

Curriculum Vitae

FRANK PENCE HOWE

Wildland Resources Department
Utah State University
5230 Old Main Hill, NR 206
Logan, UT 84322-5230
office: 435-797-8523
e-mail: frankhowe@utah.gov

EDUCATION

- BA** St. Cloud State University, St. Cloud, MN 56301, Biology & Anthropology, 1982
MS South Dakota State University, Brookings, SD 57007, Wildlife Science, 1986
Thesis: An ecological study of Mourning Doves in a cold desert ecosystem on the Idaho National Engineering Laboratory
PhD Colorado State University, Ft. Collins, CO 80523, Wildlife Biology, 1993
Dissertation: Effects of an experimental food reduction on nesting shrubsteppe passerines

PROFESSIONAL EXPERIENCE

Current Position

University Research Liaison, UDWR

1594 West North Temple, Salt Lake City, UT 84114-6301

Supervisor: Ashley Green, Assistant Director

Dates: 1/06 to Present

Duties: Act as liaison between DWR and Utah universities. Facilitate communication between universities and DWR in all aspects of higher education and research of mutual interest. Develop, conduct, and/or consult on wildlife-related research of interest to DWR. Lead DWR staff in developing applied research questions, communicating those questions to university researchers, and communicating research results to biologists, managers, and administration. Assist DWR and university personnel in funding and implementing research projects. Chair DWR's Education Advisory Team and direct DWR's advanced education program by advising and financially assisting employees in attaining advanced degrees while meeting DWR research needs. Lead DWR professional recruitment program by recruiting high caliber students into DWR through developing and implementing paid internships for graduates and undergraduates. Coordinate DWR professional training by identifying training needs, recruiting instructors, and organizing workshops. Develop core competencies for DWR's Leadership Development Program, review program curricula, and evaluate student progress. Chair DWR Research Council which reviews internal and external (university) research project proposals, provides constructive comments to PIs, and makes recommendations to the Director regarding funding. Assist with research and partnership components of DWR's Wildlife Migration Initiative. Attract funding to universities and DWR for wildlife related research. Facilitate presentation of research findings to biologists, managers and administrators as well as wildlife professionals and the public. Advise graduate students and serve on their committees. Teach or team teach graduate and undergraduate courses, e.g., Applied Avian Ecology, Wetland Ecology and Management, Wildlife Law Enforcement. Help universities develop curricula pertinent to students seeking wildlife agency careers and professionals seeking advanced training. Chair Logan River Task Force; assist agencies, USU educators and researchers, NGOs, businesses, and municipalities in restoration and promotion of the Logan River as an outdoor classroom and applied ecology demonstration area.

Current Position**Associate Professor (State Cooperator), Department of Wildland Resources**

Utah State University, Logan, UT 84322-5230

Supervisor: Dr. Karen Mock, Department Head**Dates:** 10/19 to Present

Duties: Act as liaison between USU and DWR by enhancing communication regarding wildlife-related research projects as well as employee and student education. Serve as a member of the Wildland Resources Department faculty. Assist Quinney College of Natural Resources (QCNR) faculty in identifying DWR-related research questions and projects. Where appropriate, assist faculty in securing funding, developing projects, and carrying out research. Assist faculty in developing collaborative relationships with DWR staff. Assist QCNR in program and curriculum development in the Master of Natural Resources (MNR) Professional Degree Program and in other programs as appropriate. Serve on and, when appropriate, chair graduate committees. Assist QCNR in recruiting DWR professionals as graduate students. Develop online and resident ecology and management coursework at graduate and undergraduate levels within the QCNR. Teach and/or team-teach at least one course per academic year; facilitate delivery of professional workshops by USU faculty. Advise graduate and undergraduate students interested in careers in Natural Resources management. Serve on MNR Standing Committee and other QCNR or University committees when appropriate. Attract funding for wildlife-related research to QCNR. Develop and implement joint graduate and undergraduate internship programs with QCNR. Also serve as Chair of Logan River Task Force (LRTF) which includes developing collaborative research opportunities and outdoor classroom opportunities between QCNR Departments and other LRTF partners including Logan City, DWR, other state, federal, and local agencies, and Non-government Organizations.

Previous Positions**Adjunct Associate Professor, Department of Wildland Resources**

Utah State University, Logan, UT 84322-5230

Supervisor: Dr. Michael Kuhns, Department Head**Dates:** 11/13 to 10/19

Duties: Act as liaison between USU and DWR by enhancing communication regarding wildlife-related research projects as well as employee and student education. Serve as a member of the Wildland Resources Department faculty. Assist Quinney College of Natural Resources (QCNR) faculty in identifying DWR-related research questions and projects. Where appropriate, assist faculty in securing funding, developing projects, and carrying out research. Assist faculty in developing collaborative relationships with DWR staff. Assist QCNR in program and curriculum development in the Master of Natural Resources (MNR) Professional Degree Program and in other programs as appropriate. Serve on and, when appropriate, chair graduate committees. Assist QCNR in recruiting DWR professionals as graduate students. Teach and/or team-teach at least one course per academic year; facilitate delivery of professional workshops by USU faculty. Provide advisement to graduate and undergraduate students interested in careers in Natural Resources management. Serve on MNR Standing Committee and other QCNR or University committees when appropriate. Attract funding for wildlife-related research to QCNR. Develop and implement joint graduate and undergraduate internship programs with QCNR. Also serve as Chair of Logan River Task Force (LRTF) which includes developing collaborative research opportunities and outdoor classroom opportunities between QCNR Departments and other LRTF partners including Logan City, DWR, other state, federal, and local agencies, and Non-government Organizations.

Adjunct Assistant Professor, Department of Wildland Resources

Utah State University, Logan, UT 84322-5230

Supervisor: Dr. Johan du Toit, Department Head**Dates:** 12/05 to 11/13**Duties:** Acted as primary contact between USU and DWR and after 2005 as liaison (see Current

Position). Duties were similar to Current Position but with more focus on developing the University Liaison Program, converting the MNR program into a professional degree, and serving as PI or Co-PI on MS and PhD-level research projects. Position now has less emphasis on leading my own MS-level research projects and more focus on building collaborative research with QCNR faculty, especially new faculty, as well as mentoring MNR students.

Affiliate (Associate) Faculty, Department of Plant and Wildlife Sciences

Brigham Young University, Provo, UT 84602

Supervisor: Dr. Val Anderson, Department Chair

Dates: 1/2008 – 12/2013

Duties: Acted as primary contact between BYU and DWR. Coordinated annual BYU-DWR research symposium, served on several MS and PhD committees, and assisted in developing DWR-related research projects appropriate to BYU faculty expertise.

Adjunct Assistant Professor, Department of Forest, Range, and Wildlife Sciences

Utah State University, Logan, UT 84322-5210

Supervisor: Dr. David Roberts, Department Head

Dates: 1/03 to 12/05

Duties: Served on several graduate committees. Also was Co-Project Leader for multi-disciplinary ShrubMap Project in Rich County Utah which included four MS and three PhD projects.

Nongame Avian Program Coordinator, UDWR

1594 West North Temple, Salt Lake City, UT 84114-6301

Supervisor: John Kimball, retired

Dates: 9/91 to 4/94 and 1/96 to 12/06

Duties: Developed and implemented statewide program to research, manage and conserve native, nongame bird species and their habitats. Designed and implemented statewide population and habitat research, monitoring, and management programs for rare and endangered species, neotropical migrants, and resident birds. Developed and coordinated statewide applied avian research program with focus on riparian and shrubsteppe ecosystems. Directed statewide Partners in Flight Program: an interagency program designed to facilitate monitoring, research, and management of nongame birds in Utah and the West. Developed and implemented the Utah Avian Conservation Strategy. Assisted stakeholders in developing and implementing the Utah Wildlife Action Plan. Served as member of the Mexican Spotted Owl Recovery Team and chaired an interdisciplinary team to implement recovery of Mexican Spotted Owls in 4 states on the Colorado Plateau. Represented Utah in creation of interagency Northern Goshawk Conservation Strategy. Compiled the State Sensitive Terrestrial Species List. Formulated and administered research projects with western universities and other agencies pertaining to Threatened, Endangered, and Sensitive bird species as well as shrubsteppe and riparian ecosystems. Developed funding proposals; administered interagency cooperative agreements, university contracts, and foundation grants. Conducted and directed statistical analyses of statewide avian databases. Wrote professional reports and manuscripts and presented findings at professional and public meetings. Developed work programs for, edited and approved reports from 5 DWR regional offices. Developed DWR policies and rules pertaining to Threatened, Endangered, Sensitive, and Nongame Birds. Provided input to U.S. Fish and Wildlife Service and other state and federal agencies on policies and rules for federally listed bird species. Created, taught, and/or coordinated professional workshops on population estimation, population modeling, ecosystem classification, biodiversity monitoring and management, avian population monitoring, bird identification, songbird conservation, raptor management, endangered species monitoring and management, shrubsteppe community ecology and management, and riparian/wetland ecology and conservation. Conducted federal certification workshops for endangered species surveyors.

