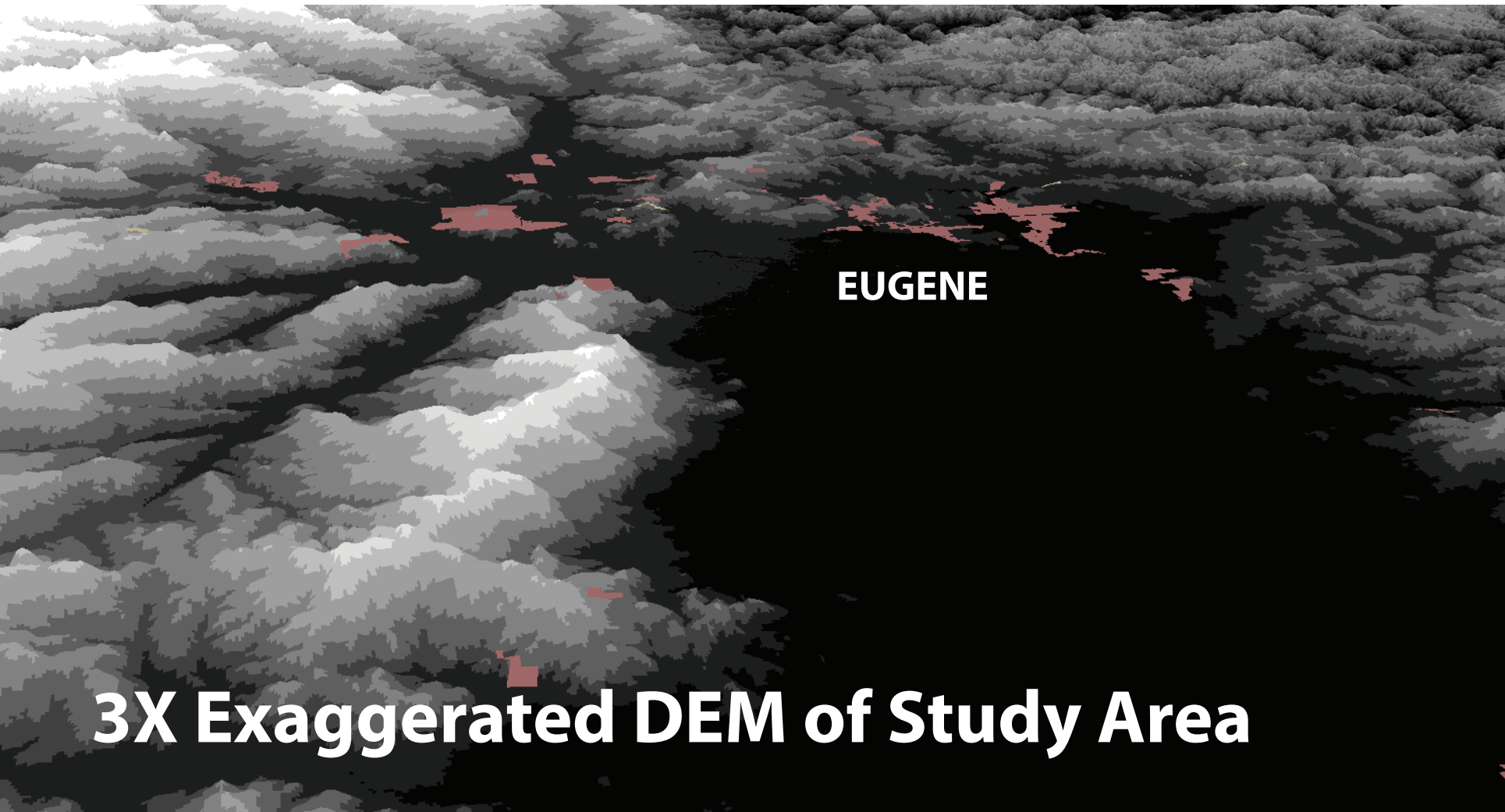


Suitability Analysis: Lane County Oak-Prairie Conservation Sites

Alejandro Brambila - LA515

Phase 1: ID Potential Sites

Individual taxlots are utilized for suitability analysis to maximize payoff for given effort working with landowners. Sites were first narrowed using criteria of presence in the study area, minimum size (100 acres), and presence in a "Conservation Opportunity Area" (COA).



