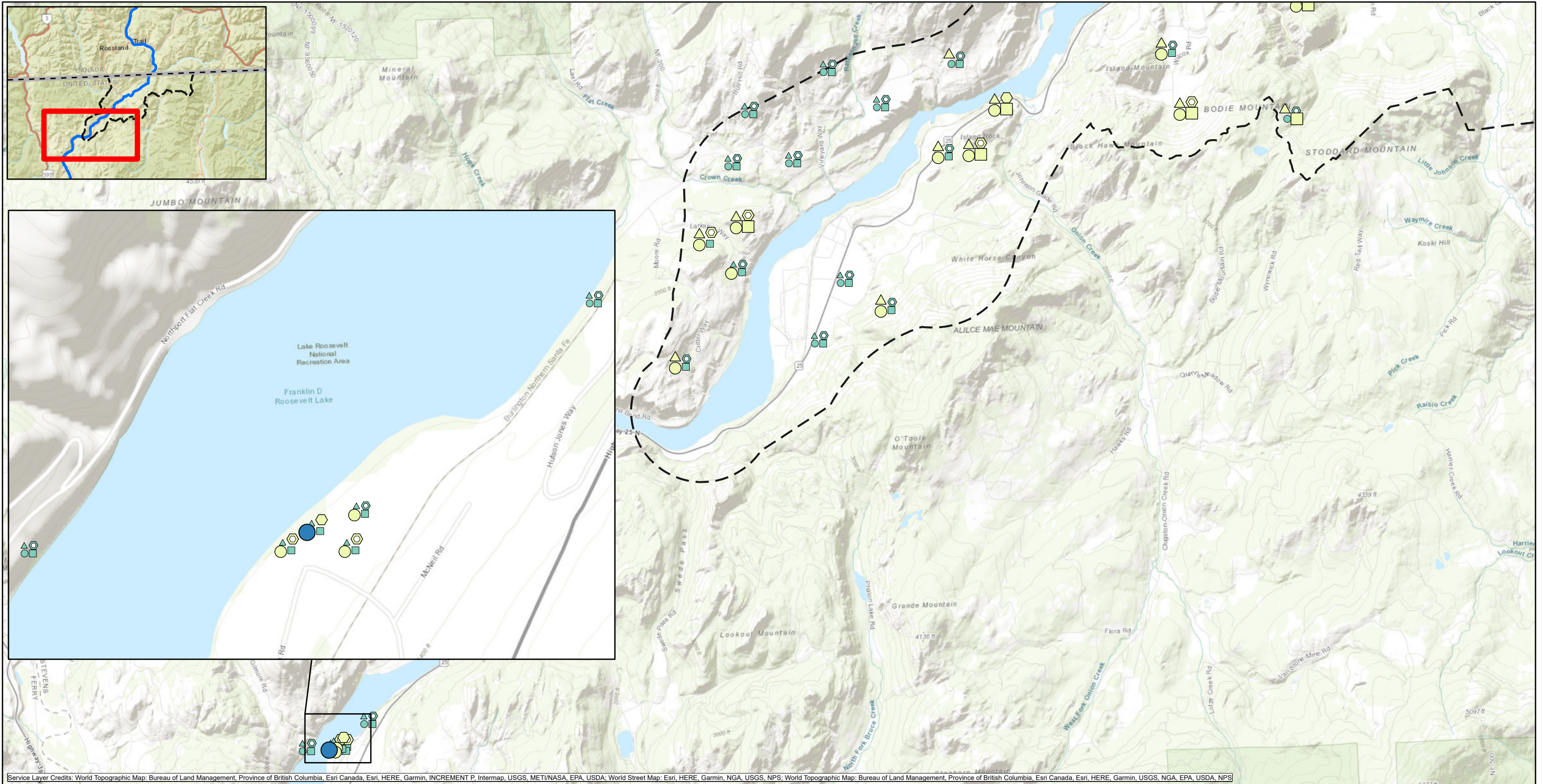
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- HQ < 1
- HQ ≥ 1 and HQ < 5
- HQ ≥ 5

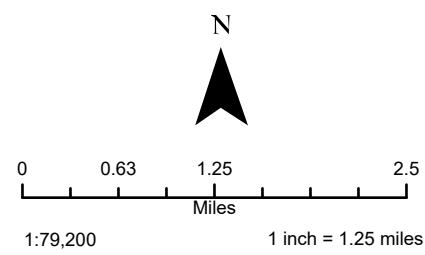
Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV



MAP 8-22c. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Bird Receptor
Final Upland BERA
Upper Columbia River, Washington

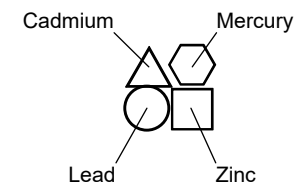


Service Layer Credits: World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA; World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

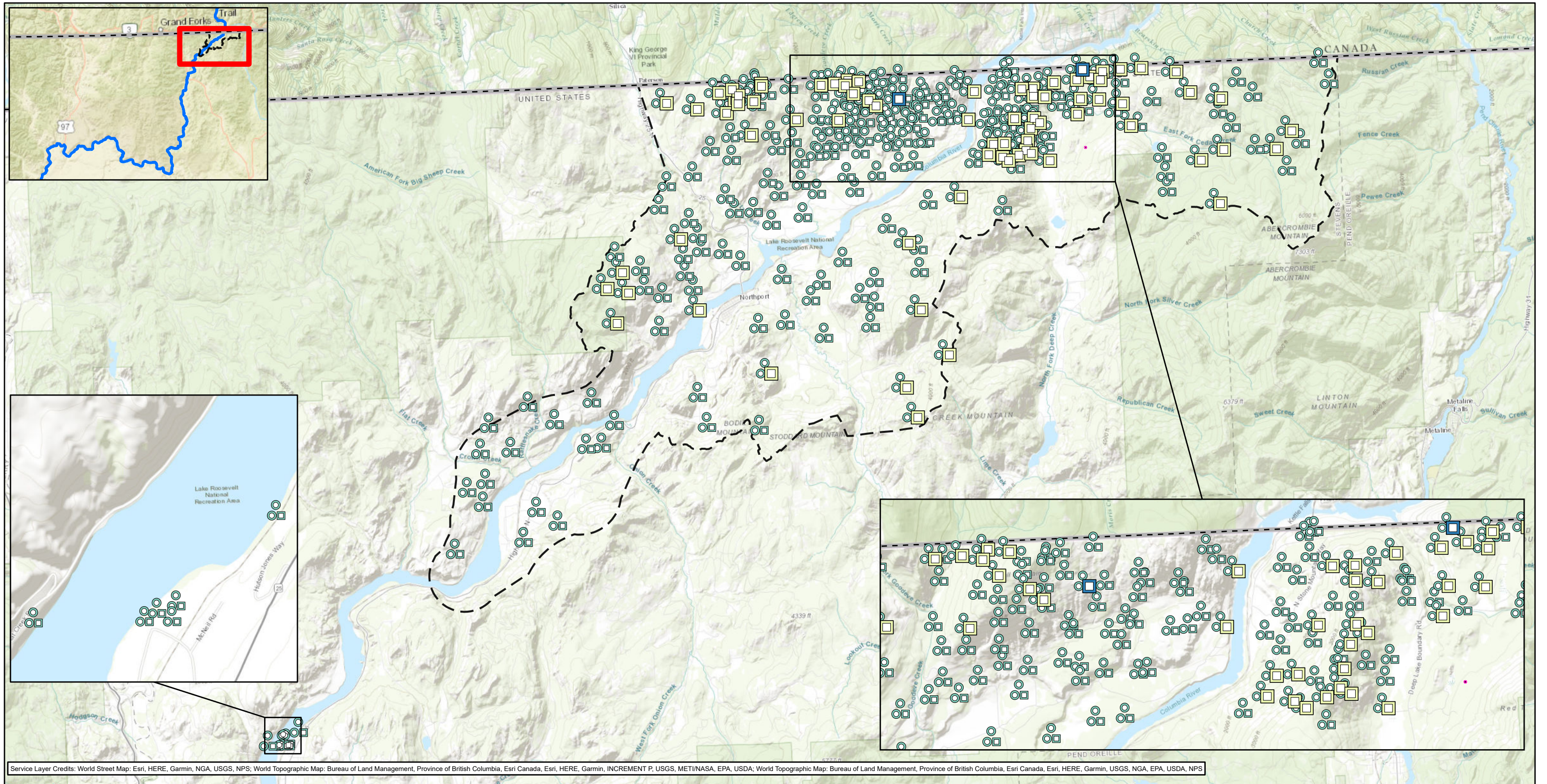


LEGEND

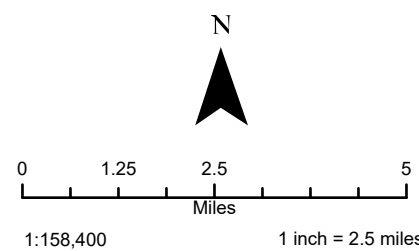
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- HQ < 1
- HQ ≥ 1 and HQ < 5
- HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV



MAP 8-22d. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Bird Receptor
Final Upland BERA
Upper Columbia River, Washington



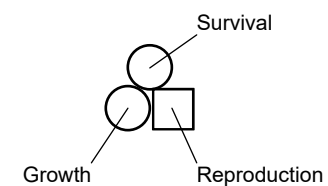
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



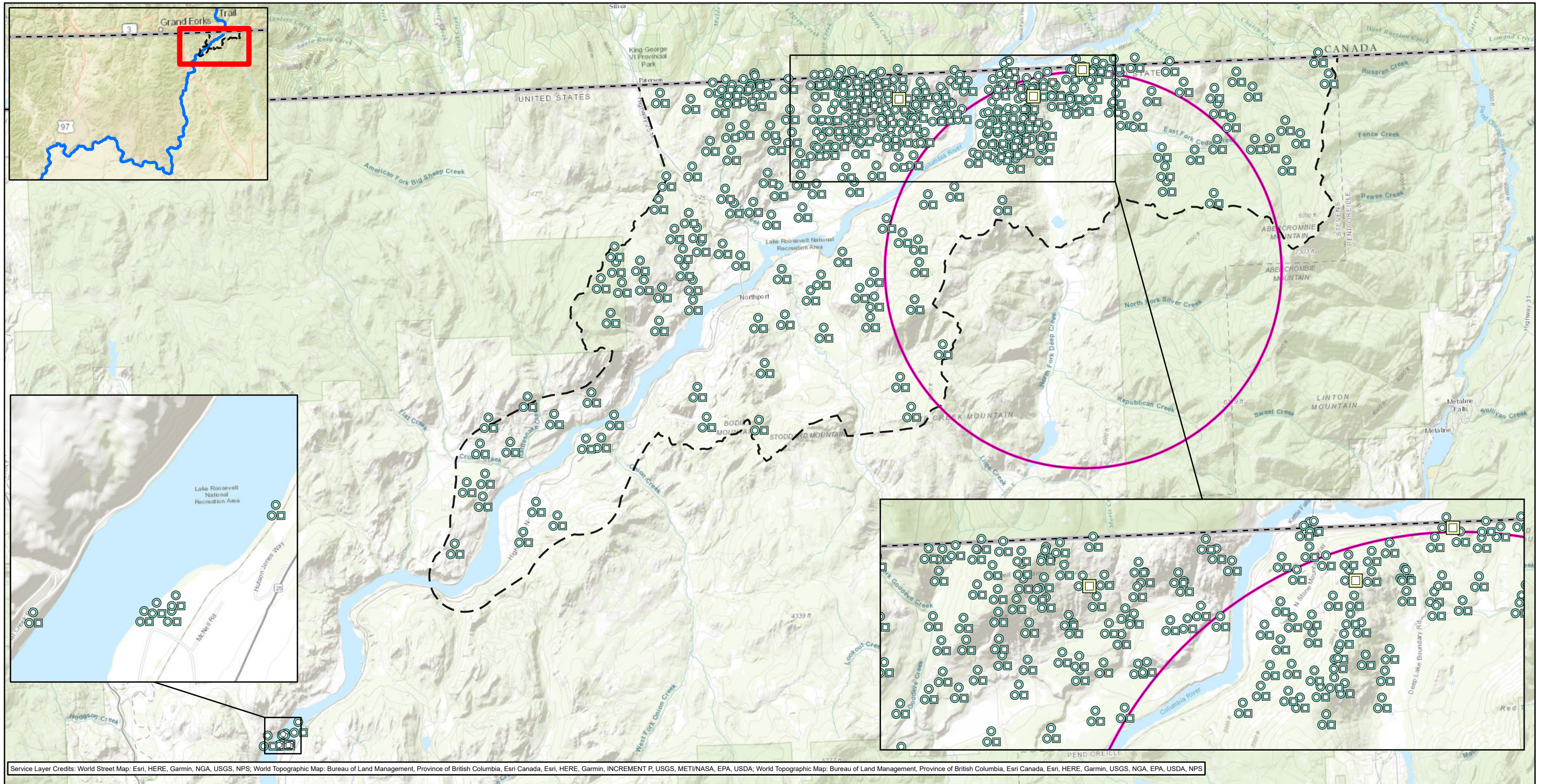
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (0.05 Acre) TRV
- ED20 ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- ED ≥ 50% and ≤ BTV
- HQ < 1 and ≤ BTV

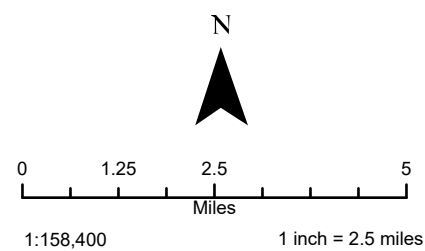
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-1. Aluminum Dietary Exposure HQs and EDs for Deer Mouse
Final Upland BERA
Upper Columbia River, Washington



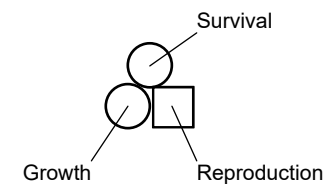
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



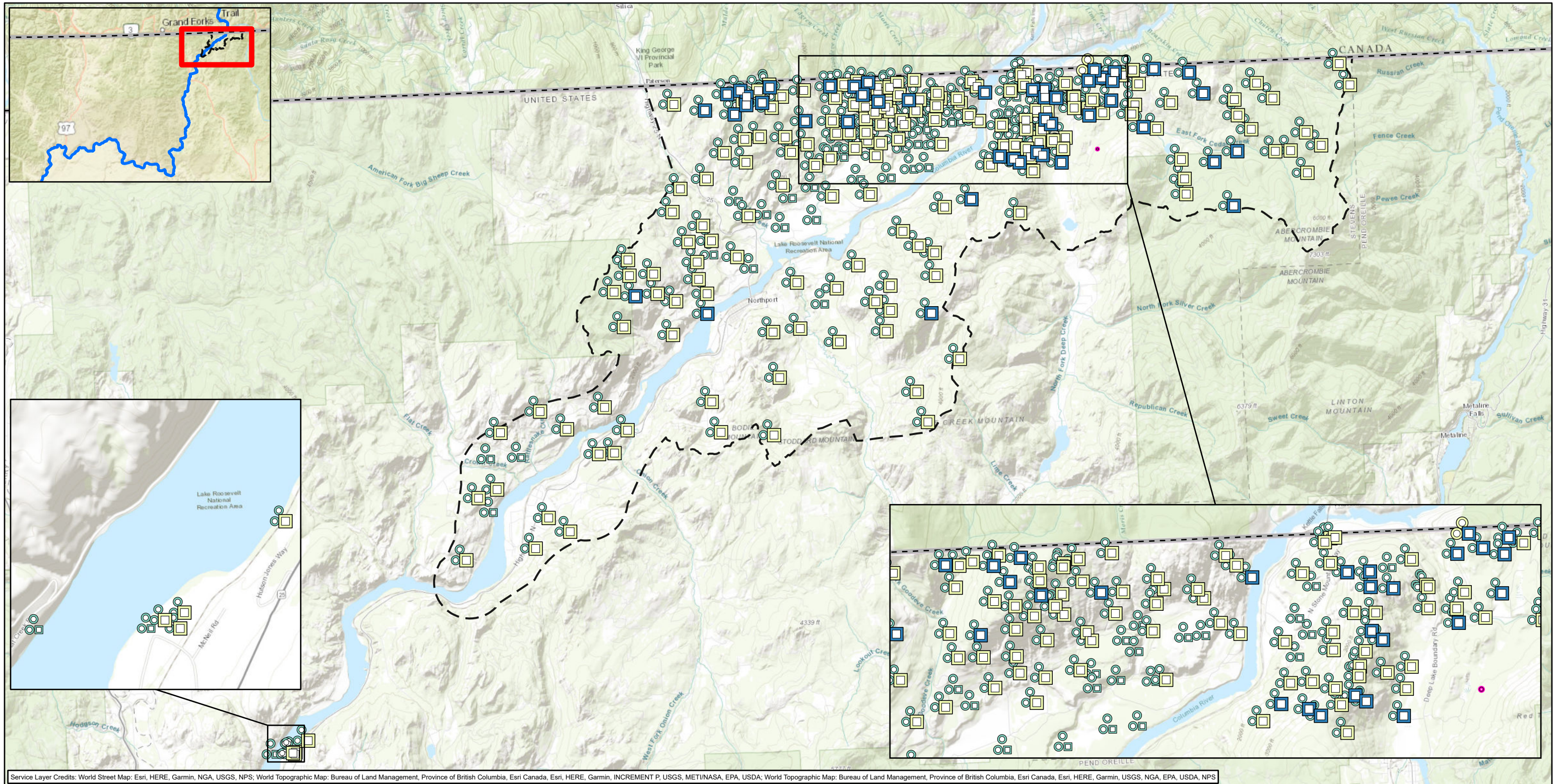
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (54,000 Acres)
- ED20
- TRV
- ED < 20% and ≤ BTV
- HQ < 1 and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV

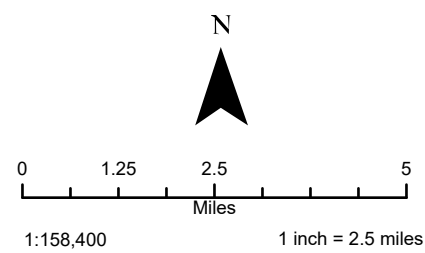
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-2. Aluminum Dietary Exposure HQs and EDs for Gray Wolf
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

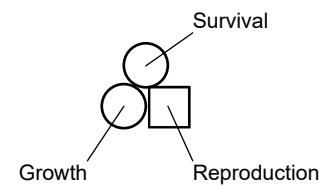


LEGEND

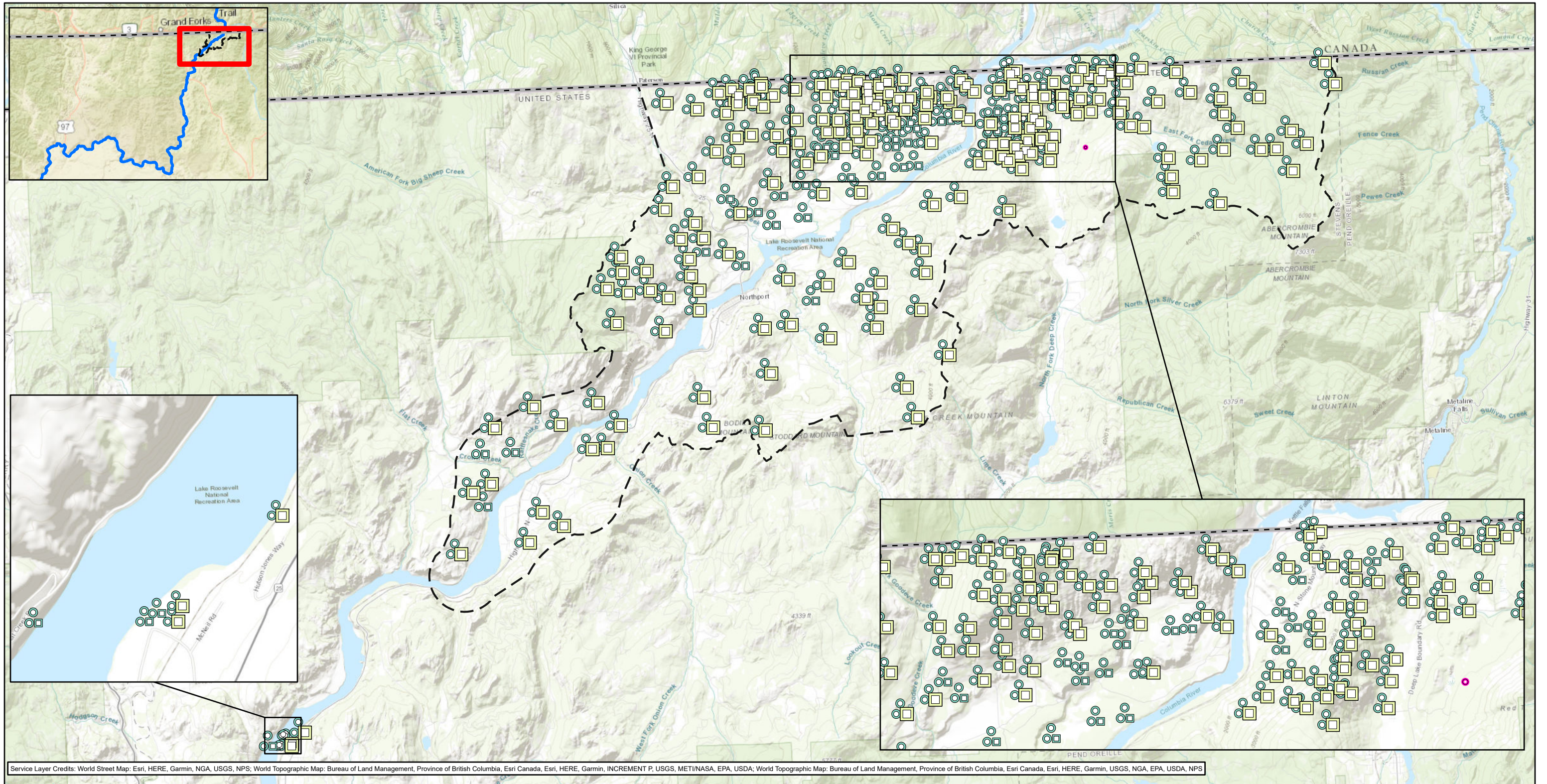
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- ED ≥ 50% and ≤ BTV

