

A Conservation Concept Map for Yamhill County, Oregon

Summary Prepared by Jeff Krueger
September 23, 2015

Background and Purpose

The *Conservation Concept* depicted on the attached map highlights some of the higher priority conservation opportunities present in the Yamhill County portion of the Willamette Valley Ecoregion, an area of approximately 340,000 acres. The map is conceptual and intended to help focus and coordinate future on-the-ground conservation efforts in the region for the *Yamhill Partners for Land and Water* and other active conservation partners. The geographic extent of these areas may shift over time depending on new or improved conservation data, partner priorities, and emerging threats to conservation values. Additional conservation opportunities are undoubtedly present beyond the areas depicted on the map. The concept is non-regulatory and subject to voluntary landowner participation and will be implemented through the efforts of multiple conservation partners and interested land owners. Existing and planned trails and paths have been shown to help indicate where conserved lands could potentially be accessed by the public in the future.



Oak woodland in Yamhill County (photo: Patricia Farrell)

Development of the Conservation Concept Map

Working with Solid Ground Consulting, the *Yamhill Partners for Land and Water* completed a conservation feasibility analysis in February 2015. This report summarized the results of several planning workshops and meetings, and outlined preliminary conservation priorities, organizational capacity within Yamhill County, and donor feasibility. In June of 2015, planning consultant Jeff Krueger was asked to work with the *Yamhill Partners* to synthesize the results into an illustrative *Conservation Concept Map*. This map is based on the content of the earlier Solid Ground analysis and analysis of several existing sources of Willamette Valley conservation data.

Conservation Targets in the Mid-Willamette Valley

The target systems and associated native plant and animal species listed in the table on the next page have been highlighted in the *Oregon Conservation Strategy* (Oregon Department of Fish and Wildlife, 2006) and by other conservation partners as being high priority for preservation and restoration within the Willamette Valley Ecoregion, including Yamhill County. The target systems (priority habitats) include oak woodland, riparian forest, wetland, aquatic systems, and grasslands, all of which have declined significantly in extent and quality in the valley since the mid-1800s. The *priority conservation areas* shown on the map are intended to represent some of the best opportunities to protect and restore significant blocks of these target systems, with the ultimate goal of creating a system of interconnected natural areas that provide viable habitats for many at-risk native species.

Conservation Targets and Threats for the Mid-Willamette Valley

Primary Targets	Nested Targets (Threatened or Endangered ESA species in bold)		Primary Threats
Systems	Plants	Animals	
Oak Woodland	Thin-leaved peavine Wayside aster White-topped aster White rock larkspur Willamette Valley larkspur <u>Dominant System Vegetation:</u> Oregon white oak Douglas-fir Pacific madrone ponderosa pine snowberry	Acorn Woodpecker Chipping Sparrow Pileated Woodpecker Western Bluebird Western Gray Squirrel Western Wood-Pewee Slender-billed Nuthatch Townsend’s Big-eared Bat	<ul style="list-style-type: none"> • Habitat fragmentation • Conifer encroachment • Change from historic fire management regimes • Aggregate mining (isolated buttes) • Invasive plant species • Conversion to agricultural uses including vineyards and orchards • Urban and exurban development pressure
Riparian Forest, Wetland and Aquatic (Rivers, streams, and associate riparian forest and floodplains)	Tall Bugbane <u>Dominant System Vegetation:</u> alder big-leaf maple black cottonwood creek dogwood Douglas’ spiraea Douglas-fir Oregon ash slough sedge valley Ponderosa pine willow	American Beaver American Dipper Bald Eagle Cutthroat Trout Foothill Yellow-legged Frog Northern Red-legged Frog Northwestern Pond Turtle Spring Chinook Salmon Oregon Chub Pacific and Brook Lamprey River Otter Winter Steelhead Yellow-billed Cuckoo Yellow-breasted chat Yellow Warbler	<ul style="list-style-type: none"> • Habitat fragmentation • Lack of riparian vegetation • Altered floodplain (lack of river/floodplain connectivity and constraints to river migration) • Limited backwater/side channel habitat • Limited flood regime due to upstream dams • Limited in-stream habitat features (large woody debris, basking logs) • Barriers to fish passage • Aggregate mining • Invasive plant and animal species including non-native fish, reptiles, and amphibians • Climate change (river flows)
Grasslands (Upland prairie, wetland prairie, herbaceous balds, and savanna)	Bradshaw’s lomatium golden paintbrush Hitchcock’s blue-eyed grass Kincaid’s lupine Nelson’s checkermallow white-topped aster Willamette daisy <u>Dominant System Vegetation:</u> camas popcorn flower Roemer’s fescue tufted hairgrass	Fender’s Blue Butterfly Northern Harrier Oregon Vesper Sparrow Short-Eared Owl Streaked Horned Lark Taylor’s Checkerspot Butterfly Western Bluebird Western Meadowlark Native pollinators (bumblebees, solitary bees, butterflies, moths, and hummingbirds)	<ul style="list-style-type: none"> • Habitat fragmentation • Conversion of remnant grasslands to intensive agriculture • Elimination of surface waterways and vernal pools • Change from historic fire management regime • Invasive plant species