Existing Anchor Sites

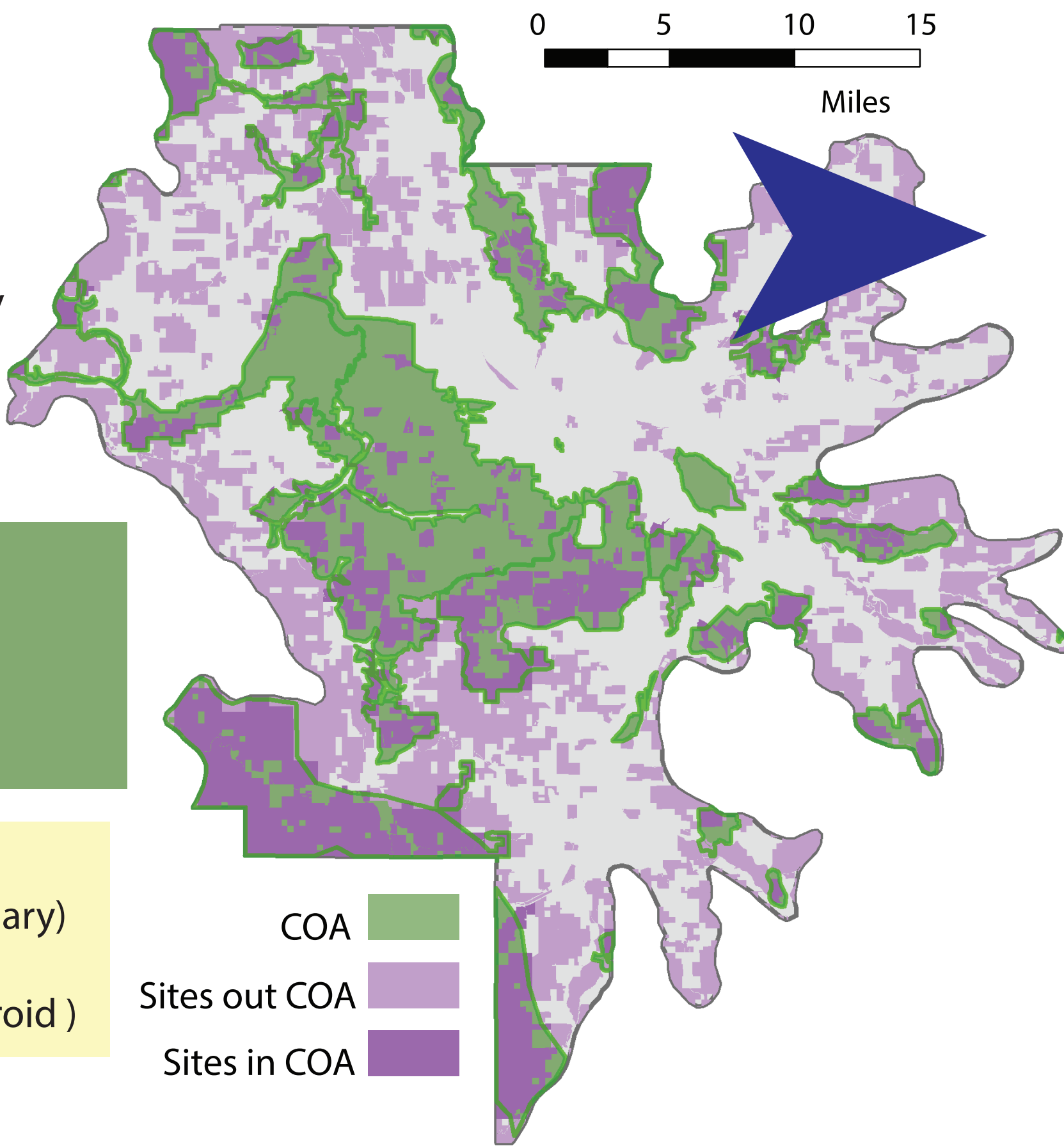
Oak and prairie habitats are among the most endangered in the Pacific Northwest. With the Willamette Valley Oak Prairie Cooperative, I have identified significant "habitat anchors" within the project boundary. Anchors were suggested by steering committee members and are conserved lands over 100 acres, containing a significant proportion of oak-prairie habitats.



Here, I perform a suitability analysis of additional taxlots for potential future conservation. Due to the large project boundary, I focus on a case study area bounded by the portion of Lane County within the US Level 3 Willamette Valley Ecoregion.