Conducted guest lectures at Utah State University, University of Utah, Brigham Young University, Weber State University, Snow College, and Southern Utah University on avian and habitat management. Taught Project WILD and Outdoor's Woman workshops. Developed and coordinated annual statewide public outreach events. Conducted public outreach workshops on bird conservation, identification, and feeding. Founder (1992) and Chair (1992-1996) of Utah Partners in Flight. Assisted in designing Continuing Education and Professional Development programs for DWR. Prepared and presented avian management recommendations to Regional Advisory Councils and the Wildlife Board. Developed and administered annual budget of approximately \$1 million.

Adjunct Associate (Instructor), Department of Biology

Westminster College of SLC, 1840 S 1300 E, Salt Lake City, UT 84105

Supervisor: Dr. Bonnie Baxter, Department Head

Dates: 8/99 to 12/04

Duties: Conducted classroom and field/laboratory instruction in undergraduate biology. Prepared and administered course syllabus, lectures, field trips, tests, quizzes, and additional teaching materials for Environmental Biology. Course delivered historical perspective and emphasized current issues. Worked with faculty to incorporate current Utah wildlife and ecology issues into environmental education program. Also served as mentor to incoming Adjunct Associates. Average student course evaluation 4.48 out of 5.00.

Utah Partners in Flight Coordinator, UDWR

1594 West North Temple, Salt Lake City, UT 84114-6301

Supervisor: Dwight Bunnell (deceased)

Dates: 1/95 to 1/96

Duties: Directed and coordinated development and implementation of statewide bird population monitoring, research, and management among several federal agencies, state agencies, regional universities, and private organizations. Developed and established guidelines for bird species and habitat management, monitoring, and recovery programs. Conducted professional workshops on avian diversity, management, and field techniques. Acted as Utah representative to Western and International Partners in Flight. Conducted analyses, interpreted results, wrote, reviewed, edited, and approved technical reports and professional manuscripts. Presented results of studies at professional and public meetings.

Utah Mexican Spotted Owl Coordinator – Independent Contractor, UDWR

1594 West North Temple, Salt Lake City, UT 84114-6301

Contract Supervisor: Dwight Bunnell (deceased)

Dates: 4/94 to 1/95

Duties: Represented State of Utah as consulting member of the Mexican Spotted Owl Recovery Team. Coauthored national Recovery Plan for Mexican Spotted Owls. Developed statewide Mexican Spotted Owl GIS database. Chaired interagency team to develop management plans for Mexican Spotted Owls in Utah.

Research Associate, Department of Fishery & Wildlife Biology

Colorado State University, Ft. Collins, CO 80523

Supervisor: Lowell C. McEwen, retired

Dates: 1/91 to 9/91

Duties: Investigated direct and indirect biological and ecological effects of insecticides (malathion and carbaryl) on breeding bird communities in southern Idaho. Collaborated with researchers

from USDA-APHIS, USDI-BLM and Colorado State University on the Grasshopper Integrated Pest Management Project. Prepared a NEPA Environmental Assessment as part of the Grasshopper Control Environmental Impact Statement.

Graduate Research Assistant, Department of Fishery & Wildlife Biology

Colorado State University, Dept. Fishery & Wildlife Biology, Ft. Collins, CO 80523

Supervisor: Dr. Richard L. Knight, retired

Dates: 1/88 to 1/91

Duties: Conducted field and laboratory research to determine effects of an insecticide (malathion) on breeding shrubsteppe birds. Designed research project, directed field and laboratory personnel, entered and analyzed data, and prepared annual reports. Presented results of findings at professional meetings and prepared professional publications. Graduate student representative to faculty; acted (voting member) on two faculty search committees.

Wildlife Biologist (General, GS-7), U.S. Fish and Wildlife Service

Ecological Services, 420 S. Garfield, Pierre, SD 57501

Supervisor: Kent Keenlyne, retired

Dates: 10/86 to 1/88

Duties: Conducted surveys on population status of endangered and threatened bird species and availability of suitable habitat for those species. Conducted research involving instream flow requirements for plains river fishes. Directed field crews and data entry. Prepared technical reports and public outreach materials; presented findings at public meetings.

Graduate Research Asst/Graduate Teaching Asst, Department of Fisheries and Wildlife Sciences

South Dakota State University, Brookings, SD 57007

Supervisor: Dr. Lester D. Flake, retired

Dates: 5/83 to 5/86

Duties: Conducted research on the Idaho National Engineering Laboratory to determine the potential for transport of contaminants (radionuclides) by birds; also supervised research on the nesting ecology of a migratory bird species (Mourning Dove). Was responsible for research design, data collection, data entry, and statistical analysis. Prepared professional publications and technical reports. Presented findings at professional meetings. Taught undergraduate laboratory in ornithology.

Wildlife Research Technician, Cloquet State Forest

University of Minnesota, 175 University Road, Cloquet, MN 55720

Supervisor: Dr. Gordon Gullion, deceased

Dates: 3/83 to 5/83

Duties: Collected compiled and entered data on biology and behavior of Ruffed Grouse in Minnesota.

Assistant Archaeologist, E. P. Hatcher Museum of Man

113 Stewart Hall, St. Cloud State University, St. Cloud, MN 56301

Supervisor: Dr. Richard Lane, retired

Dates: 5/80 to 7/82

Duties: Collected, compiled and catalogued archaeological artifacts from prehistoric sites in Minnesota.

UNIVERSITY APPOINTMENTS

- Adjunct Associate Professor of Wildland Resources – Utah State University – (2013 – present)
- Adjunct Assistant Professor of Wildland Resources – Utah State University – (2005 – 2013)
- Adjunct Associate Professor of Plant and Wildlife Sci. – Brigham Young University (2008-2013)
- Adjunct Assistant Professor of Forest, Range, & Wildlife Sci. – Utah State University – (2003-2005)
- Adjunct Associate (Instructor) of Biology – Westminster College of Salt Lake City (1999 – 2004)

- Research Associate of Fishery and Wildlife Biology – Colorado State University (1991)
- Graduate Research Associate of Fishery and Wildlife Biol. – Colorado State University (1988-1990)
- Graduate Research Assistant/Graduate Teaching Assistant of Wildlife and Fisheries Sciences – South Dakota State University (1983-1986)

CURRICULUM DEVELOPMENT AND TEACHING

- Masters of Natural Resources degree program – instrumental in moving MNR from 5th year "fall back" degree to widely respected professional degree. Co-created (with N. Mesner-WATS and J. Kurtzman-ENVS) student requirements for the MNR degree program and worked with various faculty to develop online MNR courses.
- Wetland Ecology and Management (WATS 4310/6310 online) – course co-creator/co-instructor (K. Kettenring) (2019) (Summary Score 59)
- Applied Avian Ecology (WILD 5560/6560) – course creator/instructor (2016-present) (Aver. Summary Score 58)
- Avian Ecology and Management (WILD 4950/6900) – course creator/instructor (2009-2014) (Aver. Instructor Rating 5.5, Aver. Summary Score 61)
- Wildlife Law Enforcement (WILD 4550) – course co-creator (M. Wolfe) and instructor of record (2010-present) (Aver. Instructor Rating 5.4, Aver. Summary Score 61)
- Conclave Preparation (WILD 4950) – course creator/instructor (2012)
- Advanced Wildlife Techniques (WILD 6900) – course co-creator/co-instructor (J. Shivik) (2008) (Instructor Rating 5.8)
- Principles of Wildlife Management (WILD 4500) – co-instructor (J. du Toit) (2007-2008) (Aver. Instructor Rating 5.0)
- Ecological Foundations of Natural Resources (WATS 6900) – initiated and assisted (H. Cooley) with course development for MNR
- Ecology of Animal Populations (WILD 6900) – initiated and consulted (L. Aubry and D. MacNulty) on course development for MNR
- Data Analysis and Programming for Natural Resource Managers (NR 6580) – initiated and consulted (L. Aubry) on course development for MNR
- GIS for Natural Resources Applications (NR 6910) – consulted (S. Belmont) on development for MNR.
- Integrative Capstone Experience (NR 6600) – co-developer (N. Mesner/J. Kurtzman) of MNR experiential learning capstone course
- Bioregional Planning Studio (LAEP 6200) – advised studio students and assisted instructor (B. Warren-Kretzschmar) in coordinating with stakeholders (2014)
- Connections Course (USU 1010) – collaborated with course organizer (C. Radel) in developing community-engagement assignments for incoming students (2015)
- USU Guest Lectures: Principles of Wildlife Management (WILD 4500: 2009-present), Management and Restoration of Aquatic Ecosystems Capstone (WATS 5350: 2017-present), Restoration Ecology (WATS/WILD 6700: 2012-present), Principles of Aquatic Ecosystem Restoration (WATS 5300: 2017-present), Ecology and Restoration of Wetland and Riparian Plants (WATS 5310: 2017-present), Wetland Ecology and Management (WATS 4310/6310: 2014-2016), Partnering with Beaver in Restoration Design (WATS 6860: 2018), Ecosystem Services: Assessment, Restoration, and Management (WILD 6760: 2018), Wildland Resource Techniques (WILD 2400: 2014-present), Wildland Animal Ecology & Identification (WILD 3610: 2013); Conservation Biology (WILD 4600: 2011-2012), Human Dimensions of Natural Resource Management (ENVS 4000: 2016-present), Saline Lakes Seminar (WATS 6900: 2011)
- Environmental Biology (Biol 210 – Westminster) – course instructor (Aver. Student Rating 4.48/5.0)
- Ornithology (WL – 363L – South Dakota State University) – Graduate Teaching Assistant developed

and graded labs and delivered occasional lectures

- Wildlife Law Enforcement *in progress* (Utah Valley University undergraduate course number TBD; pending approval of College of Science) – course co-creator (with Sergeant Chad Bettridge DWR)
- Advanced (online) Wildlife Law Enforcement *in progress* (Weber State University graduate course number TBD; pending approval of Masters of Criminal Justice Program) – course co-creator (with Sergeant Brandon Baron DWR)
- Guest lectures other than USU – Delivered over 20 lectures on Environmental Policy, Ecology and Management of Nongame Wildlife, Birds, Riparian Systems, Shrubsteppe Systems, and the Great Salt Lake Ecosystem at Weber State University, University of Utah, Salt Lake Community College, Utah Valley University, Brigham Young University, Snow College, and Southern Utah University

