Oak Prairie Working Group
Oak Prioritization Mapping

Nicole Ruggiero (TSWCD) and Aiman Duckworth (Biohabitats, Inc.)

Photo Credit: NRCS

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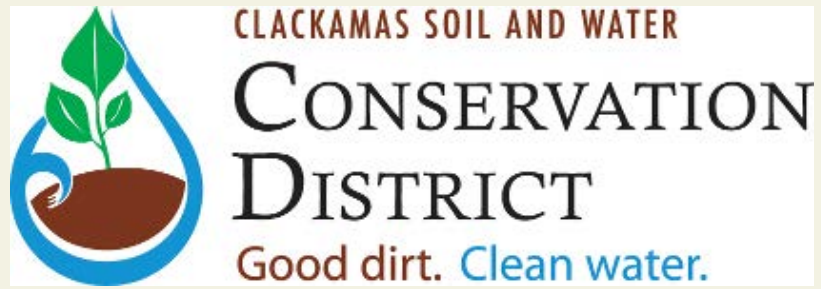Conservation is for everyone.

Biohabitats
CASCADIA BIOREGION

Thank you to our many partners!

Brief History

- Oregon white oak ecosystems

- Oak Prairie Working Group

- OakQuest

Photo Credit: USFWS

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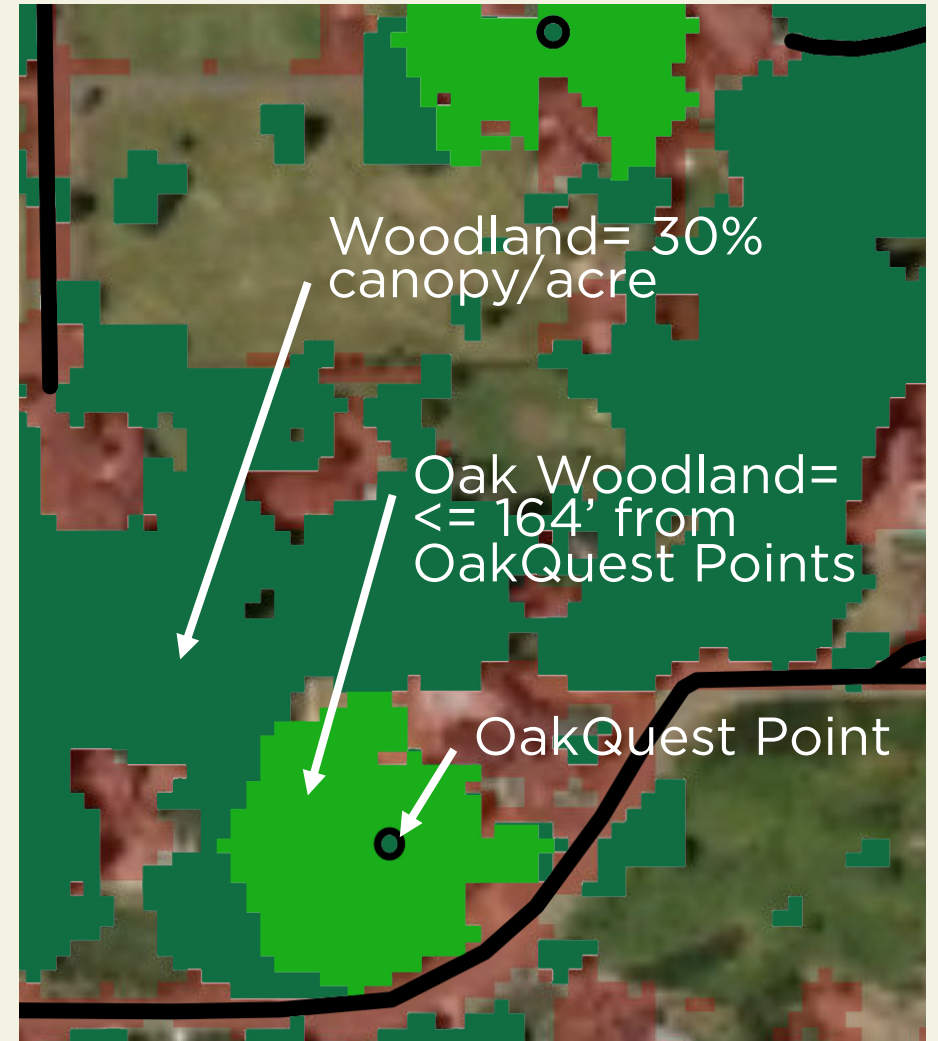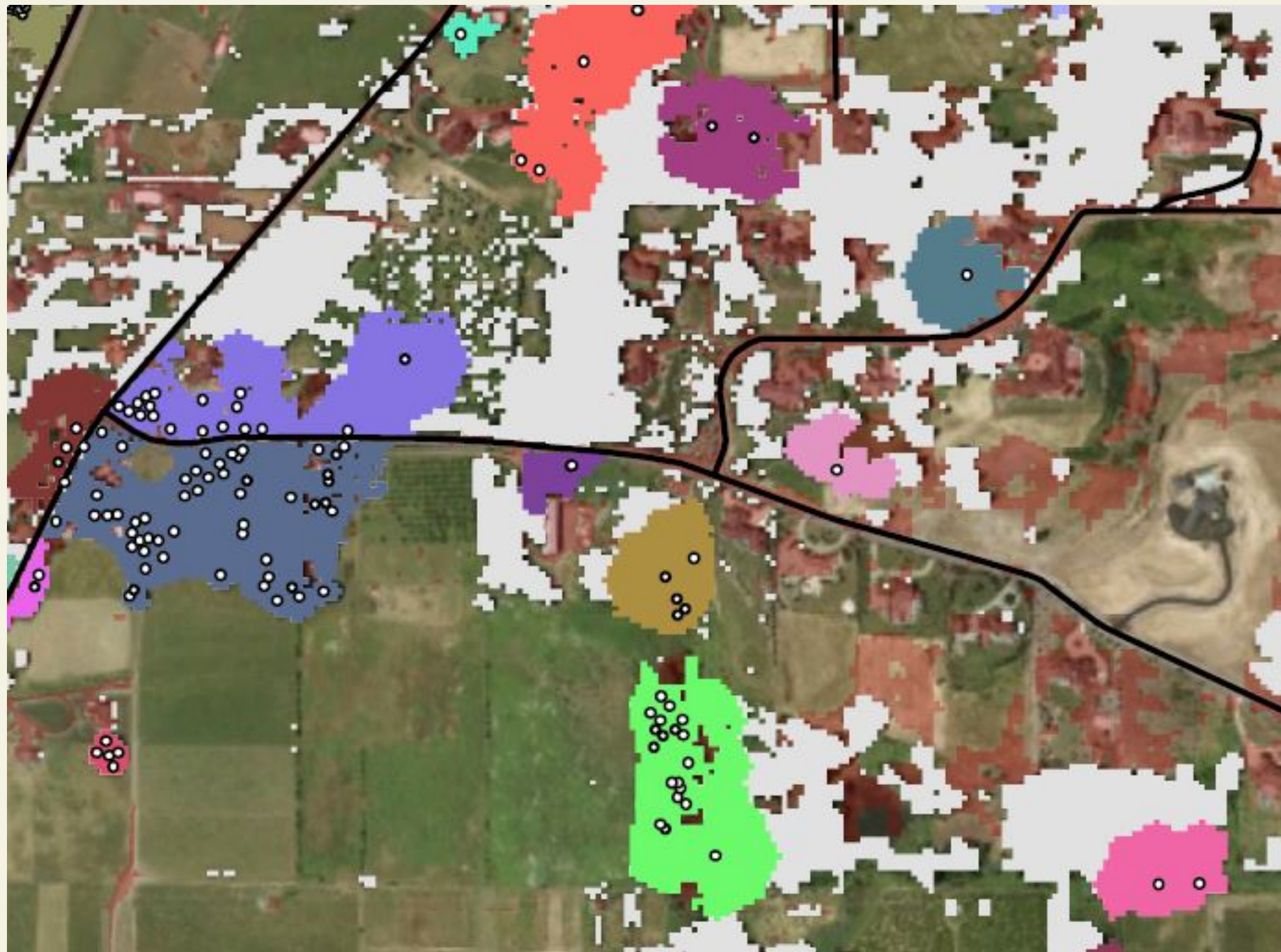
Prioritization Effort

