

Samuel Allen Field Biologist

Samuel Allen is a field biologist for Martin & Nicholson Environmental Consultants, LLC. His passion for naturally biodiverse and functioning ecosystems led his academic career focus toward Conservation Biology and Natural Resource Management. As a student, Sam became adept in characterization of physical and chemical soil properties while instructing a soil science course and lab, and proposed bighorn sheep demographic research that helps regional wildlife managers of the Southwest Montana area attain most accurate annual parameter estimates. In his professional career, Mr. Allen has collaborated with a variety of federal, state, and local agencies in conducting research involving vegetation surveys, species-specific habitat assessments, large game mammal, avian use, and nest activity surveys, special status floral and faunal investigations, and design and implementation of natural resource management plans. He has been trained and involved in capturing, processing, and translocating bighorn sheep (*Ovis canadensis*), mountain goat (*Oreamnos americanus*), and greater sage-grouse (*Centrocercus urophasianus*), is proficient in nest monitoring, avian use, and point-count surveys throughout the Great Basin, Great Salt Lake Desert, Greater Yellowstone, and Western alpine ecosystems, and is trained in basilic venipuncture blood sample collection of avian species. As a former wilderness guide, Samuel is trained in wilderness medicine and is adept at work in erratic climatic conditions with limited resources at hand.

Education

-BS Conservation Biology, Montana State University 2017

Years of Experience

5

Training/Certification

-Utah Prairie Dog Surveying, UDOT 2020
-Wilderness First Responder, NOLS WMI 2019
-CPR, NOLS WMI/American Red Cross 2019
-Environmental Control Supervisor, UDOT 2019
-Greater Sage-grouse Surveying, USGS/Great Basin Bird Observatory (GBBO) 2018
-Greater Sage-grouse Capture & Translocation, USGS 2018
-Avian Basilic Venipuncture Blood Sampling, USGS 2018
-OHV and Winch Operation & Safety, USGS 2018
-Leave-No-Trace Master Instructor, LNT 2015

Expertise

-Biological Surveys
-Species-specific Habitat Assessments
-Vegetation Surveys
-Avian Use Surveys
-Visual and Auditory Avian Detection and Identification
-Eagle and Raptor Nest Monitoring
-Greater Sage-grouse Surveys and Monitoring
-Exercise of Federal, State, Regional, and Local Rules and Regulations
-Physical and Chemical Soil Property Characterization
-Ungulate Field Necropsy
-Radio Telemetry

Professional Affiliations

The Wildlife Society
Montana Wild Sheep Foundation

Representative Experience

Echo Divide Wind Project Avian Use; Summit County, Utah, Enyo Renewable Energy Ongoing

M&N conducts monthly avian use surveys monitoring eagle, raptor, and migratory bird use within the proposed Echo Divide Wind Park, located in Summit County, UT. Mr. Allen is responsible for recording field point-count observations and summarizing results for annual regulatory review by the US Fish and Wildlife Service (USFWS), intended to inform future development of an eagle conservation plan in conformance with the Bald and Golden Eagle Protection Act, Eagle Conservation Plan Guidance (US Fish and Wildlife Service [USFWS] 2013), updated Eagle Rule (81 Federal Register [FR] 91494), Migratory Bird Treaty Act, and the Land-Based Wind Energy Guidelines (USFWS 2012). In 2021, M&N conducted two aerial and four ground-based eagle and raptor nest monitoring surveys within a two-mile radius of the proposed project area.

Castle Solar Photovoltaic Project; Tooele County, Utah, DESRI Renewables, LLC. Ongoing

M&N was contracted to conduct natural and cultural resource surveys and assist with permitting of a solar photovoltaic facility located in Emery County, Utah. Mr. Allen devised transect-based survey methodology and has been responsible for a total of two transect-based avian use and breeding bird surveys. In addition, M&N has conducted one preliminary nest clearance and removal survey, one burrowing owl (*Athene cunicularia*) and white-tailed prairie dog (*Cynomys leucurus*) burrow clearance surveys, and will perform a final nest clearance survey within five days preceding project construction.

Elektron and Horseshoe Solar Photovoltaic Projects; Tooele County, Utah, DESRI Renewables, LLC. Ongoing

M&N was contracted to conduct natural and cultural resource surveys and assist with permitting of a solar photovoltaic facility located in Tooele County, Utah. Mr. Allen devised transect-based survey methodology and has been responsible for a total of six transect-based avian use and breeding bird surveys at each project site. In addition, M&N has conducted three preliminary nest clearance and removal surveys, three burrowing owl (*A. cunicularia*) burrow clearance surveys, and will perform a final nest clearance survey within five days preceding project construction.

Rocket Solar Photovoltaic Project; Box Elder County, Utah, DESRI Renewables, LLC. Ongoing

M&N was contracted to conduct natural and cultural resource surveys and assist with permitting of a solar photovoltaic facility located in Box Elder County, Utah. Mr. Allen devised transect-based survey methodology and has been responsible for a total of six transect-based avian use and breeding bird surveys since 2020. In addition, M&N has conducted three preliminary nest clearance and removal surveys, three burrowing owl (*A. cunicularia*) burrow clearance surveys, and will perform a final nest clearance survey within five days preceding project construction.