STUDENT ADVISEMENT AND MENTORING

- Undergraduate
 - USU Student Chapter of the Wildlife Society Faculty Advisor (2008-2014)
 - QCNR Undergraduate Research Mentor of the Year (2010)
 - Directed or co-directed 11 undergraduate research projects
 - DWR-USU Internships – cosponsored 21 paid summer interns with QCNR
 - Advised students interested in wildlife management or law enforcement careers with state and/or federal agencies (referrals from Mock, Busby, Advising Center)
 - Advised 10 DWR student-employees (8 graduated, 2 ongoing) in pursuit of undergraduate degrees in Wildlife, Fisheries, Law Enforcement, and Business at USU and 5 other institutions
- Ph.D. – served on 11 committees
- MS – serving or have served on over 20 committees including 3 as chair
- MNR – currently serve on 15 committees including 10 as chair; formerly served on over 30 committees including 22 as chair
- Graduate Internships – sponsored 3 internship positions for students who work part-time for DWR during school then full-time after graduation
- Climate Adaptation Science (CAS) – hosted 2 CAS Graduate Student Internships in DWR Wildlife Migration Initiative
- Contributed to Graduate Orientation Evening Sessions (Topics: Presenting Research, Career Night) and Graduate Student Retreat

COMPLETED THESES AND CAPSTONES (Chaired Committees)

- Melinda Bennion (MNR) – Limiting factors of Woundfin in the Virgin River (co-chair with Nancy Mesner)
- Natalie Boren (MNR) – Illegal fish introductions: Comprehensive analysis of the effects of walleye at Red Fleet Reservoir, Utah
- Rhett Boswell (MNR) – Seasonal resource selection and habitat treatment use by the southernmost population of greater sage-grouse
- Wyatt Bubak (MNR) – The perception of Utah Division of Wildlife Resource’s law enforcement by local, county and municipal law enforcement agencies
- Ingrid Campbell (MNR) – A directive for macroinvertebrate monitoring for the Utah coal regulatory program
- Bryan Christensen (MNR) – Wildlife recreation: An analysis of sharing the costs among all users
- James Christensen (MNR) – Effects of *Phragmites australis* control efforts
- Jason Cox (MNR) – The relationship of bulbous bluegrass and big sagebrush in Utah
- Karen Duncan (MNR) – Wildlife Risk Analysis Matrix for biologists dealing with airstrikes at airports (co-chair with Eric Gese)
- Alexander Hansen (MNR) – A pre-paving baseline inventory of vehicle-related mortality on mule

deer along Seep Ridge Road, Book Cliffs, Utah

- Gary Howes (MNR) – Using recirculating aquaculture system technology to culture warm-water fish species
- Candace Hutchinson (MNR) – An Analysis of Utah’s Aquatic Invasive Species Program in relation to Quagga and Zebra mussels *Dreissena* spp.
- Jason D. Jones (MNR) – Efficacy of translocating juveniles and adult Canada geese in alleviating an urban goose problem
- Daniel Keller (MNR) – Effects of flooding and tamarisk removal on habitat for sensitive fish species in the San Rafael River, Utah: Implications for future restoration efforts
- Chad Landress (MNR) – Hobble Creek Delta Restoration: Impacts to June sucker, Utah Lake, and the regional human population.
- Nicole Neilson (MNR) – Mapping institutional knowledge of mule deer migration corridors and potential barriers in Utah
- Aaron Sisson (MNR) – Nesting habitat use by Rio Grande Wild Turkeys in central Utah
- Sean Spenser (MNR) – An analysis of Utah’s Turn In A Poacher (UTIP) Hotline
- Chrystal Stock (MNR) – Analysis of recreation vessel ballast tanks as *Dreissena* Veliger dispersal mechanisms
- Blair Roger Stringham (MS) – Greater Sage-grouse response to sagebrush reduction treatments in Rich County, Utah
- J. Kalon Throop (MNR) – Factors affecting the conservation status of the Grasshopper Sparrow (*Ammodramus savannarum*) in Utah
- Phillip Tuttle (MNR) – Effects of brown trout removal on the native cutthroat trout population of Right Hand Fork Logan River Utah
- Amy Vande Voort (MS) – Habitat characteristics and occupancy rates of Lewis's Woodpeckers in aspen
- Arlo Wing (MNR) – A Burrowing Owl management plan for Utah

CURRENT CAPSTONES (Chairing Committees)

- Tyson Barrow (MNR) – Movement of walleye into Lake Powell tributaries
- Calvin Black (MNR) – Optimum stocking rates for warm water fishes in Utah water
- Thomas J. Cook (MNR) – Determining where water availability is a limiting factor for Utah upland game birds
- Michael Fiorelli (MNR) – Life history requirements and survival of roundtail chub in the White River
- Richard Gibbs (MNR) – Predator-prey ratios in northeastern Utah reservoirs
- Pat Rainbolt (MNR) – Vehicle-Related Mortality of Mule Deer along the recently improved Seep Ridge Road in eastern Utah
- Josee Seamons (MNR) – Predator management and its impact on game in central Utah
- Kyle Stone (MNR) – American White Pelican use of the Great Salt Lake Ecosystem
- Michael Wardle (MNR) – Mule Deer migration on the Paunsaugunt Hunt Unit of southern Utah
- Clint Wirick (MNR) – Private land, Public trust: Strategic conservation and planning for public wildlife on private lands through the U.S. Fish & Wildlife Partners Program

GRADUATE COMMITTEE SERVICE

- Thayne Aubrey (MNR switched to MS WILD) Effects of North Valley Landfill on Wildlife
- Amanda Bakian (MS BIOL) Behavioral responses of Willow Flycatchers to a heterogeneous environment
- Heather Bernales (MS WILD) Development of an innovative statewide population monitoring program for mule deer
- Justin Bingham (MS WILD) Causes, extent and consequences of lead-pellet ingestion by Chukars in

western Utah

- Justin Bingham (PhD BYU-PWS) Maintaining sustainable populations of upland gamebirds in Utah: Assessment of a Pressing environmental concern and a popular management tool
- Todd Black (PhD WILD) Building a better map, modeling greater sage-grouse brood-rearing habitat across the state of Utah
- Clint Brunson (MNR QCNR) Effects of barrier removal on cutthroat trout spawning
- Cheyenne Burnett (MS WILD) Modeling Habitat Use of a Fringe Greater Sage-Grouse Population at Multiple Spatial Scales
- Kevin Chapman (MS WATS) Evaluating the potential impacts of American white pelican predation on Bonneville cutthroat trout in Strawberry Reservoir Utah
- Amanda Christensen (MNR QCNR) Relating pre-construction Hawaiian hoary bat activity with post-construction fatalities at four Hawaiian wind farms
- Dallin Clark (MNR QCNR) An analysis of the costs of maintaining a natural gas pipeline in the Virgin River
- Collin Covington (MNR QCNR) Wetland management applied to a telecommunications cable line project
- Kathy Davies (PhD BYU-PWS) An Experiment to Measure and Assess Damage to Archaeological Sites by Mechanical Surface Treatments
- Tatum Del Bosco (MS WILD) Effects of spring green-up on mule deer migration and density
- Leah Delahoussaye (MS WILD) Eared Grebe Nesting Ecology and Chronology Along the Great Salt Lake Utah
- Scott Dietrich (MS WATS) Effects of hydrogeomorphology on Willow Flycatcher nesting and foraging
- Orrin Duvuvuei (MS WILD) Vital Rates Population Trends and Habitat-use Patterns of a Translocated Greater Sage-grouse Population: Implications for Future Translocations
- Joshua Easter (MNR QCNR) A comprehensive analysis of Northern Goshawk population ecology management policy social and economic factors on the Ashley National Forest
- Craig Faulhaber (PhD WILD) Small mammal response to sagebrush treatments in Rich County Utah
- Maureen Frank (PhD WILD) Migratory Waterbird Ecology at a Critical Staging Area Great Salt Lake Utah
- Ashli Gorbet (MNR QCNR) Establishment of a long-term songbird banding station and apprenticeship program at the Valle de Oro National Wildlife Refuge New Mexico
- Stephanie Graham (MS WILD) Greater sage-grouse habitat selection and use patterns in response to vegetation management practices in northwestern Utah
- Natasha Gruber (MS WILD) Population Dynamics and Movements of Translocated and Resident Greater Sage-Grouse on Anthro Mountain Utah
- Quinn Hall (MNR QCNR) Digital Data Standards and Paleontological Field Surveys adding Value to Survey Data through Consistency
- Heather Hedden McPherron (MS WILD) Greater sage-grouse movements habitat use and mortality in Hamlin Valley Utah
- Scott Hunter (MNR QCNR) Natural Resources communication and marketing: how agencies can improve communications and garner more support
- David Iles (MS WILD) Drivers of Nest Success and Stochastic Population Dynamics of the Common Eider
- Devin Johnson MRN QCNR) Habitat conservation assessment strategy and agreement of the American Three-toed Woodpecker Fishlake and Dixie National Forest
- Christopher Kerr (MNR QCNR) An Update to Martin State Airport's Wildlife Hazard Management Plan
- Christopher Kula (MNR QCNR) Impacts of Human Disturbance on Hibernating Townsend's Big-

