



SAGELAND COLLABORATIVE

IMPACT REPORT 2022

Visionary science for wildlife and lands





A Thriving Home for All

Mission: Sageland Collaborative provides science-based strategies...

We envision a future of flourishing in the West that includes every species. A solid understanding of interconnected ecological systems is critical to this vision, but science on its own cannot bring our vision to life. When paired with precise recommendations, community projects, clear messaging, and meaningful partnerships, science can make the difference between actions that harm the places we love and actions that support their vibrance into the future. Our volunteer community scientists help us answer big questions, bringing clarity to conservation decisions that would otherwise be made in the dark.

...for wildlife and land conservation.

Our Sageland community is diverse in opinion and experience, but one thing connects us: our deep love for the West.

The region holds gems that have enchanted us all. Whether your treasure is a particular species of wildlife, some unique piece of the culture, or the place where you fell in love with fishing or camping, we're grateful it brought you here. Thank you for helping us conserve this remarkable place.

- The Sageland Collaborative Team

Reflecting on a year of grief and joy

For those who love wildlife and lands in the West, this was a challenging year. From Great Salt Lake's potential ecological collapse to ever-growing climate concerns like extreme drought, the region has seen its fair share of issues. Our team knows we have not been alone in shedding tears for the land this year.

We were also not alone in rolling up our sleeves for the places we love. As difficult has it has been, the year has also brought conservation successes that continue to spark our hope and renew our vision. We documented rosy-finches among the ice and snow of Idaho's rockiest peaks. We joined Utah ranchers to restore streams, watching grins break across their faces as they released beavers to heal struggling lands.

We shared gasps of wonder as we spotted bees and butterflies at our Pollinator Pride Party. We published seven more papers with data from our dedicated Wasatch Wildlife Watch community scientists, providing answers to wildlife movement questions, habitat needs, and the impacts of human activities in our beloved Wasatch Mountains. We searched the skies and wetlands around Great Salt Lake for birds, connecting work across the western hemisphere for shorebird conservation.

All of this—plus everything you will read about in the coming pages—is thanks to the hope and commitment of our incredible community of donors, volunteers, and partners. The challenges are great, but so is our collective resolve to do what we can to address them.

On behalf of our team and the wildlife we share these lands with, I want to thank you. Here's to everything conservation brings: the heartache, the joy, and everything in between!



A handwritten signature in black ink that reads "Joshua Wood".

Joshua Wood
Executive Director

Biologists band a Utah rosy-finch as part of our Rosy-Finch Project. Community scientists across the West count these birds every winter to support their conservation in the face of climate change. Photo: Sarah Woodbury

Our approach

1. Applying objective conservation science

2. Establishing strategic partnerships

3. Facilitating community engagement



Photo: Janice Gardner

2022 AT A GLANCE

Whether by donating, volunteering, partnering, or otherwise engaging in our work, you made so much possible in 2022.

With your support, we...

Included over 800 community scientist volunteers in western conservation

Launched the first Intermountain West Shorebird Survey including Great Salt Lake in over 30 years

Published scientific papers based on community science to inform planning decisions

Developed community partnerships and events with and for Utah's Latinx and LGBTQ+ communities

Expanded our riverscape restoration and communications work by hiring new staff

Led the Rosy-Finch Working Group's symposium including representatives from ten states

Planted hundreds of trees and thousands of pollinator-friendly plants



Volunteers restore a stream at our Conservación de Castor event. Photo: Sarah Woodbury



OUR PROJECTS

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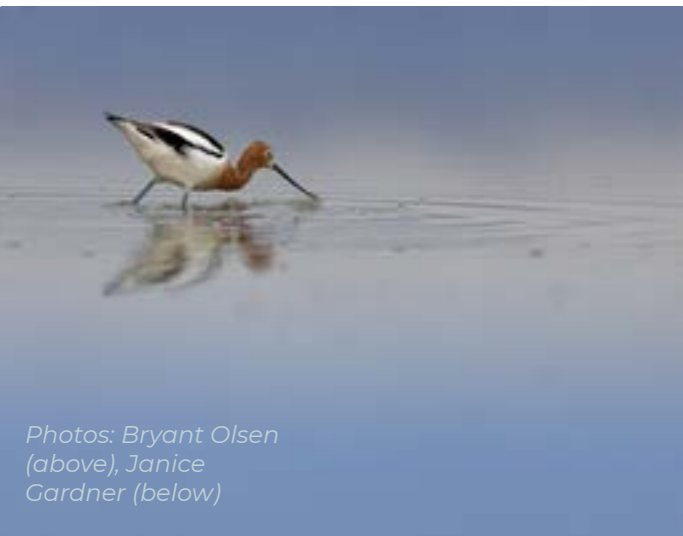
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Intermountain West Shorebird Survey