Note:
ED = effective dose
TRV = toxicity reference value

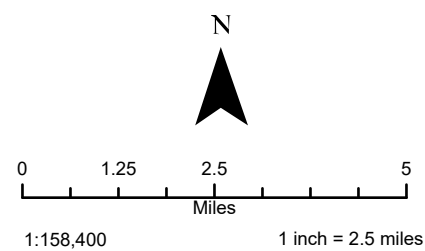
- Receptor Home Range (1.5 Acres)
- TRV**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV



MAP 9-3. Aluminum Dietary Exposure HQs and EDs for Masked Shrew
Final Upland BERA
Upper Columbia River, Washington



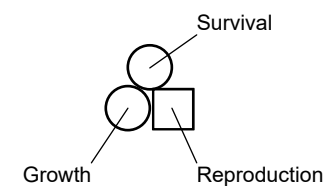
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



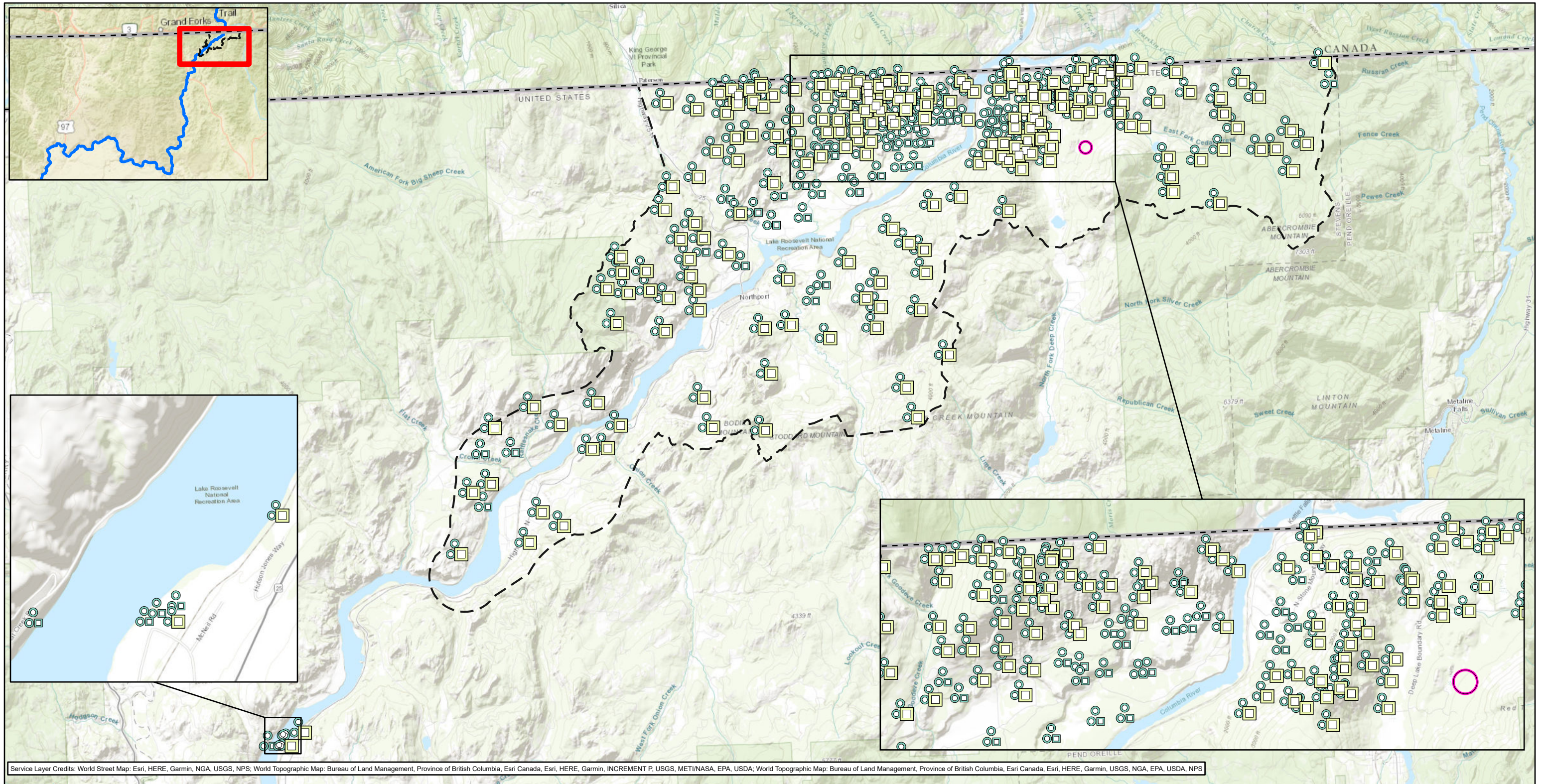
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (2.5 Acres)
- ED20**
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- TRV
- HQ < 1 and ≤ BTV

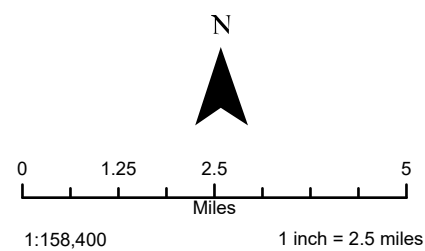
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-4. Aluminum Dietary Exposure HQs and EDs for Meadow Vole
Final Upland BERA
Upper Columbia River, Washington



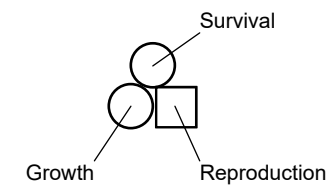
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



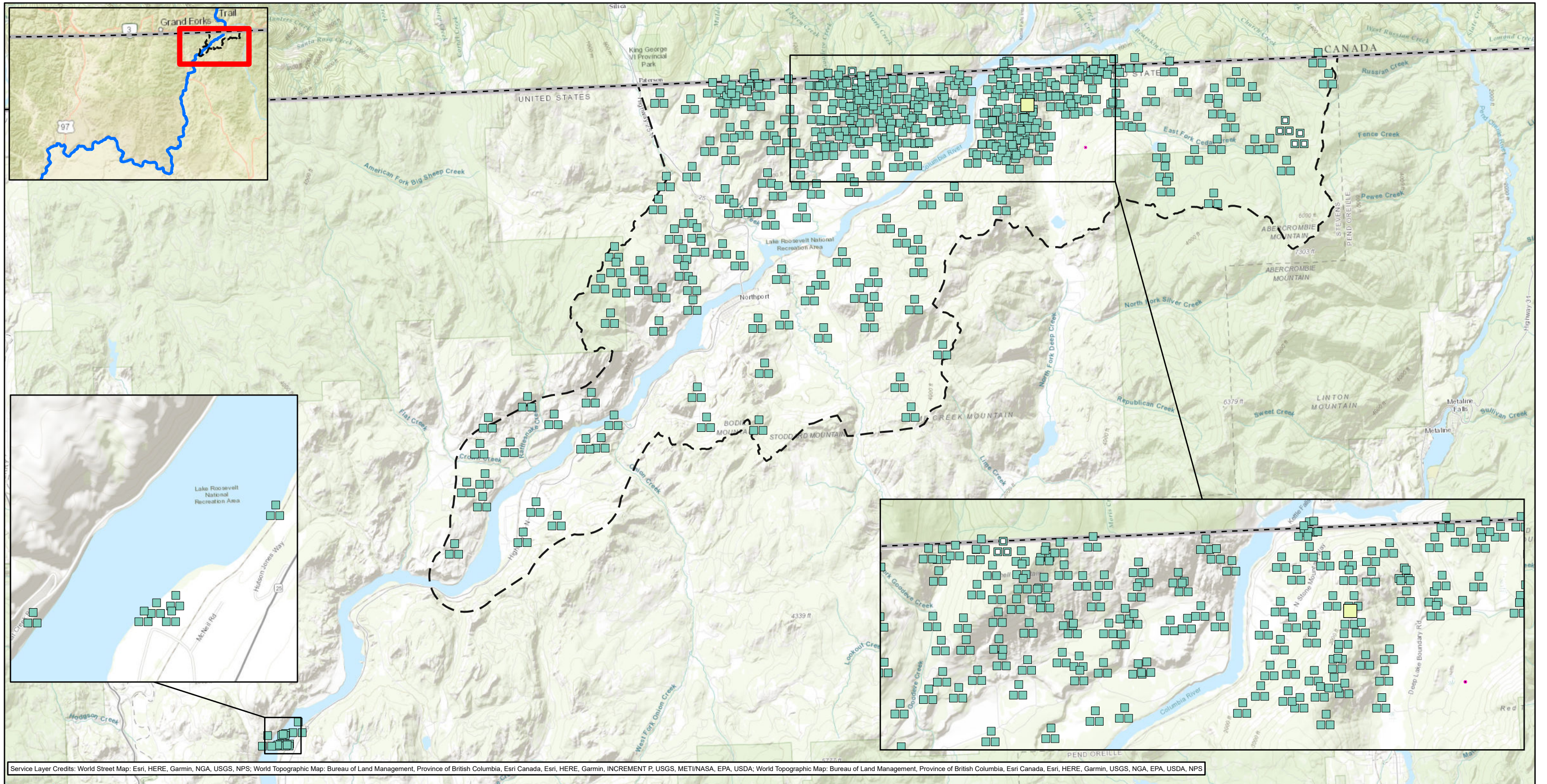
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20
- ED < 20% and ≤ BTV
- ED ≥ 20% and ED < 50% and ≤ BTV
- Receptor Home Range (49.5 Acres)
- TRV
- HQ < 1 and ≤ BTV

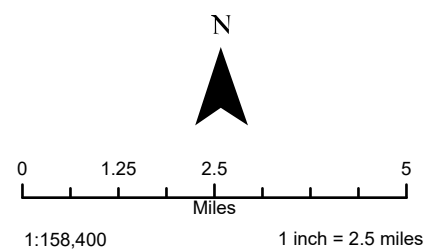
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-5. Aluminum Dietary Exposure HQs and EDs for Short-tailed Weasel
Final Upland BERA
Upper Columbia River, Washington



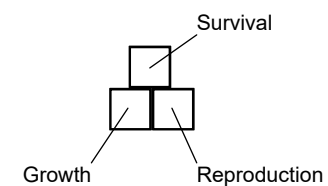
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



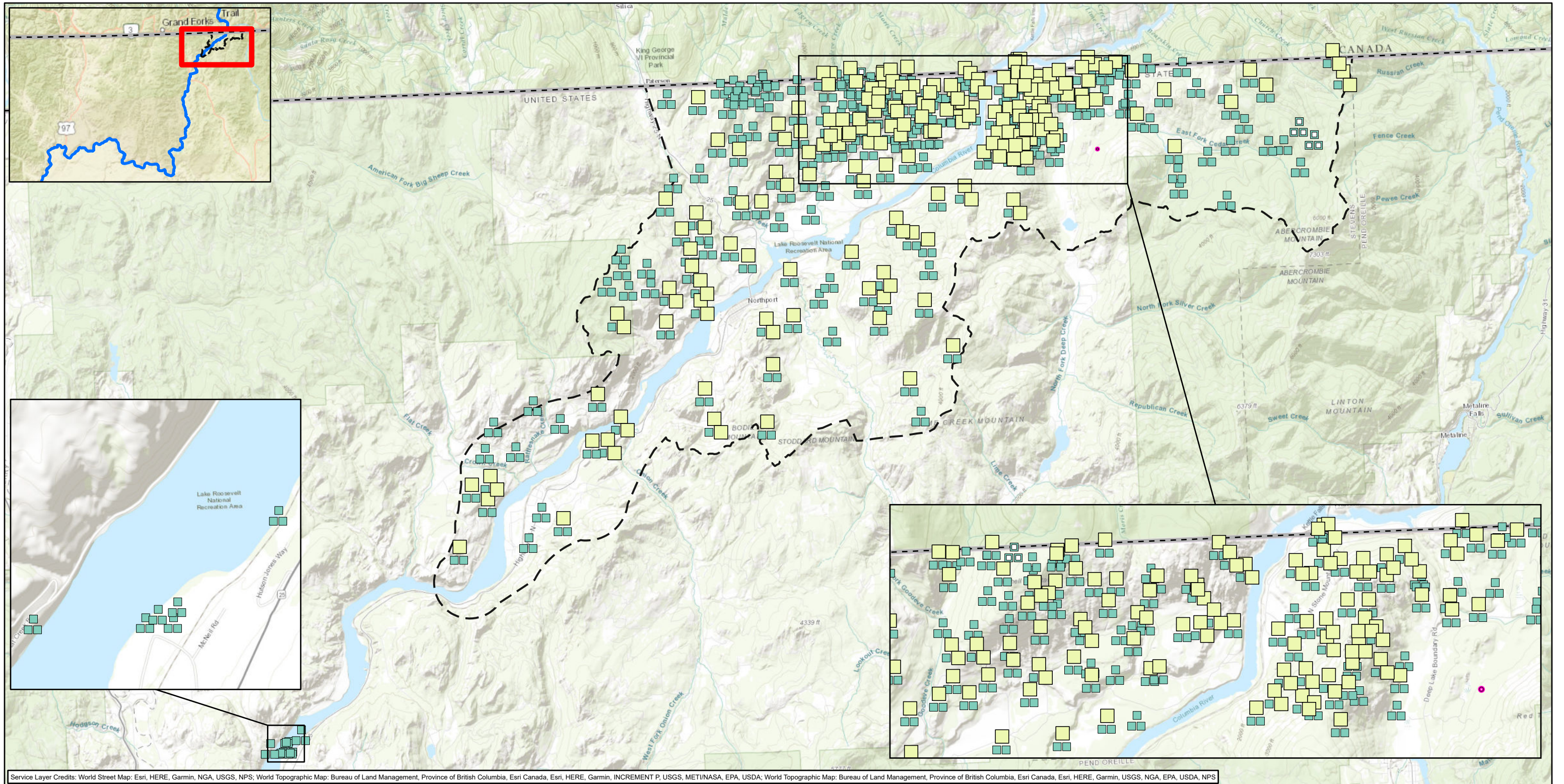
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (0.05 Acre)
- ED20**
- ED < 20% and ≤ BTV
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV

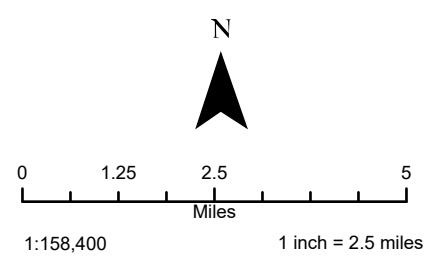
Note:
ED = effective dose



MAP 9-6. Cadmium Dietary Exposure EDs for Deer Mouse
Final Upland BERA
Upper Columbia River, Washington



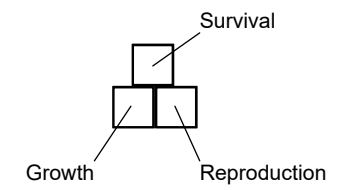
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



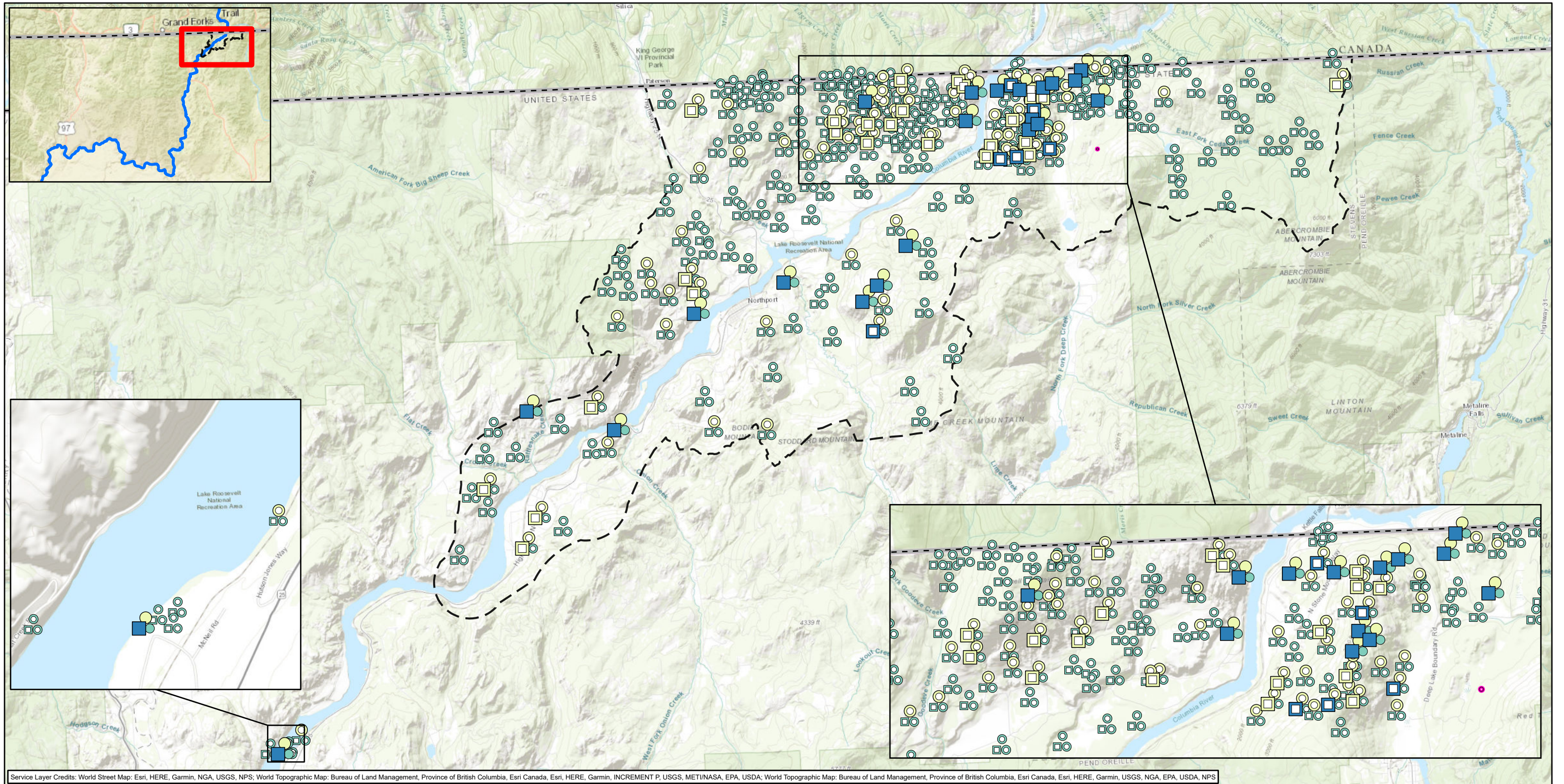
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (1.5 Acres)
- ED20**
- ED < 20% and ≤ BTV
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV

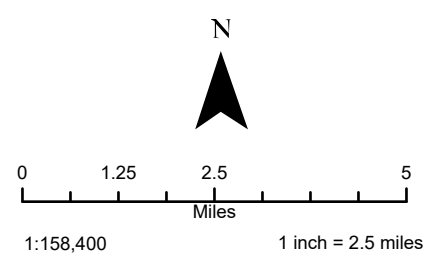
Note:
ED = effective dose



MAP 9-7. Cadmium Dietary Exposure EDs for Masked Shrew
Final Upland BERA
Upper Columbia River, Washington

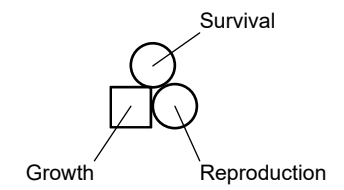


Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

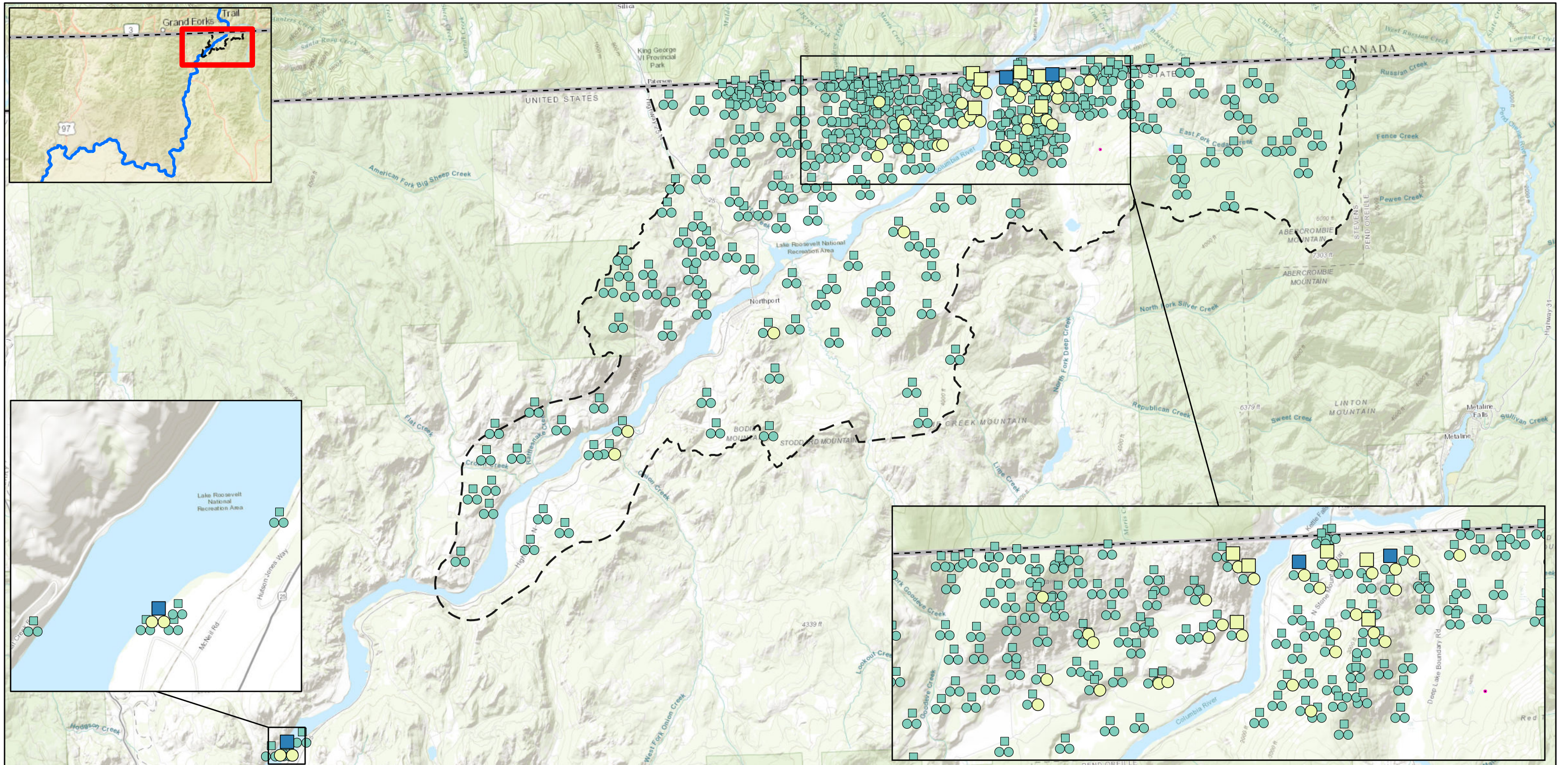


LEGEND

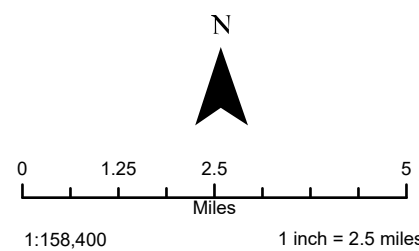
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
 - ED20**
 - ED < 20% and ≤ BTV
 - ED ≥ 20% and ED < 50% and ≤ BTV
 - ED ≥ 50% and ≤ BTV
 - ED ≥ 50% and > BTV
 - Receptor Home Range (1.5 Acres)
 - TRV**
 - HQ < 1 and ≤ BTV
 - HQ ≥ 1 and HQ < 5 and ≤ BTV
 - HQ ≥ 1 and HQ < 5 and > BTV
- Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-8. Copper Dietary Exposure HQs and EDs for Masked Shrew
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

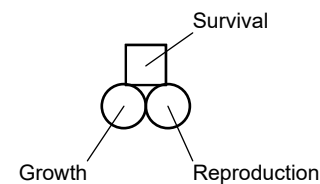


LEGEND

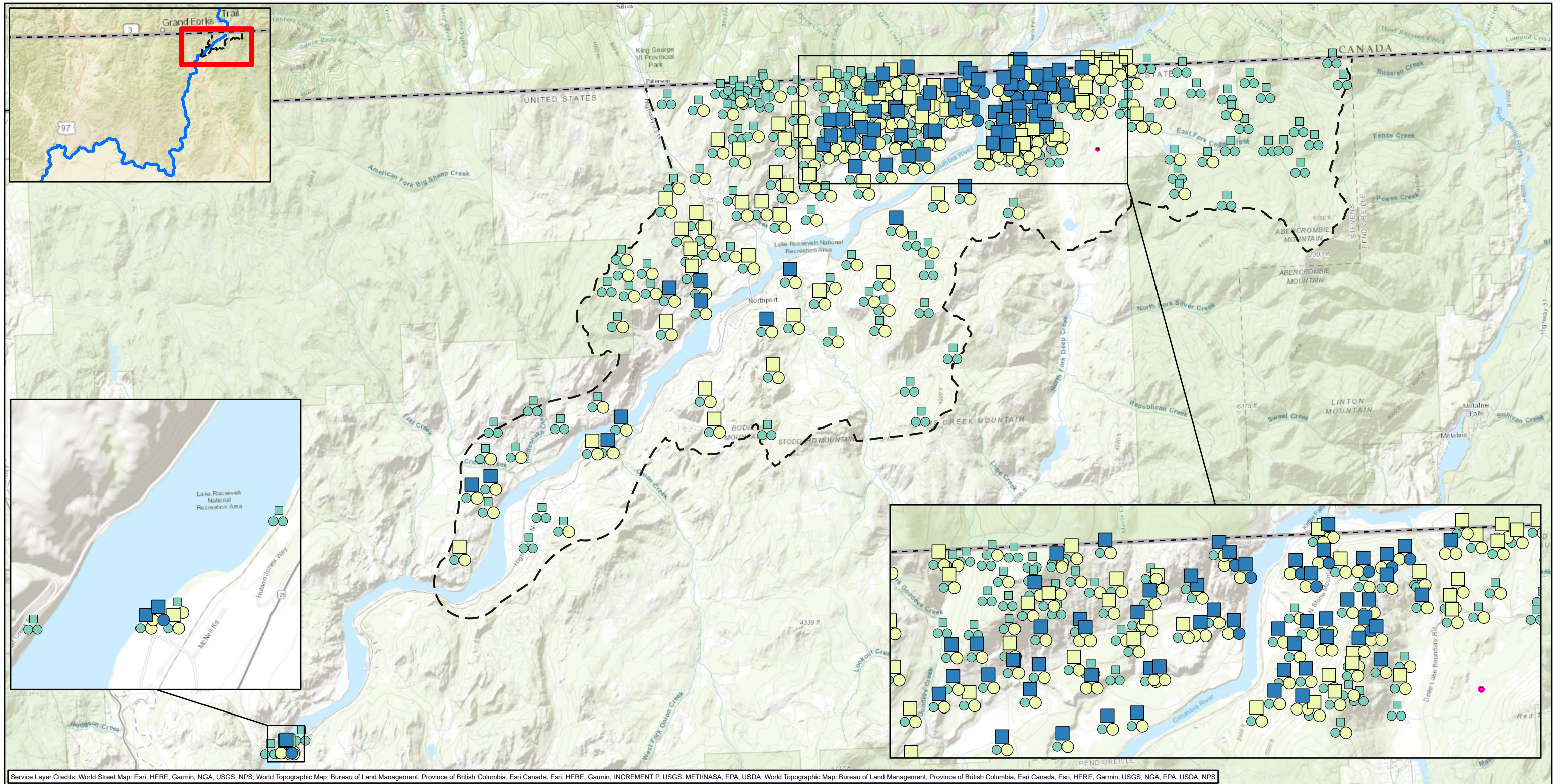
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

Note:
ED = effective dose
TRV = toxicity reference value

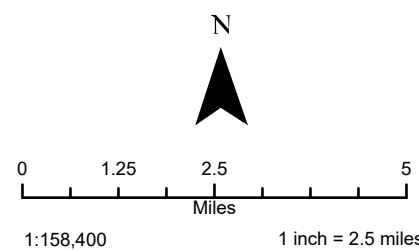
- Receptor Home Range (0.05 Acre)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV



MAP 9-9. Lead Dietary Exposure HQs and EDs for Deer Mouse
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

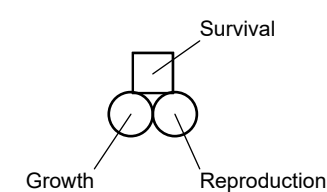


LEGEND

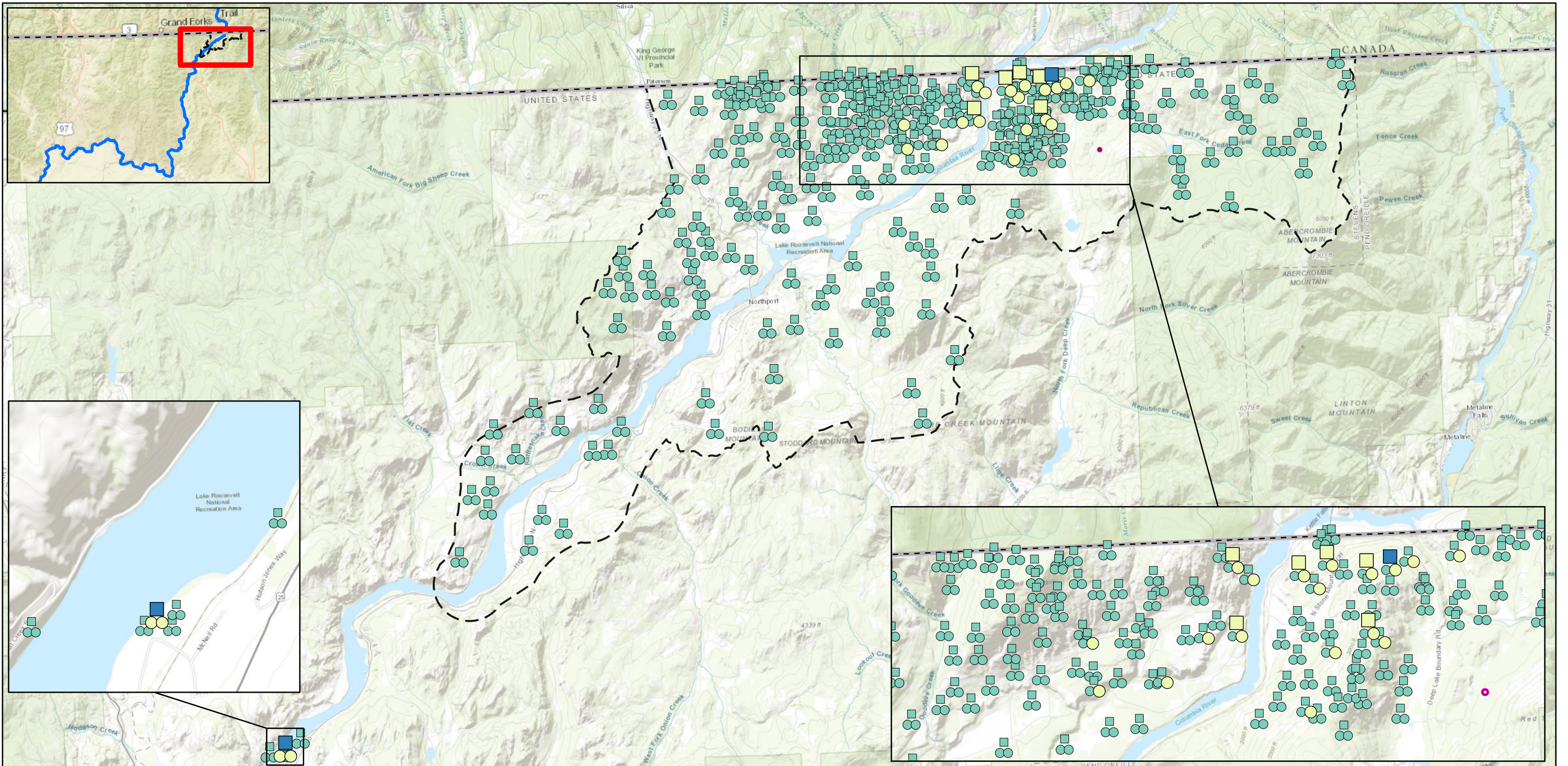
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

- Receptor Home Range (1.5 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

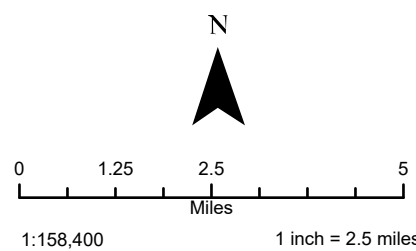
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-10. Lead Dietary Exposure HQs and EDs for Masked Shrew
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

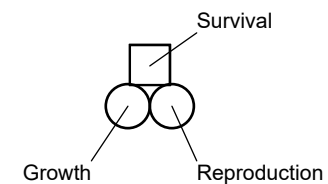


LEGEND

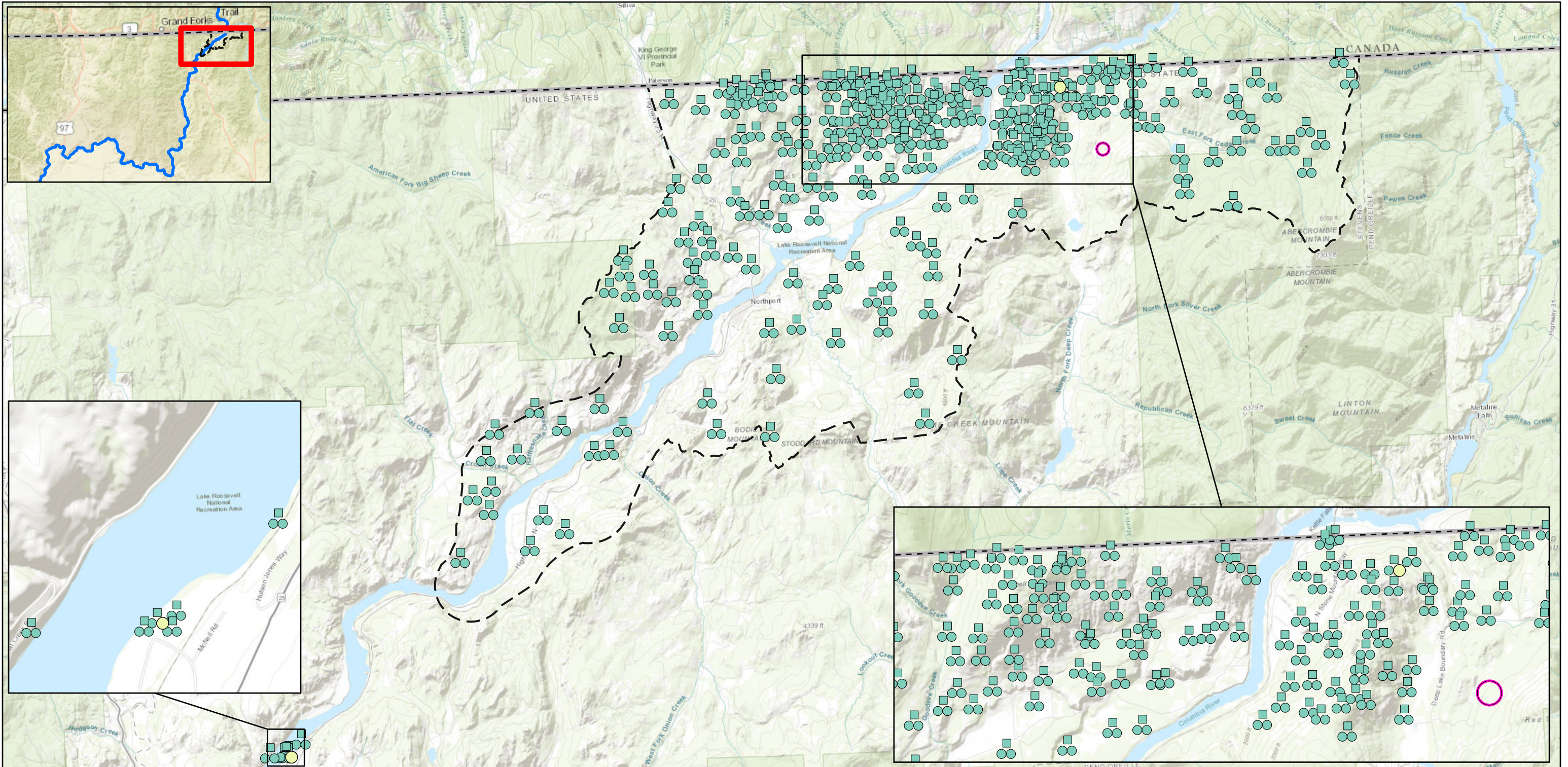
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV

Note:
ED = effective dose
TRV = toxicity reference value

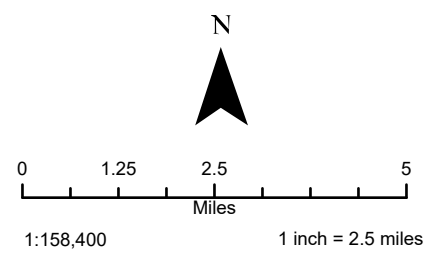
- Receptor Home Range (2.5 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV



MAP 9-11. Lead Dietary Exposure HQs and EDs for Meadow Vole
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