- Subgroup of OPWG partners hired Biohabitats
- Methods
  - Compile existing data
  - Literature review to understand key attributes
  - Create and score polygons
  - Incorporate habitat connectivity
  - Identify gaps

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Photo Credit:

Create and Score Polygons

- Oak Patches
  - 30' radius for OakQuest data, trimmed to landcover=oak canopy
  - Oak canopy <118' from each other; no roads, paving, or buildings

- Oak Woodland Patches
  - Contiguous woodland <= 164' from OakQuest points

Woodland= 30% canopy/acre

Oak Woodland= <= 164' from OakQuest Points

OakQuest Point

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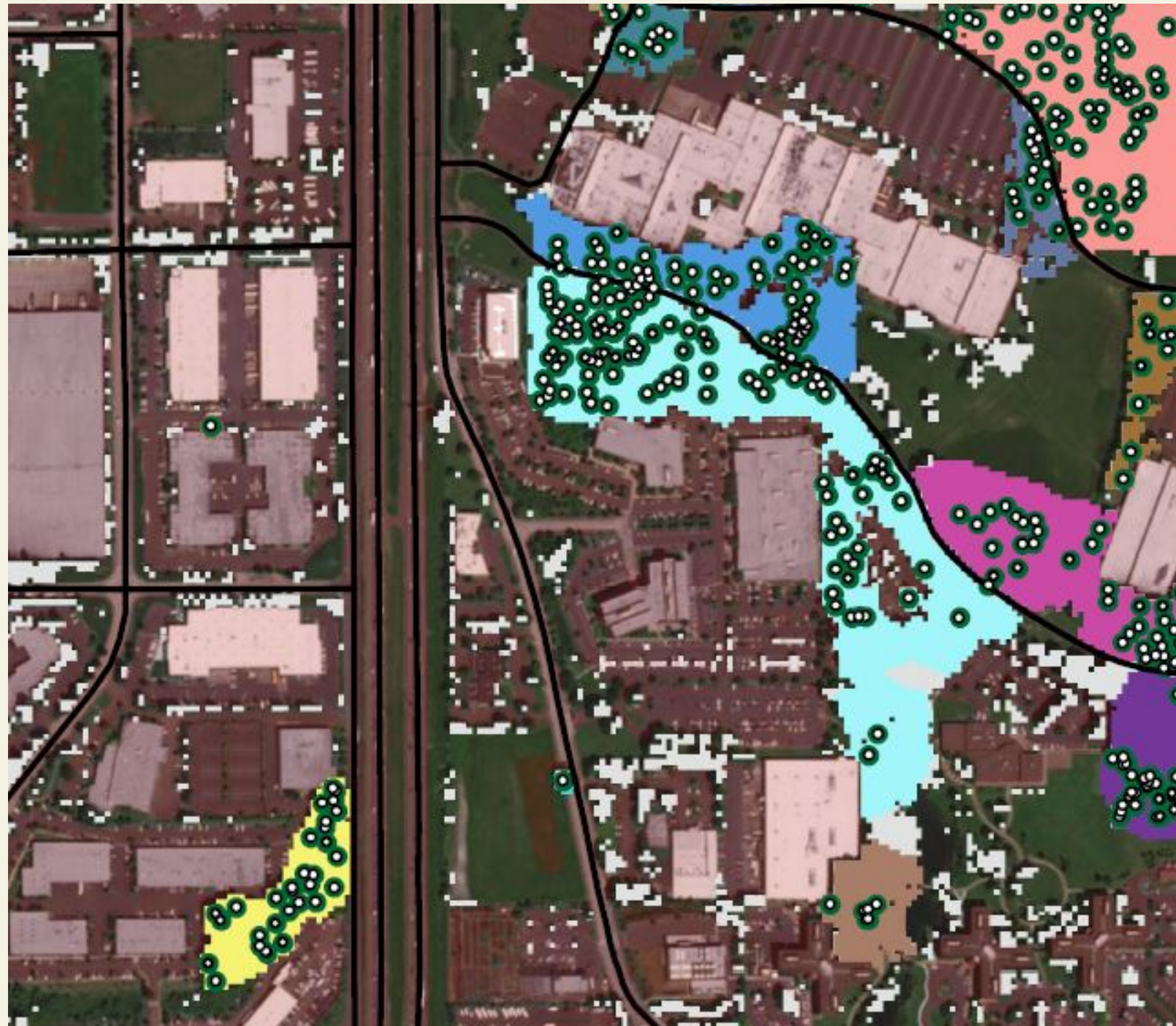## 4. Oak Woodland Example- Rural