Photos: Bryant Olsen (above), Janice Gardner (below)

LONG-TERM GOAL

Document decades of changes in shorebird distribution and abundance at sites across the Intermountain West.

Summary

Our newest project is the Intermountain West Shorebird Survey, which allows us to understand the incredible migrations of shorebirds as they pass across our region, known as the Flyway. Some of the longest-distant migrants are shorebirds, with some species flying 4,000 miles between their summer breeding grounds and winter homes. We seek to strengthen the scientific foundation for regional management of resources for shorebirds and other wildlife. Western wetlands—especially Great Salt Lake—are critical habitat for migratory birds. With a 30-year lapse since the last survey and the rapid decline of our wetlands and saline lakes, this effort is desperately needed to understand species that depend upon this crucial habitat.

Impact

Our successful kick-off survey paved the way for this work to continue for the next several years. Understanding why shorebird populations are declining is extremely difficult because it requires collecting data across their entire migratory pathway. A large-scale shorebird monitoring program is underway in the Pacific Flyway, and our newly established Intermountain West Shorebird Survey contributes to this larger effort. This type of survey would not be possible without help of over 100 dedicated volunteers and partners.

In 2022, we documented 31 species of shorebirds, with several rarities for our region including Red Phalarope and Hudsonian Godwit. The most numerous species counted were Red-necked Phalaropes, Wilson's Phalaropes, American Avocets, and Black-necked Stilts. This work will support targeted conservation efforts along the flyway, which is an internationally critical habitat.

2022 Highlights

The survey connects our work to that of biologists **across the entire Pacific Flyway**, spanning our western states and countries from Canada to Argentina.

5 modes of transportation used to reach shorebird habitat: airplane, boat, car, ATV, and on foot.

31 species of shorebirds documented in this first large-scale survey in the area in 30 years.

228,000+ shorebirds counted across Great Salt Lake, Utah Lake, the Amalga Barrens Sanctuary, and Fish Springs National Wildlife Refuge.



Volunteer of the Year

Mike Malmquist is our Shorebird Survey Volunteer of the Year. Mike and his son Max at National Audubon are two of Utah's finest birders. Mike not only helped survey shorebirds in Utah and Nevada, but he also supported the project planning phase, scouting sites and using his skills as an attorney to help secure access to sites with participating landowners. A big thank you to Mike for all his hard work making this new project a reality this year.



Photo: Sierra Hastings

Partners & Participants

- Utah Division of Wildlife Resources Great Salt Lake Ecosystems Program
- National Audubon
- Point Blue Conservation Science
- Tracy Aviary
- U.S. Fish and Wildlife Service

Wasatch Wildlife Watch



Photo: Rob Tolley

LONG-TERM GOAL

Facilitate and improve wildlife movement in the Wasatch Mountains.

Summary

Wasatch Wildlife Watch is a long-term project monitoring wildlife across the Wasatch. Community scientists, or “Wildlife Watchers,” set up and monitor wildlife cameras and analyze thousands of images. This work shines a light on locations, movements, and habitats of wildlife species in the region. With the Wasatch Mountains experiencing rapid development, this work lays critical groundwork for better conservation and smarter planning on a large scale. The project has led to multiple peer-reviewed papers and important findings, answering questions about wildlife-human zones, population concentrations across landscapes, and wildlife responses to structures like roads.

