

# LAND COVER & WILDLIFE HABITAT MAPPING OF WESTERN WISCONSIN

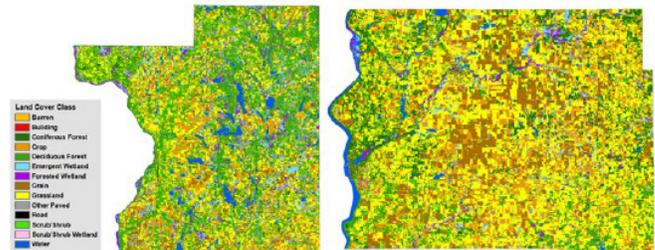
## TO IDENTIFY CURRENT AND POSSIBLE HABITAT AREAS

This corridor analysis provided detailed habitat information for Polk and St. Croix Counties. In addition to the habitat information, stakeholders can use these value-added products for decision support in urban planning, forestry, agriculture, stormwater utilities, watershed management, best management practices, and other analyses requiring detailed landscape information. The tools and workflows developed for these counties are transferable to other counties and regions across the Midwest, such as the St. Croix River basin, to expand the corridor analyses and provide similar value-added information.

# LEVERAGING EXISTING DATA TO CREATE VALUE-ADDED PRODUCTS

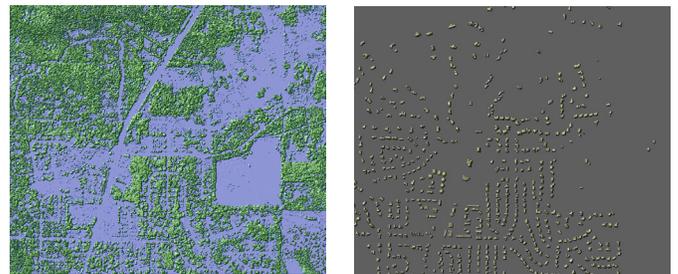
## LAND COVER LAYERS

Using existing data, SIG was able to map 14 types of land cover classes using a semi-automated feature extraction approach (object-based image analysis). Wisconsin planning officials and scientists did not previously have this valuable mapping data for landscape analysis.



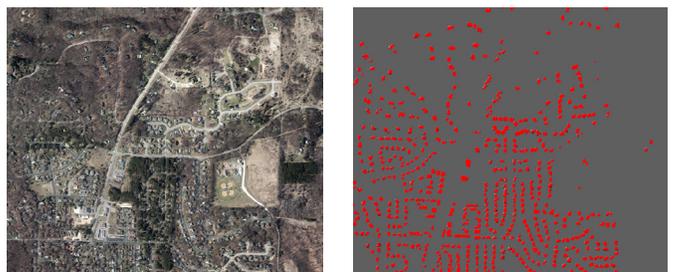
## SURFACE MODELS DERIVED FROM LIDAR

New surface models provide 3D digital representation of landscape features, including trees and structures



## BUILDING FOOTPRINTS

Using high resolution imagery and lidar data, building footprints polygons were derived and incorporated into the mapping layer.



# Modeling Habitat Corridors for Gaps & Connectivity

The habitat gap analysis used the land cover classification to identify habitat areas and a region-growing process to model corridors between the habitat areas and the lack of connectivity or gaps between the habitat areas. The region-growing process used the habitat classes for each species as the seeds for flooding the landscape surrounding each habitat area. The process produced a corridor layer where habitat areas were connected by a species-defined distance. A habitat gap layer was created when the maximum connectivity distance was exceeded or the process was interrupted by a barrier.

Habitat areas within the land cover layer included grassland and agricultural areas for monarchs, emergent wetlands for mallards and blue-winged teal, and deciduous forest for ruffed grouse and Karner blue butterflies. The habitat, corridor, and gap layers were used to calculate summary metrics for five geographic boundary layers. The resulting habitat, corridor, and gap layers for each species were summarized by area and percent cover within the county, parcel, section, municipality, and public lands layers. Each species has a metrics table with a field for joining the table to the associated geography layer.

## CONTACT US

FOR MORE INFO ON THIS PROJECT

**Caitlin Nagorka**  
caitlin\_nagorka@nps.gov

**Keith Pelletier**  
kpelletier@sig-gis.com

[www.sig-gis.com](http://www.sig-gis.com)



## Habitat Classes



## Habitat Gaps & Corridors Mapped for Regional Species

- **Monarch butterfly**
- **Mallard ducks**
- **Blue-winged teal**
- **Ruffed grouse**
- **Karner blue butterflies**



**PROJECT DASHBOARD**  
<https://tinyurl.com/4fhntyam>

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