

Aquatic Habitat Conservation Plan and Candidate Conservation Agreement with Assurances



FINAL

October 2006 • Volume 1 (Oversize Maps)

Aquatic Habitat Conservation Plan and Candidate Conservation Agreement with Assurances

Prepared for:

National Marine Fisheries Service
U.S. Fish and Wildlife Service

Prepared by:



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NOTE: All maps present Green Diamond's ownership and the Initial Plan Area based on the ownership in April 2005.

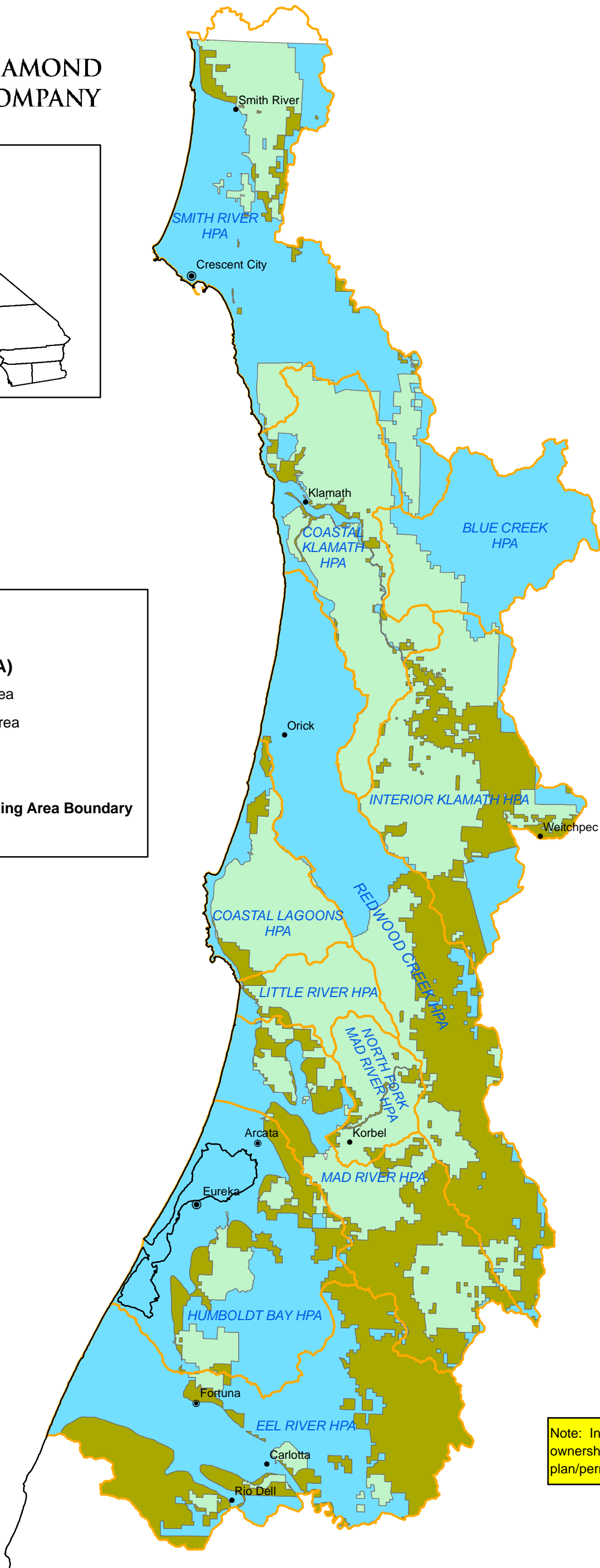
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Legend

Eligible Plan Area (EPA)

- Initial Plan Area
- Adjustment Area

Non-EPA

- Non-EPA
- Hydrographic Planning Area Boundary

Note: Initial Plan Area based on 2005 ownership; map will be updated upon plan/permit approval.

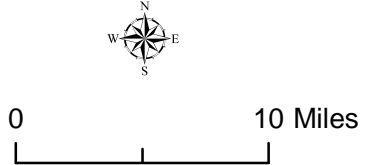
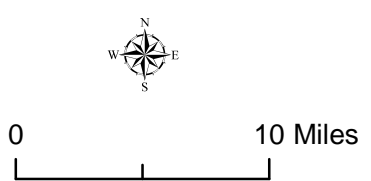
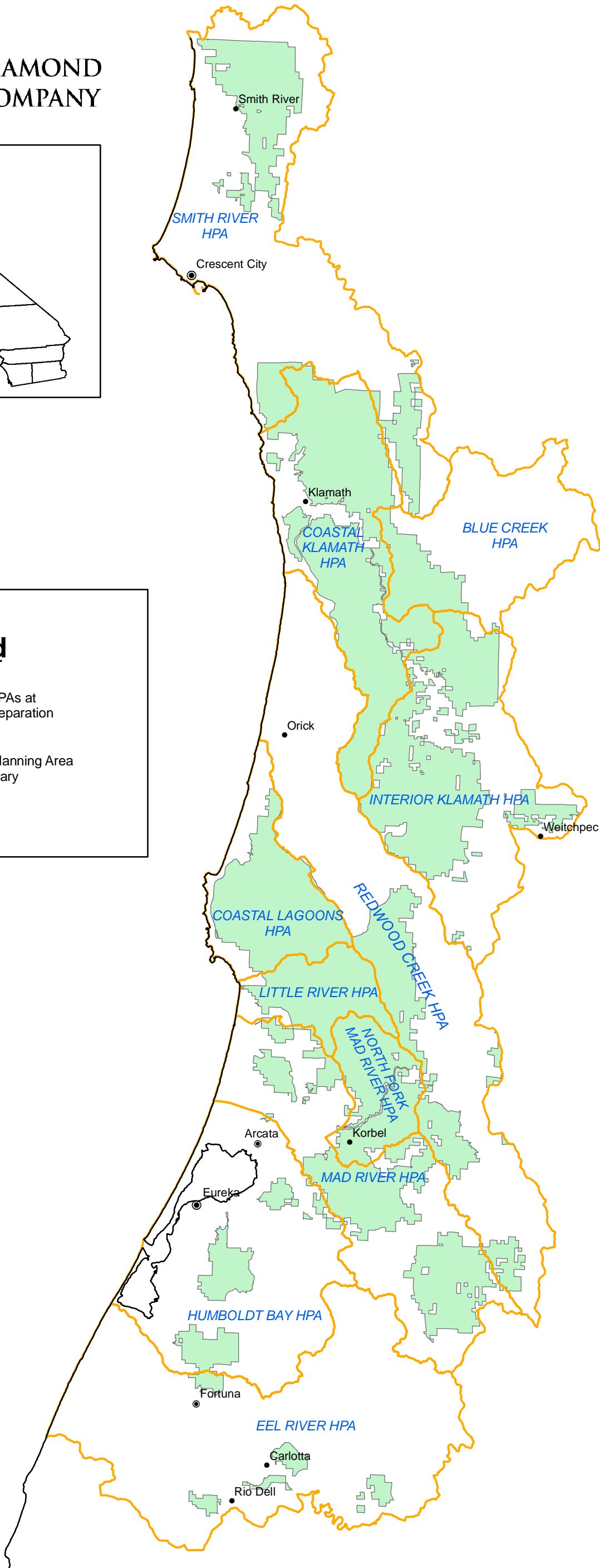


Figure S-1. Hydrographic Planning Areas, Initial Plan Area, and Adjustment Area



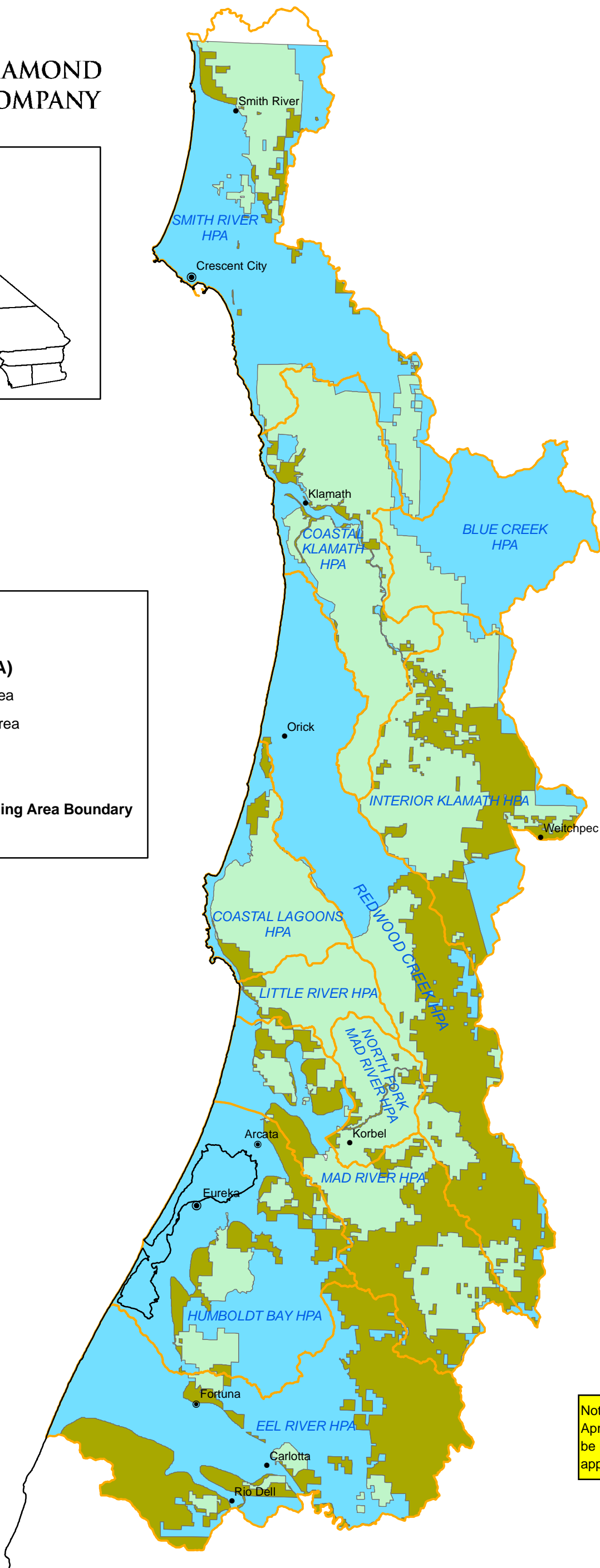
Legend

- Ownership in HPAs at Time of Plan Preparation
- Hydrographic Planning Area Boundary



Note: ownership as of April 2005; map will be updated upon plan/permit approval.

Figure 1-1. Hydrographic Planning Areas and Initial Plan Area



Legend

Eligible Plan Area (EPA)

- Initial Plan Area
- Adjustment Area

Non-EPA

- Non-EPA
- Hydrographic Planning Area Boundary

Note: Initial Plan Area based on April 2005 ownership; map will be updated upon plan/permit approval.

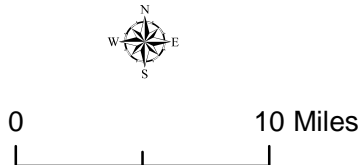


Figure 1-2. Eligible Plan Area. (The Initial Plan Area and Adjustment Area constitute the Eligible Plan Area.)