Impact

Wasatch Wildlife Watch is the largest data contributor to the Urban Wildlife Interface Network, a national organization that supports the coexistence of people and wildlife on an urbanizing planet. Our work contributes to fundamental wildlife behavior research. **Key findings from our 2022 community science include:**

- Wasatch communities may be able to reduce or mediate negative impacts on wildlife simply by changing the timing of recreation activities.
- Urban ecosystems are crucial to wildlife, with some species actually using urban human presence as a protection against predators.
- Preliminary evidence suggests that the I-80 wildlife bridge is an effective way to increase wildlife movement and habitat connectivity.
- We now have enough data to understand the impacts of COVID lockdowns on wildlife activity. This supports wildlife and habitat managers and urban planners in their work facilitating responsible recreation in wild-urban interfaces.

Project Highlights To-Date

2,522+
camera stations managed across the Wasatch Mountains.

3rd largest data contributor in the Snapshot USA worldwide mammal survey.

750+
volunteer community scientists participated in the project.

40,500+
animal detections across 28 species.



Volunteers of the Year

Mary Ann White is a fourth year Wasatch Wildlife Watch Community Scientist. With a keen interest in wildlife conservation, she has been delighted by the diversity of wildlife visiting her cameras. Both in urban and remote areas, she’s been excited to see what species are showing up at her cameras.



Peter Mimmack is also a fourth year Wildlife Watcher and has enjoyed gathering wildlife images as well as some videos for the project. This year on one of his surveys in the field, he encountered four bull moose over the span of an hour! Gratefully, he avoided any altercation and even managed to complete the camera installation.



A Wasatch Wildlife Watch camera image of a cougar.

Partners

- Biodiversity and Conservation Ecology Lab, University of Utah
- Utah’s Hogle Zoo
- U.S. Forest Service
- Salt Lake City Open Space and Public Lands
- Natural History Museum of Utah
- Utah Division of Wildlife Resources

Riverscape Restoration

LONG-TERM GOAL

Change the culture of stream restoration in the West.

Summary

Riverscapes are landscapes of streams and rivers. These blue-green ribbons and their associated watery habitats are critical for humans and wildlife throughout the arid West. Due to over-grazing and removal of beaver—a keystone species—thousands of river miles are currently degraded. That's why we strategically restore and monitor riverscapes for wildlife habitat and other ecosystem services. We apply scientifically backed principles to re-establish natural processes rather than building habitat directly. Our human-made beaver dams catalyze processes such as beaver activity, natural



wood accumulation, and floodplain connection. Hundreds of dedicated volunteers and partners build these structures each year.

As leaders in the natural resources and conservation communities, we make process-based restoration more common in the region. We monitor restoration sites for habitat improvements using the "Rapid Stream-Riparian Assessment" protocol, drone surveys, and community science tools surveying pollinator and amphibian presence.

Impact

Our program has contributed to a widespread increase in process-based restoration in the West. In 2022, we contributed to a State of the Science report published by American Rivers, highlighting our work in the Chalk Creek watershed. A research paper on hydrologic responses to beaver dam analogs is forthcoming as well. This study demonstrated that flows were not measurably changed by restoration activity despite drought conditions.

Releasing beavers at two new sites in Chalk Creek watershed represents a sizable shift in the culture of restoration in Utah and the West. A flurry of beaver reintroductions this year signals a new level of trust in low-tech process-based restoration methods and appreciation for healthy riverscapes. In June, we co-hosted a successful wet meadows restoration workshop connecting landowners and agency partners. We also completed a short documentary about this watershed, worked closely with the Northwestern Band of the Shoshone Nation on restoration work, and hosted special events engaging diverse communities.

2022 Highlights

265

volunteers contributed almost 2,000 volunteer hours

Hundreds of cottonwood and willow trees planted, plus thousands of native plants

9

streams benefited from restoration work

285

low-tech restoration structures built on degraded streams



Overall Volunteers of the Year: The McKinstry Group

Our volunteer of the year for this program is also Sageland Collaborative's overall Volunteer of the Year. The McKinstry Group reached out to us in 2020 and have been a dedicated group of volunteers ever since. This group of cheerful volunteers, many of whom resonate with beavers as 'ecosystem engineers' is a joy to work

with. Their dedicated service year after year has resulted in real progress toward restoring streams in Utah. McKinstry enables employees to volunteer their time to local causes, making an impact for the community in which they live and work. We are so grateful to their entire team for their dedicated service!