- ○ Oak Quest Points
- Oak Canopy
- Woodland without Oak
- Street Centerlines
- Developed/ Impervious Surface Landcover
- Oak Woodland Patches (different tones = separate patches)

3. Oak Woodland Example- Urban

Legend:

- ○ Oak Quest Points
- Oak Canopy
- Woodland without Oak
- Street Centerlines
- Developed/Impervious Surface Landcover
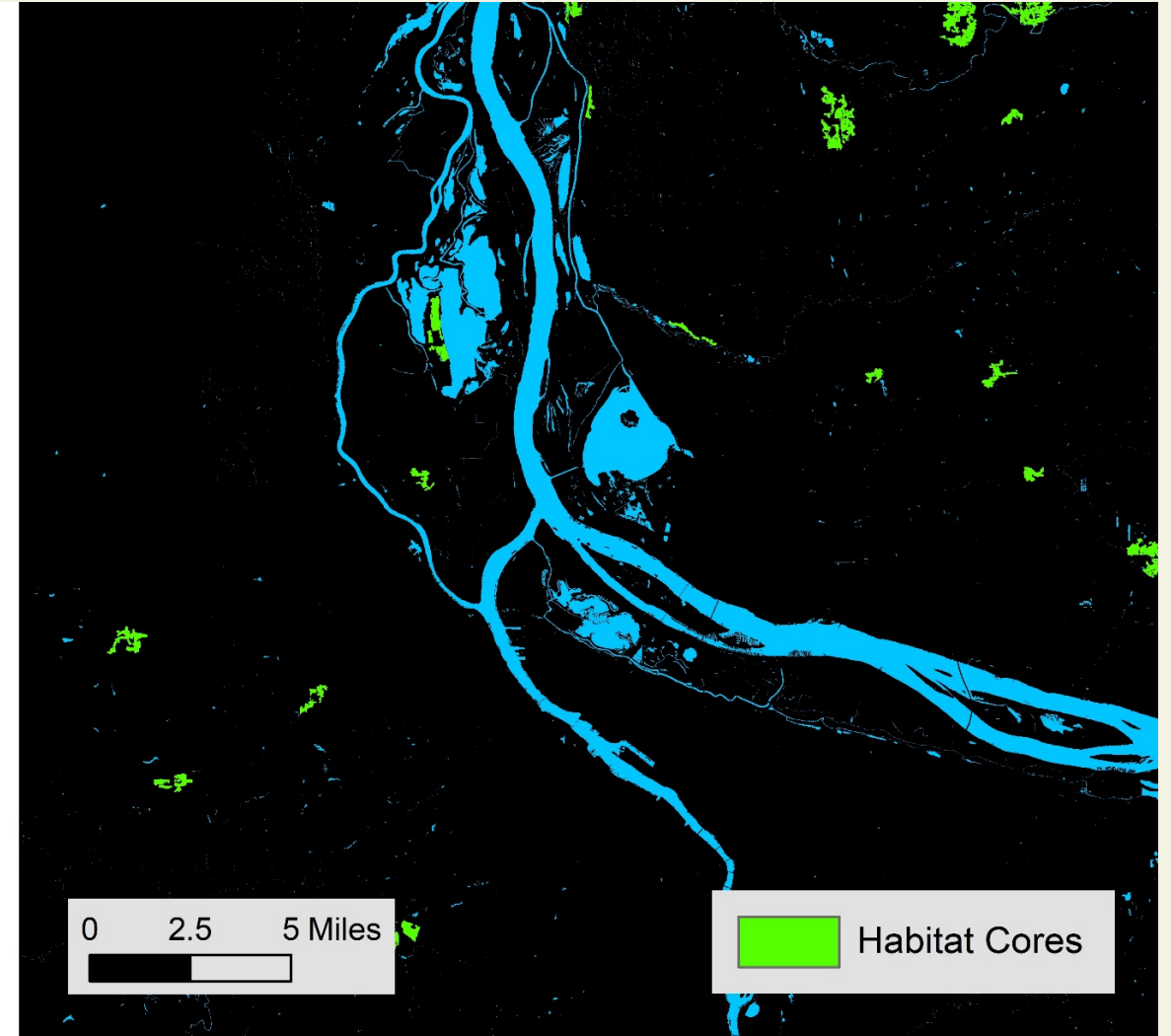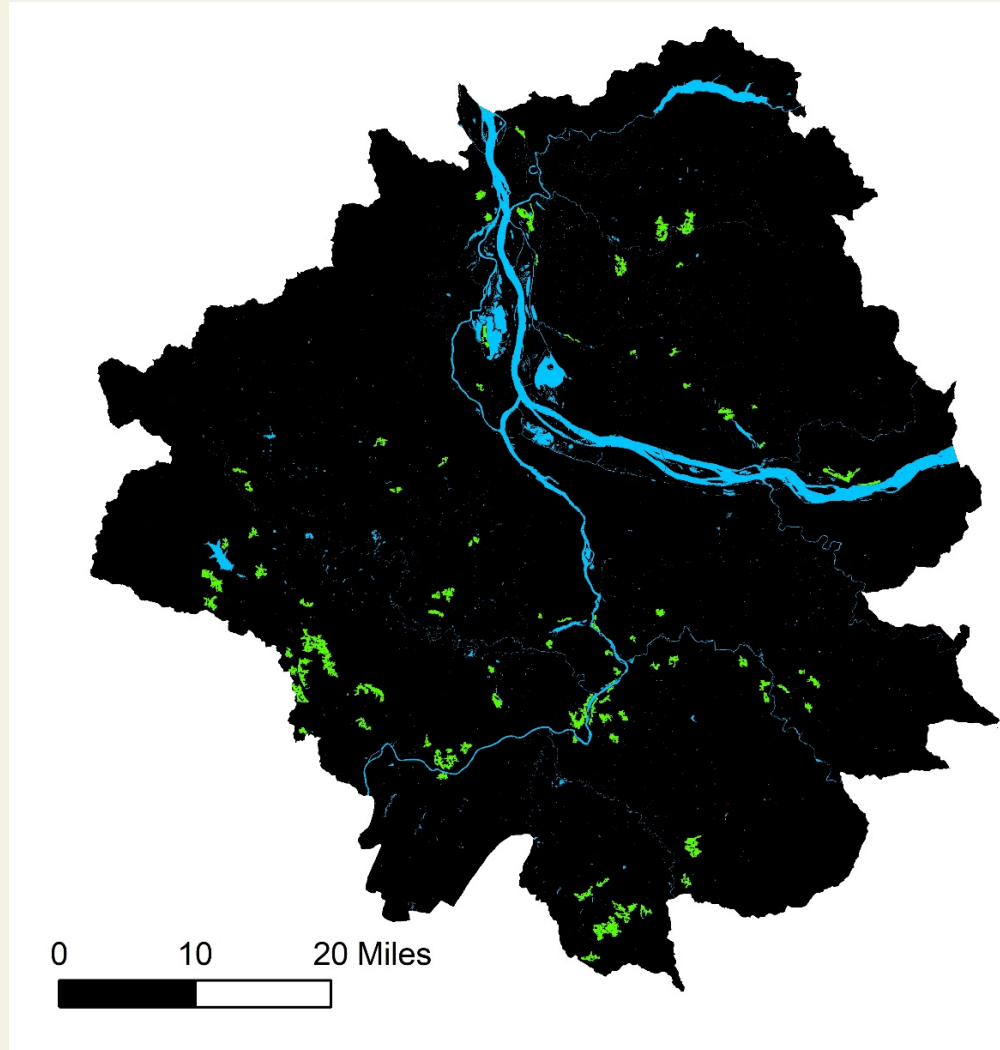- Oak Woodland Patches (different tones = separate patches)

