

Hannah A. White

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Objective

Given my years of experience in the fields of both wildlife ecology and geospatial sciences, my ideal position is interdisciplinary, harnessing the power of geospatial applications to better steward and protect our natural resources.

Education

MASTER OF SCIENCE | May 2020 | Geographic Information Science (GIS)

- University of Minnesota – Twin Cities
- GPA: 4.00
 - Awarded [best cartography](#) and [best use of maps](#) in university mapping contest (2020)
 - Taught both introductory and advanced GIS courses to undergraduates using ArcGIS Pro and QGIS software
 - Independent study: [Mapping Forested Wetlands with Hydrologic Modeling from High-resolution Aerial LiDAR](#)

BACHELOR OF SCIENCE | December 2013 | Wildlife Ecology & Conservation Biology

- University of Wisconsin – Stevens Point
- GPA: 3.94
 - *Chancellor's Leadership Award* — 40 recipients out of 700 graduates, nominated by my advisor (2013)

Technical Skills

- **Esri software** | ArcGIS Pro, ArcGIS Online, Field Maps, Survey123, Story Maps, Model Builder, ArcGIS Dashboards
- **Cartography** | map design ([won Best Cartography 2020](#)), map scale, projections, datums, survey principles
- **Drone pilot** | commercially certified pilot of unmanned aircraft (UAS) through Federal Aviation Administration
- **GPS** | expert navigation, logging/averaging waypoints, saving tracks, PC data transfer, Garmin and Trimble units
- **QGIS software** | taught undergraduate courses
- **eCognition software** | remote sensing, object-based image analysis, wetland mapping (master's project)
- **LAStools software** | remote sensing, processing LiDAR data
- **Python coding** | programming in Jupyter Notebooks, PyCharm, and ArcGIS Pro
- **Radio telemetry** | digital/analog receivers, Yagi/omnidirectional antennas, VHF/GPS transmitters
- **Off-road vehicle operation and maintenance** | ATVs, 4WD trucks, regular use of tire chains, trailer towing

Experience

GIS SPECIALIST

Michael Baker International
Anchorage, AK

July 2022 – present
40 hrs/wk

- Work independently to perform spatial analyses; devise innovative solutions to troubleshoot technical issues
- Create, manage, describe (with metadata), and deliver spatial data for clients
- Develop mobile mapping applications (*Field Maps* and *Survey123*) for field data collection; provide training
- Apply cartographic principles to create both dynamic (web-based) and static (printable) maps
- Facilitate data interoperability between GIS, AutoCAD, and Google Earth formats

WILDLIFE BIOLOGIST – Data Management

U.S. Fish and Wildlife Service

Sept 2020 – June 2022

Inventory and Monitoring Branch – Anchorage, AK

40 hrs/wk

- Provided technical GIS support and training with data management systems
- Managed national Inventory and Monitoring databases, while serving on National Geospatial Advisory Committee
- Curated a regional GIS file directory from scratch, bringing together commonly used but disparate geospatial data
- Coordinated a regional archiving effort for Alaska Refuges in collaboration with partner organizations
- Applied cartographic principles to map the status of ongoing refuge archiving efforts

GRADUATE TEACHING ASSISTANT – GIS

University of Minnesota - Twin Cities

Jan 2019 – May 2020

Advanced GIS | Principles of GIS | Numerical Spatial Analysis | Biogeography

20 hrs/wk

- Instructed GIS lab sections, helping students learn ArcGIS Pro and QGIS software to perform geospatial analyses
- Received overwhelmingly positive feedback from anonymous, end-of-semester, student surveys
- Demonstrated effective communication and interpersonal skills to engage students with course content
- Employed time management strategies to successfully balance a full credit load while holding dual assistantships

DIRECTORATE FELLOW – GIS & Fisheries Biology

U.S. Fish and Wildlife Service

May – Aug 2019

Midwest Fisheries Center – Onalaska, WI

40 hrs/wk

- Conducted a geospatial habitat assessment for Lake Sturgeon (*Acipenser fulvescens*) in Minnesota's Red River Basin
- Created electronic Survey123 forms for field data collection of sonar imagery and GoPro video footage
- Digitized benthic substrate for all sample sites and produced a map catalog of the study area
- Completed detailed metadata/documentation for all spatial layers and organized them in a geodatabase
- Demonstrated critical thinking to overcome a series of logistical challenges

GIS INTERN

United States Solar Corporation

Feb – May 2019

Minneapolis, MN

12-24 hrs/wk

- Conducted proprietary geospatial tasks to aid in the site selection for new solar projects nationwide
- Used Google Earth to create, update, edit, and review spatial datasets relating to the existing power grid