Photos: Sierra Hastings (left page), McKinstry Group (right page, above), Kelly Fink (right page, below)

Partners

- Utah Division of Wildlife Resources
- Swaner Preserve and EcoCenter
- Trout Unlimited
- Snyderville Basin Special Recreation District Utah
- Army National Guard
- Salt Lake City
- Utah Department of Agriculture and Food
- Private landowners
- Salt Lake County Parks & Open Space
- US Fish & Wildlife Service
- ...and of course, beavers!

Utah Pollinator Pursuit



LONG-TERM GOAL

Increase populations of Utah's monarch butterfly, western bumble bee, other native pollinators, and the plant communities they rely on.

Summary Utah Pollinator Pursuit seeks to put pollinators experiencing dramatic population declines on the map. Community scientists gather and share new location and habitat condition information for species like monarch butterflies and western bumble bees that need the most support. This information is used to create species maps and locate areas of conservation interest in the state. This work supports wildlife and habitat managers in choosing restoration sites. It ensures that efforts and dollars are used where they are most impactful, and that pollinator conservation plans can be made at a landscape-scale.

Impact Habitat information gathered by community scientists is crucial to state and federal wildlife practitioners. It highlights specific pollinator habitat areas for restoration, maintenance, or improvement. In 2022, Utah Pollinator Pursuit data were presented at large-scale meetings for partners who plan regional conservation measures and determine whether monarchs and other declining pollinator species should be listed as threatened or endangered. Community-gathered data are also contributing to the development of habitat models that will inform the conservation work being considered at a landscape scale.

Thanks to increasing volunteer participation in the project, we are filling in the map of monarch migration and western bumble bee habitat in Utah. The 2021 and 2022 field seasons have yielded more monarch observations than our habitat and wildlife managers at the state and US Fish and Wildlife Service have expected for a species in decline. We also found new habitat locations where the Western bumble bee—a declining species—was previously undetected. This sparked conservation planning discussions that are actively being incorporated into Utah's Wildlife Action Plan. This means these struggling pollinator insects and their habitats will be included and prioritized for funding, restoration, and research.

2022 Highlights

490 monarch sighting events this year, including 952 adults

490 bumble bee submissions, representing 17 species

4 rare species habitats recorded and prioritized for conservation

Rare species

For Utah's rare bumble bee species, community scientists documented 38 golden northern bumble bee, 19 indiscriminate cuckoo bumble bee, 4 mixed bumblebee, 17 Morrison's bumble bee, 7 western bumble bee, 4 American bumble bee, and 1 Sonoran bumble bee.



Volunteer of the Year

Bill Oldroyd has contributed over 16 bumble bee observations, including 7 pollinator species and 12 monarch observations, in the town of Orem, Utah. This kind of insight into pollinator diversity in an urban area with quality habitat is as important as sightings on undeveloped land.

Bill has been a dedicated volunteer to the project for years, and we are excited to celebrate his diligent efforts.



Partners

- Utah State University College of Natural Resources
- Utah Division of Wildlife Resources
- University of Utah
- Utah Monarch Enthusiasts Group
- U.S. Forest Service
- U.S. Fish and Wildlife Service
- Natural Resources Conservation Service

Boreal Toad Project



Photo: Sierra Hastings

LONG-TERM GOAL

Monitor habitat conditions and populations of boreal toads in alpine aquatic areas of Utah.

Summary

Boreal toads have declined in recent years. This is due to serious threats including climate change and an amphibian-killing fungus. Adding to these issues is the lack of knowledge about how many toads there are, what habitats they are using, and what habitats would be best as targets for reintroduction or restoration. The Boreal Toad Project engages volunteers in surveying sites for amphibians and potential habitat. Filling in the map of Utah amphibian habitats enables the best planning possible for the species. Armed with datasheets, toad buckets, and measuring devices, these volunteers spread across Utah's mountains in search of this mysterious species.

Impact

This was a banner year for participation. More community scientists joined on field trips, more boreal toad breeding sites were visited, and more individual toads were detected than past field seasons, with a steady increase since the project started in 2016. We also furthered our connection to communities through our storytelling and volunteer engagement efforts, including a documentary video, a virtual option for the training, and identification aids for the field.

This year, locations were identified that have all different life stages of boreal toads present—including eggs, tadpoles, toadlets, and resident adults—indicating that populations are not only persisting but have been successfully breeding. Project partner Utah's Hogle Zoo's efforts to manage a species assurance colony were also confirmed to be successful this year. Their captivity-reared toadlets were released into native habitats, survived the winter, and appear to be thriving!