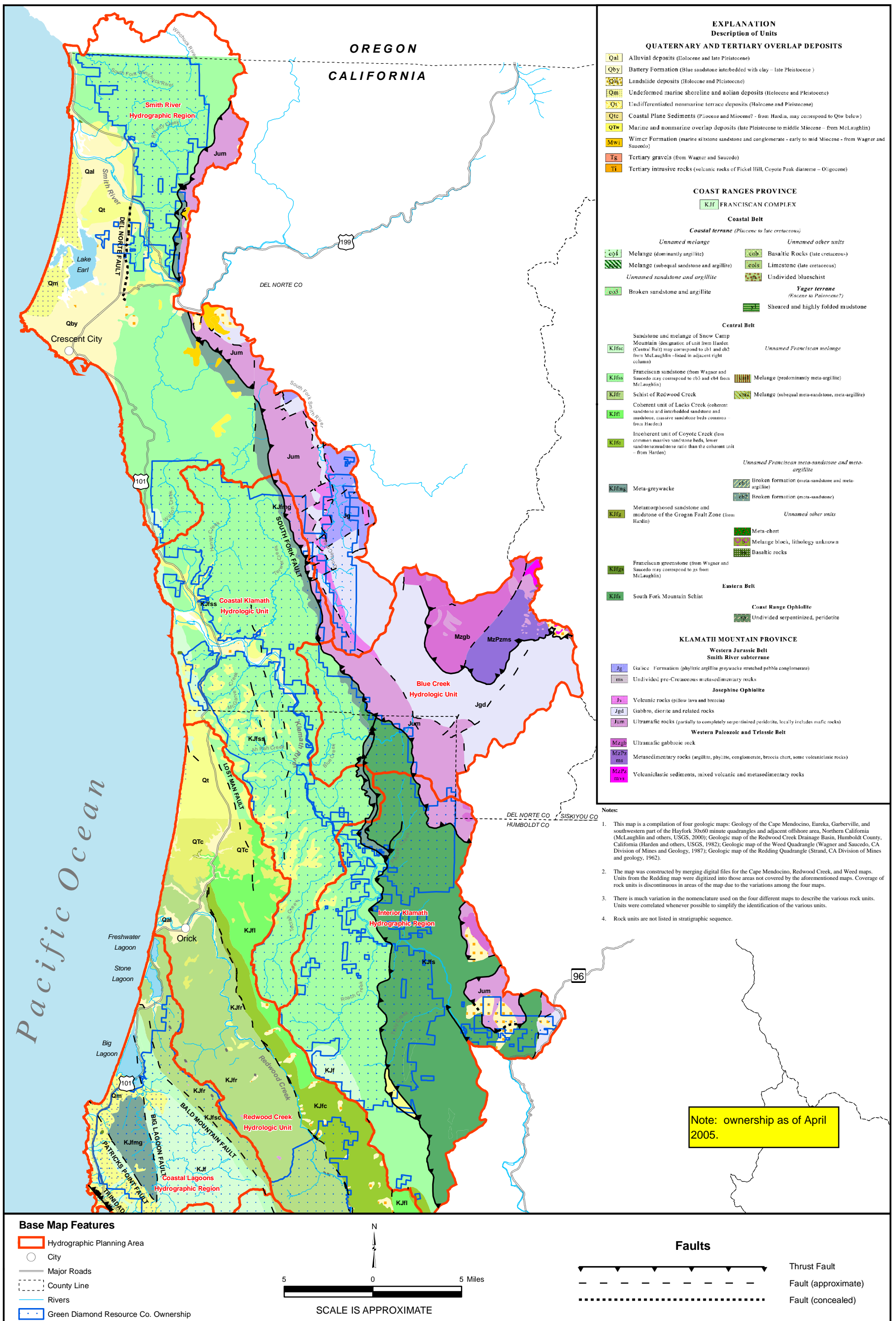


Figure 4-1(A). Geologic map of the HPAs and Original Assessed Ownership.

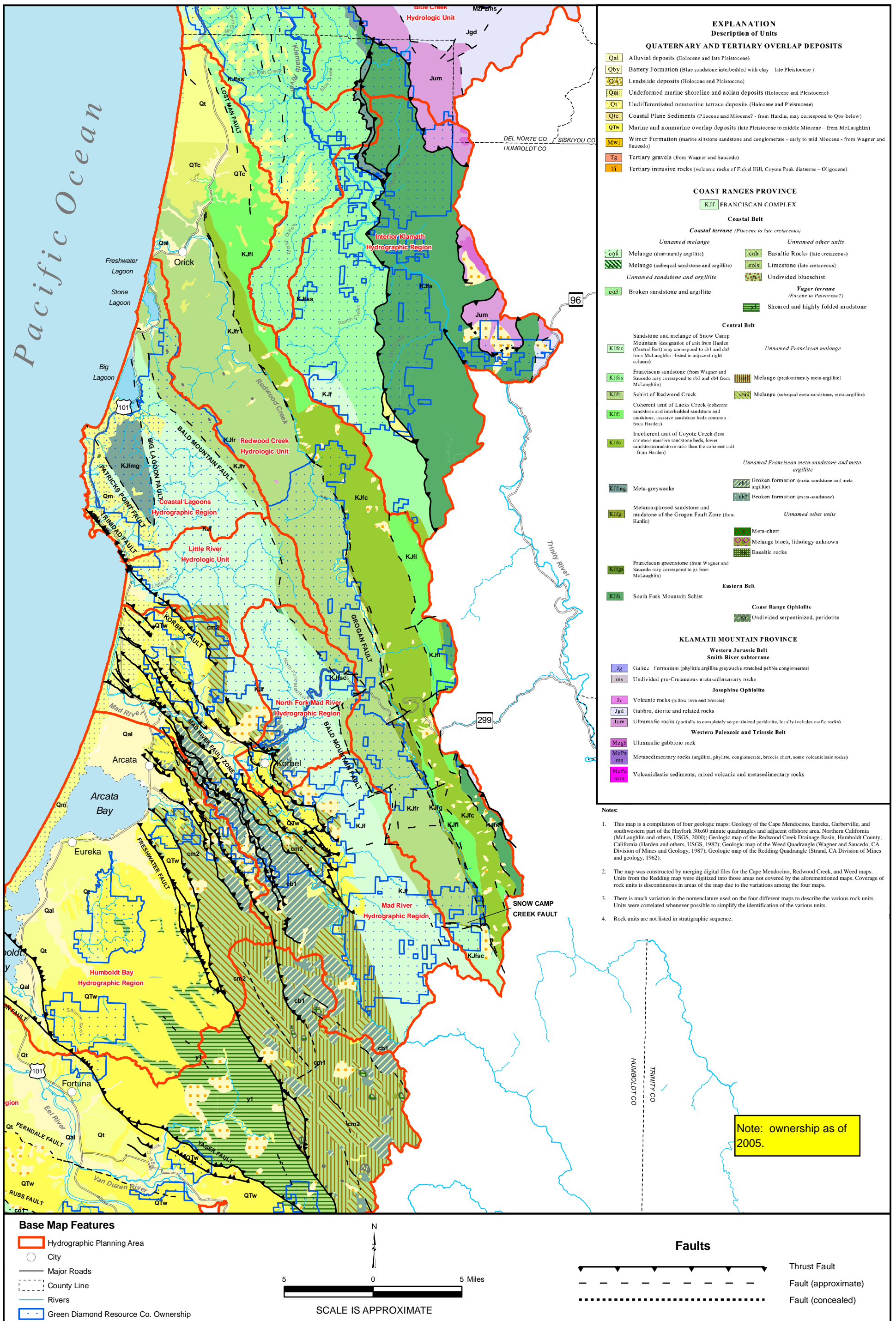


Figure 4-1(B). Geologic map of the HPAs and Original Assessed Ownership.

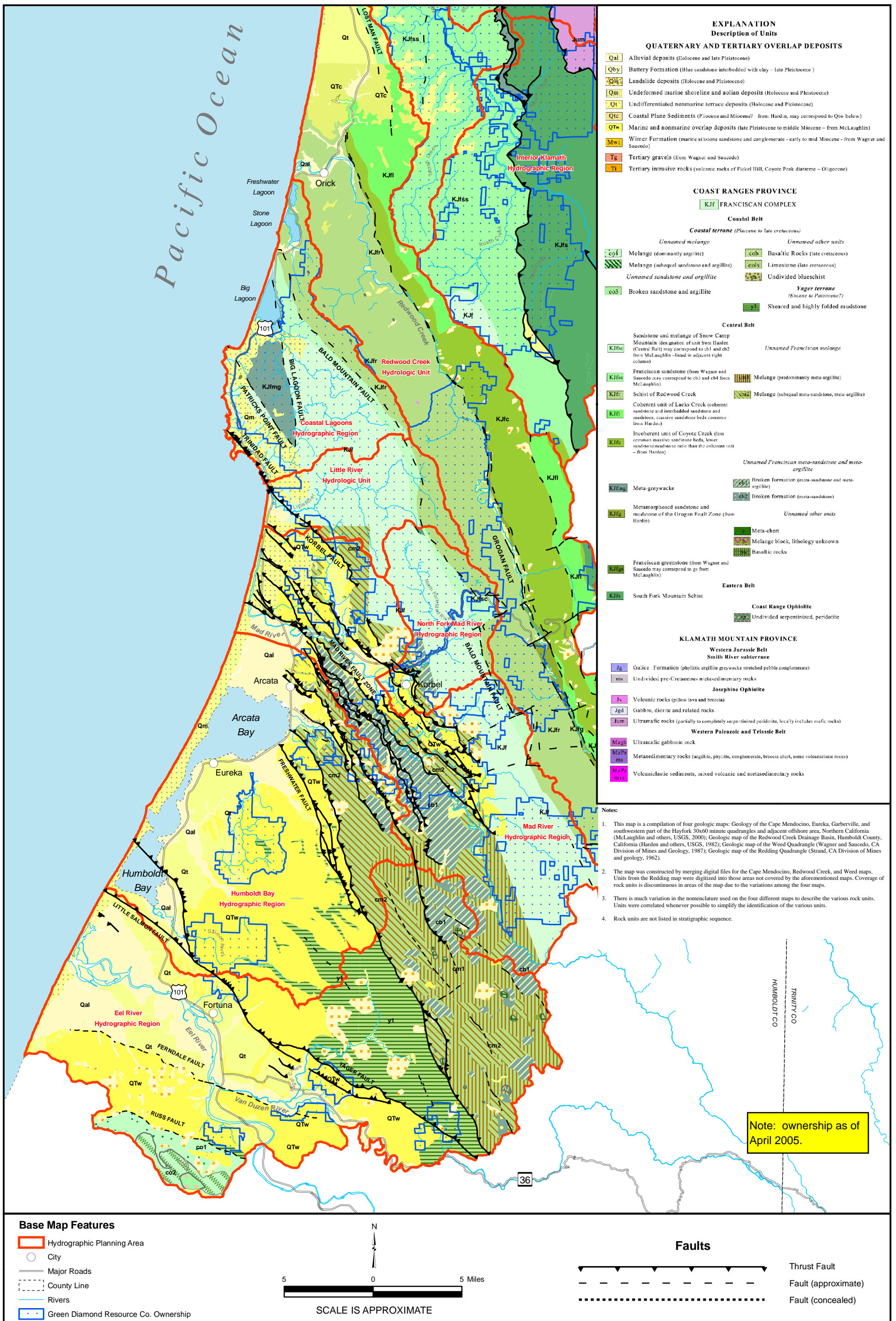


Figure 4-1(C). Geologic map of the HPAs and Original Assessed Ownership.

EXPLANATION
Description of Units

QUATERNARY AND TERTIARY OVERLAP DEPOSITS

- Qal Alluvial deposits (Holocene and late Pleistocene)
- Qby Battery Formation (Blue sandstone interbedded with clay – late Pleistocene)
- Qls Landslide deposits (Holocene and Pleistocene)
- Qm Undeformed marine shoreline and aolian deposits (Holocene and Pleistocene)
- Qt Undifferentiated nonmarine terrace deposits (Holocene and Pleistocene)
- Qtc Coastal Plane Sediments (Pliocene and Miocene? - from Hardin, may correspond to Qtw below)
- QTw Marine and nonmarine overlap deposits (late Pleistocene to middle Miocene – from McLaughlin)
- Mwi Wimer Formation (marine siltstone sandstone and conglomerate - early to mid Miocene - from Wagner and Saucedo)
- Tg Tertiary gravels (from Wagner and Saucedo)
- Ti Tertiary intrusive rocks (volcanic rocks of Fickel Hill, Coyote Peak diatreme – Oligocene)

COAST RANGES PROVINCE

KJf FRANCISCAN COMPLEX

Coastal Belt

Coastal terrane (Pliocene to late cretaceous)

Unnamed melange

- cob1 Melange (dominantly argillite)
- cob2 Melange (subequal sandstone and argillite)

Unnamed sandstone and argillite

- co3 Broken sandstone and argillite

Unnamed other units

- cob Basaltic Rocks (late cretaceous)
- cols Limestone (late cretaceous)
- un Undivided blueschist

Yager terrane

(Eocene to Paleocene?)