SAGE GROUSE FIELD TECHNICIAN

Oregon State University

Apr – Aug 2017, May – July 2018

Eastern and south-central Oregon

40-60 hrs/wk

- Tent-camped in remote field sites after night capture efforts attaching radio transmitters to sage grouse hens
- Hiked alone in pre-dawn hours carrying bulky equipment over several kilometers in the high desert
- Daily ATV use in backcountry to conduct telemetry, point-count surveys, and vegetation surveys

GRADUATE RESEARCH ASSISTANT

University of Illinois at Urbana-Champaign

Aug 2017 – May 2018

Illinois Natural History Survey

20 hrs/wk

- Conducted preliminary thesis research on state-endangered Blanding's Turtle (*Emydoidea blandingii*)
- Performed geospatial analyses to model where potentially suitable habitat existed
- Used R programming to manipulate decades of trapping data for quality assurance/data cleaning
- Drafted research proposal & co-authored a successful grant proposal – received funding for \$12,700

WILDLIFE BIOLOGIST AIDE – Deer Crew Lead

Pennsylvania Game Commission

Oct 2015 – Apr 2017

Susquehannock State Forest – Coudersport, PA

40-60 hrs/wk

- Independently coordinated and supervised a 5-person field crew to radio-collar and monitor does and fawns
- Digitized traplines with Esri's ArcMap software and created a suite of maps displaying deer capture locations
- Administered immobilizing drugs to sedate deer during rocket-netting and VIT deployment
- Operated 4WD trucks on unmaintained logging roads in mountainous terrain, using tire chains during winter
- Authored weekly blog posts to Penn State's *Deer-Forest Blog* (*Deer Crew Diaries*, 2016-17 archives)

SMALL-MAMMAL CREW LEAD

National Ecological Observatory Network

Apr 2015 – Oct 2015

Land O' Lakes, WI

40 hrs/wk

- Established 30-year sampling plots with survey-grade Trimble Geo 7X units
- Coordinated a 4-person crew to check 300 Sherman traps/day following standardized protocols
- Processed small mammal captures by ear-tagging, weighing, and measuring morphological characteristics
- Conducted vegetation surveys, invertebrate sampling, and processed soil samples in the lab

DEER TELEMETRY TECHNICIAN

Wisconsin Department of Natural Resources

Sept 2014 – Feb 2015

Winter & Shiocton, WI

40 hrs/wk

- Conducted solo telemetry work on a high-profile and controversial deer mortality study related to wolves
- Contacted landowners to request access on private property and to survey hunters regarding harvests
- Demonstrated effective communication skills during frequent interactions with the public, neutralizing charged conversations by maintaining positive and constructive dialogue

GREATER PRAIRIE-CHICKEN TECHNICIAN

University of Wisconsin - Stevens Point

March – Sept 2014

Buena Vista Wildlife Area – Bancroft, WI

40-60 hrs/wk

- Independently trapped hens on leks, fitted radio-collars, and recorded morphological measurements
- Monitored nest/brood success via telemetry, requiring precise triangulation to avoid disturbing nests
- Demonstrated acute organizational skills by keeping detailed field notes

WILDLIFE MANAGEMENT INTERN

Wisconsin Department of Natural Resources

May – Aug 2013

Crex Meadows Wildlife Area – Grantsburg, WI

40 hrs/wk

- Developed and executed an internship project estimating beaver abundance within the 30,000-acre wildlife area
- Performed general property maintenance including dike repair, beaver-dam removal, and mowing
- Controlled invasive species via herbicide application and biological agents (loosestrife beetles)
- Monitored sensitive species via point-counts, vegetation surveys, and butterfly surveys; banded waterfowl

Soft Skills

ADAPTABILITY

- As someone who has worked in varied roles across a multitude of agencies, I am quick to learn new workflows while forging collaborative partnerships with my colleagues.

TEAMWORK

- My ability to cooperate amicably with diverse personalities fosters productive working environments.

LEADERSHIP

- Having been a teacher, a supervisor, and a regional coordinator, my commitment to mutual respect and open communication has allowed me to become a more effective leader.

ORGANIZATION

- A master of to-do lists, I balance my workload by staying exceptionally organized and attending to every detail.

CRITICAL THINKING

- When unexpected challenges require creative thinking to reach a resolve, I welcome the opportunity to devise unique solutions.