2022 Highlights

60+
volunteers surveyed across Utah for boreal toads

2,500+
survey hours completed on the project

190+
surveys completed, putting boreal toads on the map

500+
toads detected in community scientist surveys



Volunteer of the Year

Candice Clark is our Boreal Toad Project Volunteer of the Year for 2022. This was Candice's first year volunteering on the boreal toad survey field season. Even in this short amount of time, she went on every survey she possibly could.

Candice enjoys doing community science with her child whenever she can. We're particularly grateful for our volunteers who bring future generations into conservation by supporting their love for amphibians. Thank you so much, Candice!



Photo: Sierra Hastings

Partners

- Utah's Hogle Zoo
- Utah Division of Wildlife Resources
- Utah Geological Survey
- U.S. Forest Service
- U.S. Fish and Wildlife Service

Rosy-Finch Project



A biologist gently takes key measures on a gray-crowned rosy-finch. Photo: Janice Gardner

LONG-TERM GOAL

Ensure rosy-finch populations persist into the future.

Summary Together with our partners, we continue to solve the mystery of a suite of rare birds, known as rosy-finches. We're using chemical signatures in feathers to understand where these birds move between summer and winter. As these alpine-loving birds face climate disruption, we're facilitating complex discussions with colleagues across the West about how we can act to conserve them. We lead the Rosy-Finch Working Group, comprised of people from government, academic, and nonprofit entities. With the help of our community scientists, we track rosy-finches at bird feeders and by using small microchip bracelets that detect research birds.

Impact Managing wildlife is a complex endeavor, and biologists are rarely afforded the staffing and funding to address issues that require working across political boundaries. In response to this reality, we wove together a cohesive network of conservationists, managers, and researchers through the Rosy-Finch Working Group. Many were previously operating in silos, but we are now reaping the benefits of sharing resources and working on shared outcomes for our rosy-finches. This year, we facilitated the Working Group through a moderated process called Structured Decision-Making that prioritizes key actions we can take to conserve rosy-finches across the West.

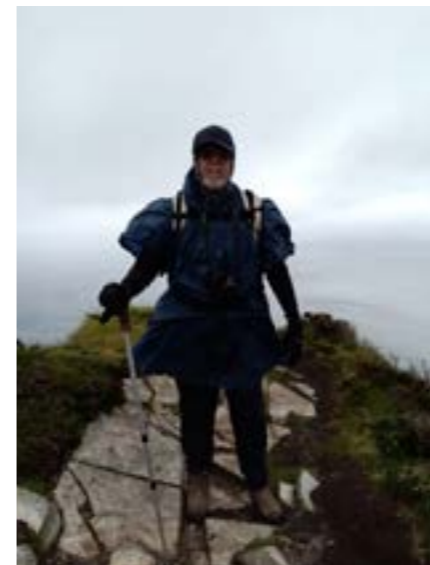
In 2022, volunteers continued to expand the project into new sites, establishing new bird feeders and recruiting new rosy-finchers. We counted thousands of rosy-finches across the West. Volunteers contributed to understanding the movement of rosy-finches by reporting over a dozen banded birds, one as far away as 350 miles from their original capture site. Through feather isotopes, we confirmed how Utah's rosy-finches move across state lines throughout the year. We secured funding to collaboratively develop a breeding season survey protocol, which will allow biologists to monitor populations as a team.

2022 Highlights

191 volunteers known as "rosy-finchers" are sharing in the conservation of these species across the West

79 passionate professionals and stakeholders participate in our Working Group

7 states are represented in the project



Volunteer of the Year

Steve Van Winkle is this year's Rosy-Finch Volunteer of the Year. Steve has been a star volunteer on several projects for years. On the Rosy-Finch Project, Steve has taken up doing bird surveys at multiple sites, including a new site established at Sundance in Utah.

Even though Steve did not document any rosy-finches on his surveys, those "zero counts" are still incredibly important data on the project. Thank you so much for your dedicated work, Steve!



Sageland Collaborative staff document rosy-finches at a remote site with partners at Idaho's Department of Fish and Game. Photo: Janice Gardner

Partners

With over 40 partner organizations, this project boasts our most expansive partnership list.