- yl Sheared and highly folded mudstone

Central Belt

- KJfsc Sandstone and melange of Snow Camp Mountain (designation of unit from Harden (Central Belt) may correspond to cb1 and cb2 from McLaughlin –listed in adjacent right column)

Unnamed Franciscan melange

- KJfss Franciscan sandstone (from Wagner and Saucedo may correspond to cb3 and cb4 from McLaughlin)

- un1 Melange (predominantly meta-argillite)

- KJfr Schist of Redwood Creek

- cm2 Melange (subequal meta-sandstone, meta-argillite)

- KJfl Coherent unit of Lacks Creek (coherent sandstone and interbedded sandstone and mudstone, massive sandstone beds common – from Harden)

- KJfc Incoherent unit of Coyote Creek (less common massive sandstone beds, lower sandstone:mudstone ratio than the coherent unit – from Harden)

Unnamed Franciscan meta-sandstone and meta-argillite

- KJfmg Meta-greywacke

- cb1 Broken formation (meta-sandstone and meta-argillite)
- cb2 Broken formation (meta-sandstone)

- KJfg Metamorphosed sandstone and mudstone of the Grogan Fault Zone (from Harden)

Unnamed other units

- c Meta-chert
- b Melange block, lithology unknown
- br Basaltic rocks

- KJfgs Franciscan greenstone (from Wagner and Saucedo may correspond to gs from McLaughlin)

Eastern Belt

- KJfs South Fork Mountain Schist

Coast Range Ophiolite

- sp Undivided serpentized, peridotite

KLAMATH MOUNTAIN PROVINCE

Western Jurassic Belt

Smith River subterrane

- Jg Galice Formation (phylitic argillite greywacke stretched pebble conglomerate)
- ms Undivided pre-Cretaceous metasedimentary rocks

Josephine Ophiolite

- Jv Volcanic rocks (pillow lava and breccia)
- Jgd Gabbro, diorite and related rocks
- Jum Ultramafic rocks (partially to completely serpentized peridotite, locally includes mafic rocks)

Western Paleozoic and Triassic Belt

- Mzgb Ultramafic gabbroic rock
- MzPzms Metasedimentary rocks (argillite, phyllite, conglomerate, breccia chert, some volcanoclastic rocks)
- MzPzmvs Volcanoclastic sediments, mixed volcanic and metasedimentary rocks

Figure 4-1(D). Legend for the geologic map of the HPAs and Original Assessed Ownership.

Smith River HPA

Amphibian and Fish Distribution Map

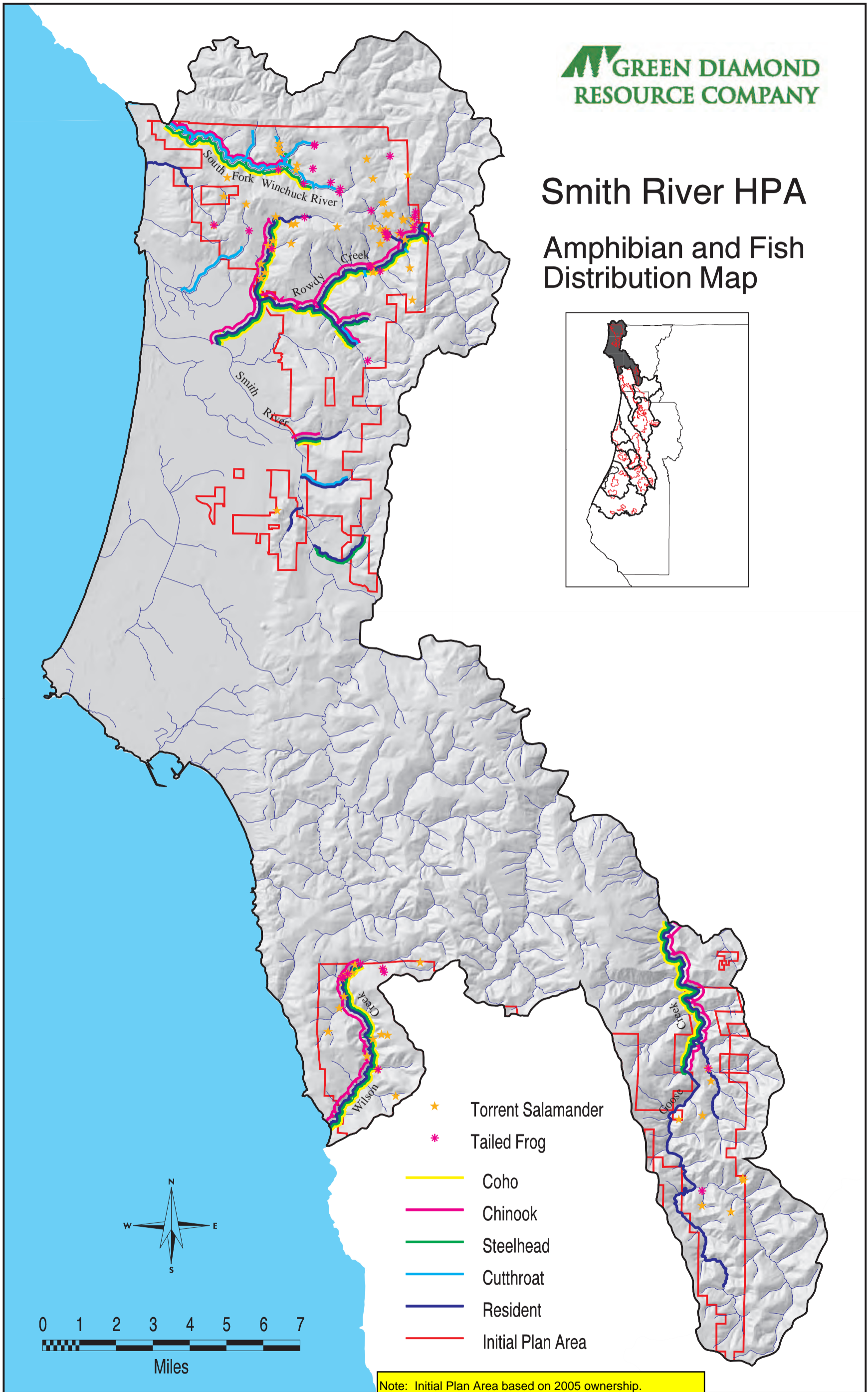
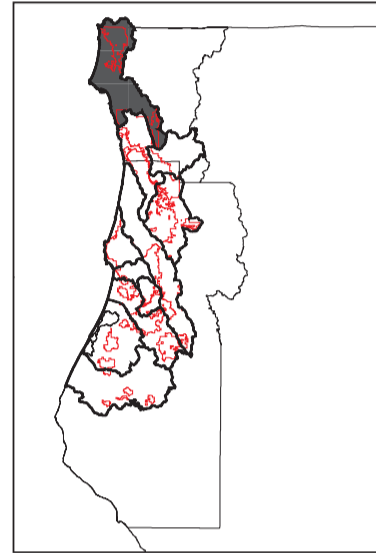
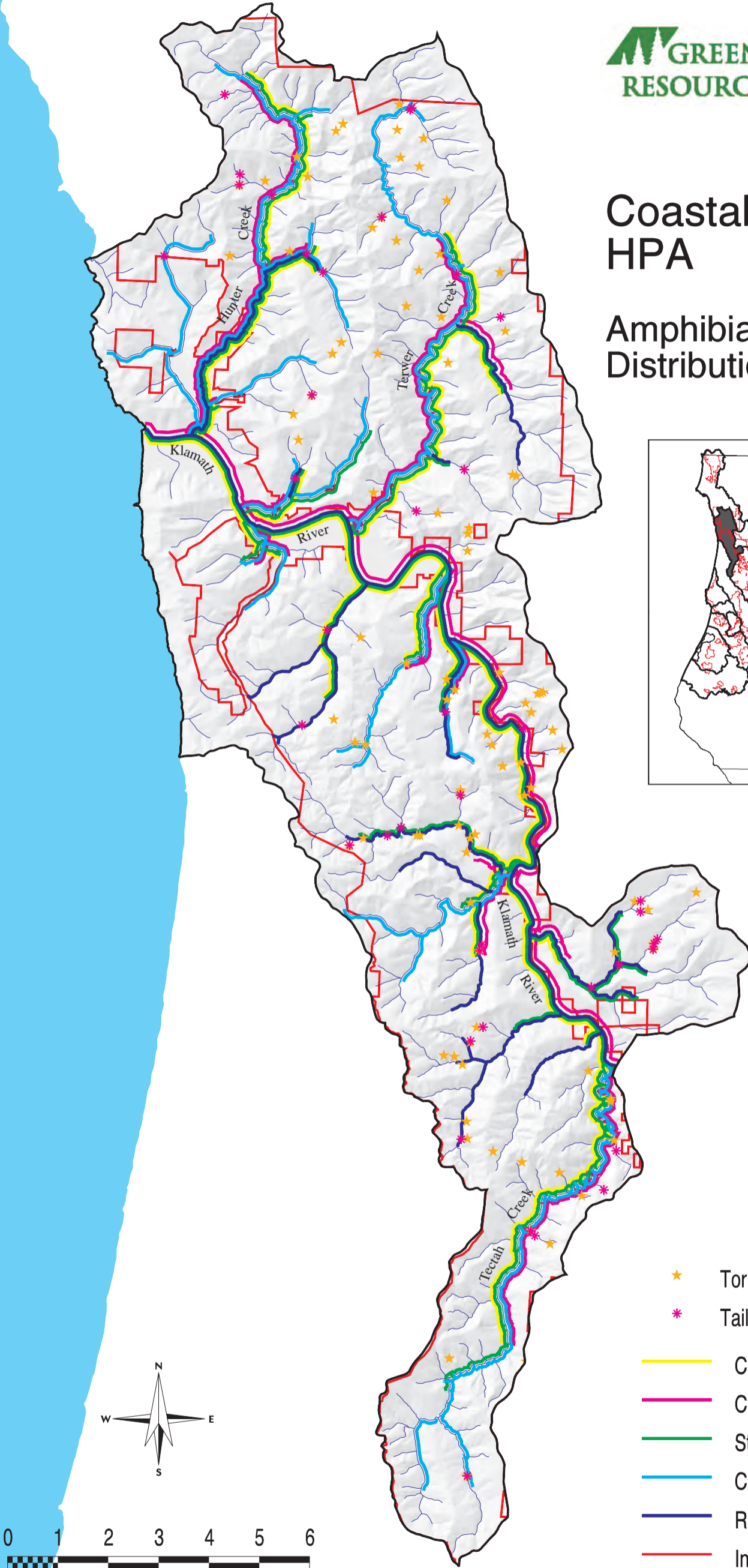
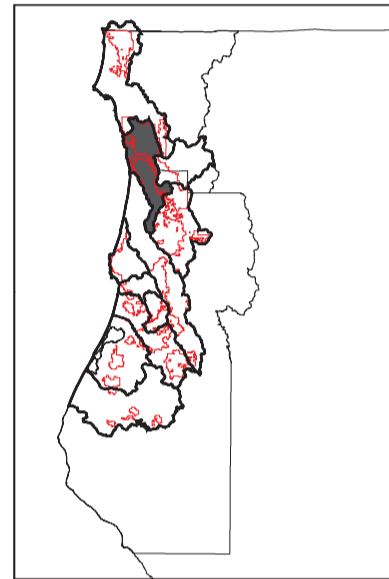


Figure 4-9. Recorded distribution of Covered Species in the Smith River HPA.

