

Metro Habitat Connectivity Toolkit

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Habitat Connectivity

- Foundation of Conservation
- Critical to maintain viable populations of plants and animals
- Increasingly important in the face of:
 - Urban growth and human development
 - Climate change pressures

Connectivity Assessments

- Typically done exclusively through spatial modeling



- Challenges:
 - **Large spatial scales**
 - **Rapid changes**
 - **Misclassification**

Metro Habitat Connectivity Toolkit Assessment

Conduct connectivity assessment on an actionable scale and provide detailed empirically derived information to help support decision-making for transportation planning and habitat management



Surrogate Species

Forested Habitats



Oak (Madrone/Pine) Woodlands



Wetlands



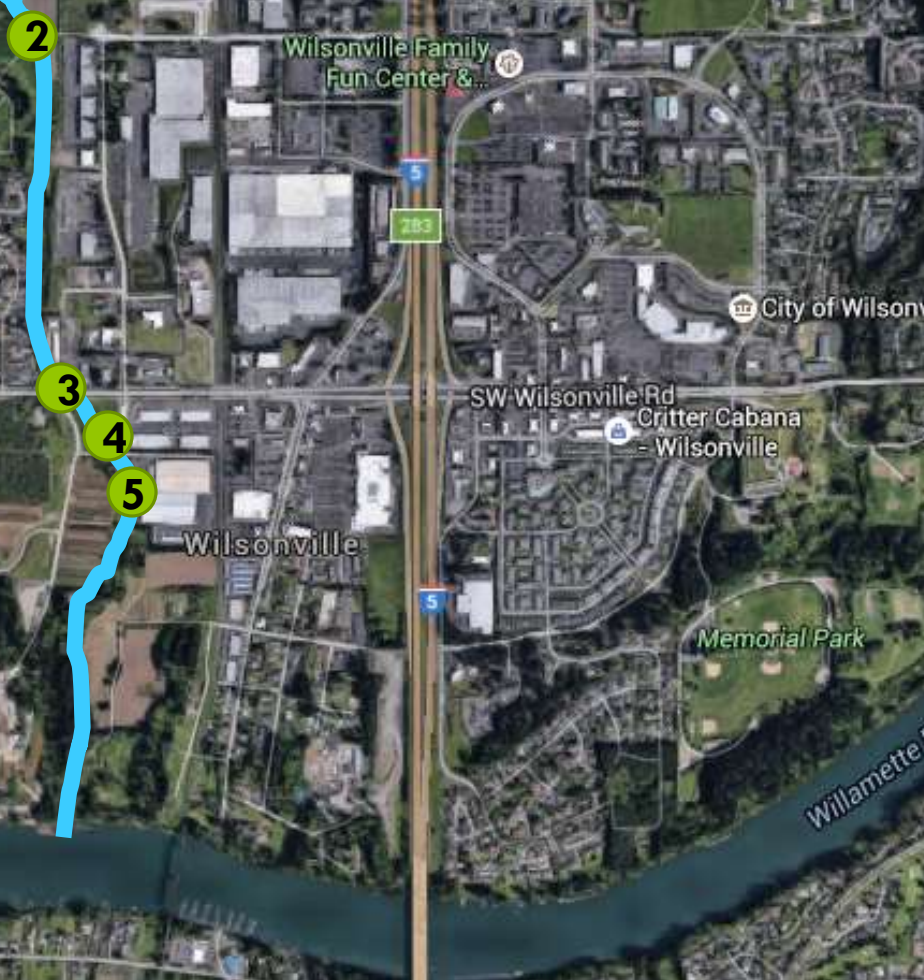
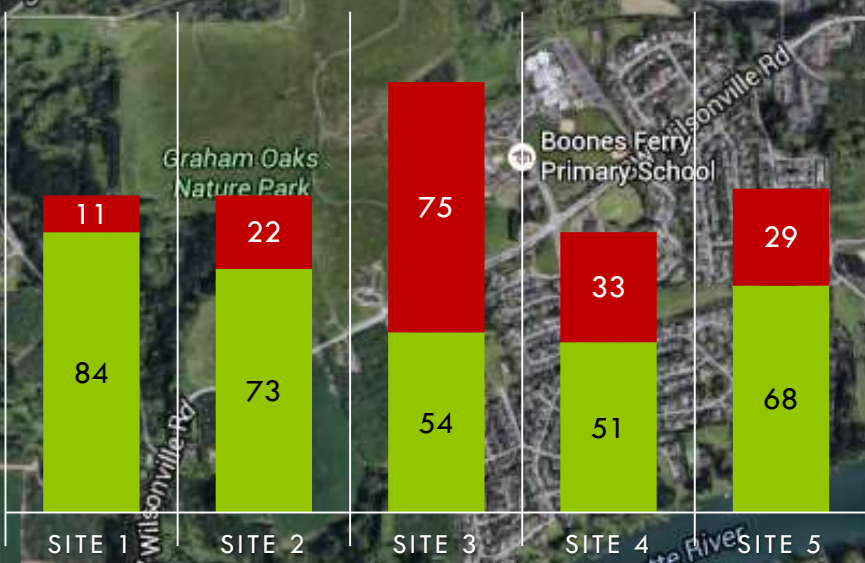
Toolkit Process