Our collaborators include state and federal wildlife agencies, academic institutions, and many conservation organizations, including the Tracy Aviary.



Story Highlight

Launching our Shorebird Surveys

On August 12, 2022, a hundred biologists and birders woke up early to survey over 60 sites across Great Salt Lake. As they spread out onto the stark landscape, they were awarded with three incredible sights at once: a beautiful sunrise, a rainbow, and the sturgeon super moon. That day, they counted a quarter of a million shorebirds on Great Salt Lake alone.

Survey organizer and Sageland Collaborative biologist Janice Gardner said the experience was bittersweet. “We experienced firsthand how low the lake levels were. Many of us also had to walk across exposed and dying microbialities, which are the coral reefs of Great Salt Lake. Restoring and conserving our wetlands is paramount, since entire species of birds depend on it.”

From 1989 to 1995, a large collaborative survey across the Intermountain West counted shorebird populations. The data collected made it clear: Great Salt Lake is essential for shorebirds like phalaropes, avocets, stilts, and sandpipers.

“The difference now,” says Don Paul, a retired biologist from Utah Division of Wildlife Resources who organized the survey in the ‘80s, “is that there is a 14-foot difference in Lake elevation. It’s a significantly different landscape.”

That changed landscape manifests in many ways. Freshwater wetlands, which are important habitats for shorebird nesting and used to closely border the Lake, are now separated from the shore by miles, straining the relationship between water, food, and habitat that shorebirds rely on. Invasive species like phragmites have taken over much of the Lake’s wetlands. And as the water level of the Lake drops, the salinity increases beyond the level that brine shrimp and brine flies—crucial food sources for millions of shorebirds—can survive.

According to Gardner, “Managing water in the West is complex, and the entire community needs to be involved in solutions. Counting

shorebirds helps us understand where they are and what they need so we can target the right conservation actions.”

Gathering data on this large scale puts the importance of each site into context, shedding light on the value of particular sites across the entire migratory path, or “flyway.”

Many of the birds counted in Utah in August stop over at the Lake on migrations that span thousands of miles. Wilson’s Phalaropes, for example, spend winters in Argentina but can be found at Great Salt Lake feeding on the abundant food sources. This hemispheric migration makes large-scale collaboration essential to conserving these birds.

“Phalaropes amaze me with their long migrations, being as small and delicate as they appear to be,” says Marcela Castellino, a flyway conservation specialist at Manomet in Argentina. “In particular, they connect me with this sense of unity across the hemisphere. Connections between sites create ties in people, and I think that is key.” Partner organizations like Manomet will use the data gathered from the Intermountain West Shorebird Survey to understand threats to shorebirds—like the phalarope—with a hemispheric range.

Castellino points to the importance of working together to create large pictures of shorebird populations within the state of Utah, across the Western U.S., and over the far-reaching, global ranges of these incredible birds. “It opens up our understanding, and it opens opportunities to collaborate to conserve these species,” Castellino says.

Gardner found hope in her work organizing the Great Salt Lake portion of the survey. “I continue to be impressed by our volunteer community scientists,” she says. “With so many passionate volunteers, we can accomplish amazing things. We put a single Utah wetland in the context of a shorebird’s journey all the way from the Arctic to Argentina.”





ECOLOGICAL SERVICES

Supporting our work with professional projects

Sageland Collaborative provides fee-based professional services to further support our mission. Our staff are experts in their respective fields and apply this expertise toward projects. This work remains rooted in conservation and science to benefit wildlife, lands, and the community. Some of the services we provide include:



Ecological studies and monitoring



Conservation storytelling & documentary video



Landscape-level planning



Project management

2022 Ecological Service Projects

*Lower Bear River Watershed
Action Plan*

*Park City Wildfire Risk
Assessment*

*Greater Canyonlands Wildlife
Migration Project*

*Bird Monitoring at Great Salt
Lake's Shorelands Preserve*

*Central Wasatch Environmental
Dashboard*

*Greater Canyonlands Area
Wildlife Needs Stakeholder
Assessment*



*Our team is expert in coordinating community scientist support for ecological monitoring.
Photo: Sierra Hastings.*

Professional groups and initiatives



We are proud to work with agencies, landowners, nonprofits, and many other groups in the pursuit of visionary science for wildlife conservation. The working groups and initiatives we participate in allow us to both contribute our knowledge to conservation planning and learn from our colleagues.