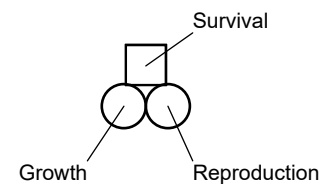


LEGEND

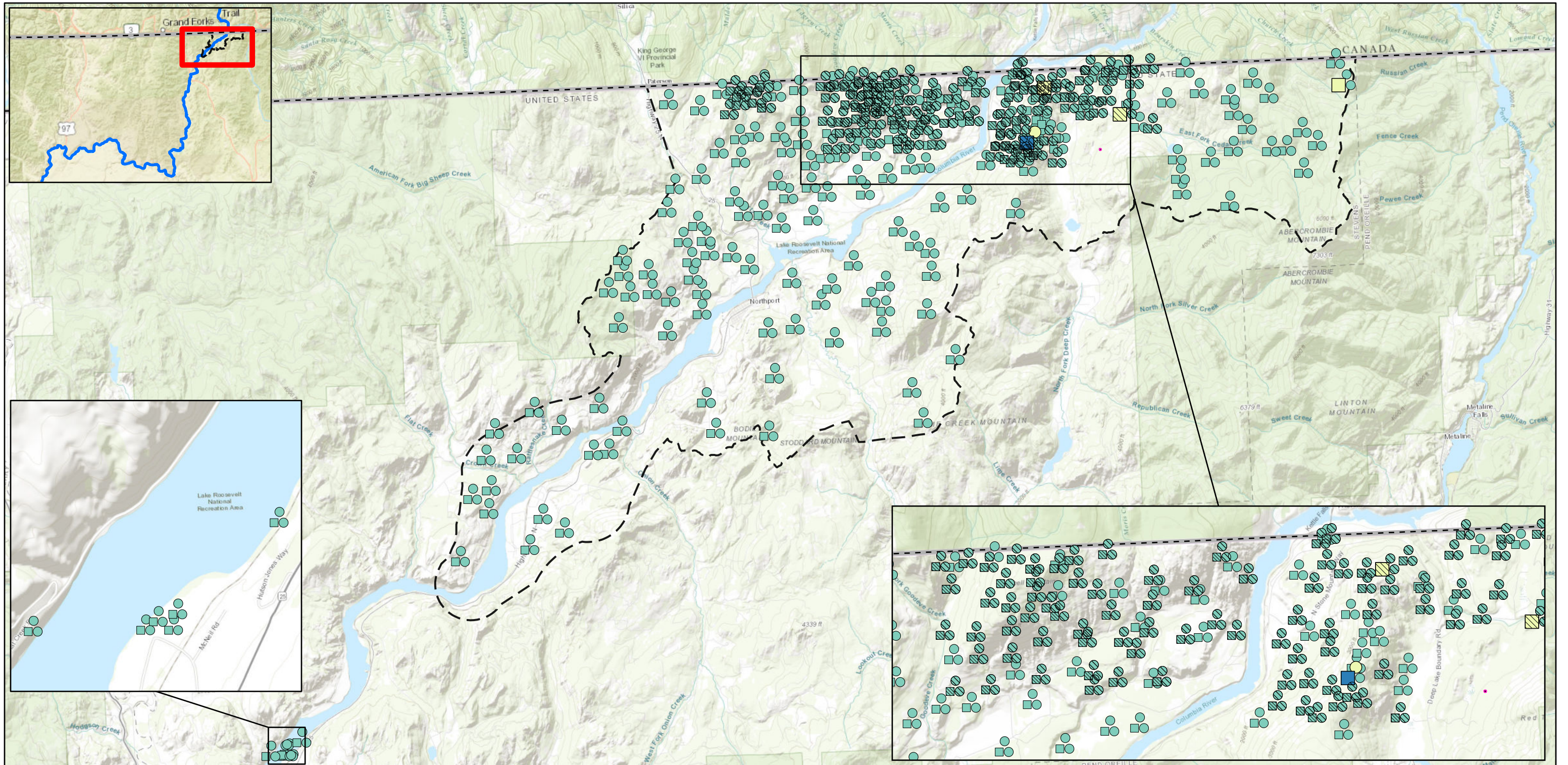
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV

- Receptor Home Range (49.5 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

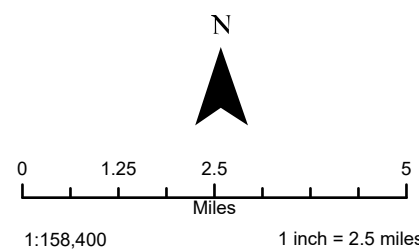
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-12. Lead Dietary Exposure HQs and EDs for Short-tailed Weasel
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

— Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)

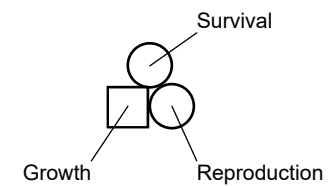
ED20
 ■ ED < 20% and > BTV
 ■ ED ≥ 20% and ED < 50% and > BTV
 ■ ED ≥ 50% and > BTV

Hatched symbol indicates non-detect results.

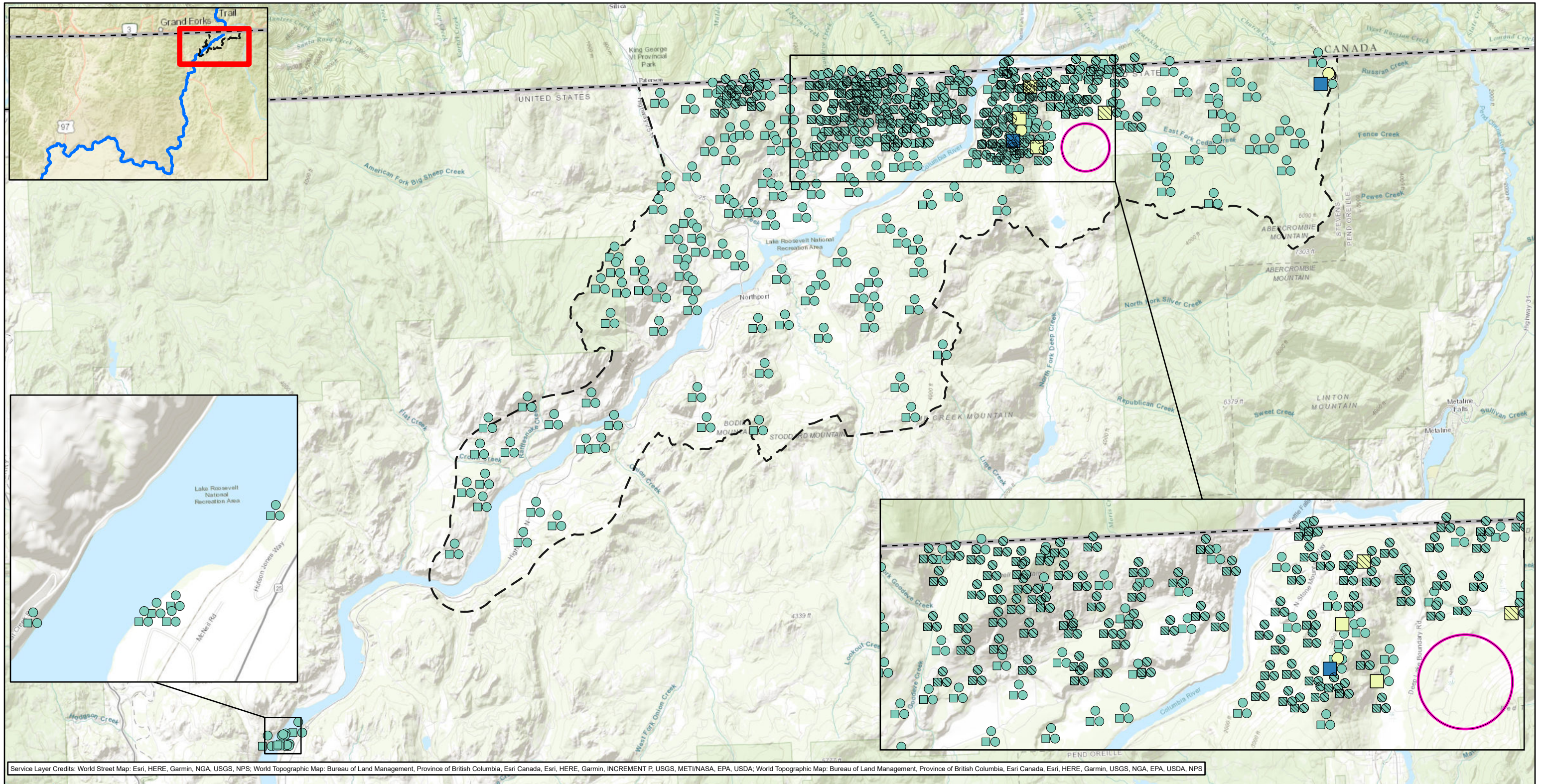
Note:
 ED = effective dose
 TRV = toxicity reference value

○ Receptor Home Range (0.05 Acre)

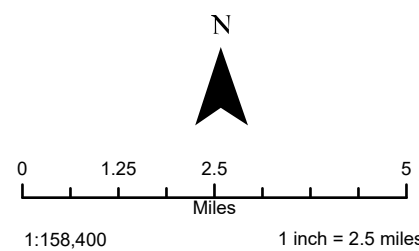
TRV
 ● HQ < 1 and > BTV
 ● HQ ≥ 1 and HQ < 5 and > BTV



MAP 9-13. Selenium Dietary Exposure HQs and EDs for Deer Mouse
 Final Upland BERA
 Upper Columbia River, Washington



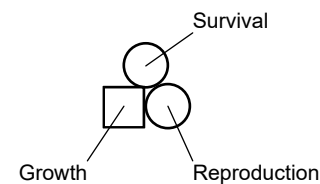
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



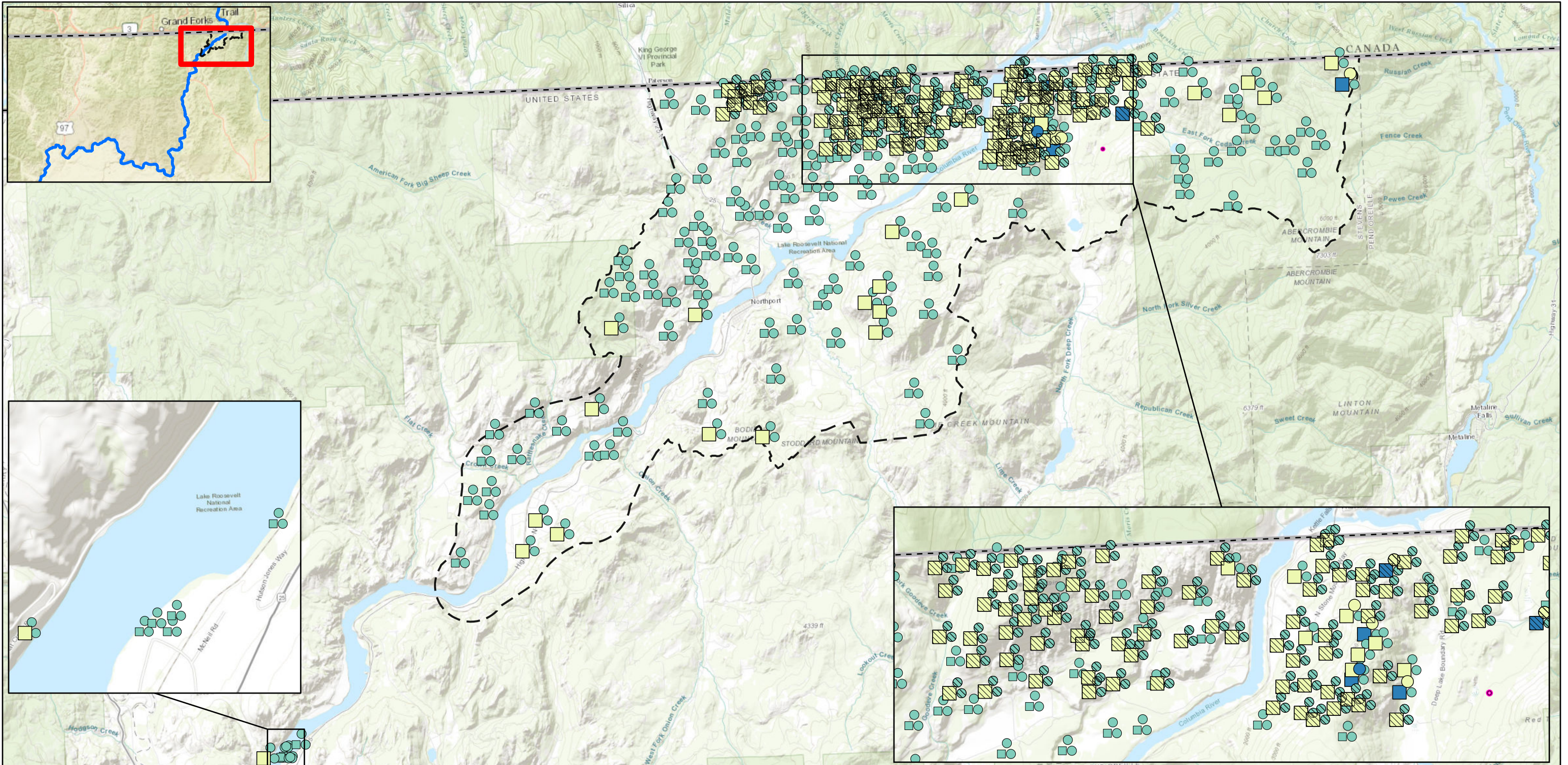
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (780 Acres)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV
- Hatched symbol indicates non-detect results.
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

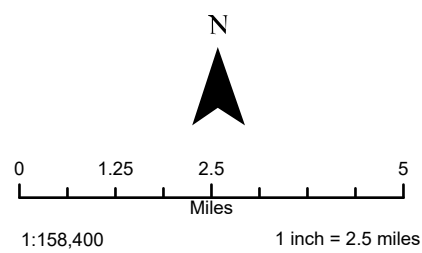
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-14. Selenium Dietary Exposure HQs and EDs for Little Brown Bat
Final Upland BERA
Upper Columbia River, Washington



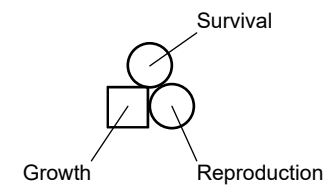
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



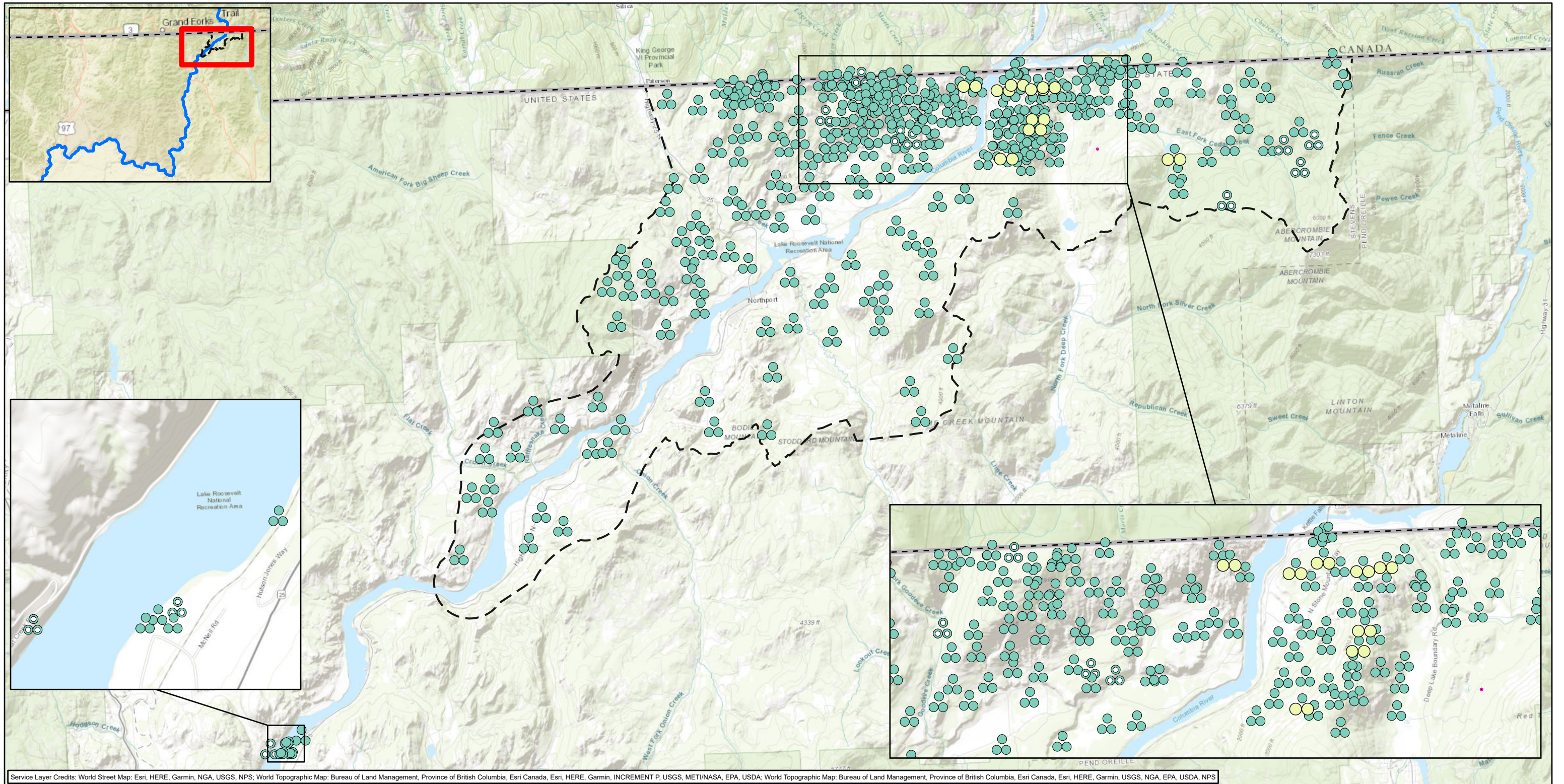
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- ED20**
- ED < 20% and > BTV
- ED ≥ 20% and ED < 50% and > BTV
- ED ≥ 50% and > BTV
- Hatched symbol indicates non-detect results.
- Receptor Home Range (1.5 Acres)
- TRV**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

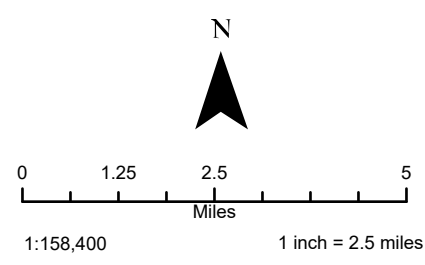
Note:
ED = effective dose
TRV = toxicity reference value



MAP 9-15. Selenium Dietary Exposure HQs and EDs for Masked Shrew
Final Upland BERA
Upper Columbia River, Washington



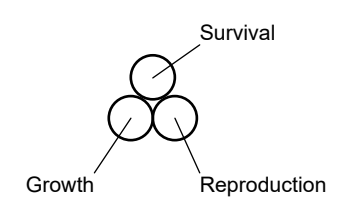
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



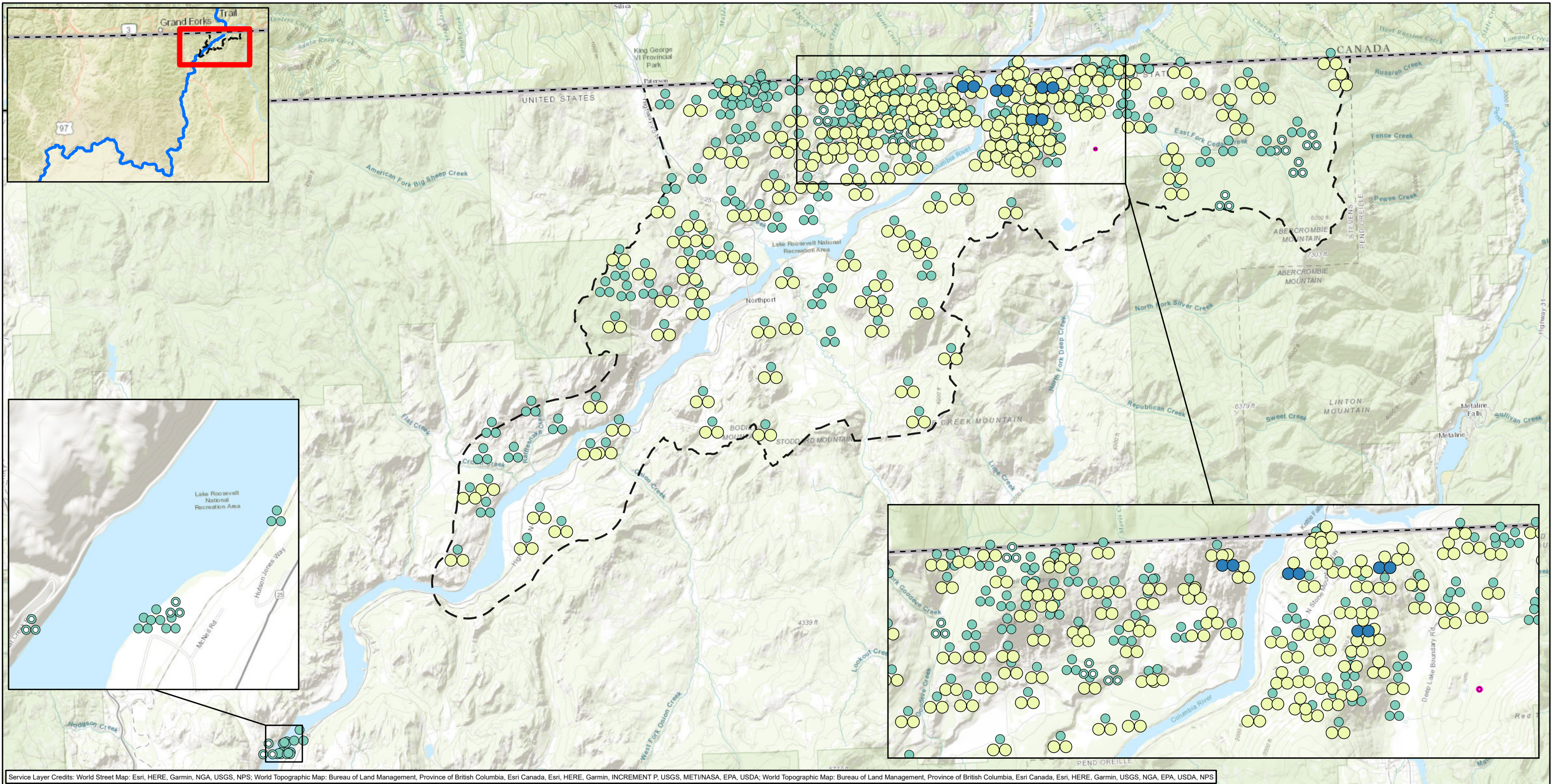
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (0.05 Acre)
- TRV
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