Eared Bats in Logan Cave

- Robert Lewis (MNR QCNR) Management of Predators, Prey, and Aviation Safety at Naval Air Station Patuxent River, Maryland: Can Coyotes Help Reduce Deer Strike Hazards?
- Leah Lewis (MS WILD) Habitat Characteristics of Mexican Spotted Owls in the Canyonlands of Southern Utah
- Laura Malaguerra (MNR QCNR) Mitigation human-elephant conflict: case studies from Kenya and India
- Leah Markiewitz (MNR QCNR) A consultant's guide to NEPA
- Paul Mason (MNR QCNR) The efficacy of riparian grazing exclosures to restore Bonneville cutthroat trout populations
- Randall McBride (MS WILD) Spatial interactions between elk cattle and hunters
- Christopher Michaud (MNR QCNR) Evaluating change in Colorado pikeminnow nursery habitat in the Colorado River
- Matthew Mullins (MNR QCNR) Assessing the Effectiveness of Access Restrictions to Reduce Wildlife Disturbance in the Gros Ventre Road Corridor
- Patrick Myers (MS WILD) Spatial Ecology and Captive Behavior of Rehabilitated Black Bears in Utah
- Russ Norvell (PhD WILD) Disturbance as Restoration in the Intermountain Sagebrush Steppe: Effects on Non Target Bird Species
- Beth Orning (MS WILD) Effects of predator removal on Greater Sage-grouse
- Nathan Packer (MNR QCNR) A Survey of the Vernal Field Office BLM Employees: Problems and Solutions
- Riley Peck (MS BYU-PWS) Winter Habitat Selection and Nesting Ecology of Greater Sage Grouse in Strawberry Valley, Utah
- Samantha Pedder (MNR QCNR) State wildlife agencies' resource allocation to hunting and shooting sport participant recruitment retention and reactivation (R3) efforts
- Chris Perkins (MS WILD) Ecology of isolated Greater Sage-grouse populations inhabiting the Wildcat Knolls and Horn Mountain southcentral Utah
- Stephen Peterson (MS WILD) Legacy Effects of Habitat Degradation by Lesser Snow Geese on Ground-Nesting Savannah Sparrows along the Hudson Bay Lowlands
- Camille Pulham (MNR QCNR) Timpanogos Cave National Monument Cave Management Plan Environmental Assessment
- Jared Randall (MS WATS) The Survival and Growth of Adult Bonneville Cutthroat Trout in Response to Different Movement Patterns in a Tributary of the Logan River Utah
- Dustin Ranglack (PhD WILD) American Bison Ecology and Bison-Cattle Interactions in an Isolated Montane Environment
- Tony Roberts (PhD WILD) Winter Waterbird Ecology on the Great Salt Lake Utah and Interactions with Commercial Harvest of Brine Shrimp Cysts
- Beth Ross (PhD WILD) Assessing changes in waterfowl population and community dynamics
- Andrew Sharp (MS WILD) Uncovering the winter range of eastern painted buntings
- Aaron Sisson (MNR QCNR) Nesting Ecology of Rio Grande Wild Turkeys in Central Utah
- David Stoner (PhD WILD) Ecology and Conservation of Cougars in the Eastern Great Basin: Effects of Urbanization Habitat Fragmentation and Exploitation
- Roger Sweeney (MNR QCNR) Captive management of Ground Hornbills for a sustainable population
- Anthony Von Niederhausern (MNR QCNR) Monitoring the American Beaver as a Management Indicator Species
- Angela Wadman (MNR QCNR) Recreation use and impacts around Temple Mountain Utah
- Jeffrey Warren (PhD WILD) Breeding Season Ecology and Demography of Lesser Scaup at Red

Rock Lakes National Wildlife Refuge

- Peter Aaron Webber (MNR QCNR) Status and structure of Bluehead Sucker populations in the Weber River Utah
- Tammy Wilson (PhD WILD) A Multi-scale Evaluation of Pygmy Rabbit Space Use in a Managed Landscape

UNDERGRADUATE RESEARCH

- Ty Anderson – Productivity of Burrowing Owls using artificial and natural nests in the Salt Creek Waterfowl Management Area, Utah
- Justin Brimhall – Survival of mule deer in the Cache Hunt Unit
- Jessop Boden – Mapping Future Placement of Wood Ducks Artificial Nesting Structures in Cache County, Utah (co-advised with Dave Koons)
- Jason Carlisle – Application of Habitat and Occupancy Modeling to a Wood Duck Nest Box Program (Honors Thesis co-advised with Dave Koons)
- Jason Carlisle – Using ArcGIS to analyze Utah’s Mexican spotted owl habitats
- SanShi Glover – Correlation between Cougar Age and Skull Size (co-advised with David Stoner)
- Shane Hill – Analysis of Morphometric Characteristics for Sex Determination of the Eurasian Collared-Dove
- Raul Lira – American Beaver as an invasive species in Tierra del Fuego, South America
- Denton Neilson – Assessing mule deer fawn and doe survival in Cache and Rich Counties, Utah
- Rachel Pyles – Occupancy Sampling of American Pika within the Northern Bear River Range in Utah (Co-advised with Mike Wolfe)
- Natalie Schwaneveldt – Analysis of Mexican Spotted Owl Diet in the Canyonlands of Southern Utah

RESEARCH PROJECT ASSISTANCE AND INVOLVEMENT AT USU

- Research Activities – My Role (Project PI) – Project Title (DWR \$ to USU); My role as consultant typically includes assisting in funding acquisition, providing comments on funding proposals, and/or discussing details of research approach with PI or graduate student.
 - Committee Member/consultant (T. Avgar) – Spatial interactions between elk, cattle, and hunters (TBD – in-kind DWR student time and vehicle)
 - Consultant (C. Rushing) – Distribution and abundance of Black Rosy-finches in Utah (TBD)
 - Consultant (C. Rushing) – Ecology and movement of American White Pelicans around the Great Salt Lake (TBD)
 - Consultant (J. Young) – Cougar population estimates, movement and foraging patterns in Utah (\$109,000 ongoing)
 - Consultant (J. Young) – Effectiveness of Utah’s coyote bounty program in enhancing deer populations (in-kind DWR student time)
 - Consultant (D. MacNulty) – Determinants of moose population growth in Utah (\$369,000)
 - Consultant (K. Kettenring) – Assessment of phragmites control in northern Utah (\$40,000)
 - Consultant (S. Null) – Modeling connectivity of Utah Rivers (\$106,000 ongoing)
 - Co-PI (D. Dahlgren) – Effects of North Valley Landfill on Wildlife (DWR Vehicle provided)
 - Consultant (K. Veblen) – Effects of soil and grazing on sagebrush (\$227,000)
 - Consultant (J. Gaeta) – Use of triploid walleye in reservoir fishery management (\$304,500)
 - Consultant (K. Mock) – Brian Head fire restoration using aspen seedlings (\$30,000)
 - Consultant (J. Wheaton) – Using beaver to improve sage-grouse and trout habitat (\$228,000)
 - Consultant (T. Messmer/D. Dahlgren) – Sage-grouse response to pinyon-juniper treatments (\$268,000)
 - Committee Member/Consultant (T. Messmer/ C. Perkins MS) – Sheeprack Sage-grouse population (\$454,500)
 - Consultant/PI (J. Wheaton/P. Budy/D. Ramsey/D. Keller MNR) – San Rafael native fish and

