

2019 ANKNEY AWARD RECIPIENT

Casey Setash, PhD Student

Casey is a PhD student at Colorado State University studying the impacts of flood irrigation on breeding waterfowl. She recently finished her master's at CSU studying cinnamon teal breeding ecology, during which time she took up waterfowl hunting and became enamored with the field of waterfowl ecology. She has conducted field work on birds in some capacity from New Jersey to Mongolia, but is slightly biased towards the intermountain basins of Colorado. Casey is excited by the research questions waterfowl allow us to ask and hopes her research will have an impact on the way we manage waterfowl on private land going forward.

Water and wetland concerns across the Western United States are inherently tied to the ability to sustainably manage waterfowl populations across North America. These concerns increasingly center around anthropogenic manipulation of water for agricultural and municipal uses alongside potential losses of water through climate-driven drought or change in the seasonality of precipitation. Healthy wetlands for wildlife are often a lower priority relative to direct human needs. As such, natural resource management agencies and NGOs target water use and water delivery regimes that can benefit both the human user and wildlife. These benefits, however, are often assumed and go untested. It might thus be possible to spend management dollars more effectively by directing them towards the practices with demonstrated effects instead of those that have little measurable benefit.

Our study will evaluate the efficacy of improving water delivery infrastructure on private working lands in the North Platte Basin (hereafter, North Park) in north-central Colorado using a BACI design. North Park serves as a truly unique venue for manipulating flood irrigation infrastructure and delivery to examine the relative benefits and trade-offs for waterbirds, wetland productivity, wetland water quality, and other ecosystem services within and across drainages. Approximately 84% of all wetland habitats in North Park are privately owned, a majority of which are flood-irrigated pastures and hayfields. We will assess breeding waterfowl productivity before and after Ducks Unlimited improves irrigation infrastructure on ranches throughout North Park.