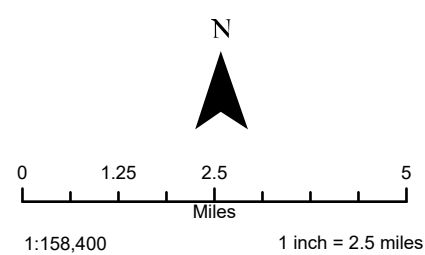
Note:
TRV = toxicity reference value



MAP 9-16. Zinc Dietary Exposure HQs for Deer Mouse
Final Upland BERA
Upper Columbia River, Washington



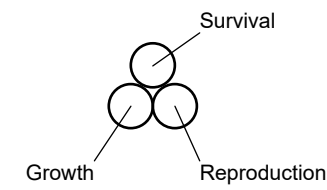
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



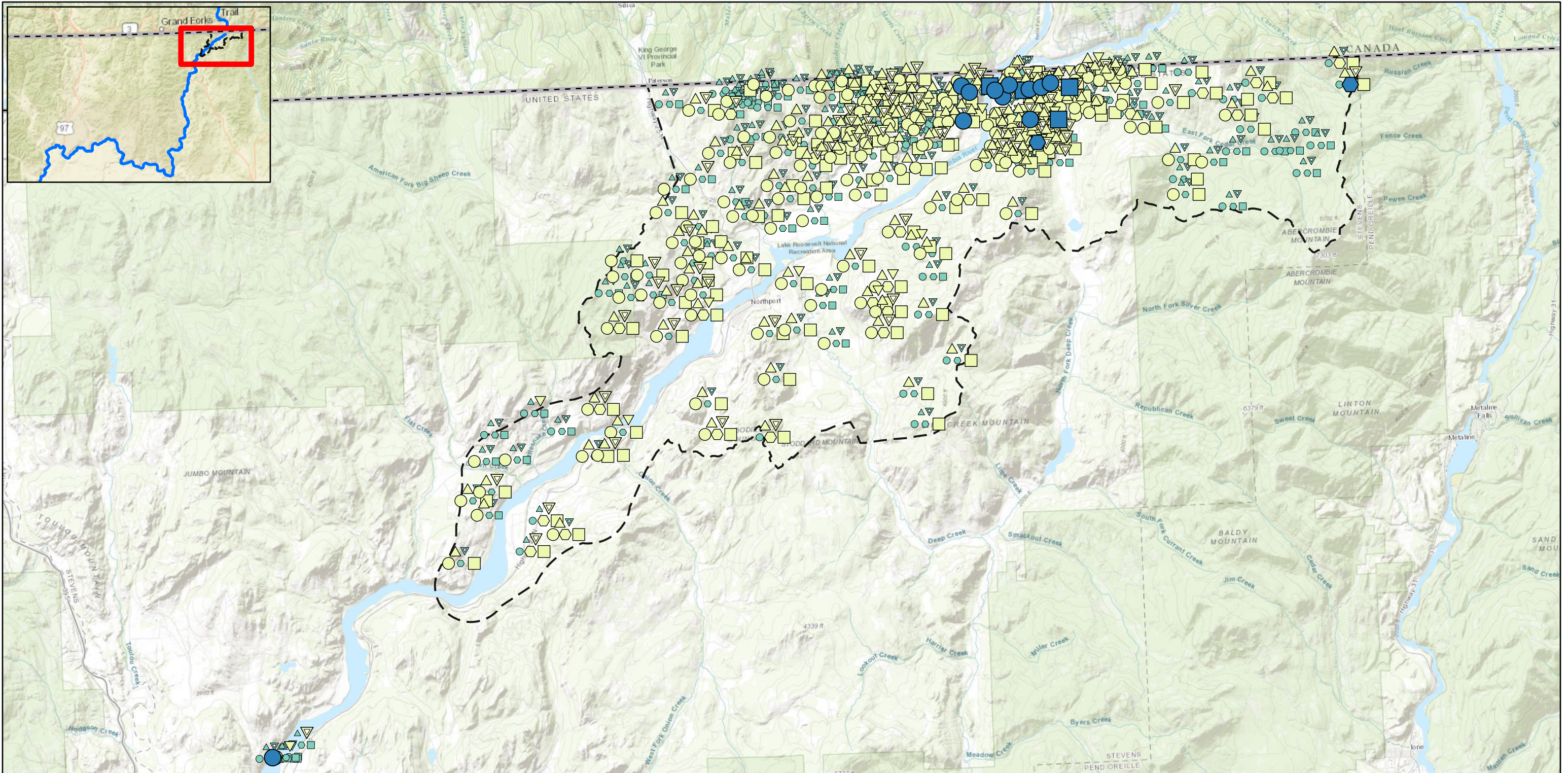
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Receptor Home Range (1.5 Acres)
- TRV
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

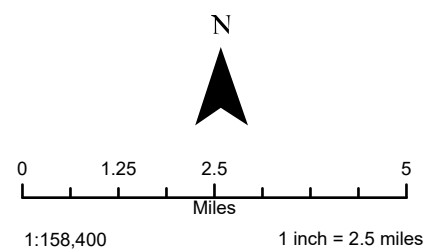
Note:
TRV = toxicity reference value



MAP 9-17. Zinc Dietary Exposure HQs for Masked Shrew
Final Upland BERA
Upper Columbia River, Washington



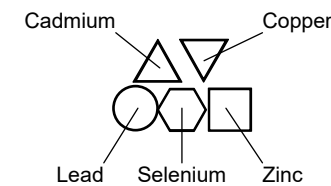
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



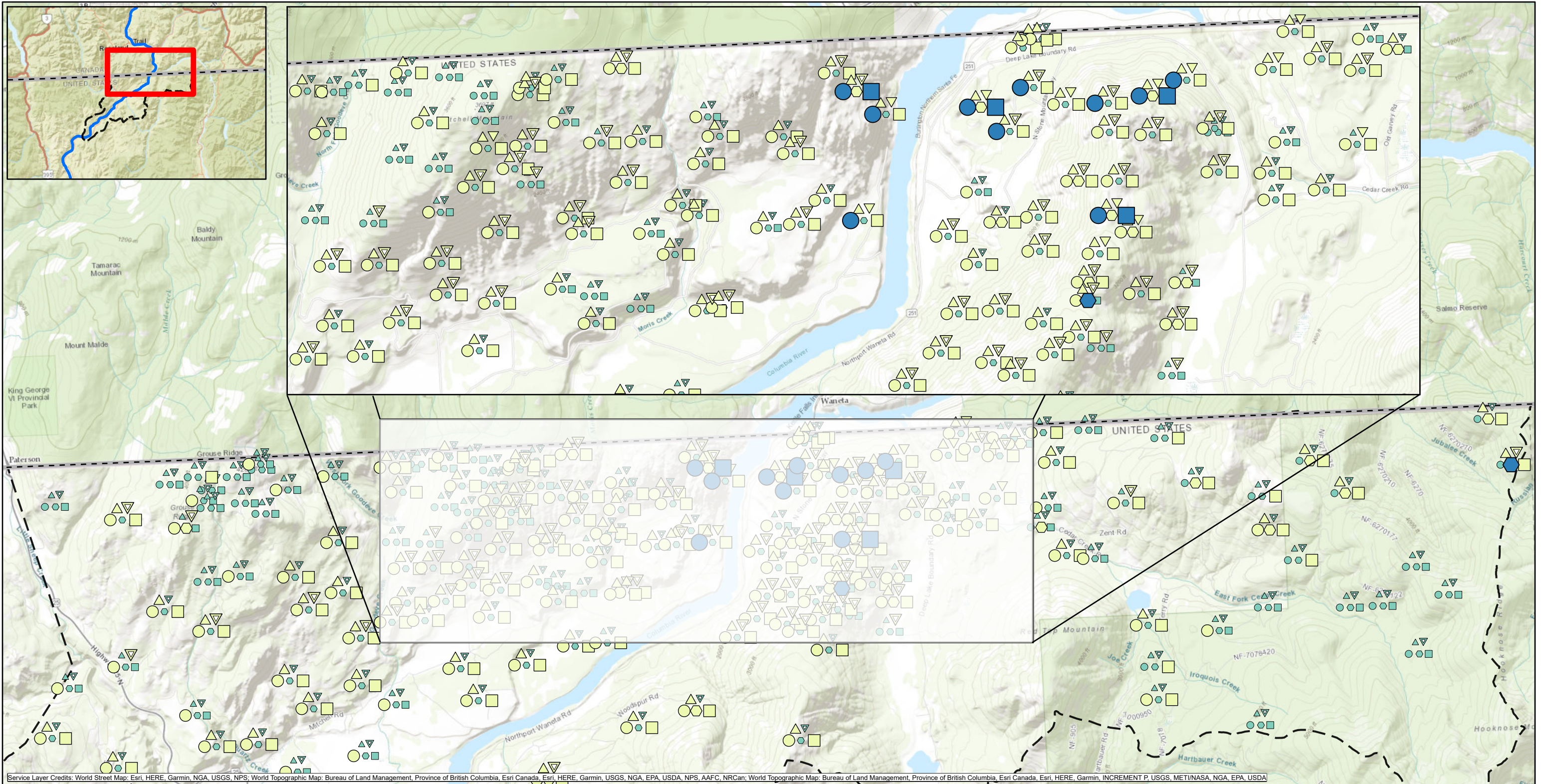
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
 - HQ < 1
 - HQ ≥ 1 and HQ < 5
 - HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

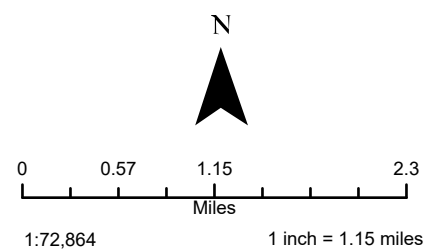
Note: BTV comparisons are only shown for copper. For all other metals, all cases when HQ ≥ 1 have concentrations > BTV



MAP 9-18a. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Mammalian Receptor
Final Upland BERA
Upper Columbia River, Washington



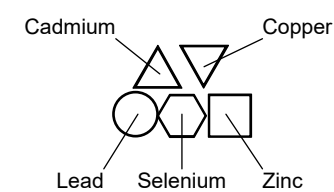
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



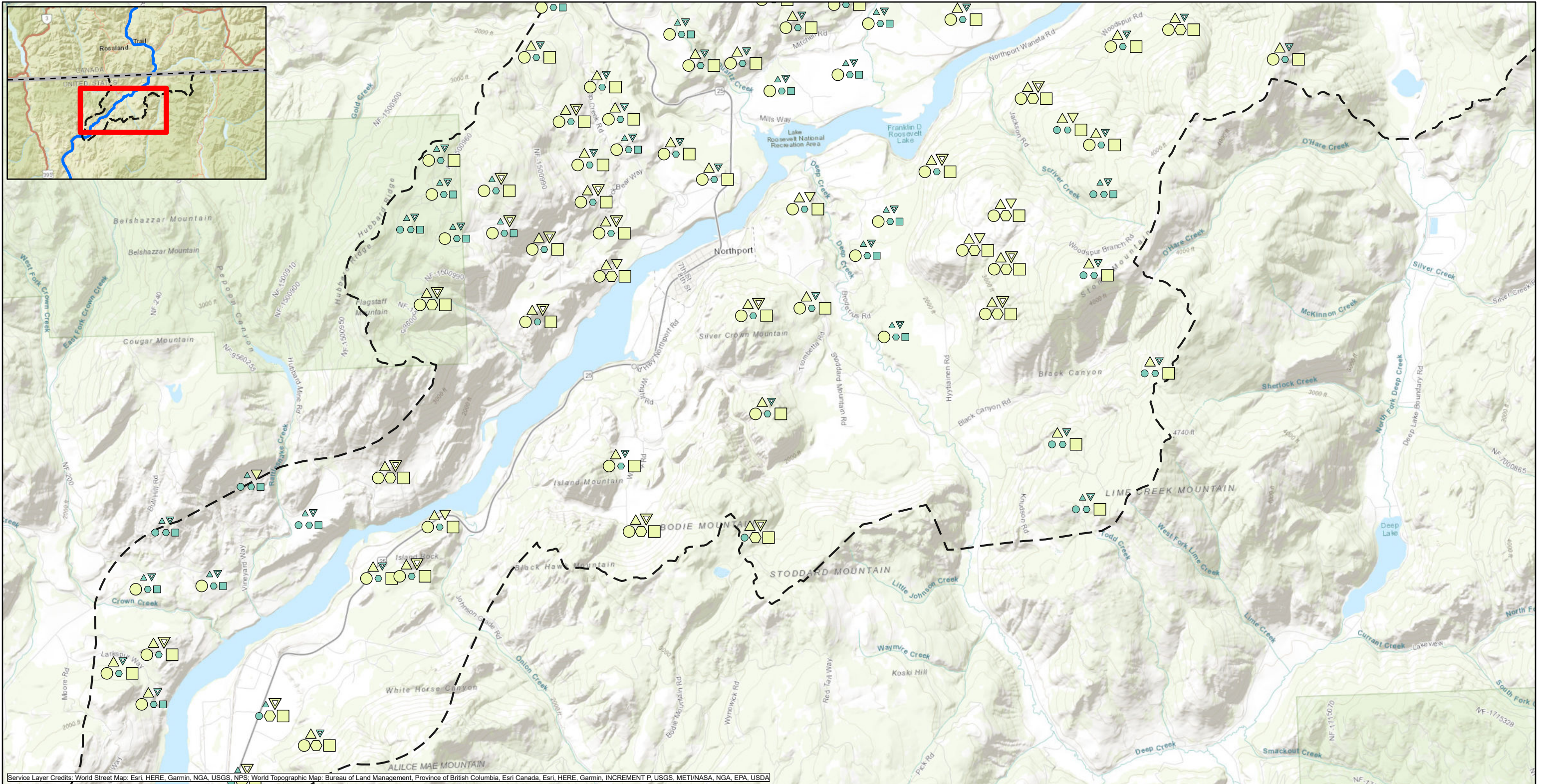
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- HQ < 1
- HQ ≥ 1 and HQ < 5
- HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

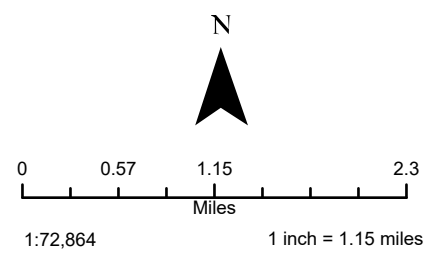
Note: BTV comparisons are only shown for copper. For all other metals, all cases when HQ ≥ 1 have concentrations > BTV



MAP 9-18b. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Mammalian Receptor
Final Upland BERA
Upper Columbia River, Washington



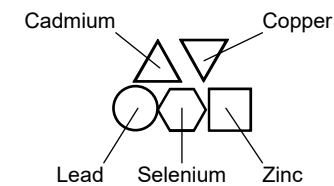
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, NGA, EPA, USDA



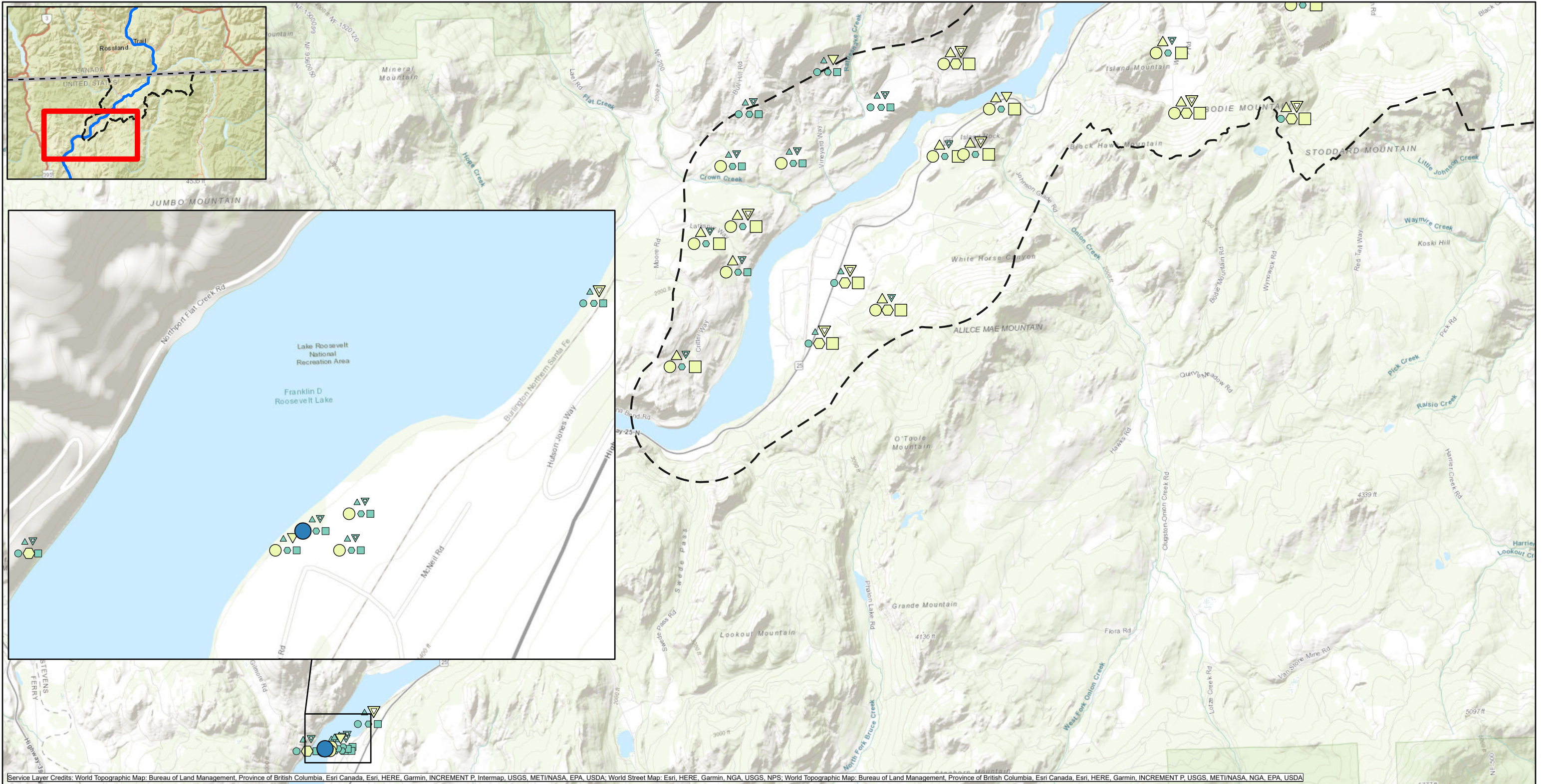
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
 - HQ < 1
 - HQ ≥ 1 and HQ < 5
 - HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

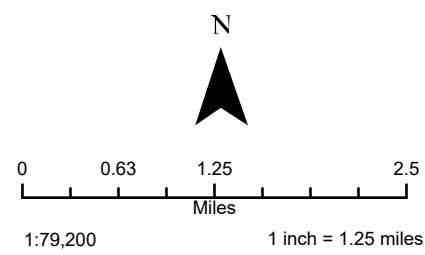
Note: BTV comparisons are only shown for copper. For all other metals, all cases when HQ ≥ 1 have concentrations > BTV



MAP 9-18c. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Mammalian Receptor
Final Upland BERA
Upper Columbia River, Washington



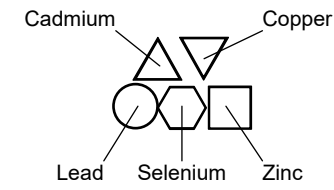
Service Layer Credits: World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA; World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