- habitat restoration (\$155,000)
- Consultant (S. Frey) – Wild Turkey riparian habitat use in central Utah (\$40,000)
 - Consultant (D. Dahlgren/T. Messmer/Thacker) – Utah forest grouse ecology (\$65,000)
 - Consultant (J. Gaeta) – Drought impacts to Bear Lake fishes (\$140,000)
 - Consultant (D. Koons/M. Brunson) – Translocation of urban mule deer (\$21,500)
 - Consultant (J. Wheaton) – Riparian habitat inventory and mapping (\$88,000)
 - Consultant (P. Budy/J. Gaeta) – Bluehead Sucker bottlenecks on the Weber River (\$64,000)
 - Co-PI/Committee Member (P. Budy/K. Chapman MS) – Pelican predation effects on the fish community in Strawberry Reservoir, Utah (\$130,500)
 - Committee Member/consultant (M. Conover/A. Roberts PhD) – Great Salt Lake winter waterbird ecology (\$438,000)
 - Consultant (T. Messmer) – Ecology of Morgan-Summit Sage-grouse (\$136,000)
 - PI (A. Wing MNR) – Statewide Burrowing Owl Management Plan (\$10,000)
 - Consultant (D. Ramsey) – Sage-grouse Statewide Habitat Model (\$58,500)
 - Committee Member/consultant (J. Young) – Black bear rehabilitation and reintroduction (\$62,000)
 - Consultant (J. Wheaton) – State Beaver Management Plan (\$40,000)
 - Consultant (T. Messmer) – Seasonal movement of sage-grouse in Raft River Mountains (\$108,000)
 - Consultant (S. Null) – Watershed Restoration Initiative Monitoring and Analysis (\$92,000)
 - Consultant (K. Veblen/T. Monaco) – Assessment of Utah Range Trend and Watershed Restoration Initiative Projects (\$40,500)
 - Co-PI (J. du Toit/D. Koons/P. Terletzky) – Improving Monitoring for Management of Bison in the Henry Mountains (\$398,000)
 - Consultant (P. Adler) – The Effects of Bison on Cattle Winter Range in the Henry Mountains (no DWR \$)
 - Co-PI (B. Bibles/E. Schupp) – Microhabitat model for Mexican Spotted Owls (\$146,000)
 - Co-PI (J. Bissonette) – Developing Riparian Bird Habitat Association Models and Management Guidelines (\$131,000)
 - PI – (A. Vande Voort MS) Habitat characteristics and occupancy rates of Lewis's Woodpeckers in aspen (USF\$133,000)
 - Committee Member/consultant (J. Bissonette) – Assessing vehicle-related mortality of mule deer in Utah (\$269,500)
 - Co-PI (Messmer/Dahlgren/Guttrely) – Evaluation of Alternative Methods to Estimate Greater Sage-Grouse Populations (\$198,000)
 - Consultant (Conover) – Ungulate Damage to Safflower in Utah (\$90,000)
 - Consultant (Messmer) – Effects of Tall Structures on Sage-grouse (\$30,000)
 - Consultant (Evans) – Population Dynamics of the Sagebrush Defoliator moth (\$76,000)
 - Co-Project Leader (with T. Edwards) – Integrated resource assessment, inventory and monitoring of wildlife and vegetation responses to manipulation of the shrubsteppe environment. Project included remote sensing (M. White), small mammals (K. Beard), mule deer (M. Conner), sage-grouse (F. Howe), shrubsteppe passerines (T. Edwards), pygmy rabbits (T. Edward), and legacy effects (T. Edwards) (\$1.2M)

UNIVERSITY SERVICE

- Public Lands Initiative Grant Review Committee (2018-present)
- Faculty Search Committee: WILD Movement Ecologist (2017)
- Faculty Search Committee: WILD Population Ecologist (2017)
- Faculty Search Committee: Assistant Leader Cooperative Wildlife Research Unit (2012)
- Contract Coordination: Chair joint (USU-DWR) committee to facilitate contract development and

- standardize contract language (2010, 2019).
- USU Extension Publication – M. Dettenmaier and F. P. Howe. 2015. Taking Care of Streams and Rivers in Cache Valley.
- USU Extension Publication Review – Authors R. Downard, M. Frank, J. Perkins, K. Kettenring and M. Larese-Casanova: Wetland Plants of Great Salt Lake: A guide to identification, communities, & bird habitat
- USU Extension Publication Review– Utah Master Naturalist (3): Author M. Larese-Casanova: Desert Wildlife Field Book; Mountain Wildlife Field Book; Watershed Wildlife Field Book
- USU Extension Publication Review – Extension Fact Sheets (3): Author S. Frey: Home Range and Movements of Greater sage-grouse in its Southern-most Distribution; UPD Relocation Success: Does relocating Utah Prairie Dogs by family group affect relocation; Attracting Hummingbirds to Your Yard
- QCNR Job Fair: co-developed and co-organized with QCNR Advising Center (M. Wagner)
- Restoring the West – Conference Organizing Committee (2010), Program Advisor (2007)
- USU Summer Citizens collaborator (2012 to 2015 – developed Environment and Natural Resources component consisting of 14 courses, recruited qualified instructors, developed and taught courses, and lead field experiences)
- Canyonlands Research Center Science Advisory Committee (2010-2013)
- Roots and Shoots in Utah Committee (2002) – initiated Jane Goodall Foundation Environmental Youth Organization at Westminster College

PROFESSIONAL SERVICE

- TWS National Conference Local Coordinating Committee Snowbird, Utah (2010)
- TWS National Conference Quiz Bowl Organizer (2010)
- TWS National Symposium Co-Organizer "Managing Montane Wildlife and Habitats in a Changing Climate" (2010)
- International Association of Landscape Ecologists Field Trip Organizer (2009)
- Professional Training Workshop "Southwestern Willow Flycatcher Survey Certification Training" Creator and Lead Instructor (2000 – 2008)
- Professional Training Workshop "Mexican Spotted Owl Survey Certification Training" Creator and Lead Instructor (2002 – 2008)
- Westminster College High School Teachers' Conference "Teaching Ecology: Avian Ecology of the Great Salt Lake" Instructor (2008).
- USU Professional's Workshop "Science Strategies Based on Information Theory and Multimodel Inference Workshop" Organizer (D. Anderson Instructor) (2006)
- Professional Training Workshop "Modeling Patterns and Dynamics of Species Occurrence" Co-Organizer (D. MacKenzie, J. Nichols, J. Hines Instructors) (2006)
- USU Professional's Workshop "Ecological Sites Descriptions for Northern Utah" Organizer (S. Green Instructor) (2006)
- USU Professional's Workshop "Design and Analysis of Mark-Recapture/Resight Studies" Co-Organizer (with M. Conner and P. Budy) (2006)
- Cooper Ornithological Society "Estimating Bird Abundance Workshop" Co-creator and Instructor (with R. Norvell, S. Rosenstock, A. Ellingson) (2003).
- USU Professional's Workshop (U.S. Forest Service) "Inventory, Monitoring and Management of Nongame Birds and Mammals in Forested Habitats" Co-Organizer (with M. Wolfe) and Presenter (1998-1999)
- Raptor Research Foundation Mexican Spotted Owl Symposium Co-Organizer (with K. Grandison) and presenter (1998)
- TWS Utah Chapter Presidency – President-elect, President, Past President (1997-1999)

- TWS Utah Chapter – Lead Conference Organizer, panel moderator, and presenter (1997): included 46 speakers, 2 panel sessions, banquet, fundraiser, and business meeting.
- Utah Chapter of The Wildlife Society Special Workshop “The State of Utah’s Wildlife Technology” Creator and Organizer (1997)
- Utah Chapter of The Wildlife Society Special Workshop “The State of Utah’s Wildlife Professionalism” Creator and Organizer (1997)
- Manuscript reviews – Wildlife Society Bulletin (2012), Western North American Naturalist (2005, 2008), 4th International Partners in Flight Proceedings (2008), Condor (2 in 2003, 2006)

PUBLICATIONS, PRESENTATIONS, AND OUTREACH

Refereed

Wurtsbaugh, W.A., C. Miller, S.E. Null, R. J. DeRose, P. Wilcock, M. Hahnenberger, F. Howe, and J. Moore. 2017. Decline of the world’s saline lakes. *Nature Geoscience* DOI: 10.1038/NGEO3052

Norvell, R.E., T.C. Edwards, and F.P. Howe. 2014. Habitat Management for Surrogate Species has Mixed Effects on Non-Target Species in the Sagebrush Steppe. *Journal of Wildlife Management*.

Beard, K., H., C. A. Faulhaber, F. P. Howe, and T. C. Edwards. 2013. Rodent-Mediated Interactions Among Seed Species of Differing Quality in a Shrubsteppe Ecosystem. *Western North American Naturalist* 73(4), 426-441.

Block, W.M., R. Cassidy, J.L. Ganey, F.P. Howe, B. Bibles, S.L. Spangle, S.E. Rinkevich, D. Willey, R. Vahle, J.P. Ward, and G.C. White. 2012. Mexican Spotted Owl Recovery Plan, First Revision (*Strix occidentalis lucida*). U.S. Fish and Wildlife Service, Albuquerque, New Mexico.

Koons, D.N., P. Terletzky, P.B. Alder, M.L. Wolfe, D. Ranglack, F.P. Howe, K. Hersey, W. Paskett, and J.T. duToit. 2012. Climate and density-dependent drivers of recruitment in plains bison. *Journal of Mammalogy*, 93:475–481.

Wilson, T.L., F.P. Howe, and T. C. Edwards, Jr. 2011. Effects of sagebrush restoration treatments on multi-scale resource selection by pygmy rabbits. *Journal of Wildlife Management* 75:393-398.

Thogmartin, W.E., F.P. Howe, F.C. James, D.H. Johnson, E.T. Reed, J.R. Sauer, F.R. Thompson III. 2006. A Review of the Population Estimation Approach of the North American Landbird Conservation Plan. *Auk* 123:892-904.