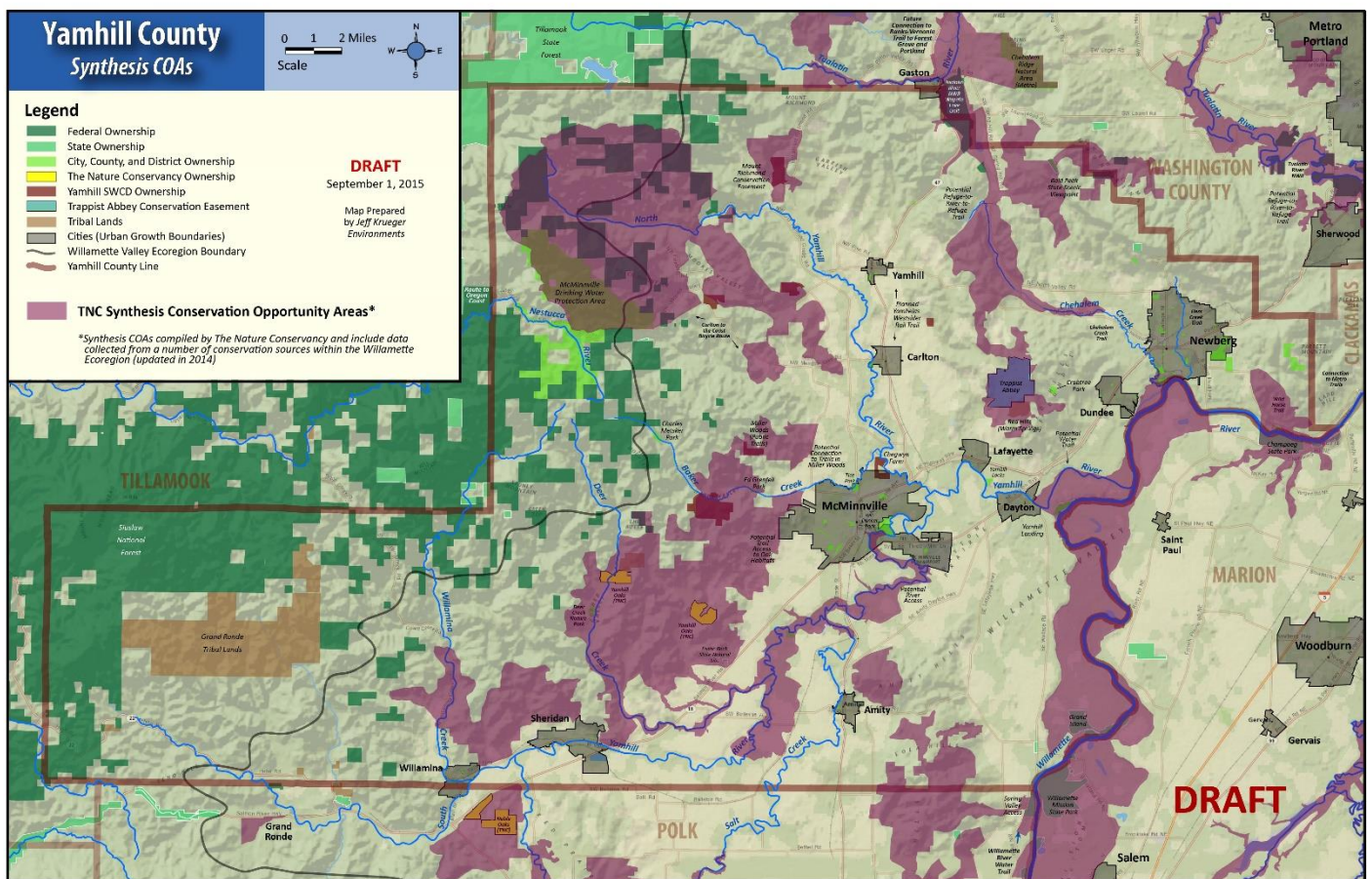
Conservation Data Used

The following Willamette Valley conservation data was utilized to help support the development of the priority conservation and restoration areas depicted on the Conservation Concept Map.

Synthesis Conservation Opportunity Areas (The Nature Conservancy)