Coursework

GEOGRAPHY | 30 CREDITS

- *GIS in Natural Resource Management* (4 cr.) NRES 454, University of Illinois at Urbana-Champaign
- *Advanced GIS for Natural Resource Planning* (2 cr.) NRES 455, University of Illinois at Urbana-Champaign
- *Advanced GIS* (3 cr.) GEOG 5563, University of Minnesota
- *ArcGIS I* (3 cr.) GIS 5571, University of Minnesota
- *ArcGIS II* (3 cr.) GIS 5572, University of Minnesota
- *Remote Sensing & Geospatial Analysis of Natural Resources* (3 cr.) FNRM 5262, University of Minnesota
- *Advanced Remote Sensing (Research Problems in GIS)* (3 cr.) GIS 8990, University of Minnesota
- *Drones: Data Analysis and Operations* (3 cr.) FNRM 5362, University of Minnesota
- *GIS Project Management* (3 cr.) GIS 8501, University of Minnesota
- *Principles of Geocomputing, Intro to Python Coding* (3 cr.) GEOG 5541, University of Minnesota

ZOOLOGY | 27 CREDITS

- *Ornithology* (3 cr.) Biology 377, University of Wisconsin - Stevens Point
- *Mammalogy* (3 cr.) Biology 378, University of Wisconsin - Stevens Point
- *Animal Physiology* (4 cr.) Biology 381, University of Wisconsin - Stevens Point
- *Wildlife Ecology and Conservation Biology* (3 cr.) Wildlife 458, University of Wisconsin - Stevens Point
- *Genetics* (3 cr.) Biology 210, University of Wisconsin - Stevens Point
- *Animal Biology* (5 cr.) Biology 160, University of Wisconsin - Stevens Point
- *Ecology* (3 cr.) Biology 305, University of Wisconsin - Stevens Point
- *General Biology* (3 cr.) Biology 150, University of Wisconsin - River Falls

NATURAL RESOURCE MANAGEMENT | 26 CREDITS

- *Ecological Basis for Natural Resource Management* (3 cr.) NRES 151, University of Wisconsin - Stevens Point
- *Ecosystem Management and Restoration* (3 cr.) NRES 459, University of Wisconsin - Stevens Point
- *Wetlands Ecology and Management* (3 cr.) Wildlife 360, University of Wisconsin - Stevens Point
- *Management of Wildlife Habitat* (4 cr.) Wildlife 451, University of Wisconsin - Stevens Point
- *Fisheries, Forestry and Wildlife Resources* (4 cr.) NRES 250, University of Wisconsin - Stevens Point
- *Soil and Water Resources* (4 cr.) NRES 251, University of Wisconsin - Stevens Point
- *Soil Conservation & Watershed Inventory Techniques* (1 cr.) Soil 359, University of Wisconsin - Stevens Point
- *Soil Inventory Methods* (1 cr.) Soil 360, University of Wisconsin - Stevens Point
- *Aquatic Ecosystem Evaluation* (1 cr.) Water 380, University of Wisconsin - Stevens Point
- *Wildlife Management Techniques* (1 cr.) Wildlife 340, University of Wisconsin - Stevens Point
- *Fire Operations* (1 cr.) Forestry 224, University of Wisconsin - Stevens Point

BOTANY | 9 CREDITS

- *Plant Science* (3 cr.) Horticulture 161, University of Wisconsin - River Falls
- *Vascular Plant Taxonomy* (4 cr.) Biology 342, University of Wisconsin - Stevens Point
- *Plant Identification* (1 cr.) NRES 405, University of Wisconsin - Stevens Point
- *Forest Mensuration* (1 cr.) Forestry 320, University of Wisconsin - Stevens Point

FUNDAMENTALS | 31 CREDITS

- *Quantitative Methods for Wildlife and Fisheries Research and Management* (3 cr.) Wildlife 311, UW - SP
- *Wildlife and Fish Population Dynamics* (4 cr.) Wildlife 353/354, University of Wisconsin - Stevens Point
- *Chemistry* (5 cr.) Chemistry 105, University of Wisconsin - Stevens Point
- *Physics* (4 cr.) Physics 201, University of Wisconsin - Stevens Point
- *Elementary Statistics* (4 cr.) Math 355, University of Wisconsin - Stevens Point
- *Applied Statistics* (4 cr.) NRES 440, University of Illinois at Urbana-Champaign
- *Calculus* (4 cr.) Math 166, University of Wisconsin - River Falls
- *Geology* (3 cr.) Geology 101, University of Wisconsin - River Falls