Site Source: Lane County Taxlots
Boundary Source: Clip Lane County to WV Ecoregion (EPA)
COA Source: Oregon Conservation Strategy (Clip to Boundary)

Process:
Study area (Clip - Taxlots/Boundary)
Size (SBA Taxlots >100 Acres)
In COA (SBL - Taxlots/COA, centroid)



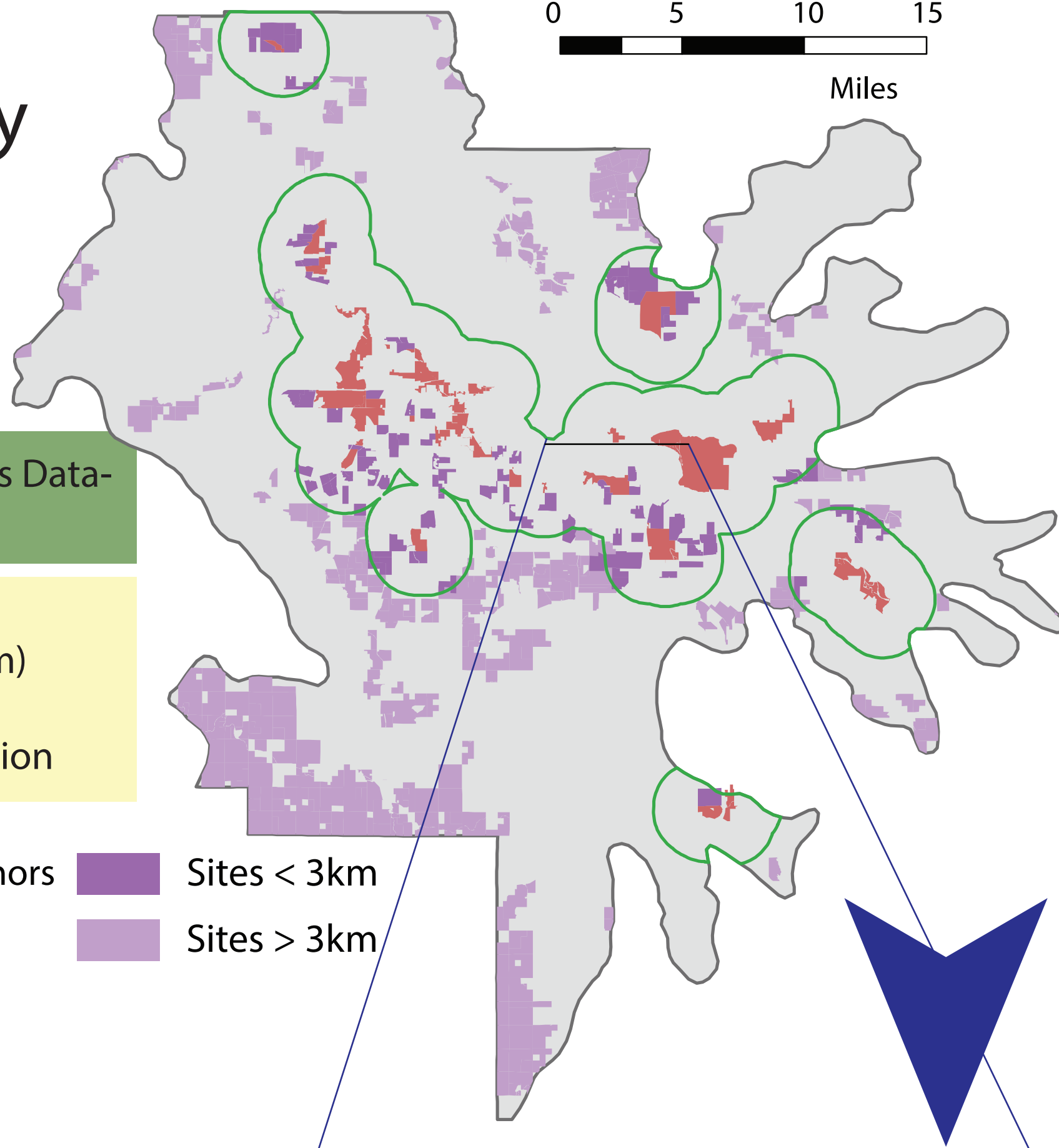
Phase 2: Anchor Proximity

To maximize habitat connectivity only sites within 3 km of existing anchors were kept.