Coastal Klamath HPA

Amphibian and Fish Distribution Map



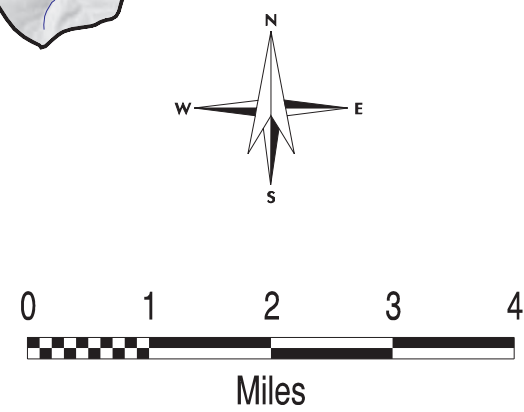
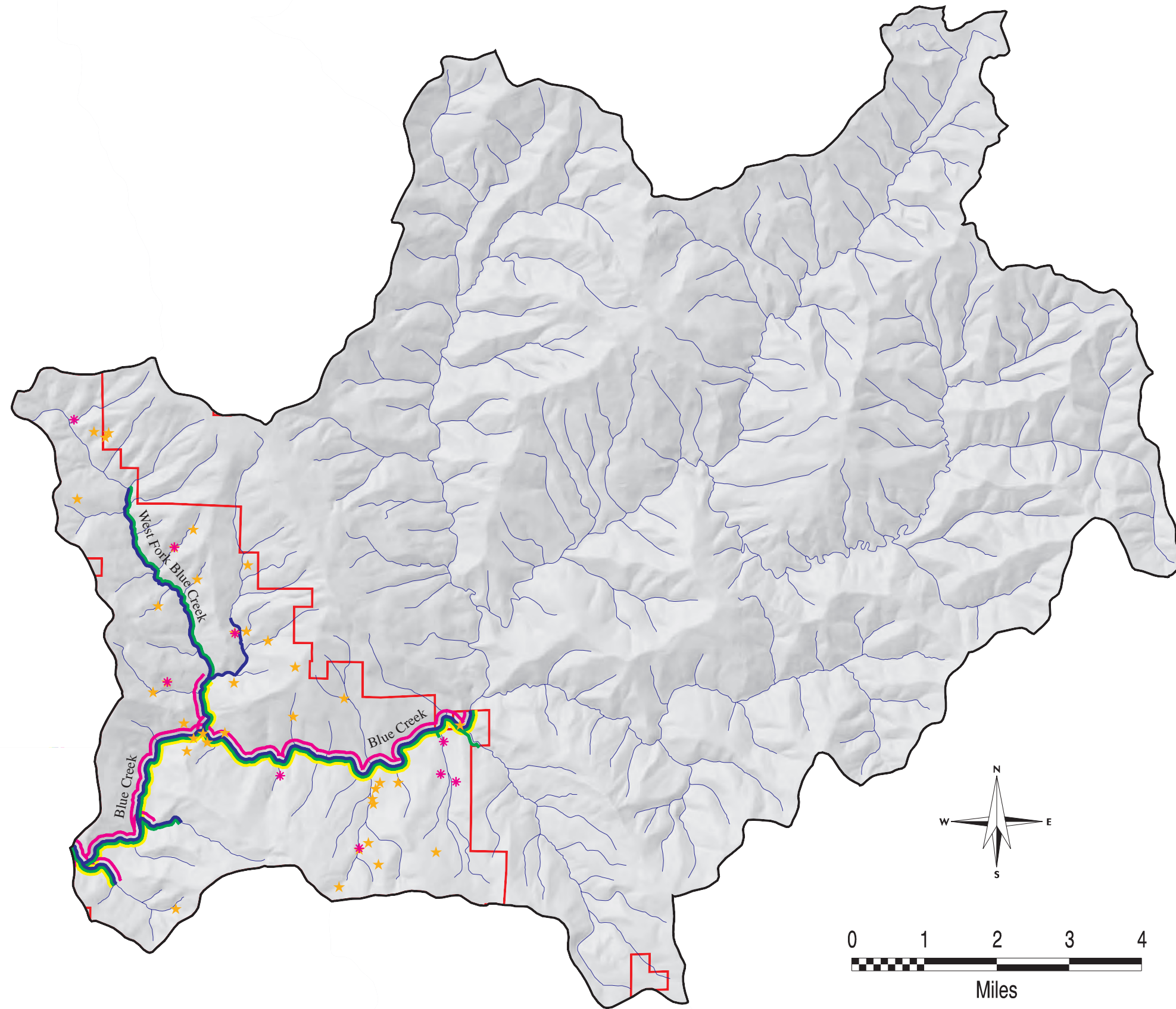
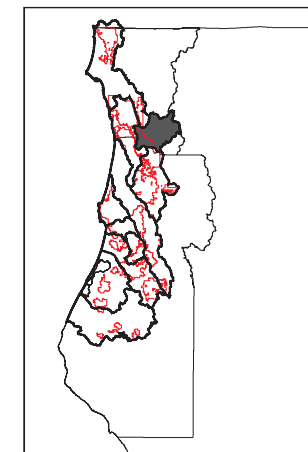
- ★ Torrent Salamander
- * Tailed Frog
- Coho
- Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area

Note: Initial Plan Area based on 2005 ownership.

Figure 4-14. Recorded distribution of Covered Species in the Coastal Klamath HPA.

Blue Creek HPA

Amphibian and Fish Distribution Map

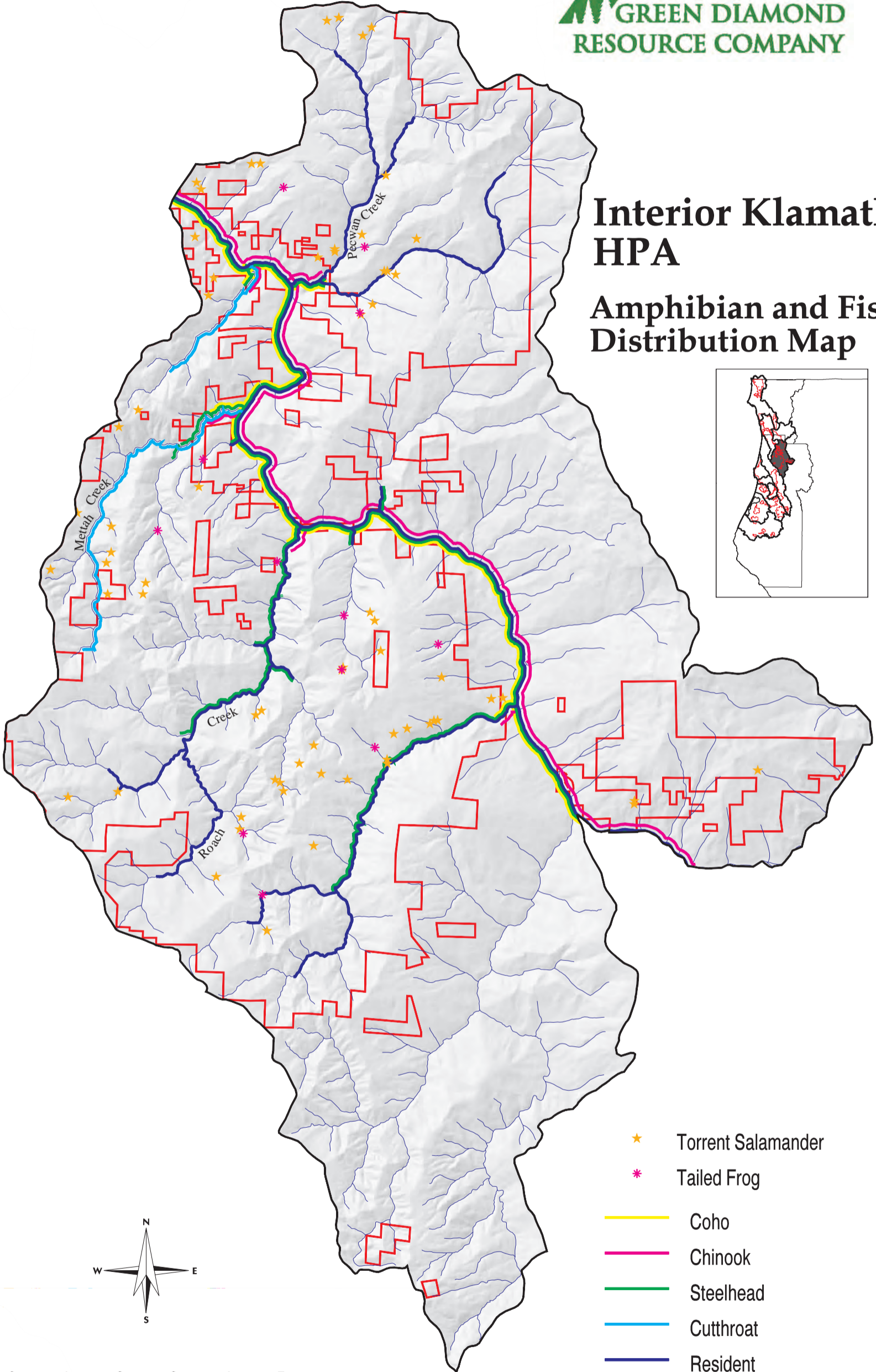
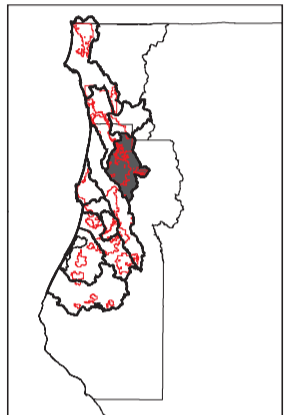


- ★ Torrent Salamander
- * Tailed Frog
- Coho
- Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area

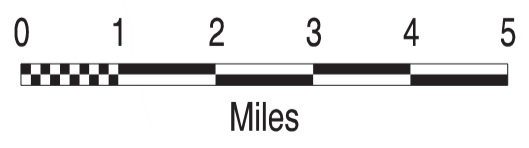
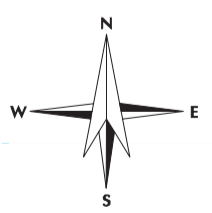
Note: Initial Plan Area based on 2005 ownership.

Figure 4-14. Recorded distribution of Covered Species in the Blue Creek HPA.

**Interior Klamath
HPA
Amphibian and Fish
Distribution Map**



- ★ Torrent Salamander
- * Tailed Frog
- Coho
- Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area



Note: Initial Plan Area based on 2005 ownership.

Figure 4-21. Recorded distribution of Covered Species in the Interior Klamath HPA.