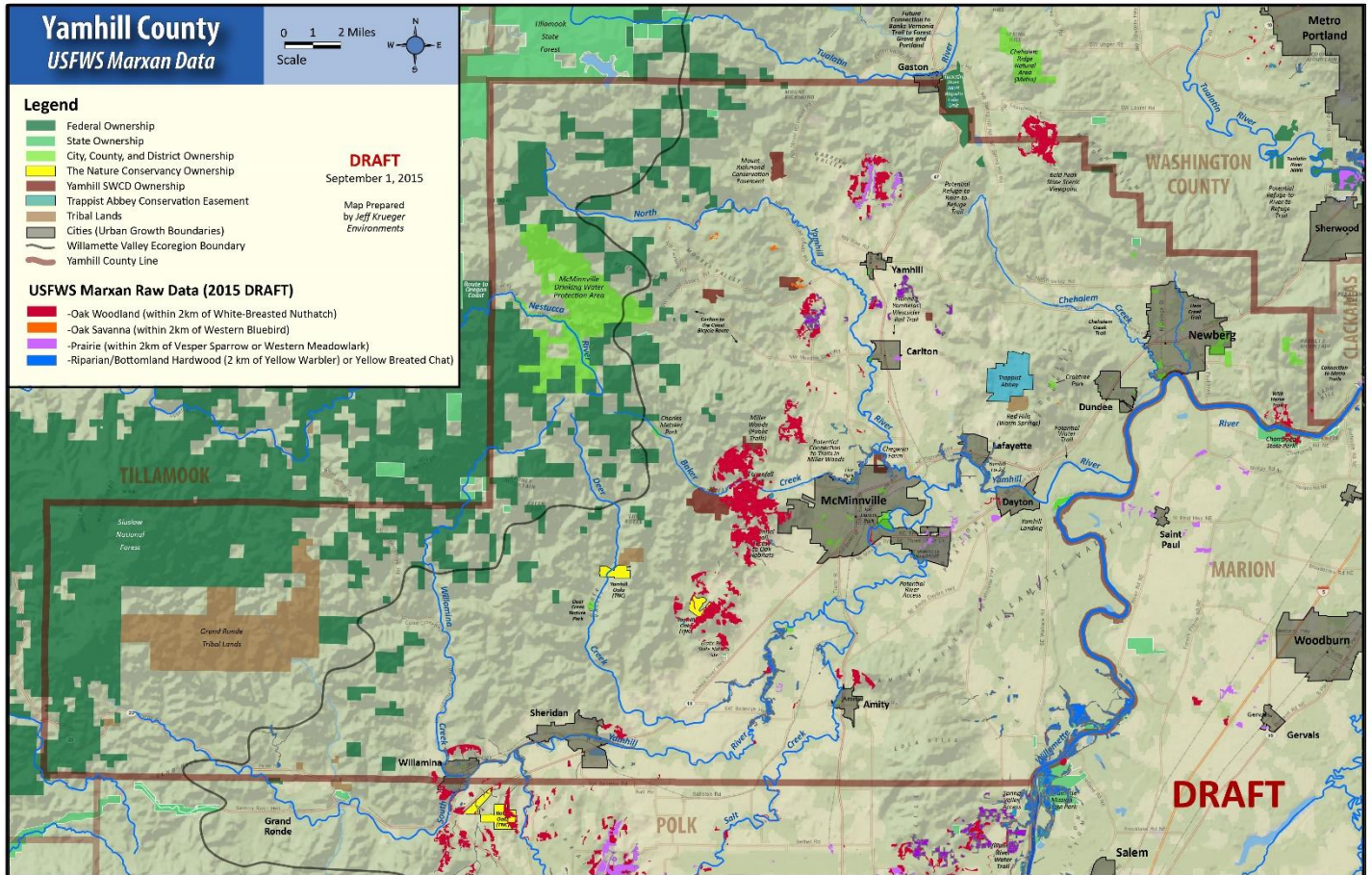
This synthesis project is a collaborative approach to conservation planning that has led to the delineation of priority sites within the Willamette Valley where investment in conservation or restoration would best contribute to the health of historically significant and functional habitats.