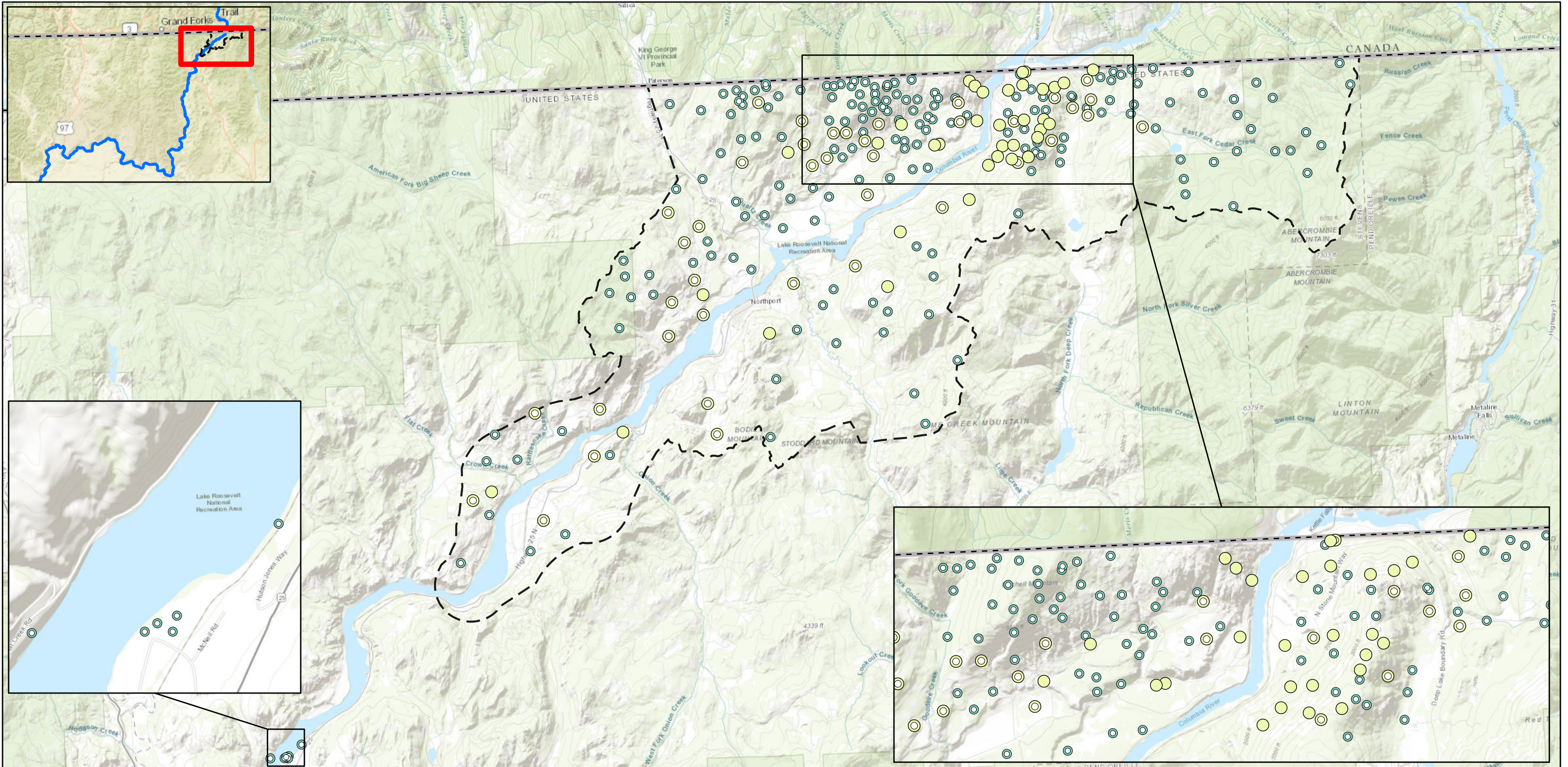
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
 - HQ < 1
 - HQ ≥ 1 and HQ < 5
 - HQ ≥ 5
- Open symbol indicates concentration ≤ BTV; closed symbol indicates concentration > BTV

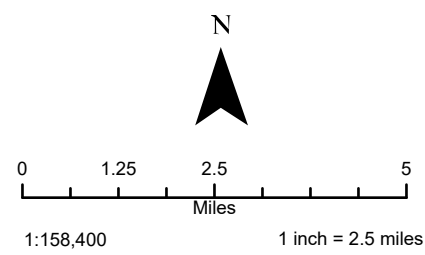
Note: BTV comparisons are only shown for copper. For all other metals, all cases when HQ ≥ 1 have concentrations > BTV



MAP 9-18d. Locations Where Each COC Exceeds the Lowest Risk Based Soil Concentration for the Most Exposed Mammalian Receptor
Final Upland BERA
Upper Columbia River, Washington

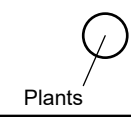


Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

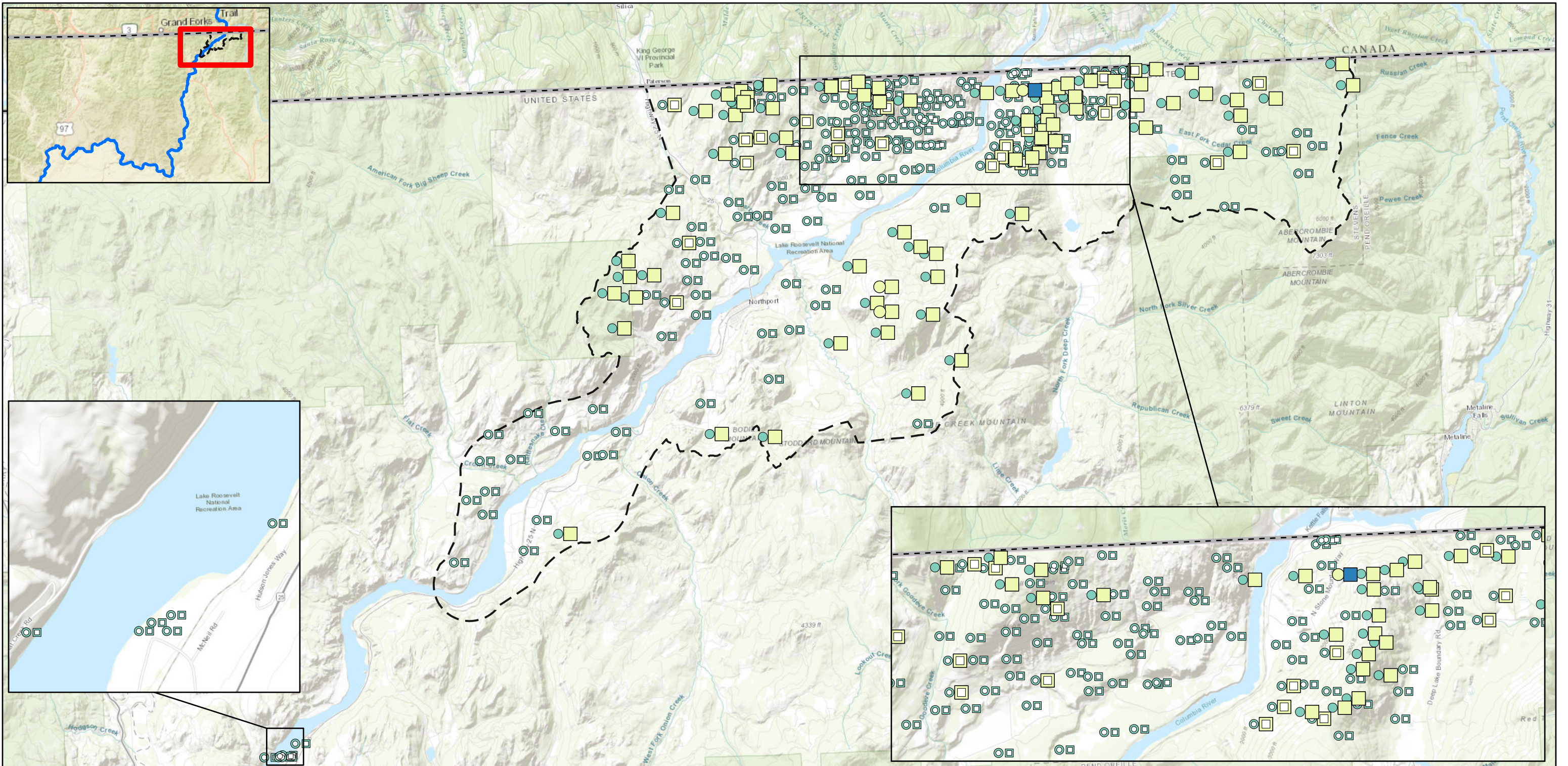


LEGEND

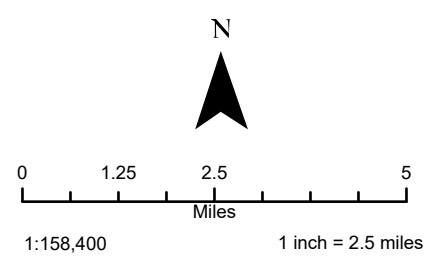
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV



MAP 10-1. Summary of Maximum Arsenic HQs for Plants
Final Upland BERA
Upper Columbia River, Washington



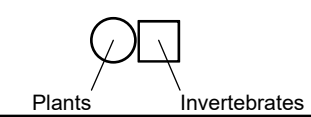
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USA



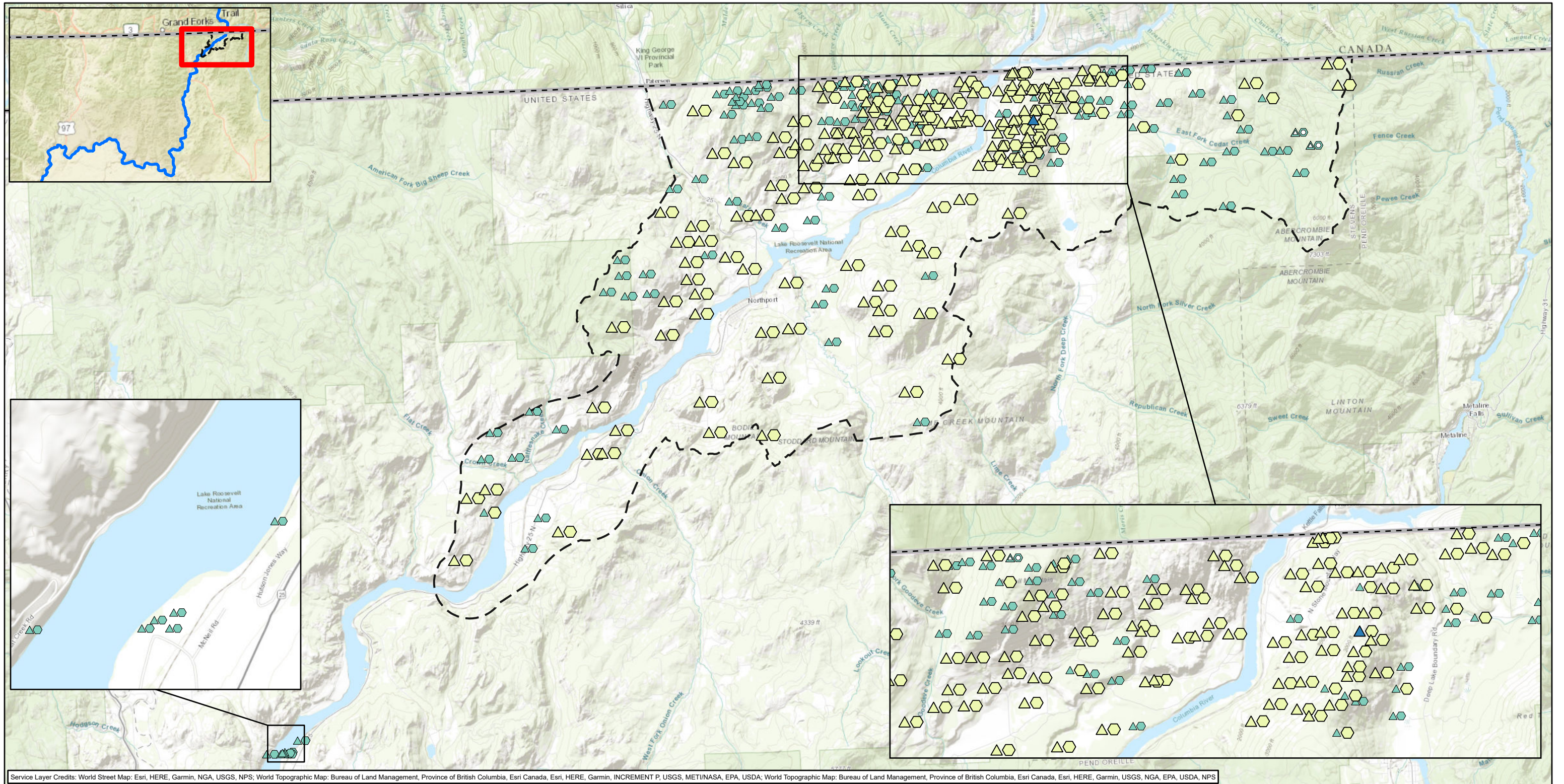
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

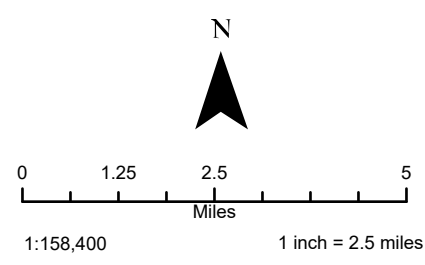
- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP 10-2. Summary of Maximum Barium HQs for Plants and Invertebrates
 Final Upland BERA
 Upper Columbia River, Washington



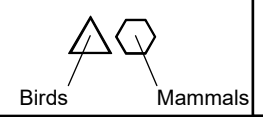
Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



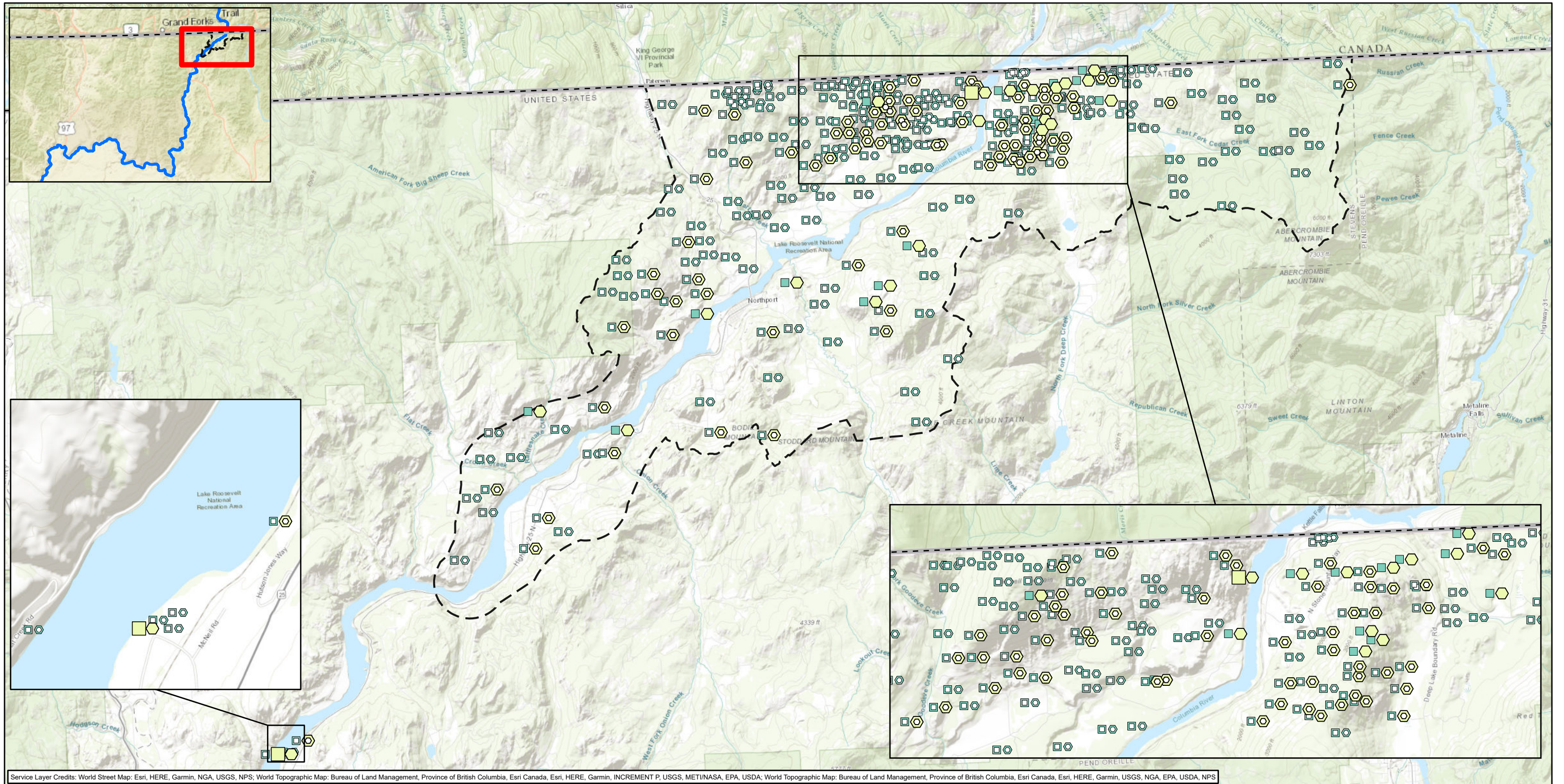
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

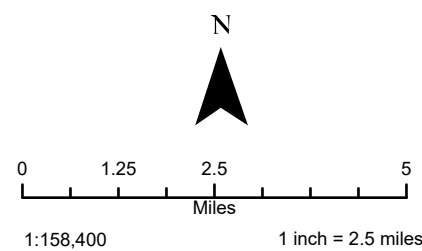
- Mammals HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV



MAP 10-3. Summary of Maximum Cadmium HQs for Birds and Mammals
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

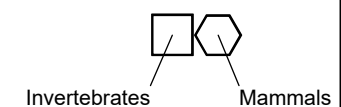
— Aerial deposition area as defined in
 - - - 2014 UCR Upland Soil Study QAPP (TAI 2014a)

Invertebrates HQ

- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

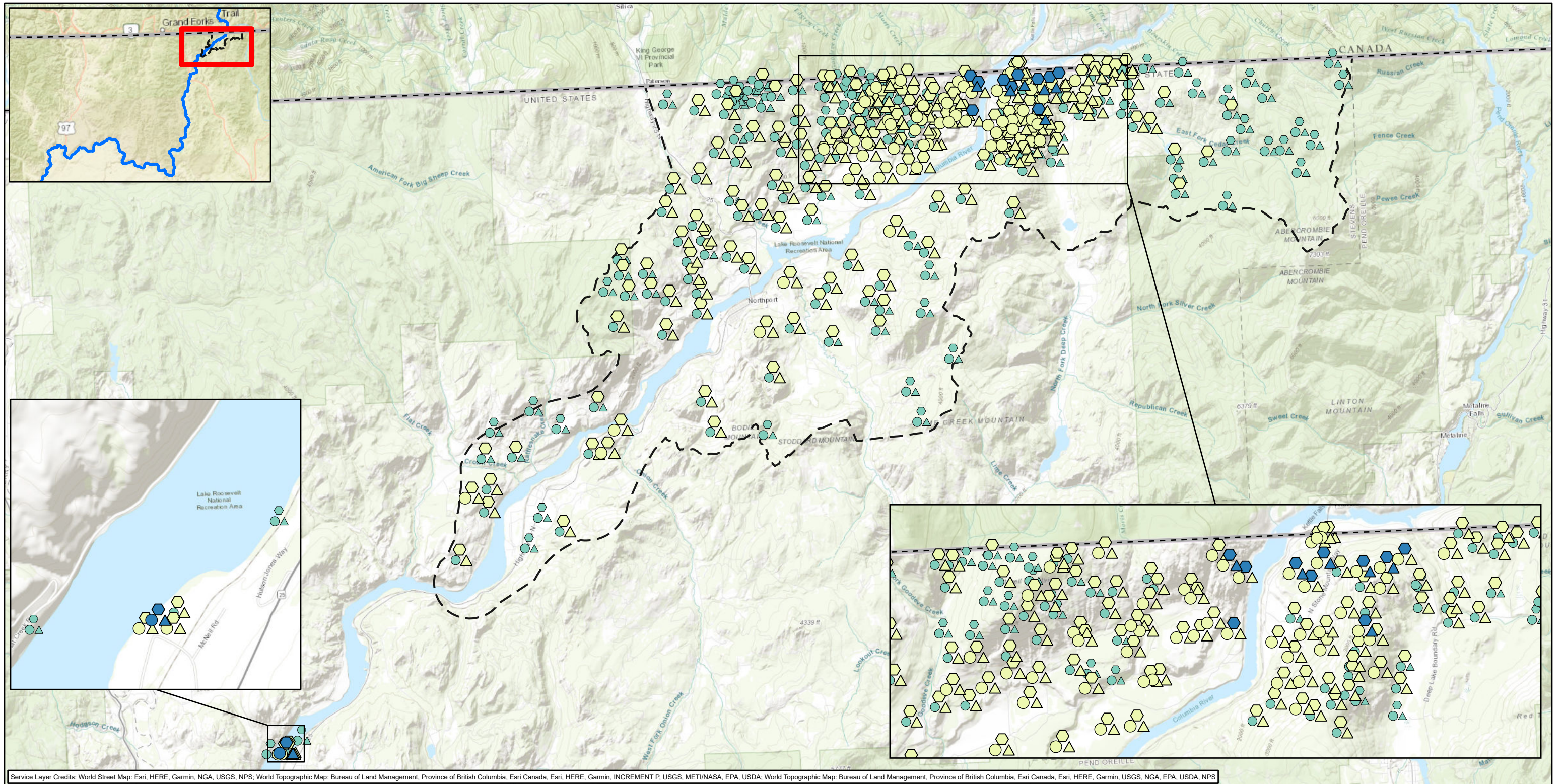
Mammals HQ

- ⬡ HQ < 1 and ≤ BTV
- ⬢ HQ ≥ 1 and HQ < 5 and ≤ BTV
- ⬢ HQ ≥ 1 and HQ < 5 and > BTV