Redwood Creek HPA

Amphibian and Fish Distribution Map

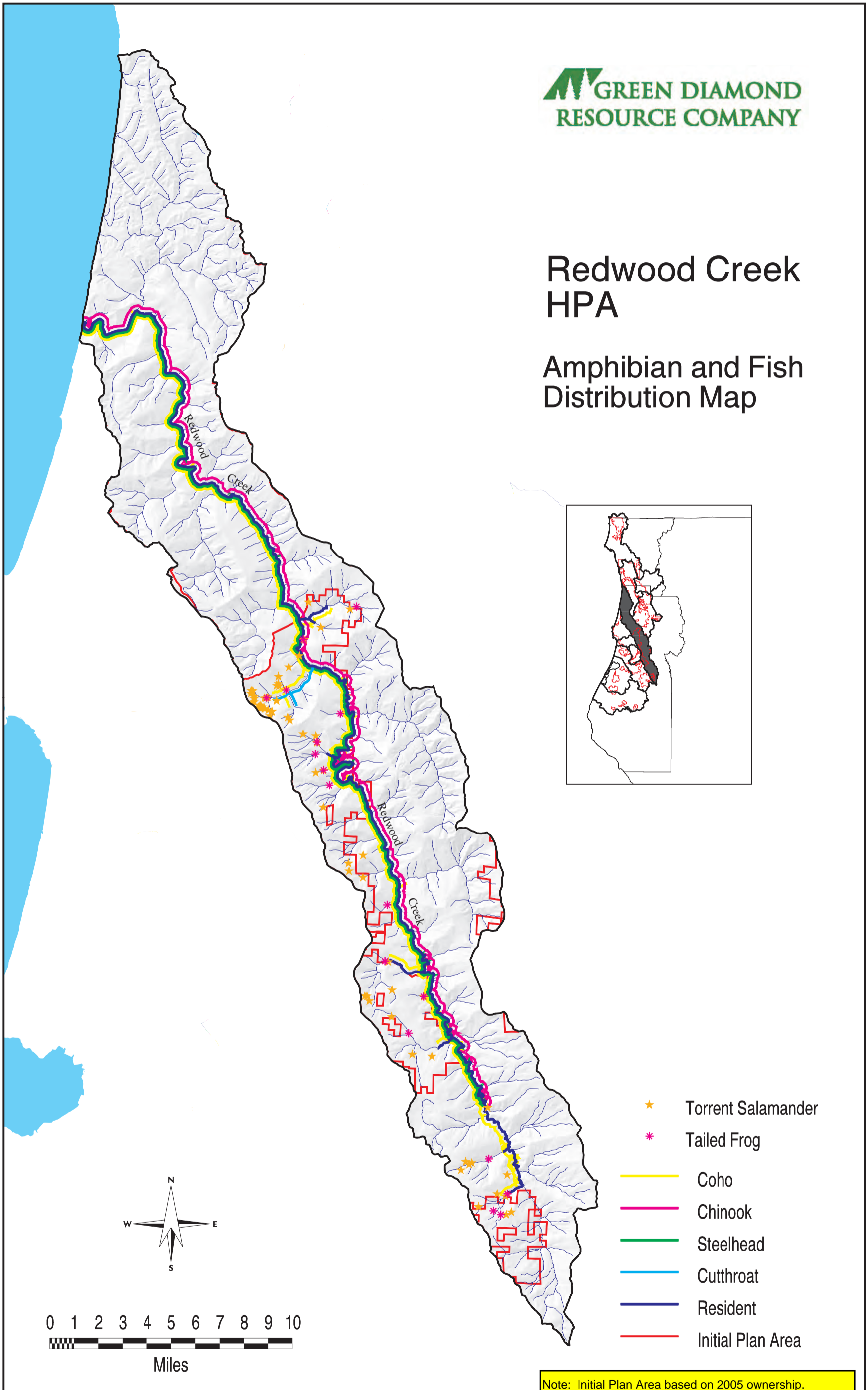
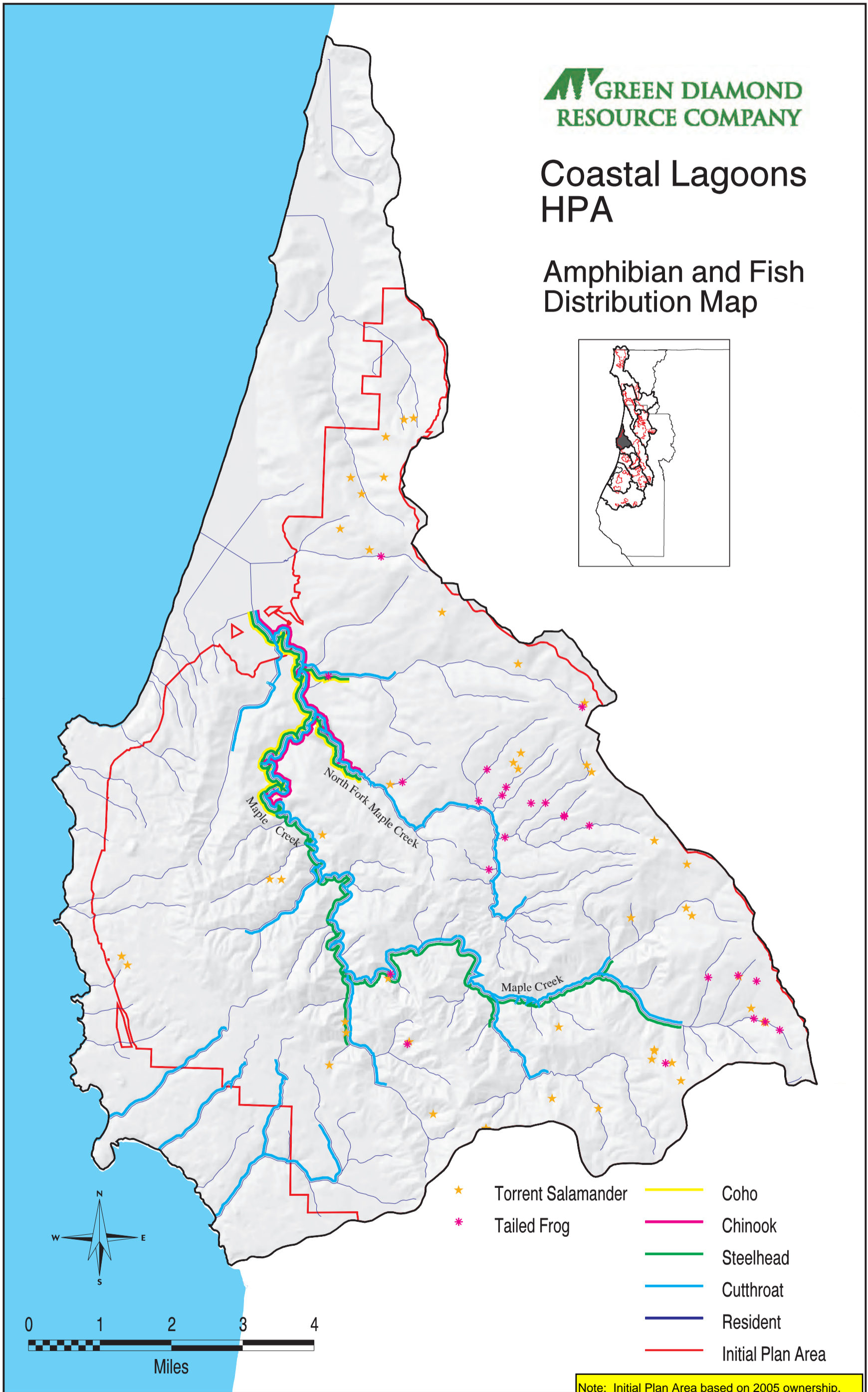
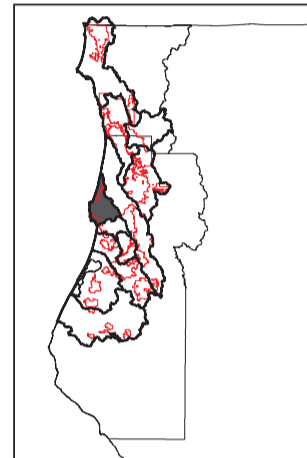


Figure 4-23. Recorded distribution of Covered Species in the Redwood Creek HPA.

Coastal Lagoons HPA

Amphibian and Fish Distribution Map



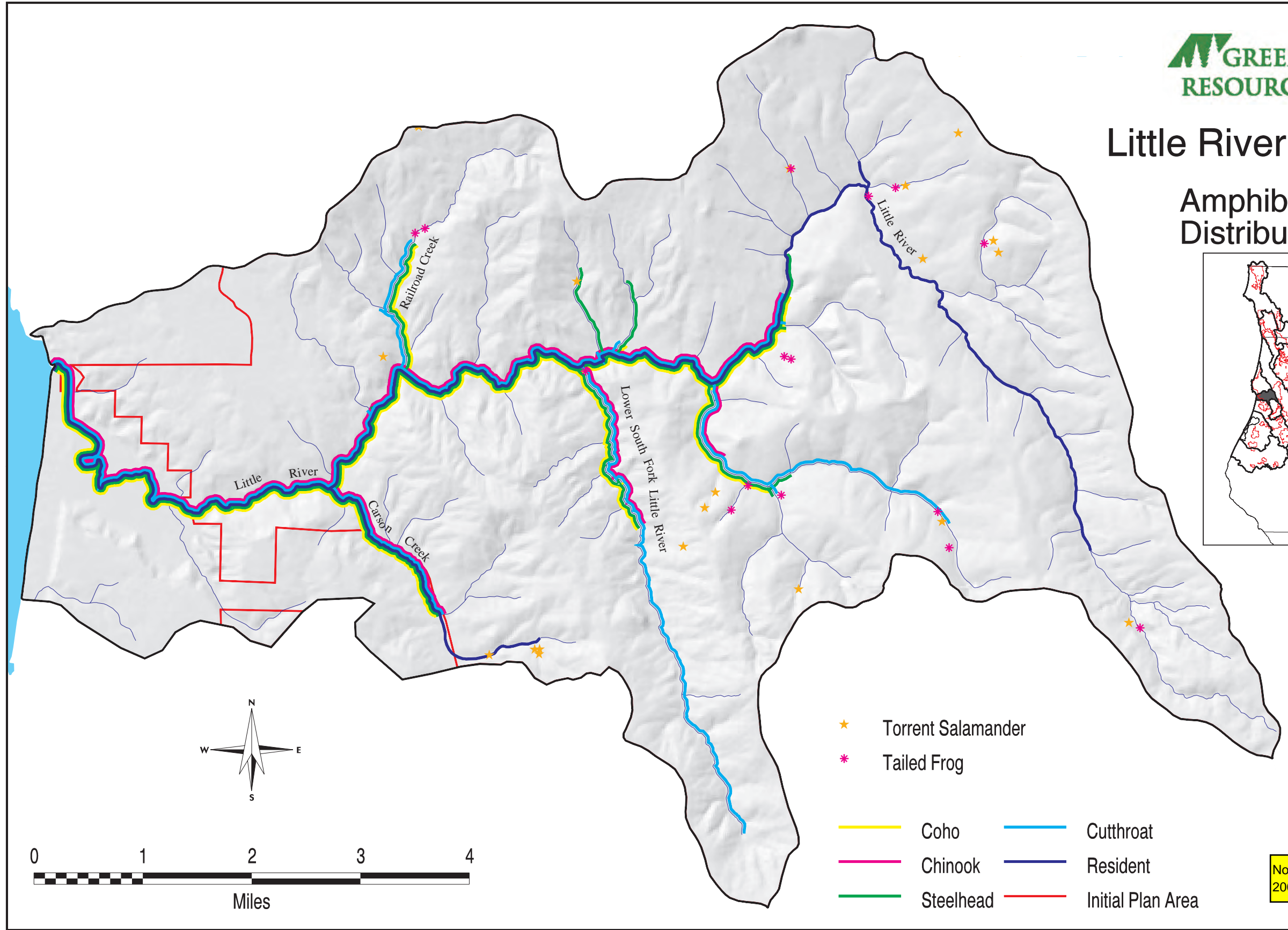
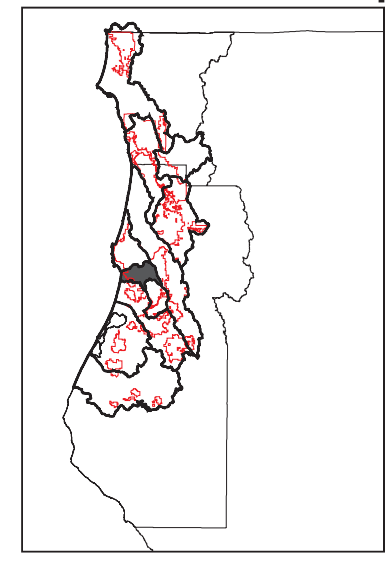
- ★ Torrent Salamander
- ★ Coho
- * Tailed Frog
- * Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area

Note: Initial Plan Area based on 2005 ownership.

Figure 4-25. Recorded distribution of Covered Species in the Coastal Lagoons HPA.