Parrish, J.R., D. A. Roberts, and F.P. Howe. 2005. Occurrence and Density of Breeding Passerine Birds in Shrubland Habitats in Utah. USDA Forest Service Gen. Tech. Rep. PSW-GTR-191.

Norvell, R.E., F.P. Howe, and J.R. Parrish. 2005. Riparian bird population monitoring in Utah, 1992-2001. General Technical Report PSW-GTR-191, USDA Forest Service, Pacific Southwest Research Station, Albany, CA.

Norvell, R.E., F.P. Howe, and J.R. Parrish. 2003. A seven-year comparison of relative-abundance and distance-sampling methods. *Auk* 120:1013–1028.

Roberts, D.A., J.R. Parrish, and F.P. Howe. 2003. Repeats, returns, and estimated flight ranges of neotropical migratory birds in Utah riparian habitat. General Technical Report PSW-GTR-191, USDA Forest Service, Pacific Southwest Research Station, Albany, CA.

Howe, F.P., R.L. Knight, L.C. McEwen, and T.L. George. 2000. Diet switching and food delivery by shrubsteppe passerines in response to an experimental reduction of food availability. *Western North American Naturalist* 60:139-154.

White, G.C., W.B. Block, F.P. Howe, et al. 2000. Science vs. Reality: The Mexican Spotted Owl as a model for management of threatened species on federal lands. *Transactions, 64th North American Wildlife and Natural Resources Conference*.

Howe, F.P., R.L. Knight, L.C. McEwen, and T.L. George. 1996. Direct and indirect effects of insecticide applications on growth and survival of nestling passerines. *Ecological Applications* 6:1314-1324.

Block, W.M., F. Clemente, J.F. Cully, J.L. Dick, A.B. Franklin, J.L. Ganey, F.P. Howe, W.H. Moir, S.L. Spangle, S.E. Rinkevich, D.L. Urban, R. Vahle, J.P. Ward, and G.C. White. 1996. Recovery Plan for the Mexican spotted owl. U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 172pp.

- Howe, F.P. 1993. A western state perspective on monitoring and managing neotropical migratory birds. Pp. 269-271 in D.M. Finch and P.W. Stangel, eds. *Status and management of neotropical migratory birds*, USDA-Forest Service General Technical Report RM-229, Rocky Mountain Forest and Range Experiment Station, Ft. Collins, CO.
- Howe, F.P. 1992. Effects of *Protocalliphora braueri* (Diptera: Calliphoridae) parasitism on nestling sage thrashers. *Journal of Wildlife Diseases* 28:141-143.
- Howe, F.P. 1991. Two new host species for the parasitic blow fly *Protocalliphora braueri*. *Wilson Bulletin* 103:520-521.
- Howe, F.P. and L.D. Flake. 1989. Mourning dove use of man-made ponds in a cold-desert ecosystem. *Great Basin Naturalist* 49:627-631.
- Howe, F.P. and L.D. Flake. 1989. Nesting ecology of mourning doves in a cold desert ecosystem. *Wilson Bulletin* 101:467-472.
- Howe, F.P. and L.D. Flake. 1988. Mourning dove movements during the reproductive season in southeastern Idaho. *Journal of Wildlife Management* 52:477-480.

Technical Reports

- Wurtsbaugh, W., C. Miller, S. Null, P. Wilcock, M. Hahnenberger, F. Howe. 2016. White Paper: Impacts of Water Development on Great Salt Lake and the Wasatch Front. Watershed Sciences Faculty Publications. Paper 875. Utah State University, Logan, Utah
- Edwards, T.C., Jr., F.P. Howe, R.E. Norvell, T.L. Wilson, J. Ripplinger, and J. Gibson. 2009. Disturbance as a management tool: effects on selected wildlife species in Rich County. UTCFWRU 2009-5. USGS Utah Cooperative Fish and Wildlife Research Unit, Utah State University, Logan, Utah
- Parrish, J.R., R. E. Norvell, D. Roberts, H. White, and F. P. Howe. 2007. Population Monitoring of Neotropical Migratory Birds in Riparian Habitats of Utah. *Utah Division of Wildlife Resources Report*
- Gorrell, J.V., M.E. Andersen, K.D. Bunnell, M.F. Canning, A.G. Clark, D.E. Dolsen, F.P. Howe. 2005. Utah Comprehensive Conservation Strategy (CWCS). *Utah Division of Wildlife Resources Report*.
- Seglund, A, J, Alston, A. Kozłowski, F. Howe, and E. Ammon. 2005. Coordinated Bird Monitoring in Utah. *Utah Division of Wildlife Resources Report*.
- Parrish, J.R., F.P. Howe, and R. Norvell. 2002. Utah Avian Conservation Strategy Version 2. *Utah Partners in Flight and Utah Division of Wildlife Resources Report*.
- Howe, F.P. and M. Hanberg. 2001. Southwestern Willow Flycatcher and Yellow-billed Cuckoo Surveys on the San Juan and Green Rivers of Utah. *Utah Division of Wildlife Resources Report*.
- Nordstrom, S., (Lead 1991 Author), F. Howe (Lead 2001 Author), K. Collins, M. Halpin, B. Franklin, R. Brudnicki, and S. Duer. 2001. Creating Landscapes for Wildlife...A Guide for Backyards in Utah. *Utah Division of Wildlife Resources and Utah State University Cooperative Extension Service*.
- Howe, F.P. 2000. Southwestern Willow Flycatcher and Yellow-billed Cuckoo Surveys on the Green River in Utah. *Utah Division of Wildlife Resources Report*..
- Howe, F.P. 1999. Colorado Breeding Bird Atlas (Book Review). *The Auk*.
- Parrish, J.R., F.P. Howe, and R. Norvell. 1999. Utah Avian Conservation Strategy. *Utah Partners in Flight and Utah Division of Wildlife Resources Report*.
- P.A. Gardner, R. Stevens and F.P. Howe. 1999. Handbook of Riparian Management for the Conservation of Land Birds in Utah. *Utah Division of Wildlife Resources Report*
- Howe, F.P. 1999. Southwestern Willow Flycatcher Surveys on U.S. Forest Service Lands in Utah. *Utah Division of Wildlife Resources Report*
- Howe, F.P., J.R. Parrish, and R. Norvell. 1999. Utah Partners in Flight Progress Report. *Utah Division of Wildlife Resources Report*
- Messmer, T.A., F.P. Howe, R. Drake, L. Lentsch, B. Blackwell, M.A. Zablan, and A. Menses. 1998. Endangered and Threatened Animals of Utah. Berryman Institute Publication No. 17, Utah State University, Logan. 60pp.
- Howe, F.P. 1998. Southwestern Willow Flycatcher Surveys on U.S. Forest Service Lands in Utah. *Utah*

Division of Wildlife Resources Report.

- Howe, F.P. and J.R. Parrish. 1997. Densities and Trends of Breeding Birds in Utah's Riparian Habitats. Proceedings of the Fourth Biennial Conference on Research on the Colorado Plateau, USGS-BRD Colorado Plateau Field Station, Flagstaff, AZ.
- Breeding Status of Utah Neotropical Migratory Bird Species. *Utah Division of Wildlife Resources Reports*. 1992 and 1996.
- Population Monitoring of Utah Neotropical Migratory Birds in Riparian Habitats: Annual Reports. *Utah Division of Wildlife Resources Reports*. 1992-1995.
- Suggestions for Management of Mexican Spotted Owls in Utah. *Utah Division of Wildlife Resources Report*. 1994.
- Indirect Effects on Birds of Insect Food Base Reduction. *USDA-APHIS, Cooperative Grasshopper Integrated Pest Management Project Annual Reports*. 1988-1990.
- Avian Rookery and Foraging Area Survey of the James River in South Dakota. *USDOI-USFWS*. 1987.
- James River Waterfowl Breeding Pair and Brood Survey in South Dakota. *USDOI-USFWS*. 1987.
- Location of Habitat Important to Federally Listed Bird Species on the Missouri National Recreation River. *USDOI-USFWS*. 1986.