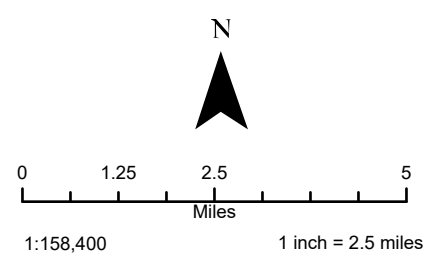


MAP 10-4. Summary of Maximum Copper HQs for Invertebrates and Mammals

Final Upland BERA
 Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

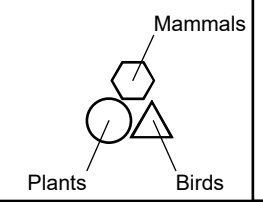


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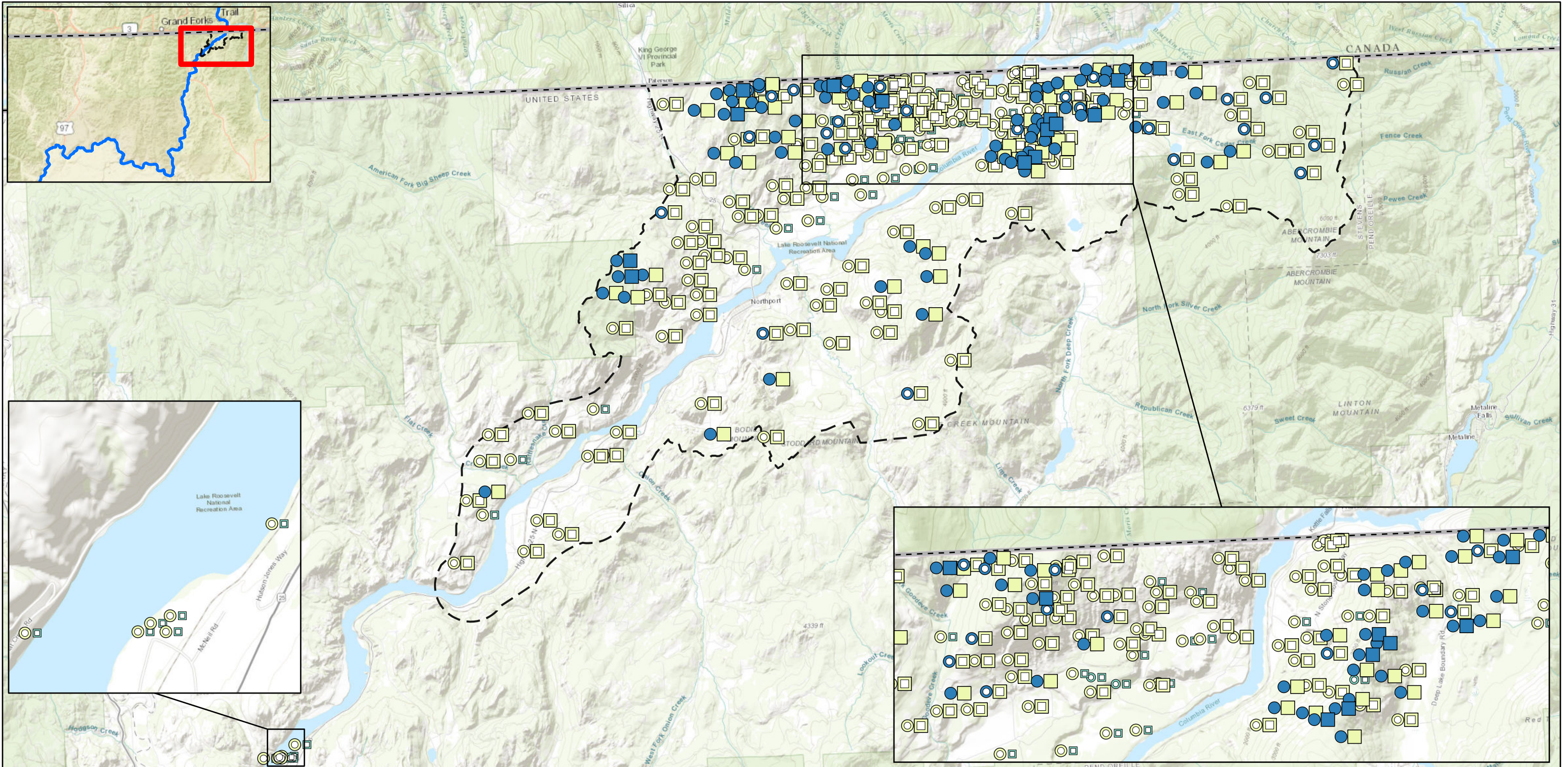
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Birds HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

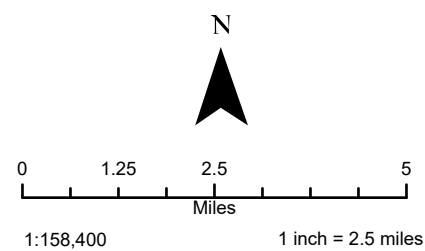
- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP 10-5. Summary of Maximum Lead HQs for Plants, Birds, and Mammals
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



LEGEND

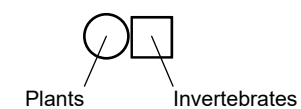
— Aerial deposition area as defined in
 - - - 2014 UCR Upland Soil Study QAPP (TAI 2014a)

Plants HQ

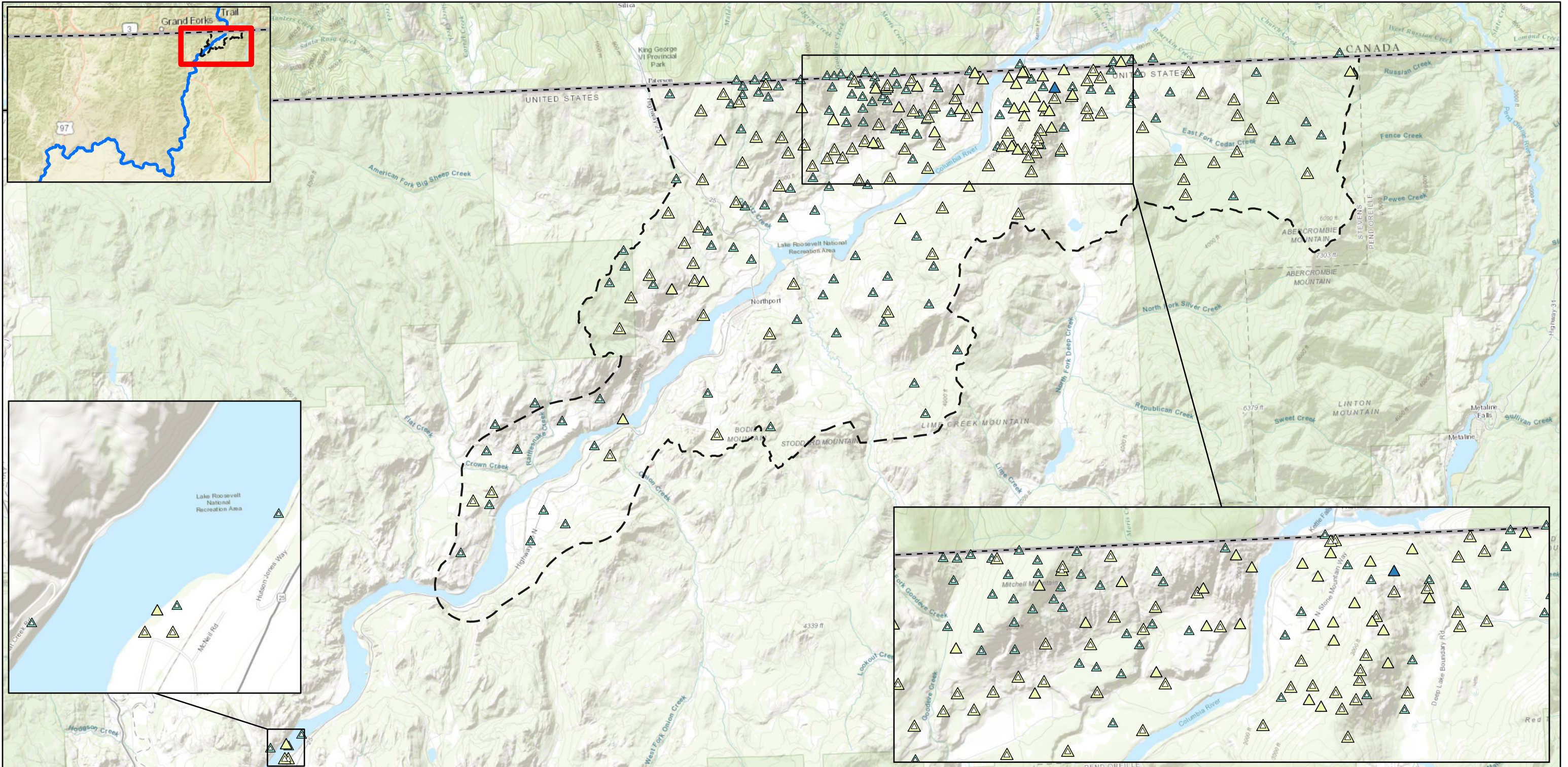
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

Invertebrates HQ

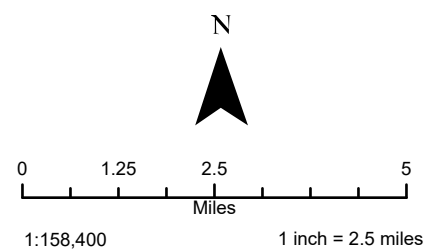
- HQ < 1 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP 10-6. Summary of Maximum Manganese HQs for Plants and Invertebrates
 Final Upland BERA
 Upper Columbia River, Washington

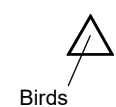


Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

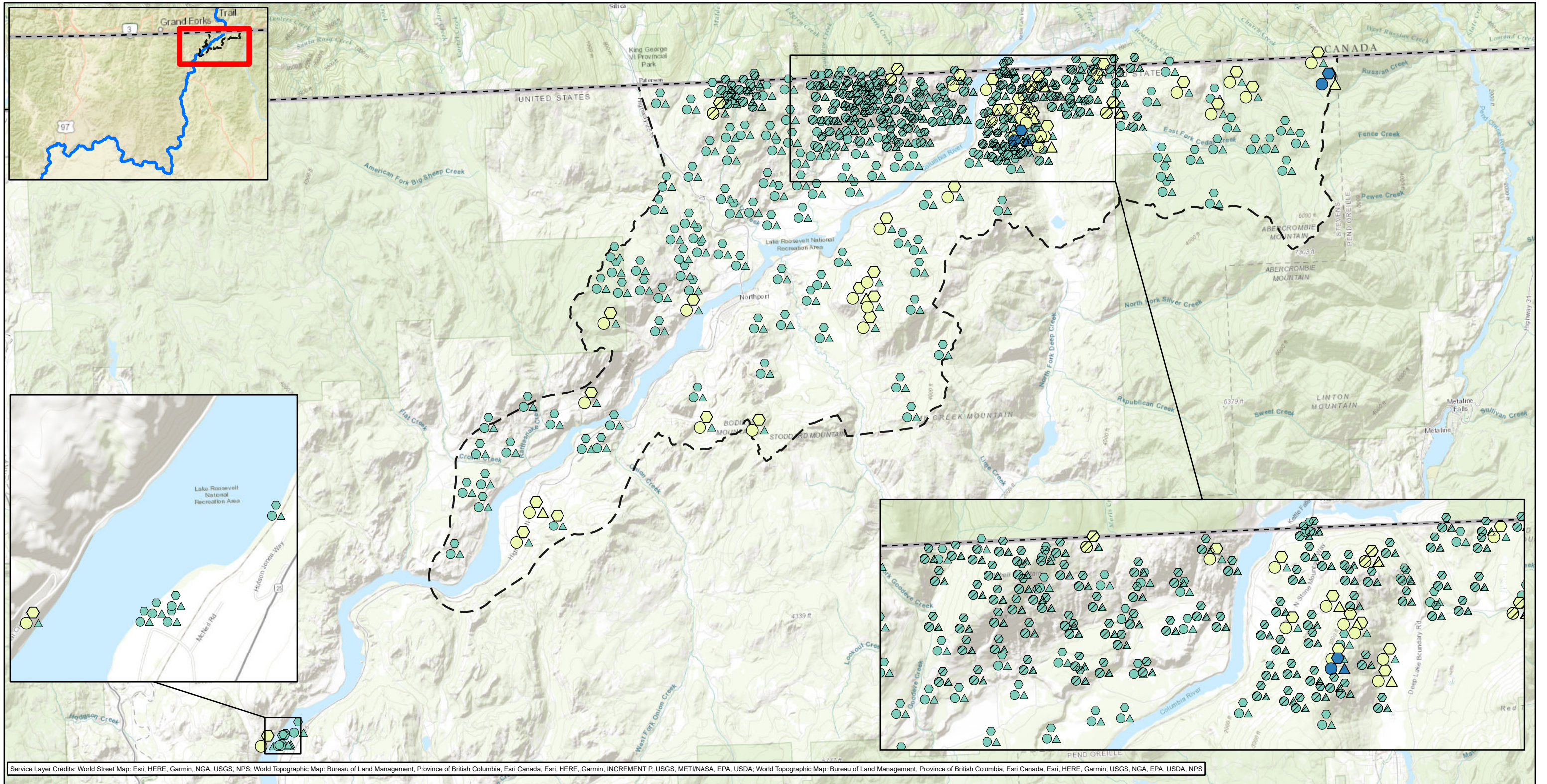


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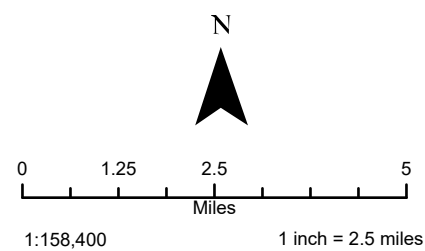
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Birds HQ
 - HQ < 1 and ≤ BTV
 - HQ ≥ 1 and HQ < 5 and ≤ BTV
 - HQ ≥ 1 and HQ < 5 and > BTV
 - HQ ≥ 5 and > BTV



MAP 10-7. Summary of Maximum Mercury HQs for Birds
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS

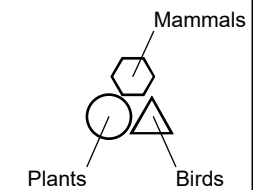


LEGEND

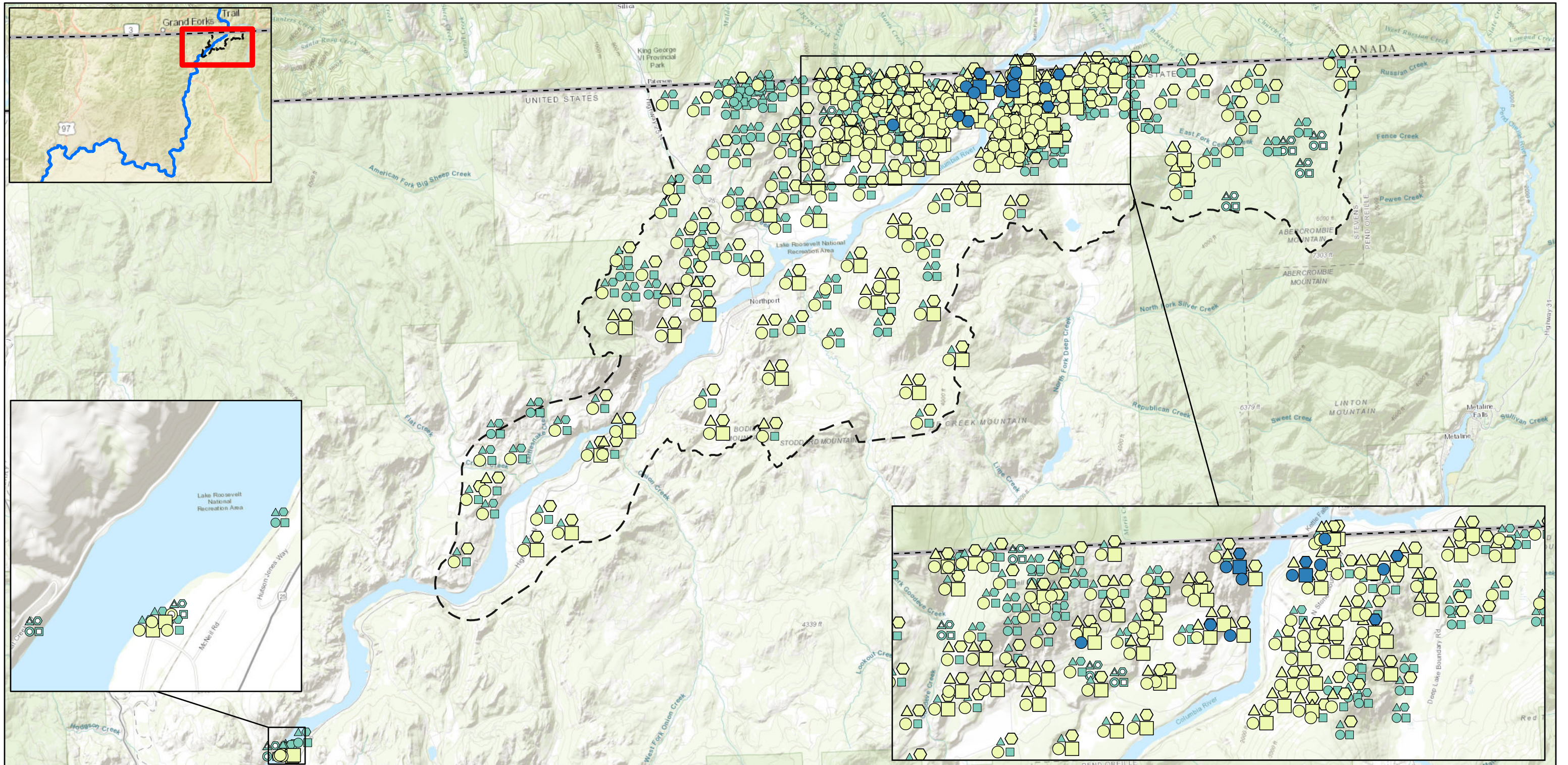
- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV
- Hatched symbol indicates non-detect results.