- Preliminary GIS Analysis
- On-the-ground verification of GIS results and data collection of
 - Habitat parameters
 - Permeability features
- Species specific scoring
 - Habitat quality proportion
 - Permeability proportion (Barrier strength)
- Generates values that show where barriers and/or poor quality habitat might be inhibiting movement

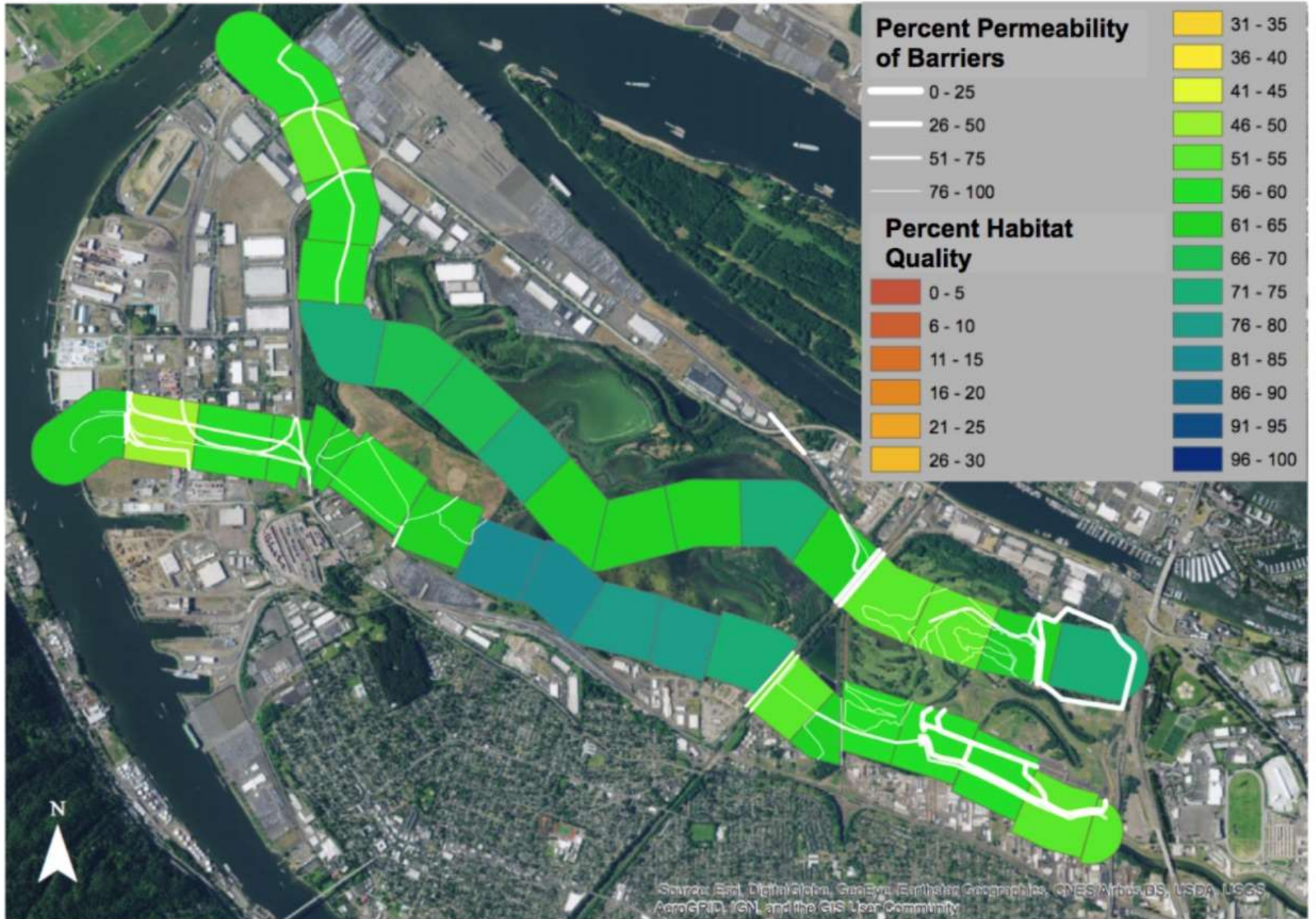
	Douglas' Squirrel		American Beaver		Red-legged Frog	
	Permeability	Habitat	Permeability	Habitat	Permeability	Habitat
HCZ 1	11%	84%	65%	48%	75%	34%
HCZ 2	22%	73%	24%	75%	28%	67%
HCZ n..						

DOUGLAS' SQUIRREL

■ Habitat ■ Permeability



Red-legged frog (*Rana aurora aurora*) HCT Barrier Permeability Scores



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





Tualatin River
National
Wildlife
Refuge

Sherwood



Smith
and
Bybee



Cooper
Mountain
Nature
Park



Tonquin
Geologic
Area



Tualatin
Hills
Nature
Park



East-side
Industrial
District

Finalizing the Toolkit

Completion by June 2018

- Sensitivity analysis
- Pilot testing
- User-guide





OREGON WILDLIFE
FOUNDATION





Thank you!

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