Little River Watershed

Amphibian and Fish Distribution Map



- ★ Torrent Salamander
- * Tailed Frog
- Coho
- Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area

Note: Initial Plan Area based on 2005 ownership.

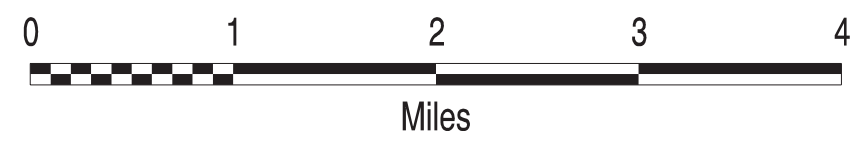
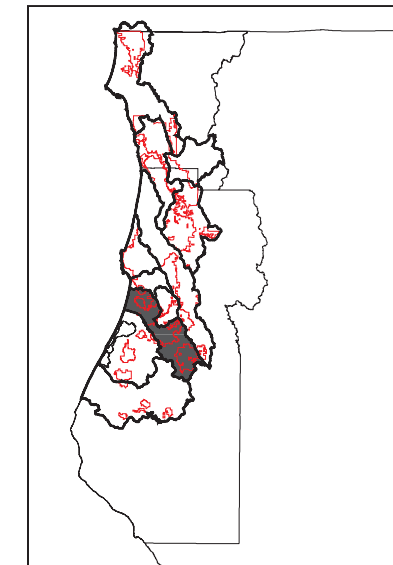


Figure 4-32. Recorded distribution of Covered Species in the Little River HPA.

Mad River HPA

Amphibian and Fish Distribution Map



- ★ Torrent Salamander
- * Tailed Frog
- Coho
- Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area

Note: Initial Plan Area based on 2005 ownership.

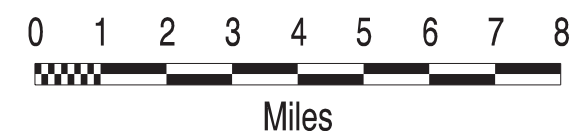
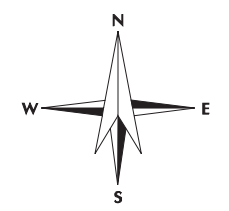
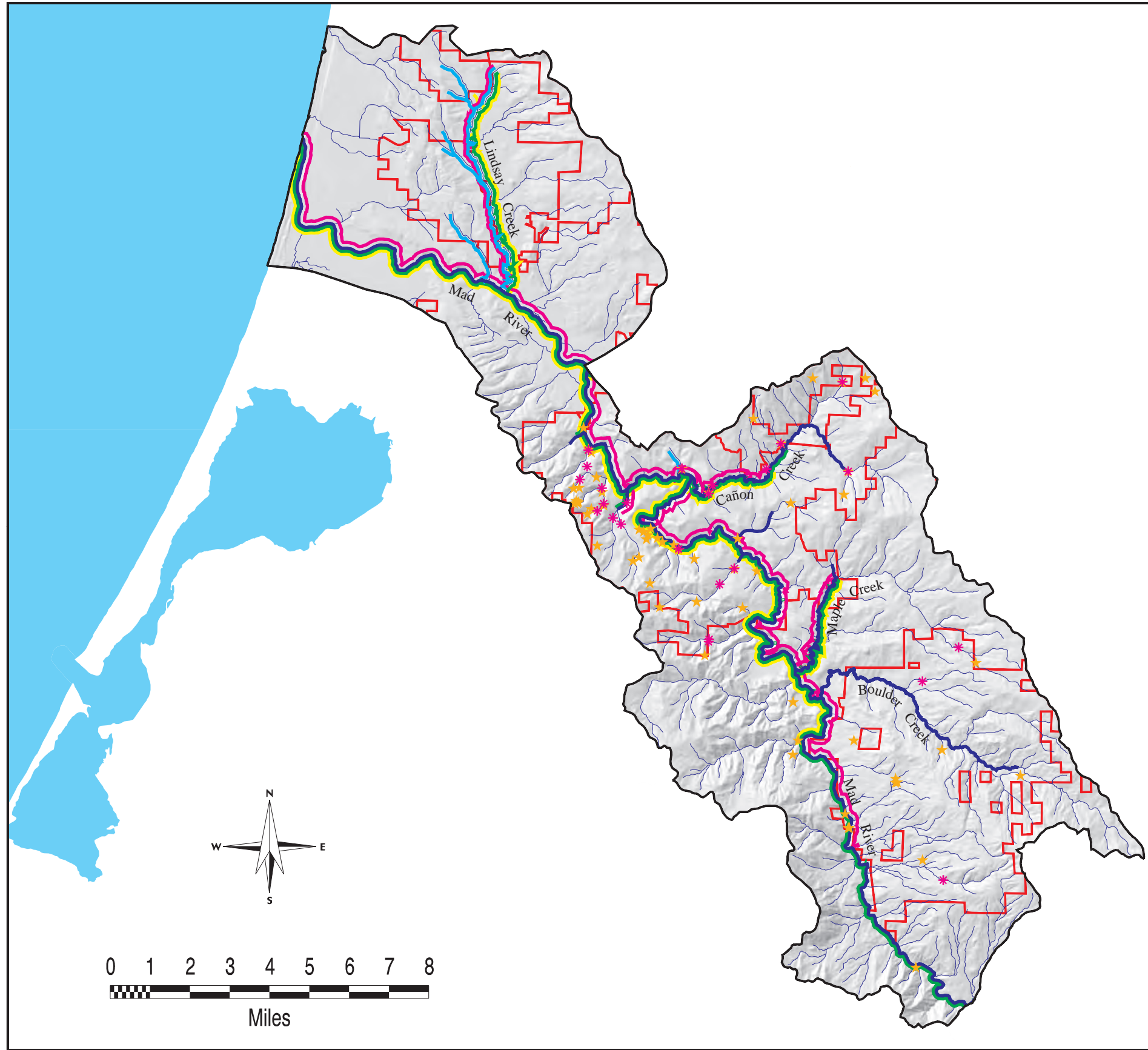


Figure 4-38. Recorded distribution of Covered Species in the Mad River HPA.

Amphibian and Fish Distribution Map

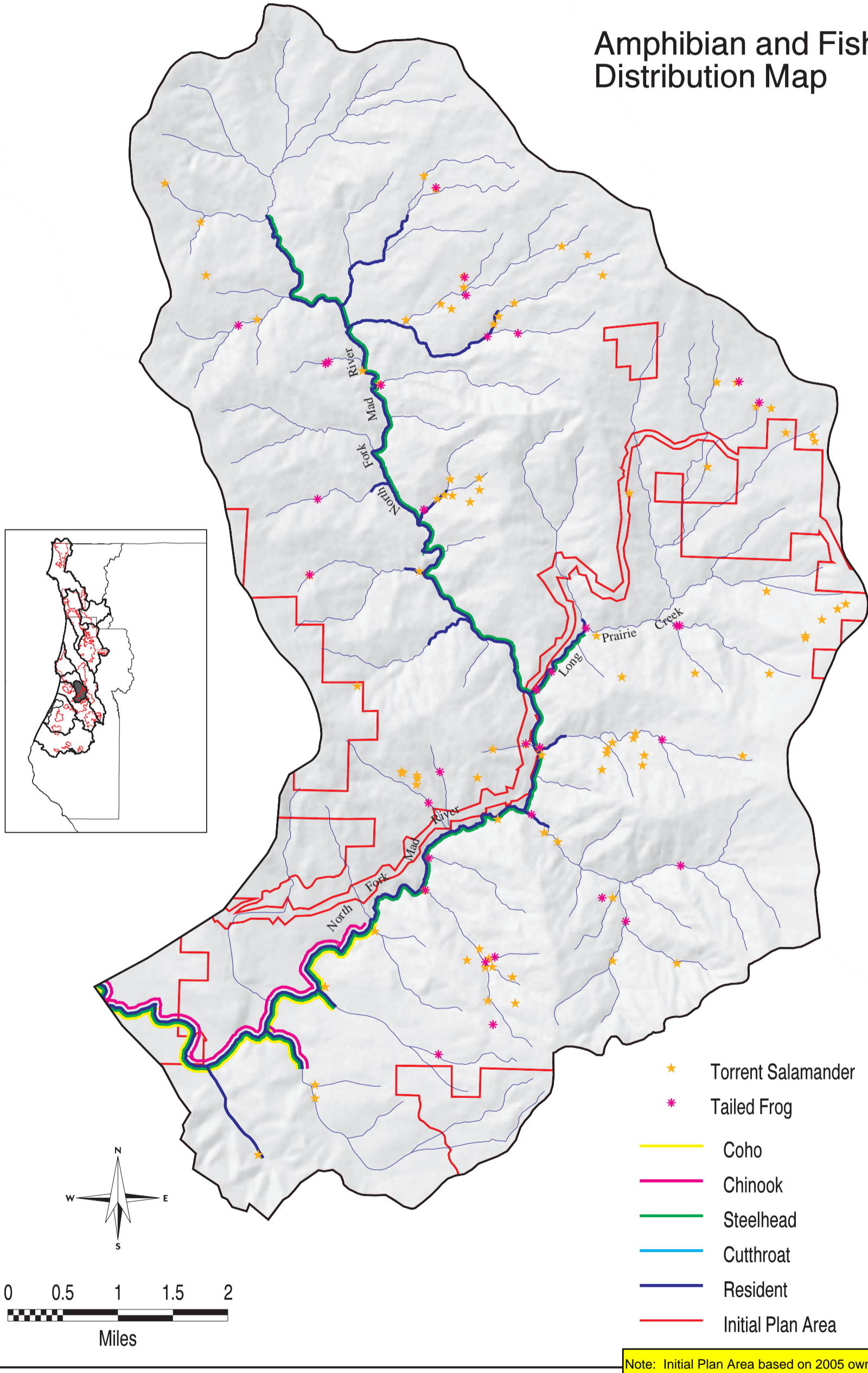
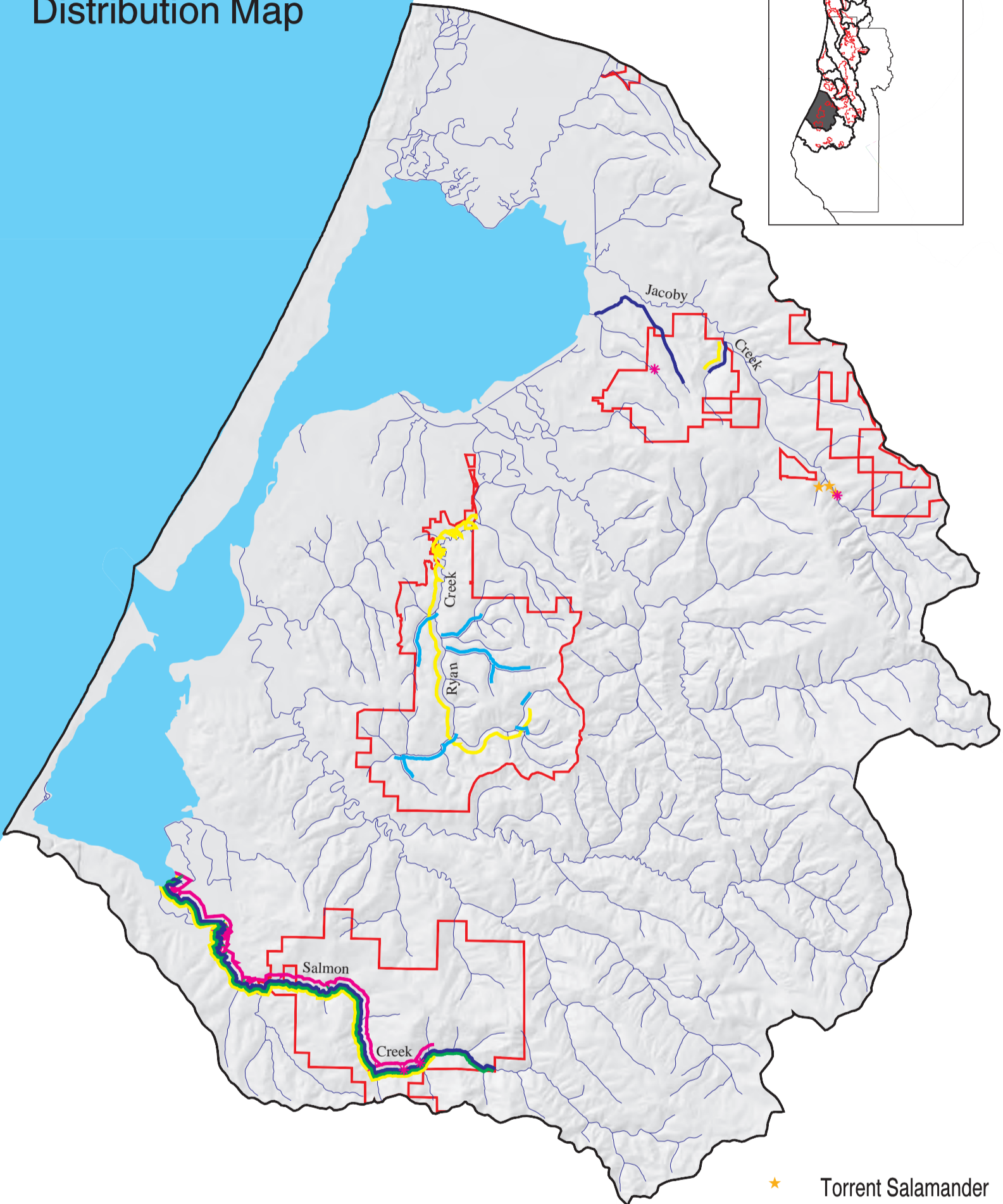
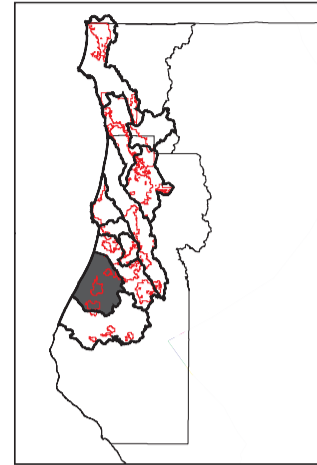