Professional Presentations

- Listening to the River: Restoring the Future of the Logan River. Future Memory: Mapping the Anthropocene Keynote Community Panel. 2019.
- Impact of Multiple Biological and Ecological Factors on the Survival of Translocated Chukars in Northwestern Utah (R. J. Bingham, R.T. Larsen, F. P. Howe, and J. D. Robinson) Utah Chapter The Wildlife Society. 2019.
- Restoring the Social and Ecological Values of the Logan River Utah Recreation and Parks Association 2018.
- Impact of Group Size, Rearing Type, and Water Availability on the Survival of Translocated Chukars (R. J. Bingham, R.T. Larsen, F. P. Howe, and J. D. Robinson) Utah Chapter The Wildlife Society. 2017.
- An Evaluation of the Conservation Status of the Grasshopper Sparrow in Utah (J.K. Throop and F. P. Howe) Utah Chapter The Wildlife Society. 2014.
- Evaluating the potential impacts of American white pelican predation on Bonneville cutthroat trout in Strawberry Reservoir, Utah (K. Chapman, P. Budy, F. Howe) Spring Runoff Conference. 2014.
- Impacts of Water Development on the Great Salt Lake and Wasatch Front (W. Wurtsbaugh, C. Miller, S. Null, M. Hahnenberger, F. Howe, P. Wilcock) Spring Runoff Conference. 2016.
- The effects of translocation on movement and survival of urban Canada geese (J.D. Jone and F.P. Howe) Utah Chapter The Wildlife Society. 2015.
- Analysis of Morphometric Characteristics for Sex Determination of the Eurasian Collared-Dove in the Field Poster (S. Hill and F. Howe) Utah Chapter The Wildlife Society. 2014.
- Impact of Cohort Size, Rearing Type, and Water Availability and Survival of Translocated Chukars Poster (R. J. Bingham, R.T. Larsen, J. D. Robinson, and F. P. Howe) Utah Chapter The Wildlife Society. 2014.
- Analysis of Morphometric Characteristics for Sex Determination of the Eurasian Collared-Dove in the Field (S. Hill and F. Howe) Utah Chapter The Wildlife Society. 2014.
- The Relationship of Bulbous Bluegrass and Big Sagebrush and the Potential Implications for Shrubsteppe Wildlife in Utah (J. D. Cox, K. Gunnell and F.P. Howe) Utah Chapter The Wildlife Society. 2014.
- Comparison of monitoring methods used to estimate greater sage-grouse habitat use in a restored sagebrush rangeland (R. Stringham and F. Howe) Utah Chapter The Wildlife Society. 2012.
- Using FIA data to predict Lewis's woodpecker occupancy in aspen (A. Vande Voort and F. Howe) Utah Chapter The Wildlife Society. 2012.
- Occupancy Dynamics, Roost Habitat, and Prey of Mexican Spotted Owls in Utah (D. Willey, C. Hockenberry, F.P. Howe, and J. Rotella) Utah Chapter The Wildlife Society. 2012.
- Precipitation and density-dependent drivers of recruitment in the Henry Mountains bison population. (D.N.

- Koons, P. Terletzky, P.B. Alder, M.L. Wolfe, D. Ranglack, F.P. Howe, K. Hersey, W. Paskett, and J.T. duToit. D. Willey, C. Hockenberry, F.P. Howe, and J. Rotella) Utah Chapter The Wildlife Society. 2012.
- Causes of lead-pellet ingestion by chukars in western Utah (R.J. Bingham, R.T. Larsen, J.A. Bissonette, J.O. Hall, and F.P. Howe) American Ornithologists' Union 2011.
- 20 Years of Riparian Bird and Habitat Monitoring in Utah Poster (F.P. Howe, H. M. White, R. E. Norvell, and J. R. Parrish) The Wildlife Society, Hawaii 2011.
- Habitat Characteristics and Occupancy of Lewis's Woodpecker in a Novel Habitat Poster (A.M. Vande Voort and F.P. Howe) The Wildlife Society, Hawaii 2011.
- Causes, extent, and consequences of lead-pellet ingestion by chukars in western Utah: examining habitat, search images, and toxicology (R.J. Bingham, R.T. Larsen, J.A. Bissonette, J.O. Hall, and F.P. Howe. The Wildlife Society, Hawaii 2011.
- Riparian bird-habitat association models: A framework for developing management and restoration guidelines in Utah. (H. White, F. Howe, and J. Bissonette.) The Wildlife Society, Snowbird, Utah 2010.
- Using a GIS habitat model to guide deployment of Wood Duck nest boxes in Cache County, Utah. (J.D. Carlisle, D.N. Koons, F.P. Howe, and J. Lowry) The Wildlife Society, Snowbird, Utah 2010.
- Using spatial null models to assess potential conflicts wildlife and range management practices. (T. L. Wilson, F.P. Howe, and T.C. Edwards Jr.) The Wildlife Society, Snowbird, Utah 2010.
- Habitat Characteristics and Occupancy Rates of Lewis's Woodpecker in Aspen. (A. Vande Voort and F. P. Howe) Restoring the West 2010.
- Managing Plant and Animal Conflicts: Audience comments, moderated discussion and synthesis. Restoring the West 2010.
- Occupancy Sampling of American Pika *Ochotona princeps clamosa* within the Northern Bear River Range in Utah. (R.F. Pyles, F.P. Howe, and M. L. Wolfe) Utah Chapter The Wildlife Society 2010.
- Using ArcGIS to analyze Utah's Mexican Spotted Owl habitats. (J. Carlisle, F. Howe, and J. Lowry) ESRI National Conference 2010.
- Using a GIS Habitat Model to guide deployment of Wood Duck nest boxes in Cache County, Utah. (J. Carlisle, D. Koons, F. Howe, and J. Lowry) The Wildlife Society, Snowbird, Utah 2010
- Spatial analysis of Mexican Spotted Owl protected activity centers. (J. Carlisle, F. Howe, and J. Lowry) Utah Chapter The Wildlife Society, 2009.
- Spatial analysis of Mexican Spotted Owl protected activity centers and best available habitat in Utah. (J. Carlisle, F. Howe, and J. Lowry) The Wildlife Society, Monterey, CA, 2009.
- Occupancy sampling of American Pika within the Northern Bear River Range in Utah. (R.K. Pyles, F.P. Howe, and M.L. Wolfe) Utah Chapter The Wildlife Society 2009.
- Greater Sage-grouse use of a restored sagebrush rangeland (R.B. Stringham, F.P. Howe, M. Conner, J. MacMahon) Utah Chapter The Wildlife Society 2009.
- Recruitment, retention and research: the new 3 Rs for the next generation of Utah's wildlife professionals. Organization of Wildlife Planners Blacksburg, VA 2007.
- What is your issue? (R. Reynolds and F. Howe) USGS – Great Basin Landscape Monitoring Workshop. Salt Lake City, Utah. 2007.
- A Closer Look: What Shrubsteppe Obligate Passerines and Pygmy Rabbits Tell Us About Sagebrush Management. (F.P. Howe, T.E. Edwards, R.E. Norvell, A.J. Kozlowski, T.L. Wilson) National Society of Range Management. 2007; invited speaker.
- How Do You Eat a 278 Page Document? Implementing Utah's Comprehensive Wildlife Conservation Strategy. (F.P. Howe and D.E. Dolsen) Utah Chapter. The Wildlife Society. 2006.
- Towards the Implementation of Utah's Comprehensive Wildlife Conservation Strategy (F.P. Howe and D.E. Dolsen). The Wildlife Society National Conference 2005.
- Do Sage-grouse Make Good Neighbors? Monitoring Shrubsteppe Restoration in Rich County. Utah Chapter.

- The Wildlife Society. 2005.
- Monitoring Wildlife Response to Management Projects. Utah Chapter. The Wildlife Society. 2005.
- Monitoring Avian Populations in Utah's Riparian Areas. Colorado Riparian Association. 2004.
- Densities and Habitat Useage for Neotropical Migratory Birds Breeding in Utah Shrublands. (J.R. Parrish, D. A. Roberts, M. Blood, R. E. Norvell, and F. P. Howe) Utah Chapter. The Wildlife Society. 2004.
- West Nile Virus – It's Here! (K. Fehlberg, F. P. Howe, and A.G. Clark) Utah Chapter. The Wildlife Society. 2004.
- On a Wing & a Prayer: Monitoring Utah's Bird Populations. Keynote address. Utah Ornithological Society 2003.
- Estimating Bird Abundance Workshop (Moderator, Introductory and Summary Speaker), Cooper Ornithological Society 2003.
- Applying distance sampling: study design and field procedures (Norvell, R.E. and F.P. Howe). Estimating Bird Abundance Workshop, Cooper Ornithological Society 2003.
- Reality check: an example of distance sampling vs. Index counts (Norvell, R.E. and F.P. Howe). Estimating Bird Abundance Workshop, Cooper Ornithological Society 2003.
- Planning for Avian Conservation in Utah and the West (J. Parrish, F. Howe, R. Norvell). Colorado Chapter. The Wildlife Society. 2002.
- Is the Black Swift extirpated in Utah? Utah Chapter. The Wildlife Society. 2001.
- Utah's next Threatened Species? Status and distribution of the Yellow-billed Cuckoo. Utah Chapter. The Wildlife Society. 2001.
- Community Composition and Conservation of Shrubsteppe Habitats and Avifaunas. Utah Chapter. The Wildlife Society. 2000.
- Conservation of Land Birds in Utah: The Utah Partners in Flight Conservation Strategy (J. Parrish, F. Howe, R. Norvell). Utah Chapter. The Wildlife Society. 2000.
- Science vs. Political Reality: Monitoring Mexican Spotted Owls on Federal Lands (G. White, B. Block, F. Howe, et al.). North American Wildlife Conference. 1999.
- Monitoring Utah riparian bird density trends with point counts (F. Howe, R. Norvell, J. Parrish). Cooper Ornithological Society. 1999.
- Trends in density, richness, and diversity of Utah's riparian birds. (F. Howe, R. Norvell, J. Parrish). Utah Chapter. The Wildlife Society. 1999.
- Developing a Conservation Strategy for Utah's Nongame Birds (J. Parrish, F. Howe, R. Norvell). Utah Chapter. The Wildlife Society. 1999.
- Inventory, monitoring, and management of nongame birds in forested habitats. U.S. Forest Service Workshop- Utah State University. 1998 and 1999.
- Five years of monitoring of birds in Utah's riparian habitats (F. Howe, J. Parrish, R. Norvell). Utah Chapter: The Wildlife Society. 1998.
- The State of Utah's Wildlife (Symposium Coordinator). Utah Chapter: The Wildlife Society. 1997.
- High Tech Wildlife Management Workshop (Moderator). Utah Chapter: The Wildlife Society. 1997.
- The Utah Partners in Flight Program (F. Howe, J. Parrish). Utah Chapter: The Wildlife Society. 1997.
- Escalante-Grand Staircase National Monument: wildlife, people and the land (Panel Moderator). Utah Chapter: The Wildlife Society. 1997.
- Changes in avian density, diversity, and richness in Utah's riparian areas. Utah Chapter: The Wildlife Society. 1997.
- Utah's avian resources: research and management beyond boundaries (Moderator). Utah Chapter: The Wildlife Society. 1996.
- Constant-effort mist netting as a monitoring tool in Utah riparian habitats (F. Howe, J. Parrish). Utah Chapter: The Wildlife Society. 1996.
- Monitoring and management of riparian habitats for breeding birds. Utah Chapter: The Wildlife Society. 1996.
- Managing riparian systems for land birds. Colorado Riparian Association. 1996.