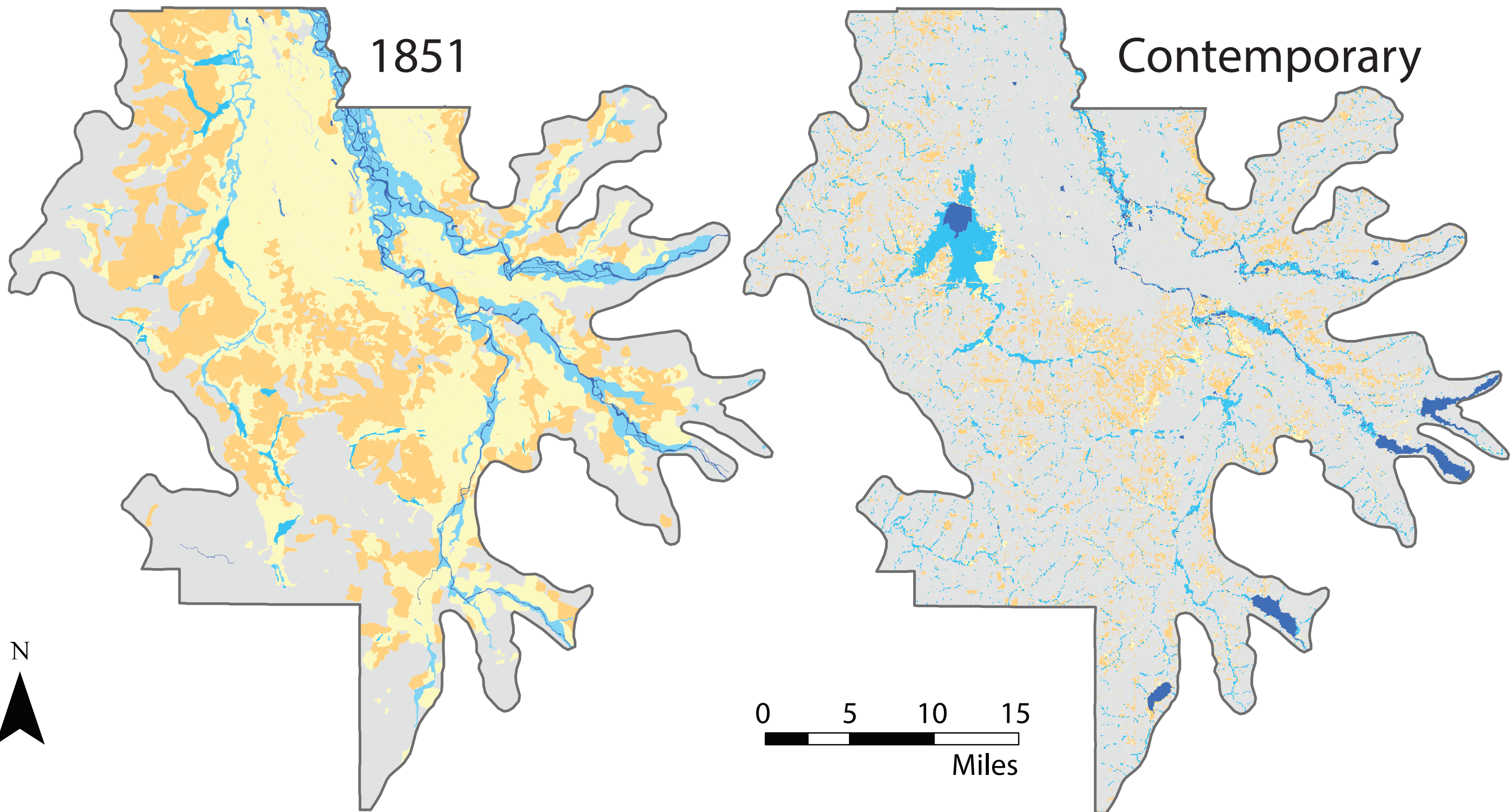
Anchor Source: Protected Areas Database (USGS) + SC Suggestions

Process:
Buffer (Existing Anchors, 3km)
SBL (Sites/Buffers)
Create new layer from selection

