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Overview

Dr. Matthew E. Reiter is the Waterfowl Director for the Mono Basin Waterfowl Habitat Restoration Program and Research Director for the Pacific Coast and Central Valley Group at Point Blue Conservation Science. He holds an M.S. and Ph.D. in Wildlife Conservation from the University of Minnesota, including a minor in Statistics. Dr. Reiter has over 25 years of expertise with applied wildlife and ecosystem research and monitoring and has extensive experience in waterfowl ecology, wetland management, and conservation biology. During his graduate research he worked closely with the Mississippi Flyway Council to monitor Canada Goose populations in the Canadian Arctic to guide harvest management decisions. His recent work in the Central Valley of California has supported the development of optimal strategies for allocating water for migratory waterbird habitat.

Relevant Expertise and Experience

Waterfowl Ecology and Population Management

- Assessment of drivers of Mono Lake breeding and non-breeding waterfowl populations using data collected 2002 – 2023
- Conducted M.S. and Ph.D. research on Canada Goose reproductive performance and inter-specific effects of increasing snow goose populations
- Developed models to understand range-wide factors influencing nesting goose distribution using 20-year aerial survey datasets
- Evaluation of the impacts of extreme drought on waterfowl carry capacity in the Central Valley using bioenergetics models
- Leveraged large data sets to develop distribution models for waterfowl in the Central Valley of California that are guiding where to prioritize wetland restoration
- Experience with waterfowl banding, reproduction assessments, and population modeling
- Extensive knowledge of waterfowl in California's Central Valley and Pacific Flyway

Survey Design and Data Analysis

- Quantitative assessment of the long-term (2002 – 2023) waterfowl monitoring program at Mono Lake (summer breeding surveys and fall migration surveys) to assess the overall effectiveness of the program and options for optimizing the survey design.
- Demonstrated strong ability to design and implement wildlife surveys, including aerial surveys and Flyway scale monitoring programs (e.g., Migratory Shorebird Project - www.migratoryshorebirdproject.org; Intermountain West Shorebird Survey -

https://www.imwss.org/)
- Advanced quantitative skills including mixed-effects modeling, Bayesian analysis, species distribution modeling, and remote sensing classification
- Experience analyzing spatio-temporal data using hierarchical mixed-models
- Developed informatics frameworks for data capture and visualizations through online applications

Habitat Management and Restoration

- Led development of wetland habitat restoration strategies on private lands in California
- Created bioenergetics models to set habitat restoration targets for California's Central Valley and the Klamath Basin
- Expertise in evaluating agricultural crop and wetland management influences on migrating waterbirds
- Experience guiding the allocation of over $5 million for habitat management projects

Leadership and Collaboration

- Currently supervises post-MS and post-PhD project leaders, post-docs, and large project teams
- Chairs international committees including Program for Regional and International Shorebird Monitoring
- Serves on the Central Valley Joint Venture board as well as on the waterfowl technical committee and shorebird and waterbird technical committee
- Works closely with National Wildlife Refuge and State Wildlife Area biologists and managers across multiple states
- Collaborates with state and federal agencies including California DFW, Department of Water Resources, USFWS, and USFS

Project Management

- Leads complex grant proposal preparation and has raised >$15 million to support projects
- Manages budgets and negotiates with funders on scopes of work, timelines, and deliverables
- Plans and oversees research and monitoring projects with multiple research teams
- Experience generating annual plans, budgets, and reports for diverse stakeholders

Communication Skills

- Published 35+ peer-reviewed scientific papers and numerous technical reports
- Regularly presents at professional meetings and scientific conferences
- Leads workshops with managers and decision-makers to integrate research findings
- Experience with public outreach and stakeholder engagement

Selected Publications / Reports

Reiter, M.E., and D. House. 2026. Mono Basin Waterfowl Habitat Restoration Program: 2025 Monitoring Report. Report to Mono Basin Monitoring Administration Team. Point Blue Conservation Science, Petaluma, California.

Conlisk, E.E., K. B. Byrd, E. Matchett, A.A. Lorenz, M. Casazza, G.H. Golet, M.D. Reynolds, K.A. Sesser, and M.E. Reiter. 2023. Changes in habitat suitability for wintering dabbling ducks during dry conditions in the Central Valley of California. Ecosphere 14(1):e4367. https://doi.org/10.1002/ecs2.4367

Matchett, E.L., M.E. Reiter, C.T. Overton, D. Jongsomjit, and M.L. Casazza. 2021, Using high resolution satellite and telemetry data to track flooded habitats, their use by waterfowl, and evaluate effects of drought on waterfowl and shorebird bioenergetics in California: U.S. Geological Survey Open-File Report 2020–1102, 59 p., https://doi.org/10.3133/ofr20201102.

Byrd, K. B., A. A. Lorenz, J. A. Anderson, C. S. A. Wallace, K. A. More-O'Leary, J. Isola, R. Ortega, and M. E. Reiter. 2020. Quantifying drought's influence on moist soil seed vegetation in California's Central Valley through remote sensing. Ecological Applications 30(7):e02153. 10.1002/eap.2153

Reiter, M.E., N. Elliott, D. Jongsomjit, G. Golet, and M.D. Reynolds. 2018. Impact of extreme drought and incentive programs on flooded agriculture and wetlands in California's Central Valley. PeerJ 6:e5147; DOI 10.7717/peerj.5147

Shuford, W.D., M.E. Reiter, K. M. Strum, M.M. Gilbert, C.M. Hickey and G. H. Golet. 2016. The benefits of crops and field management practices to wintering waterbirds in the Central Valley of California. Renewable Agriculture and Food Systems 31:495–506.

Reiter, M.E. and D.E. Andersen. 2013. Species interactions and habitat influence the range-wide distribution of breeding Canada geese in northern Manitoba. Waterbirds 36:20–33.

Reiter, M.E. and D.E. Andersen. 2013. Evidence of territoriality and inter-specific interactions from point-pattern analyses of subarctic nesting geese. PLoS One 8:e81029.

Reiter, M.E., and D.E. Andersen. 2011. Arctic foxes, lemmings, and Canada goose nest survival at Cape Churchill, Manitoba. Wilson Journal of Ornithology 123:266–276.

Reiter, M.E. and D.E. Andersen. 2008. Comparison of egg flotation and egg candling techniques for estimating incubation day of Canada goose nests. Journal of Field Ornithology 79:429–437.