- Managing native birds in forested systems. U.S. Forest Service Managers Workshop. 1994.
- Population Monitoring of Utah neotropical migratory birds in riparian habitats (Best Paper). Utah Chapter: The Wildlife Society. 1993.
- Using birds to monitor riparian health. EPA workshop on western wetlands and riparian areas. 1993.
- Indirect effects of an experimental insecticide application on nesting passerines. Utah Chapter: The Wildlife Society. 1992.
- Effects of malathion on nesting passerines in southern Idaho. Central Mountains & Plains Section: The Wildlife Society. 1991.
- Malathion's effects on nesting passerines. Grasshopper Integrated Pest Management Symposium. 1989.
- Mourning Dove nesting ecology in a cold desert ecosystem. South Dakota Chapter: The Wildlife Society. 1986.

Outreach Articles and Presentations

- Logan River: Planning for Ecological and Social Restoration. Northern Utah Water Users 2019
- Bringing Back the Logan River. Canyon Conversations Stokes Nature Center 2018
- Logan River Restoration: Balancing ecological and social benefits. Wilson Neighborhood Council 2018
- Logan River Restoration: Bringing our river back. Bridgerland Audubon Society 2018
- The Confluence: Where the Cache Water District and Logan River Task Force come together. Cache Water District 2017
- Plus additional Logan River Restoration presentations to Logan City Council (2), Logan Public Works Department (3), Sacramento Corps of Engineers, and at public open houses (3). 2014 – 2016
- Great Basin Bird Ecology and Identification Workshop. Great Salt Lake Audubon Society 2006-2014
- Mexican Spotted Owl Research in the Canyonlands Research Center. Great Salt Lake Audubon Society 2013
- Cuckoo for Cottonwoods: Conserving the Western Yellow-billed Cuckoo. Great Salt Lake Bird Festival 2013
- Murder and True Love among birds: A consideration of collective nouns used for birds. Great Salt Lake Bird Festival 2012
- Birds of the Sagebrush Sea: Research & Conservation of Shrubsteppe Birds. Wasatch Audubon Society 2010
- Tyrant Flycatchers of Utah: The kings of confusion. Great Salt Lake Bird Festival 2009
- A Bird in the Hand: Conservation through the study of birds. Keynote address Great Salt Lake Audubon Society 2008
- Ribbons of Life to the Sagebrush Sea: Riparian and Shrubsteppe Bird Research in Utah. Bridgerland Audubon Society 2007.
- Utah's Riparian Habitats: Flowing with Life. Great Salt Lake Audubon 2006.
- Rich County Shrubsteppe Monitoring: Restoration and Response (Co-Author with T. Edwards) Rich County Coordinated Resource Management 2005-2008, Utah BLM 2005, Utah DWR 2005-2006, Intermountain West Joint Venture 2006
- Community ecology of birds in the Great Basin. Audubon Great Basin Workshop 1996, 2002, 2004 and 2006.
- The More Things Change...the Dynamic Ecology of the Great Salt Lake. Tri Beta Biological Honor Society (National) 2003
- Birds of the Sagebrush Sea. Great Salt Lake Bird Festival 2005.
- Restoring Riparian Habitat: For the Birds. Jordan River Restoration Conference 2004.
- Ruling by Obfuscation: the Tyrant Flycatchers of Utah. Great Salt Lake Bird Festival 2004.
- Birds in the Sagebrush Sea: Conservation Ecology of Shrubsteppe Avifaunas and Habitats. Great Salt Lake Audubon 2004.
- The enigmatic Black Swift in Utah. Great Salt Lake Bird Festival 2003.
- Comeback of the century: The Peregrine Falcon in Utah. Great Salt Lake Bird Festival 2002.
- The future of bird conservation in Utah (J. Parrish, F. Howe). Wasatch Audubon Society. 2002.
- Are Grasshopper Sparrow dense or what? (F. Howe, R. Norvell, K. Fehlberg). Wasatch Audubon Society 2002.

What about Bobolinks (F. Howe, S. Kremer) Wasatch Audubon Society 2002.
 The bird behind the waterfall: the Black Swift in Utah. Bridgerland Audubon & Utah County Birders. 2001.
 Plus 15 additional public presentations on riparian & shrubsteppe bird communities, Grasshopper Sparrows, Spotted Owls, Sandhill Cranes, neotropical migrants & shorebirds. Various organizations & forums. 1993-2001.
 Habitat: Utah's Critical Link in the Chain of Bird Migration. *The Web-Utah Society for Environmental Education and Utah Wildlife Review*. 1997.
 Challenges of migration: Utah's songbirds head south. *Utah Wildlife Review*. 1995
 Harbingers of Spring: Utah's migratory songbirds. *Utah Wildlife Review*. 1995
 Join Utah's Stream Team. (Pamphlet) *Utah Division of Wildlife Resources*. 1995.
 Heads up, Herons! *South Dakota Conservation Digest* 1988
 Terns and plovers on the Rec. River. *South Dakota Conservation Digest* 1987
 Utah's Wetlands: treasures worth caring about. (Brochure) *Utah Partners in Flight/Utah Division of Wildlife Resources*. 1995.
 Utah's neotropical migratory birds. (Mass-printed Poster) *Utah Partners in Flight/Utah Division of Wildlife Resources*. 1995.

OTHER QUALIFICATIONS AND TRAINING:

Instream Flow/Stream Habitat – USFWS (1988)	Information Theoretics and Multi-model Selection – USU (2005)
Habitat Evaluation – USFWS (1989)	Program MARK – USU (2006)
GIS/PC ARC-INFO – ESRI (1991)	Ecological Site Description – NRCS (2006)
GIS ArcView – ESRI/State of Utah (1996)	Occupancy Modeling – IDGF (2006)
Supervisor Training – State of Utah (1996)	Home Range Analysis – TWS (2010)
Time Management – Franklin Covey (1999)	baseR – USU (2012)
Conservation Genetics (2001)	Partnering with Beaver – USU (2015)
Federal Aid Project Leaders – USFWS (2003)	Affordable tools in riparian restoration (2018)
Distance Sampling – NAU (2003)	

PROFESSIONAL AFFILIATIONS

The Wildlife Society	Utah Partners in Flight (Founder/Chair 1992-1996)
American Ornithologists' Union	HawkWatch International (Board of Trustees)
Ecological Society of America	Society for Conservation Biology
North American Bird Banding Association	Utah Ornithological Society
Cooper Ornithological Society	The Audubon Society
American Birding Association	

HONORS AND CERTIFICATIONS

U.S. Forest Service Research Partner Award 2018
 USU-CNR Undergraduate Research Mentor of the Year 2010
 Utah Division of Wildlife Resources Director's Leadership Award 2008
 Audubon Council Division Employee of the Year – 2004
 U.S. Fish and Wildlife Service Southwest Region Outstanding Contribution – 2003
 Utah Division of Wildlife Resources Above and Beyond Award – 2001
 Citizen's Conservation Award (Mexican Spotted Owl Recovery Team) – presented by President William J. Clinton, Secy. (DOI) Bruce Babbitt, and Director (USFWS) Jamie R. Clark – 1999.
 Employee of the Year – Utah Division of Wildlife Resources Wildlife Section – 1999.
 President Utah Chapter of The Wildlife Society (TWS) – 1997.
 Certified Wildlife Biologist (TWS) – 1996.
 Graduated Magna Cum Laude (3.9 GPA) Colorado State University – 1993.
 Graduated Summa Cum Laude (4.0 GPA) South Dakota State University – 1986.
 Graduated Magna Cum Laude (3.7 GPA) St. Cloud State University – 1982.
 Outstanding Graduate Student SDSU (TWS) – 1986.
 Phi Kappa Phi (Honor Society) – 1985.

Gamma Sigma Delta (Honor Society) – 1985.
National Honor Society – 1978.