Existing Anchors
Buffer
Sites < 3km
Sites > 3km



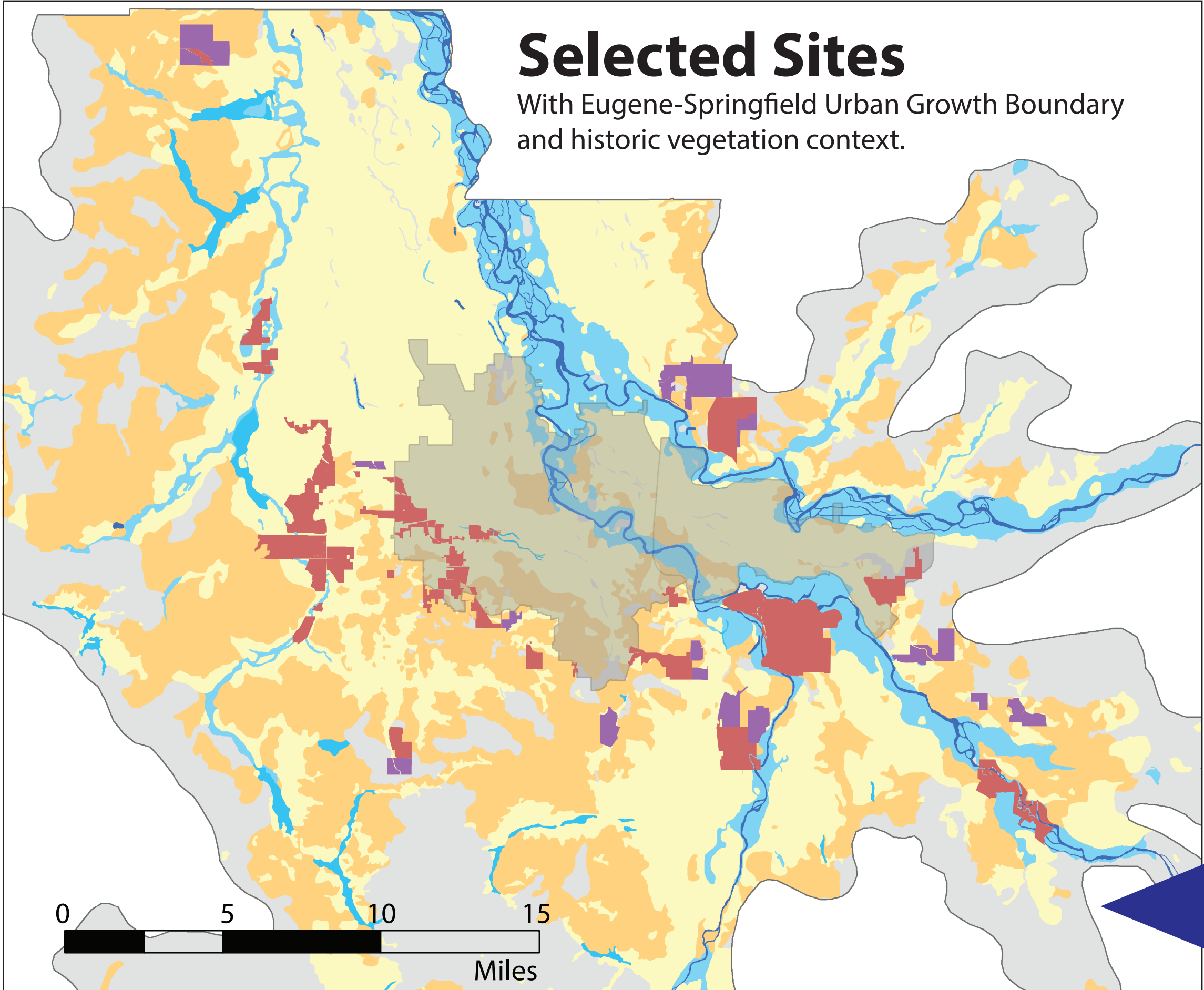
Oak-Prairie Vegetation Cover Change



1851 Vegetation Source: Oregon State
Contemporary Vegetation Source: Oregon Conservation Strategy

Selected Sites

With Eugene-Springfield Urban Growth Boundary and historic vegetation context.



Phase 3: Vegetation Analysis

3a: Reformat Vegetation Layer

Vegetation Layer Source:
Current Vegetation - OCS

Raster Reclassify: Oaks=1, Grass=2,
Riparian=3, Other=0

Raster to Feature: Current Vegetation
Clip (Current Vegetation/Potential Sites)

3b: Calculate Oak-Prairie Area/Site

Union (Potential Sites-Clipped Vegetation)
Calculate Geometry(Area, %Area)
Summarize(By site: All target veg)
Join (Union lyr - Potential Sites)
Classify By(Summarized target vegetation)

Result

Select only sites with >100 acres Oak-Prairie
SBA(Potential Sites, TargetVeg >100 acres)

There are 20 sites that meet our criteria for a total of 5413 acres, **2195** of which are Oaks/Prairies.