Partners in this effort have included Oregon Department of Fish and Wildlife, The Nature Conservancy, The Wetlands Conservancy, the Willamette Partnership, Oregon Parks & Recreation Department, The Defenders of Wildlife, Oregon Natural Heritage Information Center, Oregon Department of Environmental Quality, Oregon Biodiversity Project, and Metro. The Nature Conservancy most recently updated the Synthesis Conservation Opportunity Areas (COAs) data in 2014.



Willamette Valley Conservation Study Marxan data sets (U.S. Fish & Wildlife Service)

The USFWS is near completion of a *Willamette Valley Conservation Study* and has created a significant quantity of useful conservation data. USFWS utilized a *conservation network design optimization algorithm* known as ‘Marxan’ to identify potential conservation areas based on presence of target wildlife species and associated habitat. USFWS allowed this preliminary map data (shown below) to be used in this Yamhill conservation planning effort.

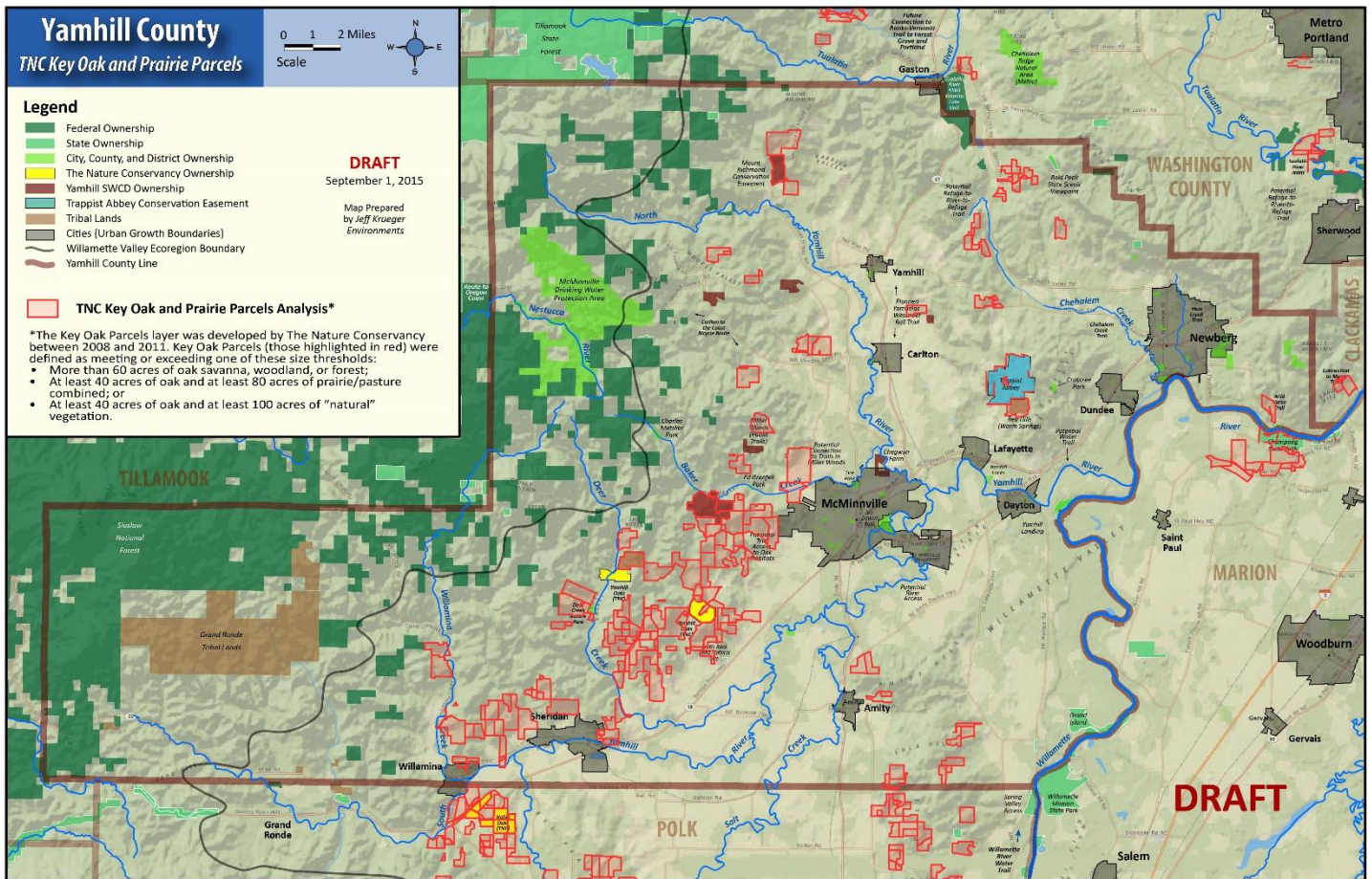


Western Meadowlark, Slender-billed Nuthatch, Western Bluebird (photos: Cary Kerst)

Key Oak and Prairie Parcels Data (The Nature Conservancy)

The Key Oak Parcels layer was developed by The Nature Conservancy between 2008 and 2011. Key Oak Parcels (those highlighted in red outline) were defined as meeting or exceeding one of these size thresholds:

- More than 60 acres of oak savanna, woodland, or forest;
- At least 40 acres of oak and at least 80 acres of prairie/pasture combined; or
- At least 40 acres of oak and at least 100 acres of “natural” vegetation.



Priority Oak and Grassland Conservation Areas

Oak and prairie conservation areas identified on the map contain large contiguous areas of grassland and oak woodland habitats and/or have significant potential for restoration or enhancement of these target systems. Targeted acquisition could be used to preserve key parcels, particularly in proximity to other protected lands. In other areas, outreach and technical assistance geared toward encouraging and assisting private landowners in managing oak and grassland habitats will be an important factor in achieving the proposed conservation concept. Combined, these priority oak and prairie conservation areas cover approximately 61,000 acres, or 18 percent of the total planning area of 340,000 acres. Each unit is briefly described below with the geographic extent shown on the *Conservation Concept Map*:

Priority Oak and Prairie Conservation Areas (Major Areas Shown on Conservation Concept Map)