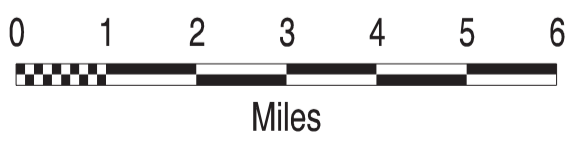
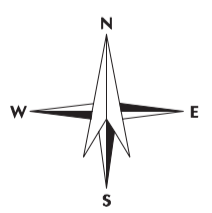
Figure 4-43. Recorded distribution of Covered Species in the North Fork Mad River HPA.

Humboldt Bay HPA

Amphibian and Fish Distribution Map



- ★ Torrent Salamander
- * Tailed Frog
- Coho
- Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area



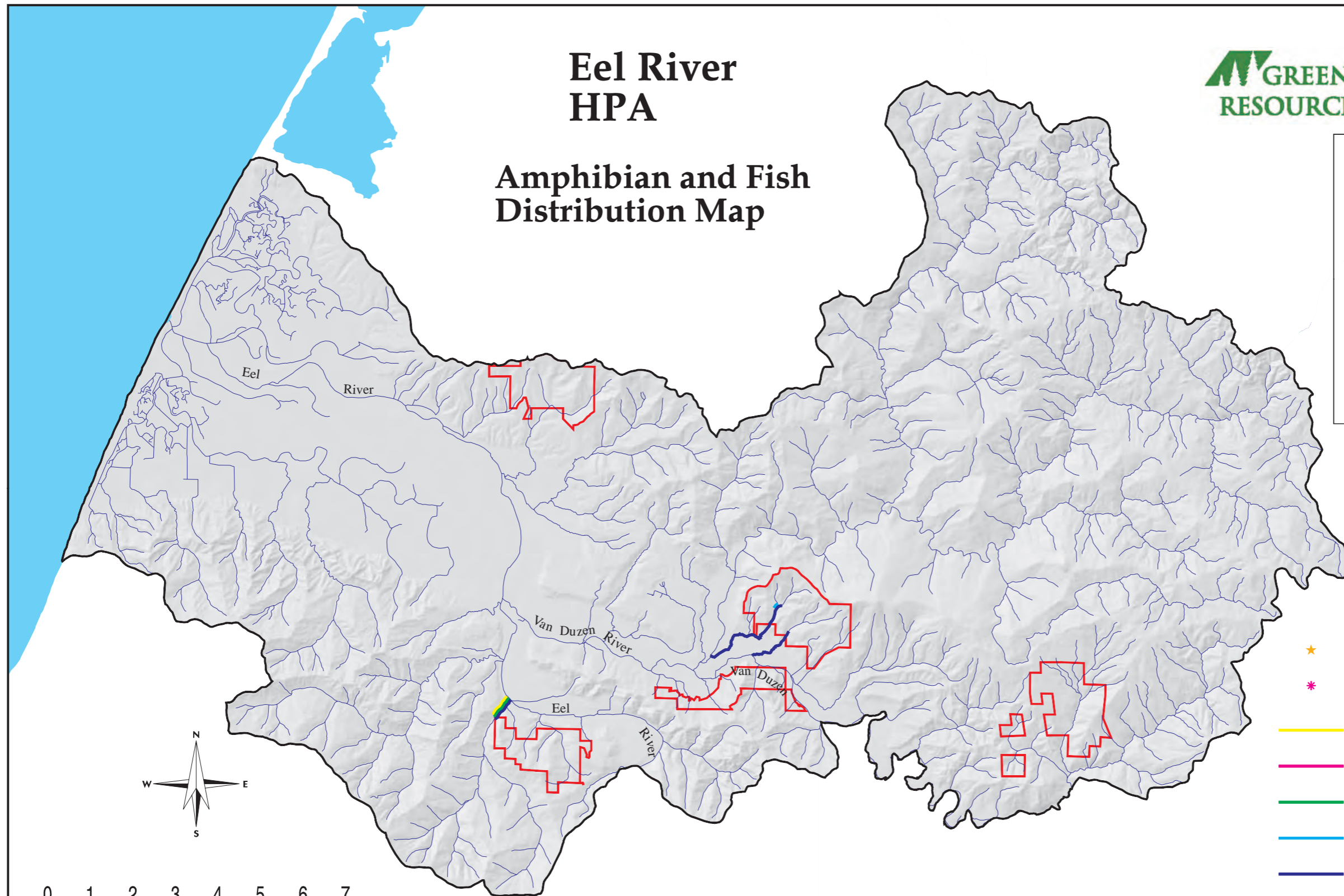
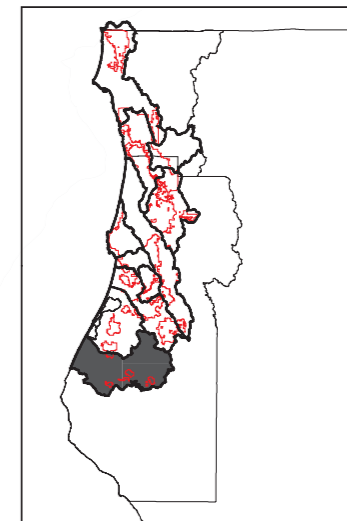
Note: Initial Plan Area based on 2005 ownership.

Figure 4-47. Recorded distribution of Covered Species in the Humboldt Bay HPA.

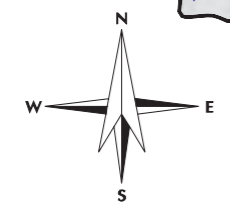
Eel River HPA



Amphibian and Fish Distribution Map



- ★ Torrent Salamander
- * Tailed Frog
- Coho
- Chinook
- Steelhead
- Cutthroat
- Resident
- Initial Plan Area



Note: Initial Plan Area based on 2005 ownership.

Figure 4-50. Recorded distribution of Covered Species in the Eel River HPA.
October 18, 2006

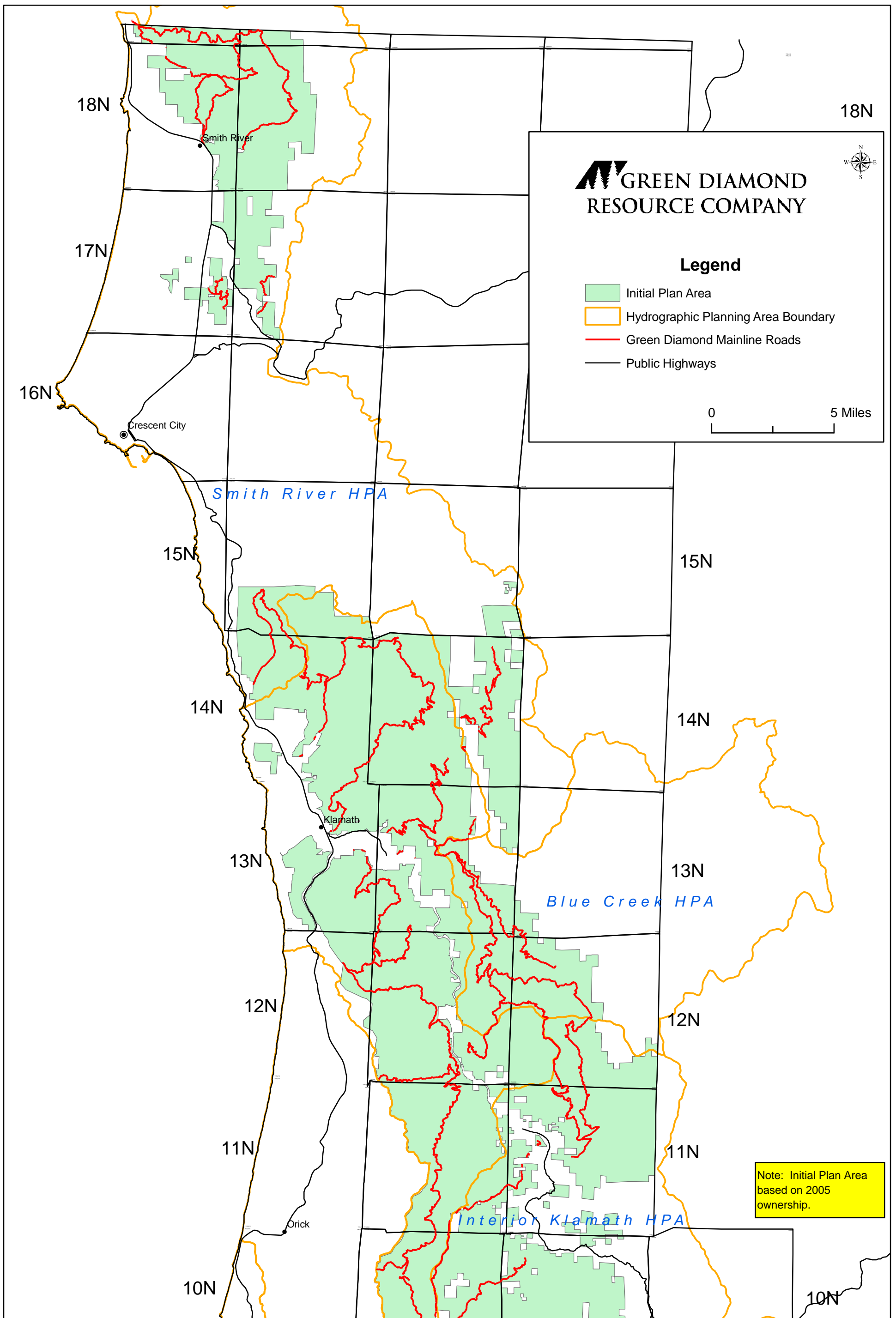


Figure 6-7 (A). Mainline roads in the Plan Area.