- Birds HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

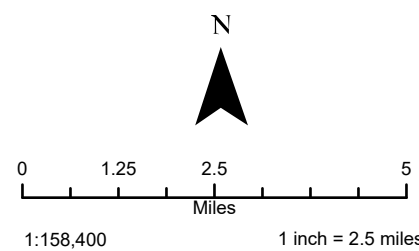
- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP 10-8. Summary of Maximum Selenium HQs for Plants, Birds, and Mammals
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



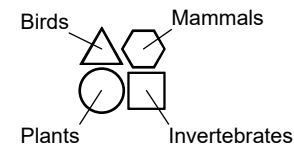
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

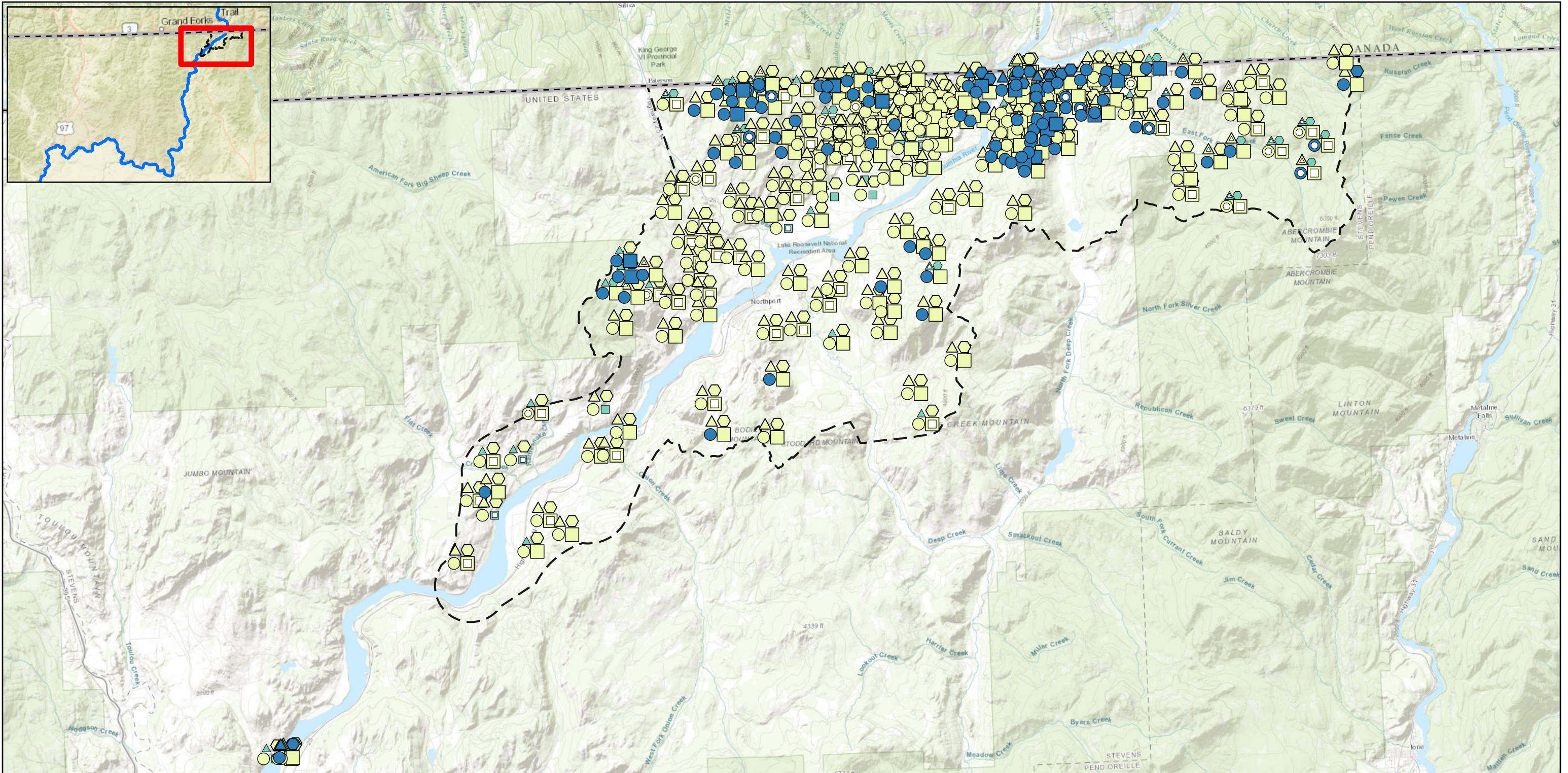
- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

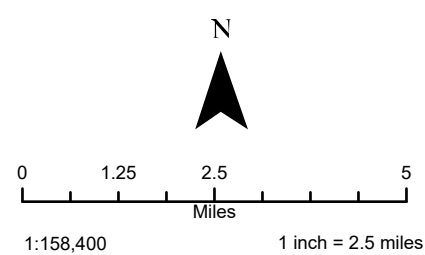
- Mammals HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



MAP 10-9. Summary of Maximum Zinc HQs for Plants, Invertebrates, Birds, and Mammals
Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, MET/NASA, EPA, USDA; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



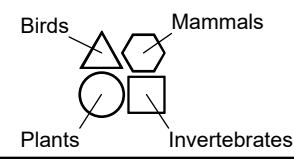
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

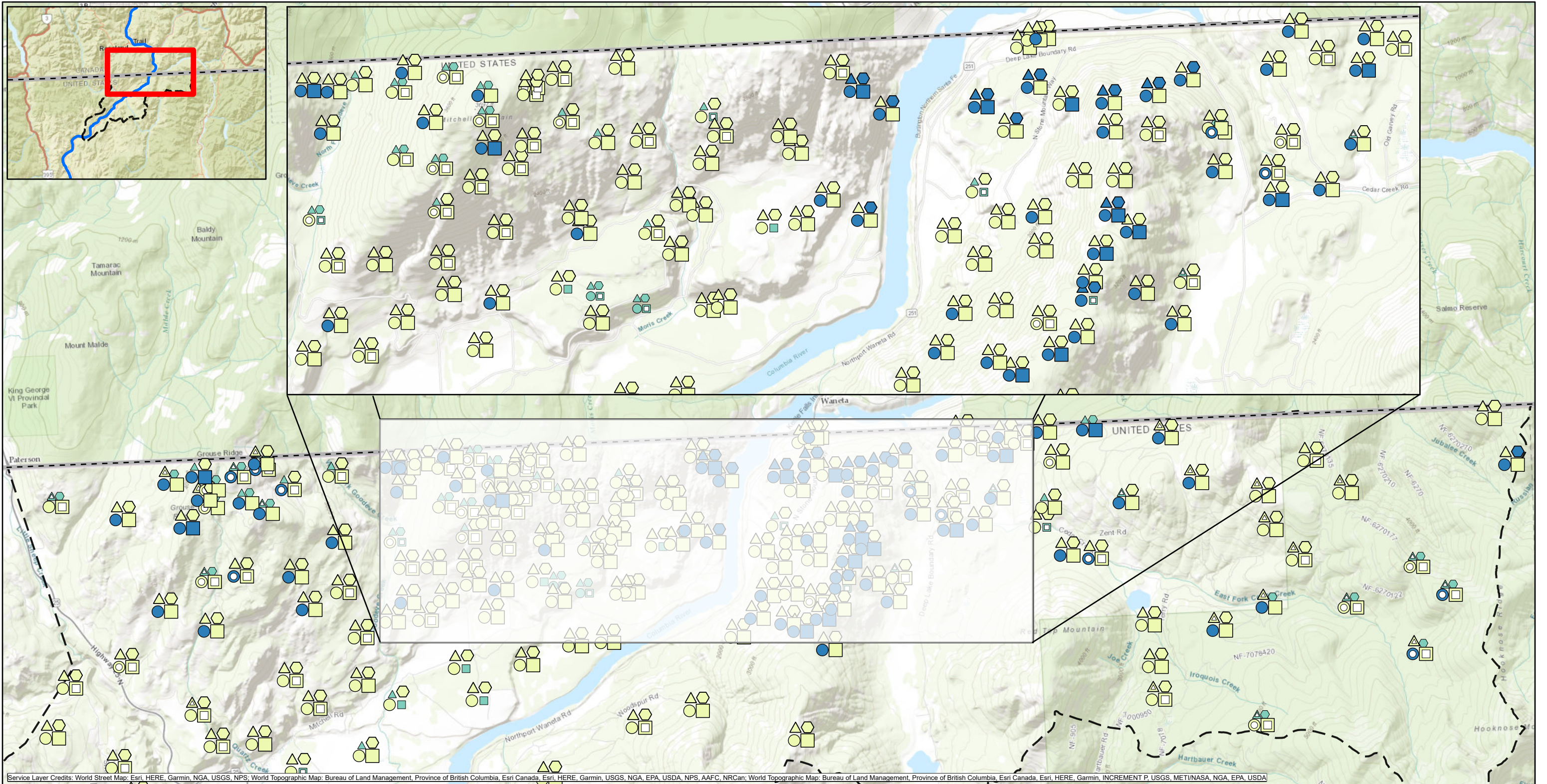
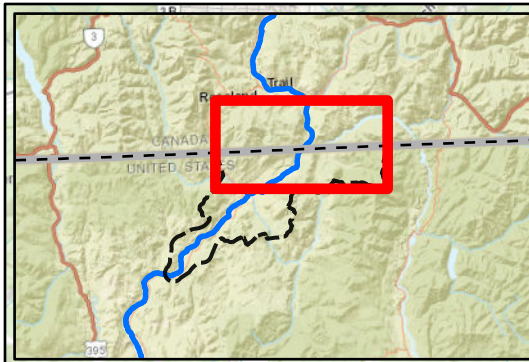
- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



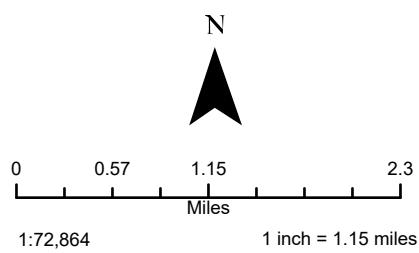
Note: For each receptor group and endpoint, the maximum HQ among COC concentrations exceeding the BTV is shown; if no COC concentrations exceed the BTV, then the maximum HQ among COC concentrations less than the BTV is shown.

MAP 10-10a. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



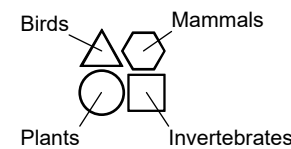
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and ≤ BTV
- HQ ≥ 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

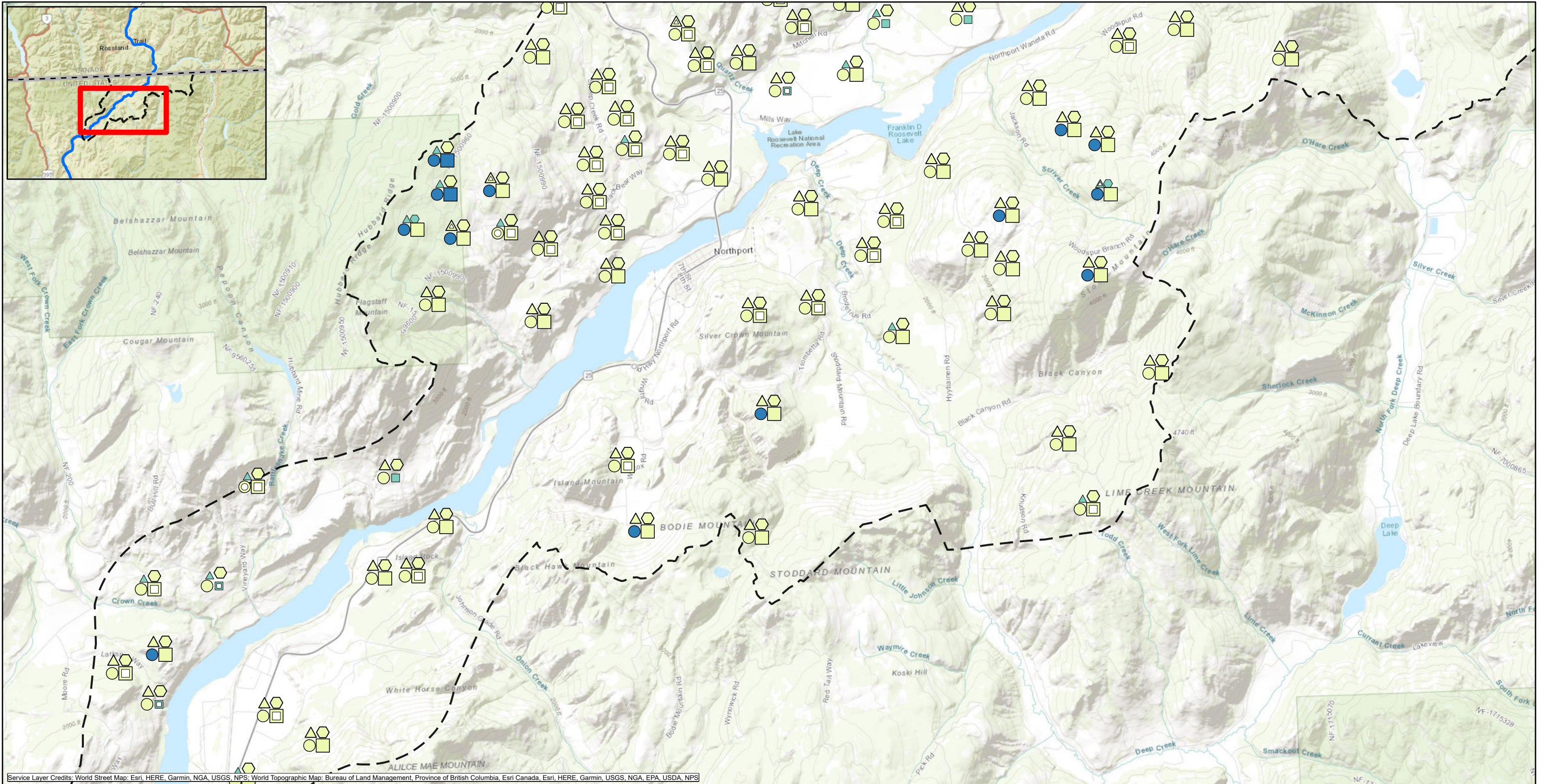
- Birds HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Mammals HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

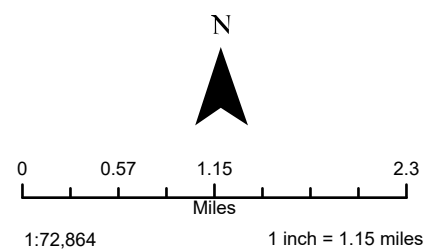


MAP 10-10b. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



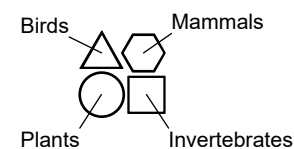
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ ≥ 1 and HQ < 5 and \le BTV
- HQ ≥ 1 and HQ < 5 and $>$ BTV
- HQ ≥ 5 and $>$ BTV

- Invertebrates HQ**
- HQ < 1 and \le BTV
- HQ < 1 and $>$ BTV
- HQ ≥ 1 and HQ < 5 and \le BTV
- HQ ≥ 1 and HQ < 5 and $>$ BTV
- HQ ≥ 5 and $>$ BTV

- Birds HQ**
- HQ < 1 and \le BTV
- HQ < 1 and $>$ BTV
- HQ ≥ 1 and HQ < 5 and \le BTV
- HQ ≥ 1 and HQ < 5 and $>$ BTV

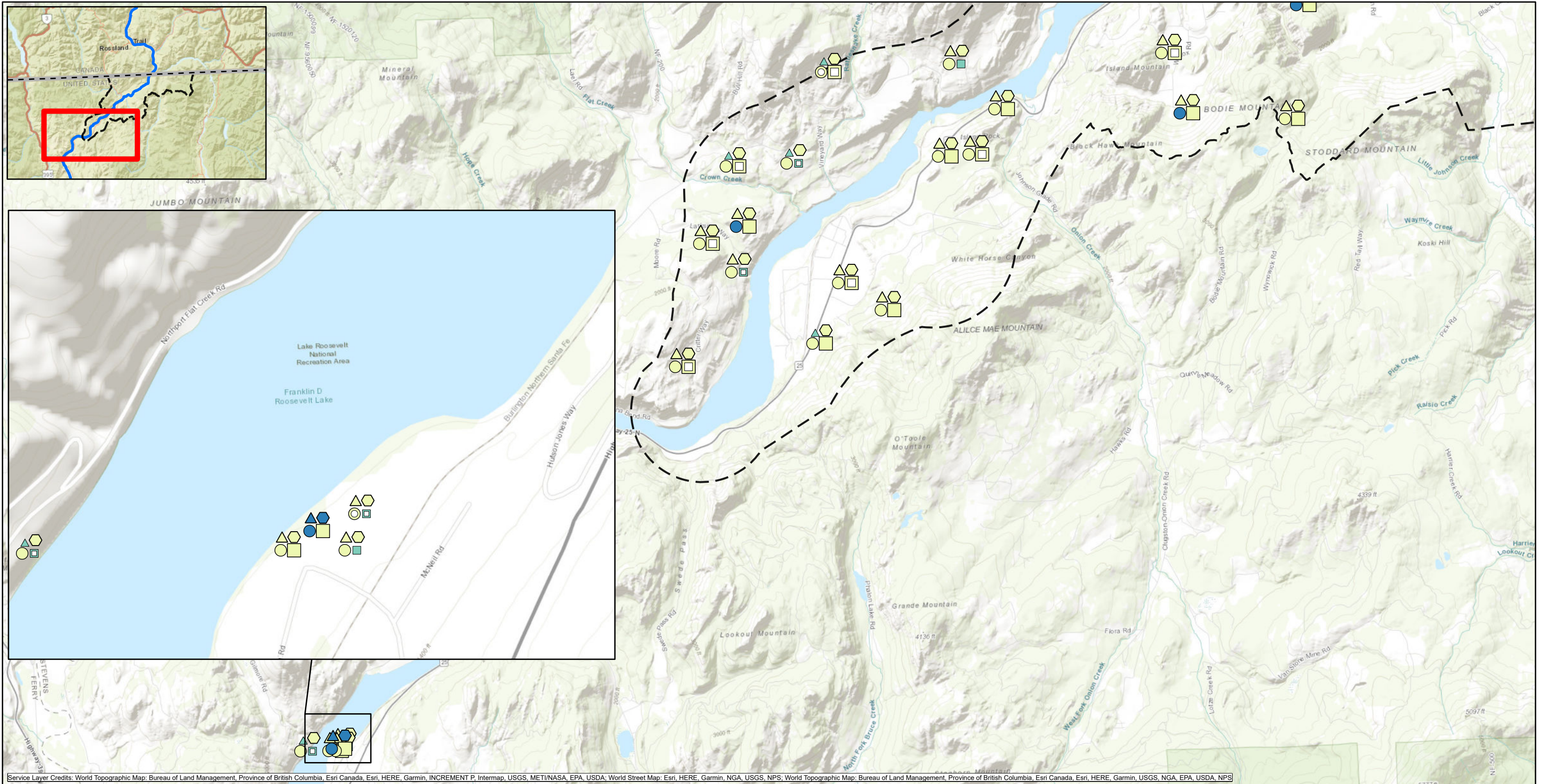
- Mammals HQ**
- HQ < 1 and $>$ BTV
- HQ ≥ 1 and HQ < 5 and $>$ BTV



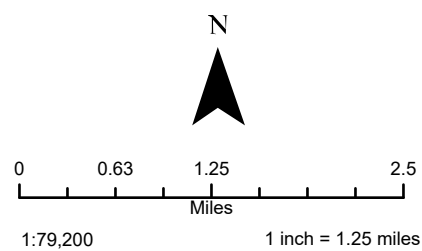
Note: For each receptor group and endpoint, the maximum HQ among COC concentrations exceeding the BTV is shown; if no COC concentrations exceed the BTV, then the maximum HQ among COC concentrations less than the BTV is shown.

MAP 10-10c. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington



Service Layer Credits: World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA; World Street Map: Esri, HERE, Garmin, NGA, USGS, NPS; World Topographic Map: Bureau of Land Management, Province of British Columbia, Esri Canada, Esri, HERE, Garmin, USGS, NGA, EPA, USDA, NPS



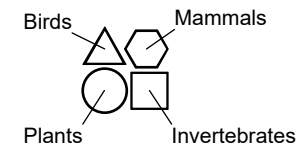
LEGEND

- Aerial deposition area as defined in 2014 UCR Upland Soil Study QAPP (TAI 2014a)
- Plants HQ**
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Invertebrates HQ**
- HQ < 1 and ≤ BTV
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and ≤ BTV
- HQ ≥ 1 and HQ < 5 and > BTV

- Birds HQ**
- HQ < 1 and > BTV
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV

- Mammals HQ**
- HQ ≥ 1 and HQ < 5 and > BTV
- HQ ≥ 5 and > BTV



Note: For each receptor group and endpoint, the maximum HQ among COC concentrations exceeding the BTV is shown; if no COC concentrations exceed the BTV, then the maximum HQ among COC concentrations less than the BTV is shown.

MAP 10-10d. Summary of Maximum HQs Among All COCs for Each Receptor Group

Final Upland BERA
Upper Columbia River, Washington