Area Name	Acres*	Description
Richmond Oaks	1,500	Builds upon the 280-acre Yamhill SWSC conservation easement and includes areas of oak and grassland habitat.
Spring Hill	3,700	Just outside of Yamhill County, this area builds upon the 1,000-acre Chehalem Ridge Natural Area (Metro) and includes areas of oak and grassland habitat.
Ribbon Ridge	3,500	Includes oak and grassland habitat to the east of Chehalem Creek and is in proximity to Slender-billed Nuthatch observations. The publicly accessible Bald Peak State Scenic is located within this area.
Chehalem Woodlands	2,900	Located on the west side of Chehalem Creek, this area Includes oak and grassland habitats and could accommodate future trails.
Oak Ridge	4,900	Builds upon Yamhill SWSC conservation easements and Includes oak and grassland habitats; In proximity to Vesper Sparrow and Slender-billed Nuthatch observations.
Dundee Oaks	2,700	Builds upon the 1,300-acre Trappist Abbey conservation easement and includes oak and grassland habitats; Potential for future trail access from Lafayette and Dundee.
Yamhill Oaks	29,000	Builds upon Yamhill SWSC and TNC conservation areas and includes large blocks of high quality oak and grassland habitat and numerous large parcels; In proximity to Slender-billed Nuthatch observations; Could potentially accommodate future trails including connections from McMinnville and the existing trail system in Miller Woods.
Willamina Oaks	4,200	Includes significant areas of oak and grassland habitat; Could potentially accommodate future trails from Willamina and Sheridan.
Amity Oaks	1,800	Includes oak and grassland habitat; Could potentially accommodate future trails from Amity; In proximity to Slender-billed Nuthatch observations.
Noble Oaks	7,200	Just to the south of Yamhill County, this area builds upon the 700 -acre TNC Noble Oaks conservation areas and includes significant oak and grassland habitat; Could potentially accommodate future trails including connections from Willamina; In proximity to Slender-billed Nuthatch, Western Meadowlark, Streaked Horned Lark, Vesper Sparrow, Western Bluebird, and Northern Red-Legged Frog observations.

*acreage shown is approximate and includes some land already having permanent conservation status.



Grassland and oak woodland in Yamhill County (photo: Patricia Farrell)

Priority Riparian and Aquatic Conservation Areas

These river and stream reaches within Yamhill County were identified as being high priority for future conservation and habitat restoration. Future actions in these areas include restoration of riparian forest and reestablishment of dynamic floodplain areas. The Willamette River and its tributaries provide aquatic habitat for native species such as Chinook Salmon, Steelhead, Cutthroat Trout, Oregon Chub, and Lamprey and could be improved through floodplain restoration efforts.

Priority Willamette River Riparian and Aquatic Conservation Areas (See Conservation Concept Map)

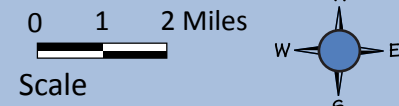
Unit Name	Acres*	Description
Tualatin River	2,500	Located in Washington County and on the northern fringe of Polk County, this area includes a significant floodplain and wetlands; Builds upon the Tualatin River National Wildlife Refuge Wapoto Lake Unit.
Chehalem Creek Floodplain	1,000	Includes floodplain area along Chehalem Creek; Could potentially accommodate a segment of the potential future Refuge-to-River-to-Refuge trail and trails from Newberg.
South Yamhill Floodplain	6,400	Contains a broad area of floodplain, wetlands, and riparian forest; Great opportunities for riparian and floodplain restoration.
Willamette Floodplain	24,000	Covers the Willamette River floodplain in Yamhill and Marion Counties; Significant riparian forest, side channel habitats, and opportunities for floodplain restoration; Builds upon several Oregon State Parks including Willamette Mission and Green Island; Is a designated segment of the Willamette River Water Trail.

**acreage shown is approximate and includes some land already having permanent conservation status.*



Willamette River (photo: Oregon Parks and Recreation Department)

Yamhill County Conservation Concept Map



Legend

- Federal Ownership
- State Ownership
- City, County, and District Ownership
- The Nature Conservancy Ownership
- Yamhill SWCD Ownership
- Trappist Abbey Conservation Easement
- Tribal Lands
- Cities (Urban Growth Boundaries)
- Willamette Valley Ecoregion Boundary
- Yamhill County Line