Create and Score Patches

- Patch Size (based on species territory and relative size in the region)
- Patch Composition- Amount of oak canopy
- Patch Context- Edge Condition
- Local Connectivity- % area of oak woodland within 2km

- Urban Area Considerations
  - Urban area OWP were scored as a subset of the full region
  - Expert opinion was used to merge some OPs separated by insignificant roads into OWPs before scoring.
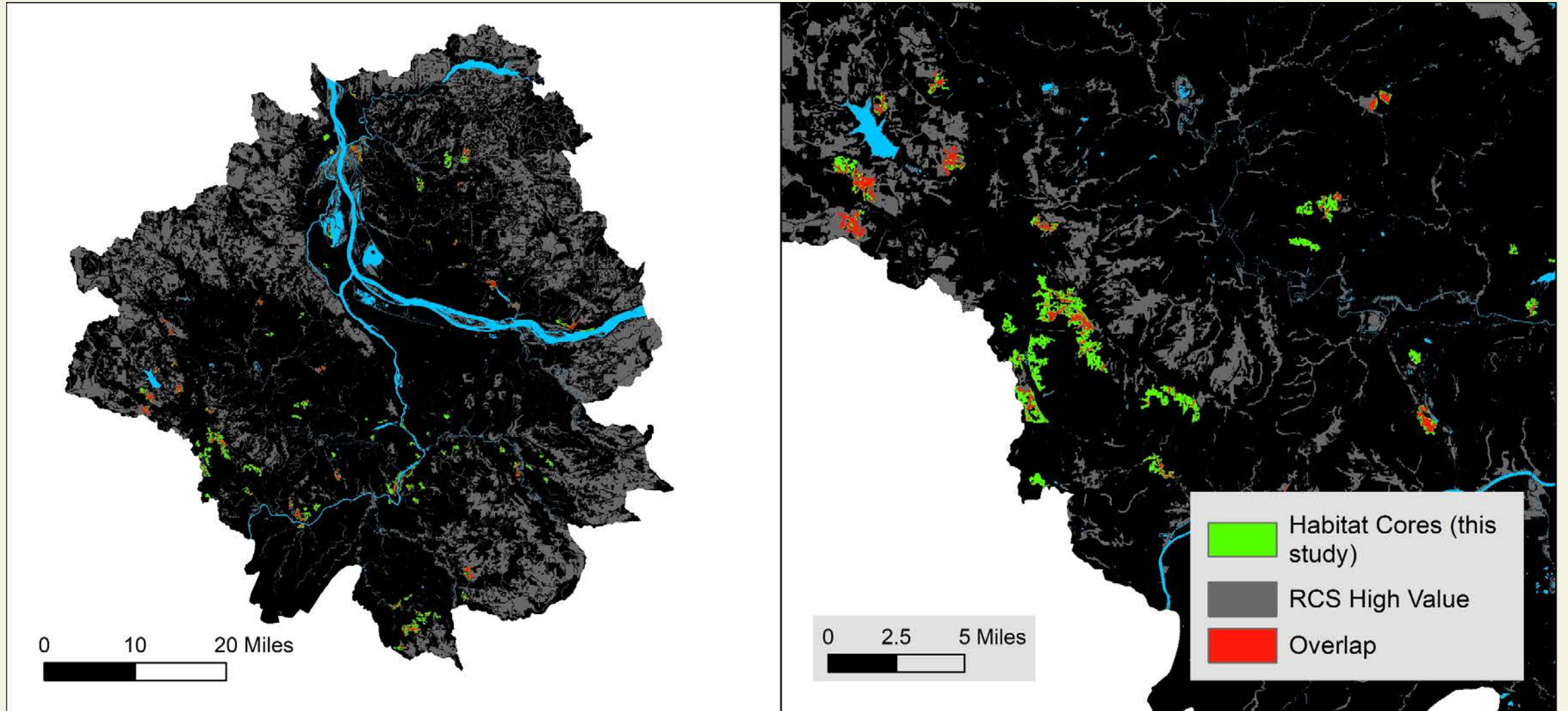
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Photo Credit:

Habitat Cores

- 110 Habitat Cores region wide (30 are urban)

0   10   20 Miles

0   2.5   5 Miles

■ Habitat Cores

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Habitat Cores and RCS

Legend:
- Habitat Cores (this study) — green
- RCS High Value — grey
- Overlap — red

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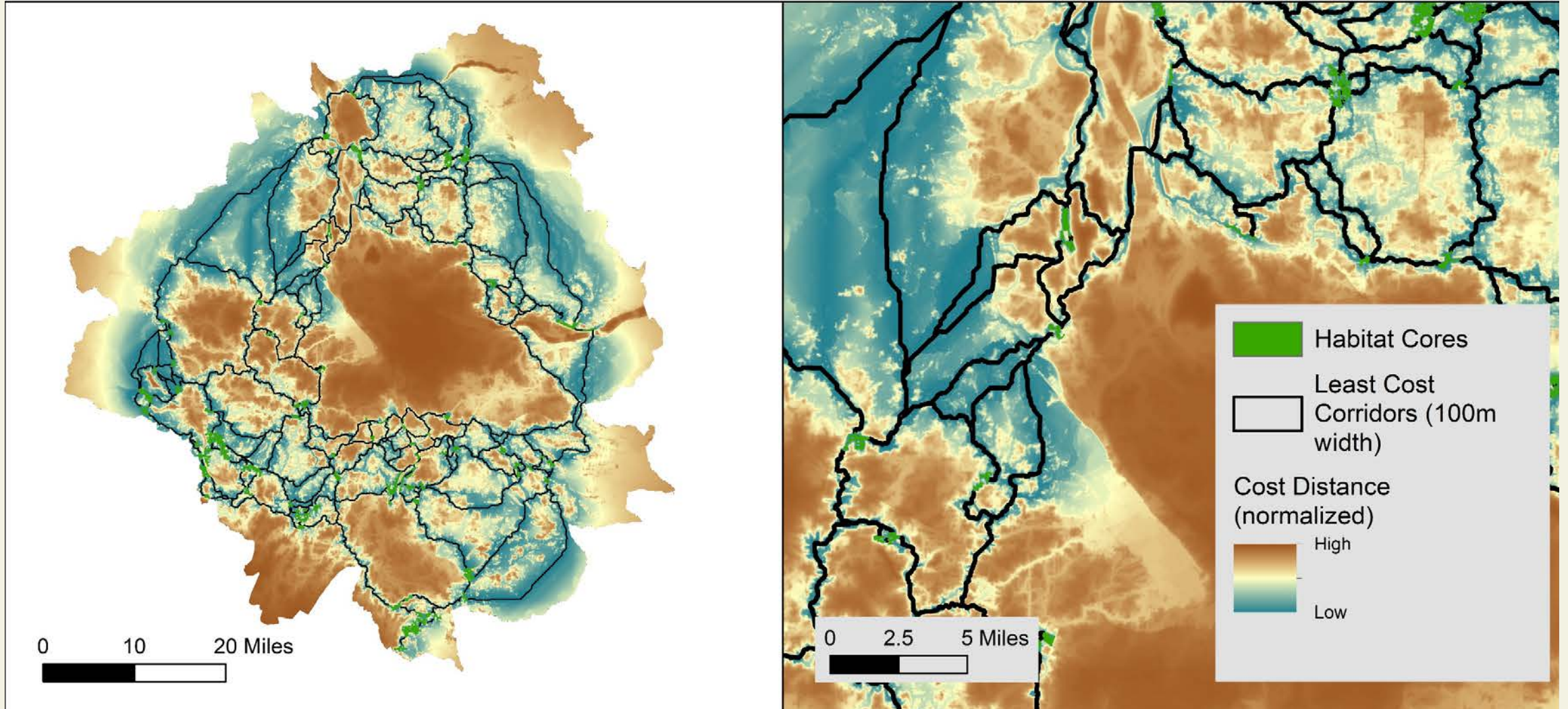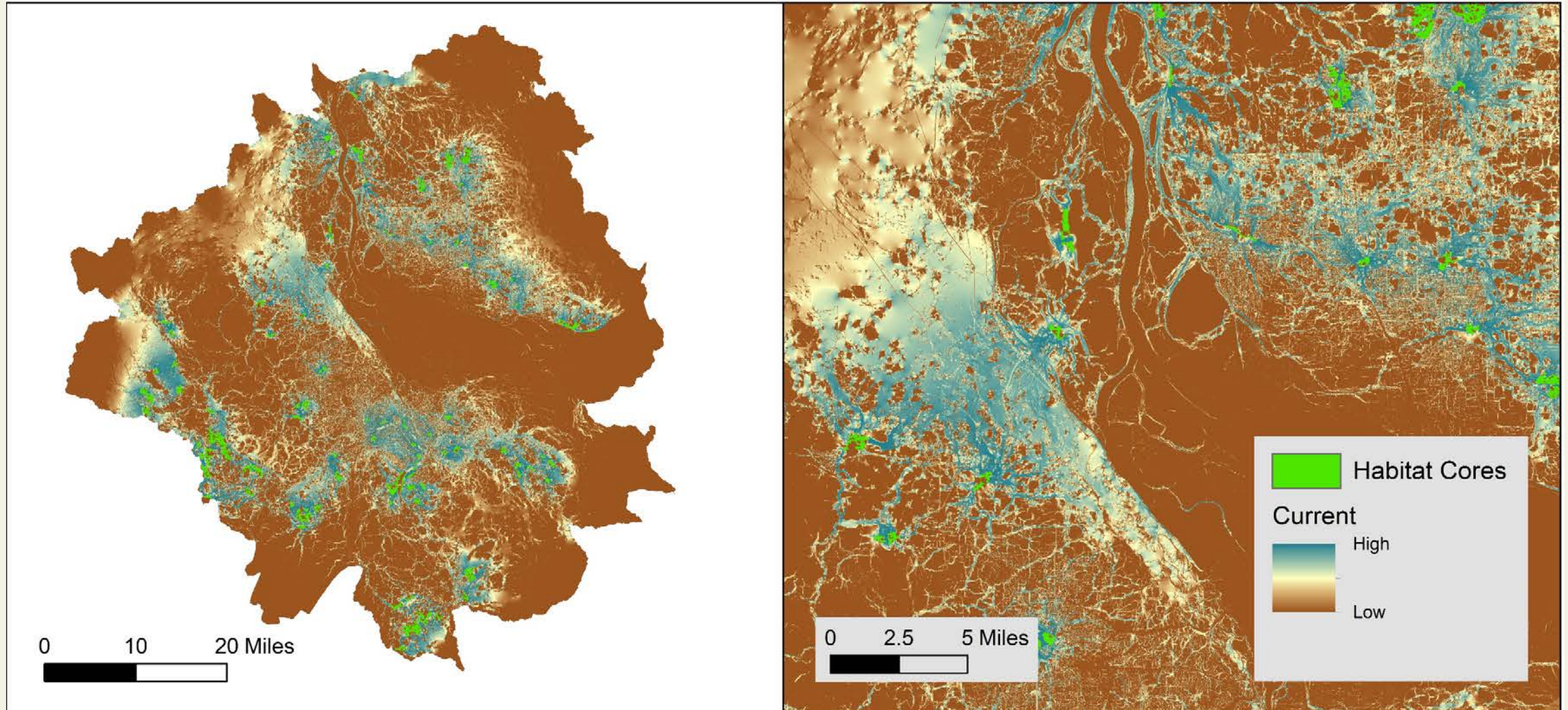
Connectivity

- Modeling the Habitat Cores as sources/destinations for movement

- Relies on a resistance surface
  - Lowest resistance- other oak patches
  - Highest resistance-major roads, buildings, large gaps in habitat

- Circuitscape vs. Least Cost Path

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Least Cost Corridors

Legend:
- Habitat Cores (green)
- Least Cost Corridors (100m width)
- Cost Distance (normalized): High / Low

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Circuitscape Connectivity

Next steps

- Cleaning up connectivity analyses
- Identifying pinch points and critical connections
- Prioritizing
- Making available

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