WORKING GROUPS WE PARTICIPATE IN

State Wildlife Action Plan Team

Utah's Wildlife Action Plan aims to maintain Utah's wildlife and improve habitat health. Sageland Collaborative plays a key role in the process, working with Division of Wildlife Resources, decision makers, and other stakeholders to develop a plan for the next 10 years that will take significant steps to conserve Utah's wildlife and habitat. We ensure the best available science and information is used to conserve our wildlife, including many species we work with like boreal toads, pollinators, rosy-finches, and others.

Wildlife Connectivity Working Group

Wildlife in the West need healthy, connected habitats so they can safely migrate and complete their life cycles. We work with a diverse group of organizations, agencies, and planners to increase wildlife connectivity throughout the region. Our participation also ensures that projects like Wasatch Wildlife Watch meet the needs of planners and the results maximize their impact.

Rosy-finch Working Group

We lead this dynamic group of scientists, managers, and officials to facilitate the conservation of rosy-finches. Through this group of nearly 40 different entities, we use a Structured Decision-Making process to prioritize research and conservation needs. This allows us to work quickly as climate change continues to threaten rosy-finch populations and other alpine species. The Working Group not only allows us to share findings from our Rosy-Finch Project, but efficiently expand our research capacity.

Utah Bat Conservation Cooperative

Our team is committed to the conservation of bats in the West. The goal of this cooperative is to conserve bat populations, communities, and habitats in Utah. We integrate bat conservation into our existing projects by gathering acoustic monitoring data and improving habitat.

Watershed Restoration Initiative

We work closely with Utah's Watershed Restoration Initiative, the state's major funding program to improve watersheds. Not only are we participants in multiple restoration projects each year, but we also serve on and chair regional project ranking committees and provide peer review of proposals. Participating in the Watershed Restoration Initiative allows us to create greater impact on the landscape by aligning our program objectives within the watershed, combining efforts with partners, and strategically matching funding dollars.

Great Salt Lake Advisory Council and Technical Advisory Group

We are committed to conserving Great Salt Lake and the vital wetland habitat surrounding it. We attend and participate in these meetings where the sustainable use, protection, and development of Great Salt Lake are addressed. With rapidly changing conditions on Great Salt Lake, it is vital we understand current threats and how to connect our work, like the Intermountain West Shorebird Survey.



Weber River Partnership

We work with a diverse group of partners in the conservation and restoration of the Weber River watershed. Partners include nonprofits, community groups, local businesses, landowners, and state agencies throughout the Weber River basin. Understanding the threats to our watersheds allows us to strategically plan stream restoration projects.

Linking Communities

Sageland Collaborative is developing a strategic plan for the Linking Communities initiative, which unites people based on shared shorebird species from Canada to Argentina. The initiative focuses on conservation of shorebird habitat, education, and responsible ecotourism.

East Canyon Watershed Committee

Our riverscape restoration work on the East Canyon watershed is an important part of our program, and our collaborations are rooted in this committee. We identify and implement solutions to problems like fish kills and noxious weeds. The Committee brings together groups from regulators to policy makers to recreation managers.

Riverscape Restoration Network

Our experts are leaders in riverscape restoration in the West. This network connects restoration practitioners across the West and is a venue for sharing research and project outcomes and creating collaborations. We regularly present and share resources and lessons learned, allowing like-minded groups to improve their restoration work.

Jordan River Technical Advisory Committee

The Jordan River is an important corridor for water, wildlife, and people in Salt Lake Valley. This technical advisory committee helps to develop tools, resources, and standards for communities working along the Jordan. We are committed to improving the habitat and community value of the Jordan River through restoration and projects along the river and throughout the watershed.



Landowners and partners at our Chalk Creek Stream Restoration Workshop near Coalville, Utah. Photo: Sarah Woodbury

Story Highlight

Meet the New Beaver Family in Fish Creek



Tucked away behind some bushes downstream, 2021 Volunteer of the Year Sierra Hastings had an excellent view of an incredible moment: four beavers making their way out of cages and into the water of Fish Creek.