Steel Solar Photovoltaic Project; Box Elder County, Utah, DESRI Renewables, LLC. Ongoing

M&N was contracted to conduct natural and cultural resource surveys and assist with permitting of a solar photovoltaic facility located in Box Elder County, Utah. Mr. Allen has conducted two transect-based avian use and breeding bird surveys, two nest clearance and removal surveys, and two burrowing owl (*A. cunicularia*) and white-tailed prairie dog (*C. leucurus*) burrow clearance surveys. In addition, M&N performed two investigative sharp-tailed grouse lek identification and short-eared owl (*Asio flammeus*) nest identification surveys.

Horse Butte Wind Project Eagle Fatality Monitoring; Bonneville County, Idaho, UAMPS Ongoing

M&N and subcontractor CORE Consultants have been contracted by Utah Associated Municipal Power Systems (UAMPS) to conduct eagle fatality monitoring and associated searcher efficiency and carcass persistence trials in accordance with the terms and conditions of the Project's eagle take permit. Monitoring was initiated in April 2019 and will continue until March 2022. Mr. Allen was responsible for overseeing searcher efficiency trials in 2019, and is currently responsible for conducting monthly eagle fatality surveys as a searcher. Mr. Allen also performs monthly preliminary avian use point-count surveys in the proposed Project extension and in accordance with USFWS protocol and recommendation.

Burrowing Owl Clearance Surveys; Millard County, Utah, Magnum Development 2021

M&N was contracted to conduct preconstruction burrowing owl (*A. cunicularia*) clearance surveys associated with planned facility expansion areas. Mr. Allen provided field assistance conducting burrow clearance surveys and identifying incidental wildlife sightings and signs.

Utah Prairie Dog Surveys; Multiple Counties, Utah, Utah Department of Transportation 2020

During the 2020 active season, M&N conducted Utah prairie dog (UPD) (*Cynomys parvidens*) pre-construction surveys and construction monitoring for four projects in Region 4. M&N applied the 2013 UDOT surveying, monitoring, and reporting protocol. Mr. Allen provided field support conducting UPD habitancy and parameter estimation surveys.

Anticline Wind Eagle and Raptor Nest Monitoring; Natrona County, WY, Enyo Renewable Energy 2019 & 2020

M&N conducted six eagle and raptor nest monitoring surveys within a ten-mile and two-mile radius of the proposed Anticline Wind Park, located in Natrona County, WY. From February to August in the years of 2019 and 2020, M&N performed two aerial and four ground-based eagle and raptor nest monitoring surveys documenting eagle and raptor presence, suitable nesting substrate and nest identification, nest site activity, and final nesting status. M&N summarizes final observational results for annual regulatory review by USFWS, and with intention to inform future development of an eagle conservation plan in conformance with the Bald and Golden Eagle Protection Act, Eagle Conservation Plan Guidance (US Fish and Wildlife Service [USFWS] 2013), updated Eagle Rule (81 Federal Register [FR] 91494), Migratory Bird Treaty Act, and the Land-Based Wind Energy Guidelines (USFWS 2012).

Rare & Endemic Plant Inhabitation Surveys; Emery County, Utah, IACX Energy 2019

M&N was contracted to perform natural resource and psoralis globemallow (*Sphaeralcea psoraloides*) inventory preceding helium mine operations in the San Rafael Swell, UT. Mr. Allen provided field support in identifying and mapping *S. psoraloides* individuals and conducted white-tailed prairie dog and burrowing owl occurrence surveys.

Mountain View Corridor Environmental Compliance; Salt Lake County, Utah, Mountain View Corridor Constructors 2019

M&N provided environmental clearance services on parcels not previously surveyed to ensure that proposed construction activities do not affect migratory birds and other special status wildlife and floral species. Mr. Allen provided field support and assessed federal and state-listed special status species occurrence potential within proposed project parcels.

Greater Sage-grouse Project Technician ; Esmeralda, Humboldt, Lander, Mineral, and Washoe Counties, NV, USGS, Nevada Department of Wildlife (NDOW), and Great Basin Bird Observatory (GBBO) 2018

As a biological technician of US Geological Survey and in collaboration with Nevada Department of Wildlife (NDOW) and Great Basin Bird Observatory (GBBO), Samuel Allen tracked and documented long-term dynamic changes in subpopulations of *Centrocercus urophasianus* (Greater Sage-grouse) throughout the Great Basin of Nevada and Eastern California. Responsibilities included surveying Greater Sage-grouse lek-site attendance, classification of avian age and sex, point-count surveys of raptor and livestock, monitoring female sage-grouse nesting sites and individuals' reproductive success, rearing habits, and brood outcomes, assessing preferred seasonal sage-grouse habitats, vegetation surveys, collection of individuals' feather, fecal, and blood samples, and safe capture, process, and translocation of live sage-grouse hens and chicks. (Prior to joining M&N)