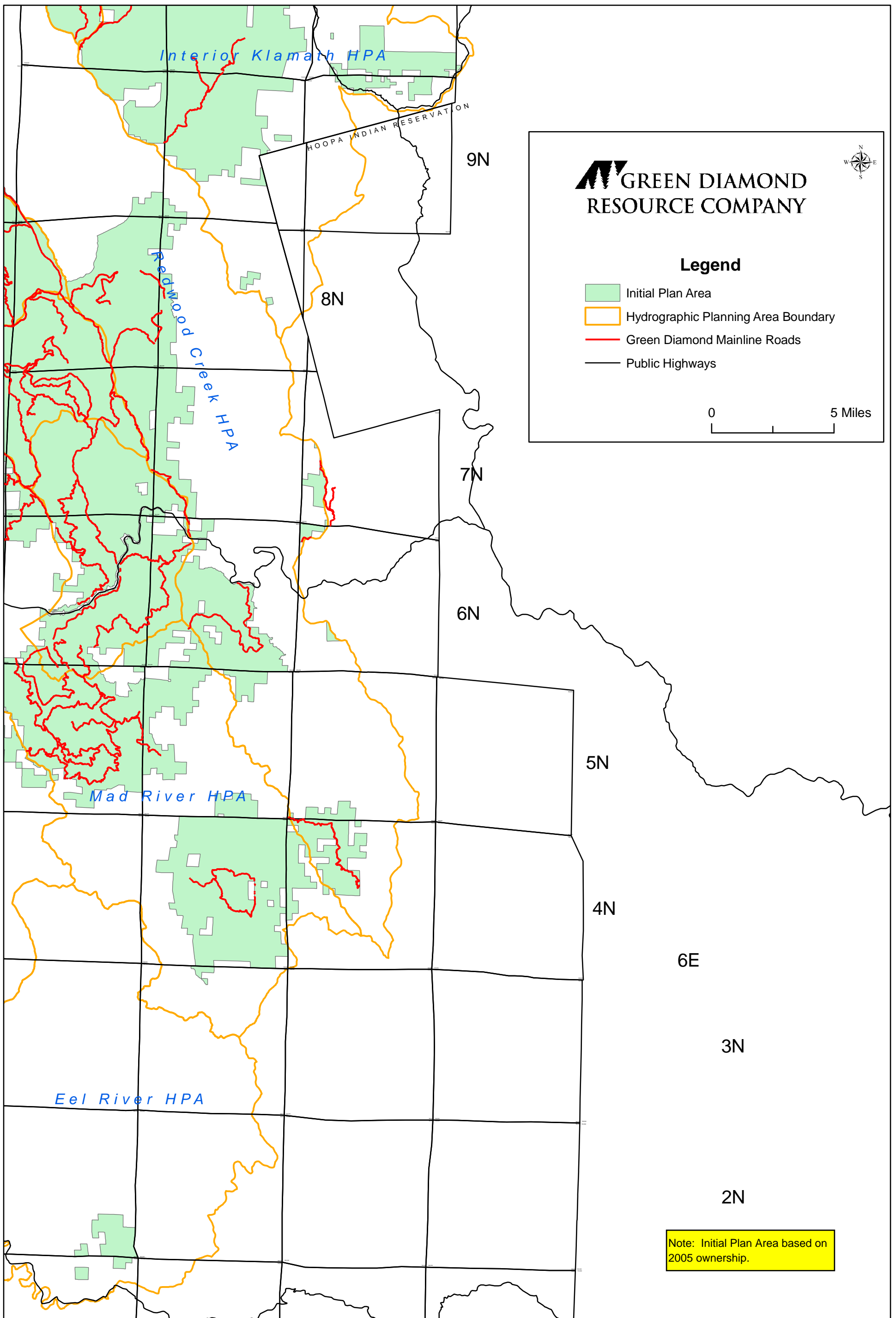


Figure 6-7 (B). Mainline roads in the Plan Area.

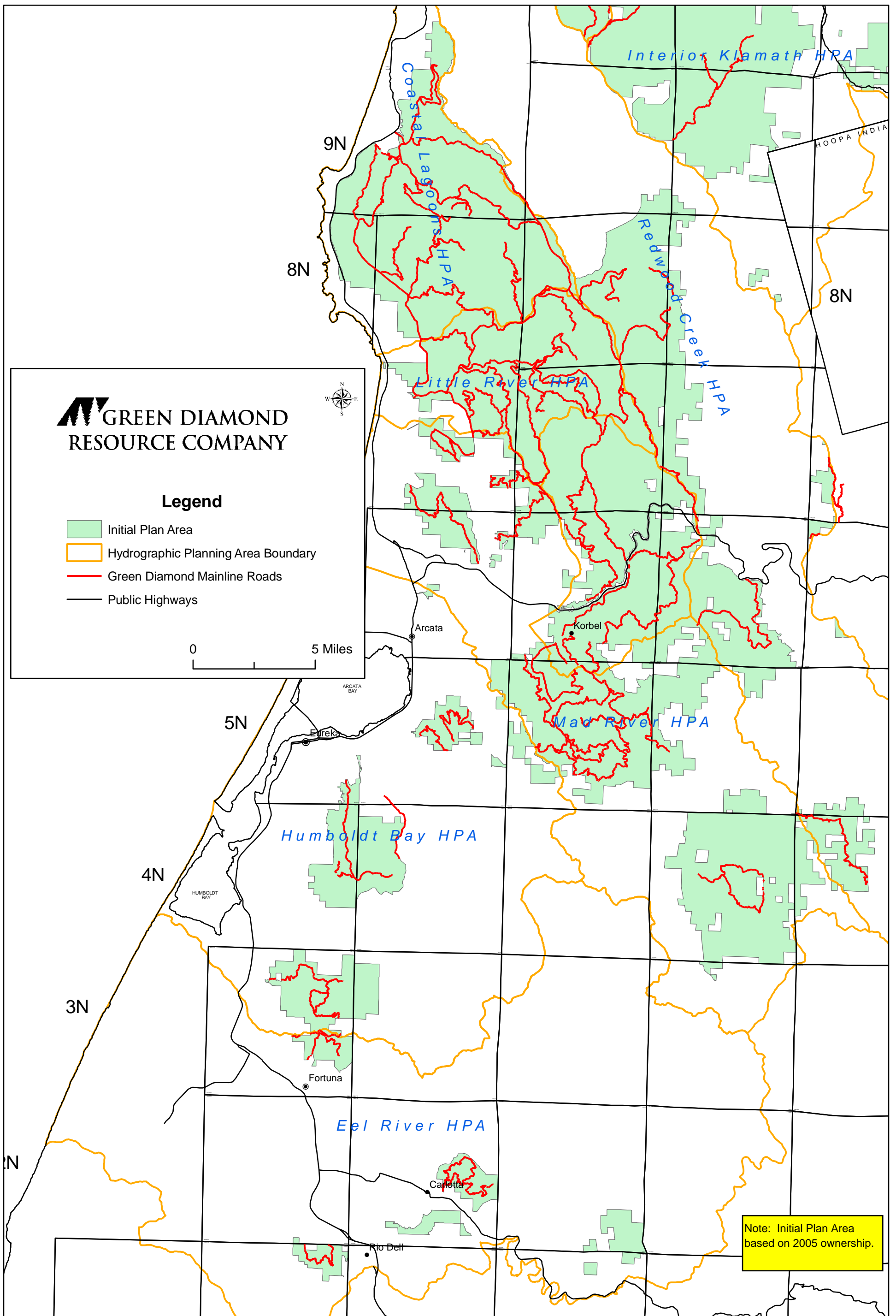


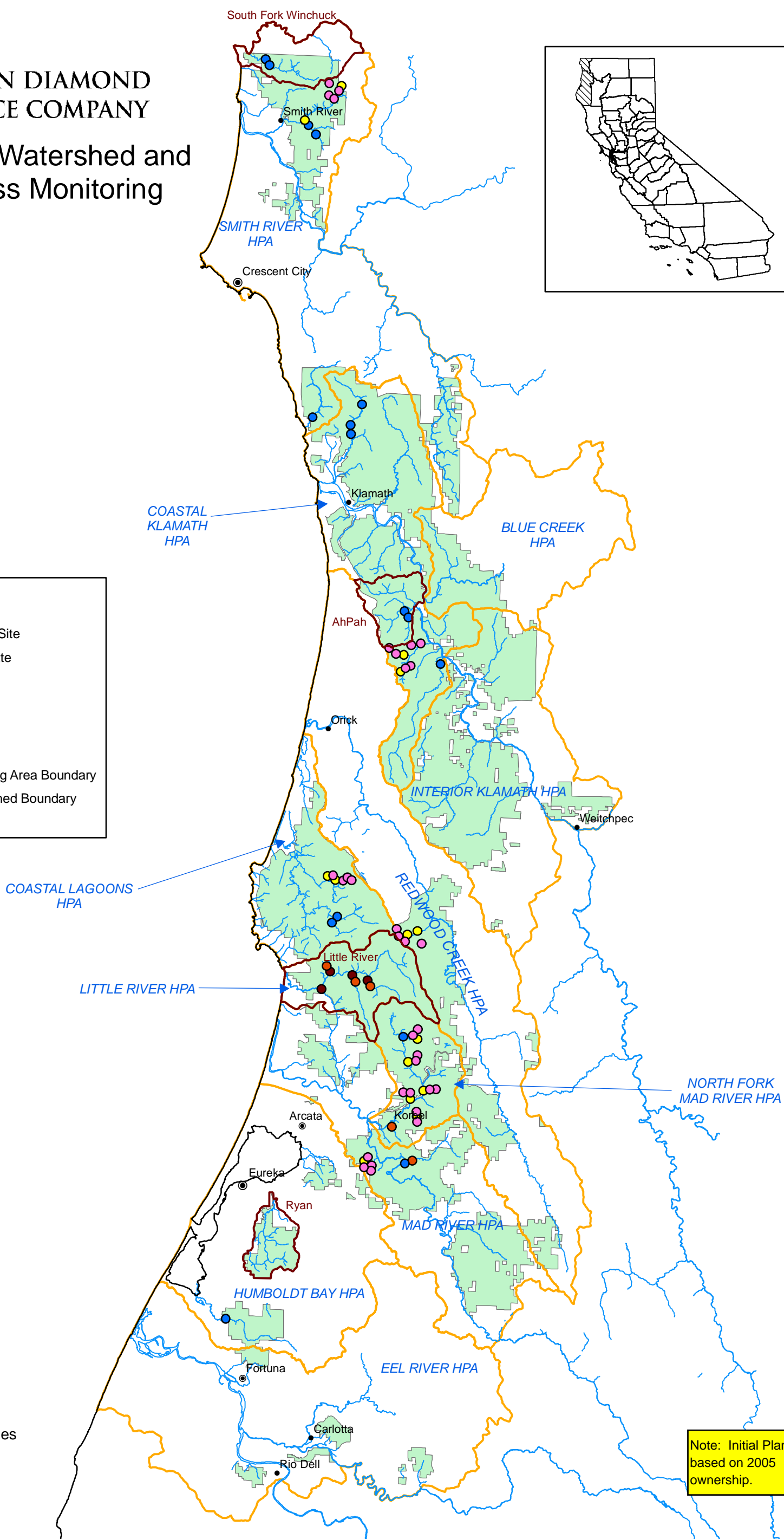
Figure 6-7 (C). Mainline roads in the Plan Area.

**Experimental Watershed and
Effectiveness Monitoring**



Legend

- Outmigrant Trapping Site
- Single Stream Estimate
- Channel Monitoring
- Astr Monitoring
- Rhva Monitoring
- Initial Plan Area
- Hydrographic Planning Area Boundary
- Experimental Watershed Boundary



Note: Initial Plan Area based on 2005 ownership.

Figure 6-9. Location of existing monitoring sites (water temperature monitoring sites not included).