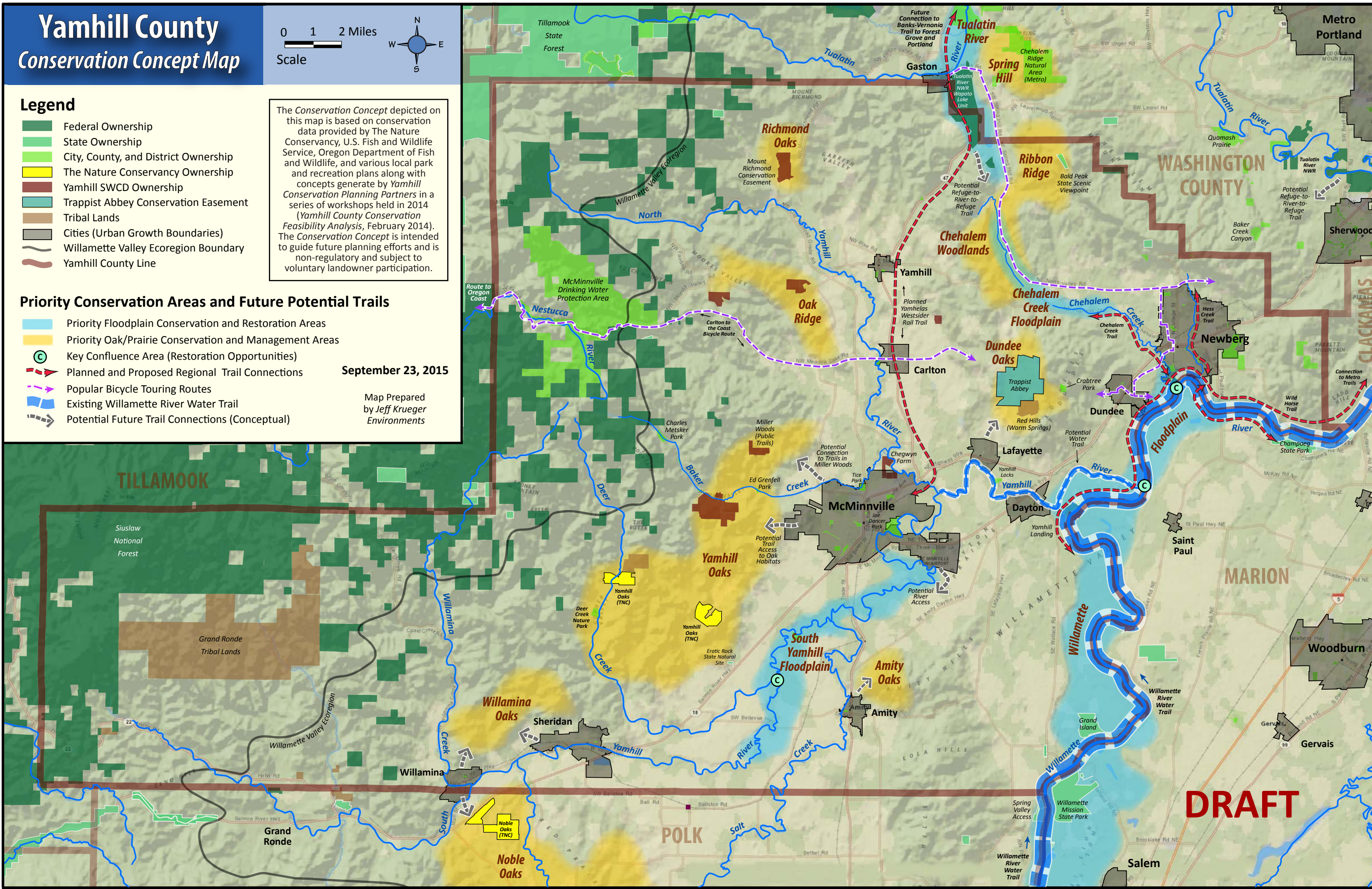
The Conservation Concept depicted on this map is based on conservation data provided by The Nature Conservancy, U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife, and various local park and recreation plans along with concepts generated by Yamhill Conservation Planning Partners in a series of workshops held in 2014 (Yamhill County Conservation Feasibility Analysis, February 2014). The Conservation Concept is intended to guide future planning efforts and is non-regulatory and subject to voluntary landowner participation.

Priority Conservation Areas and Future Potential Trails

- Priority Floodplain Conservation and Restoration Areas
- Priority Oak/Prairie Conservation and Management Areas
- Key Confluence Area (Restoration Opportunities)
- Planned and Proposed Regional Trail Connections
- Popular Bicycle Touring Routes
- Existing Willamette River Water Trail
- Potential Future Trail Connections (Conceptual)

September 23, 2015

Map Prepared by Jeff Krueger Environments



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