“Of course I love many amazing species,” she says, “but none compare to beavers. The absolute power of beaver dams to expand the water table and to hold water in our systems is remarkable.”

Rose Smith, stream ecologist and Riverscape Restoration Program lead, explains why beavers are such incredible restoration partners:

“Beavers are often called ‘ecosystem engineers’ because they actively manage the environment to meet their needs for shelter and food. Moose feed on aquatic plants that thrive in beaver ponds. Woodpeckers and other birds find food and homes in dead trees left standing when a new area floods. Fish and amphibians lay their eggs behind dams and rest from other fast-moving sections of the stream. These diverse, complex habitats benefit and meet the needs of many species, humans included.”

Our 2022 beaver release in Fish Creek is part of a decade-long collaborative effort to restore the Chalk Creek watershed. Since 2019, Sageland Collaborative partners and volunteers have built dozens of beaver dam analogs (BDAs)—or structures that mimic beaver dams—on

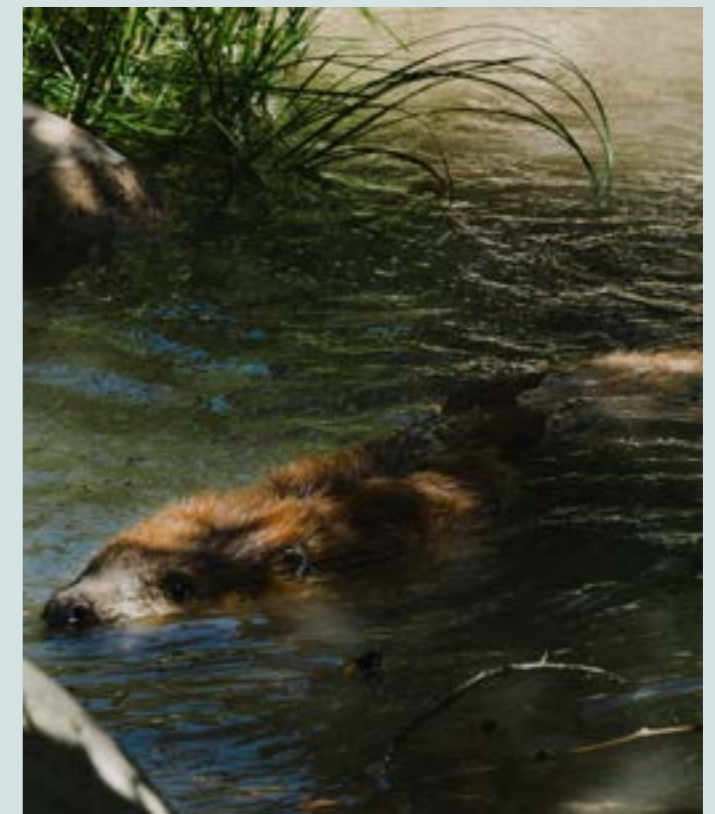
this stream. Fish Creek was once cut unnaturally deep into the ground, but thanks to these simple structures, the stream has started to slow down, meander, and pool.

Sierra has helped build many BDAs with our Riverscape Restoration Program. “It’s an addictive feeling, seeing these works of art come together like they do,” she says. Volunteers can often see the stream start to spread out the same day they build one of these simple structures.

Thanks to the BDAs, Fish Creek transformed to the point that it was ready to support beavers. Alongside partners and volunteers, our team released a beaver family into a pool now deep enough to support the need to hide from predators. If these beavers successfully take up residence in Fish Creek, they will continue the stream restoration work of volunteers. By improving the existing BDAs and building their own dams, they will create the complex, life-sustaining ecosystems they are known for.

In addition to supporting myriad game and fish species, healthy streams are critical for many of Utah’s sensitive species, including greater sage-grouse, southwestern willow flycatcher, Bonneville cutthroat trout, and northern leatherside chub. Reintroducing beavers is one of the most ecologically and cost-effective restoration tools for bringing degraded riparian habitats back to life.

With both scientific monitoring and on-the-ground restoration as part of our riverscape work, we’re proud to support vibrant streams and beaver families across our beloved Western landscapes. A huge thank you to our volunteers, donors, and partners who make this work possible!



Photos: Sierra Hastings

Our conservation team

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2022 INTERNS

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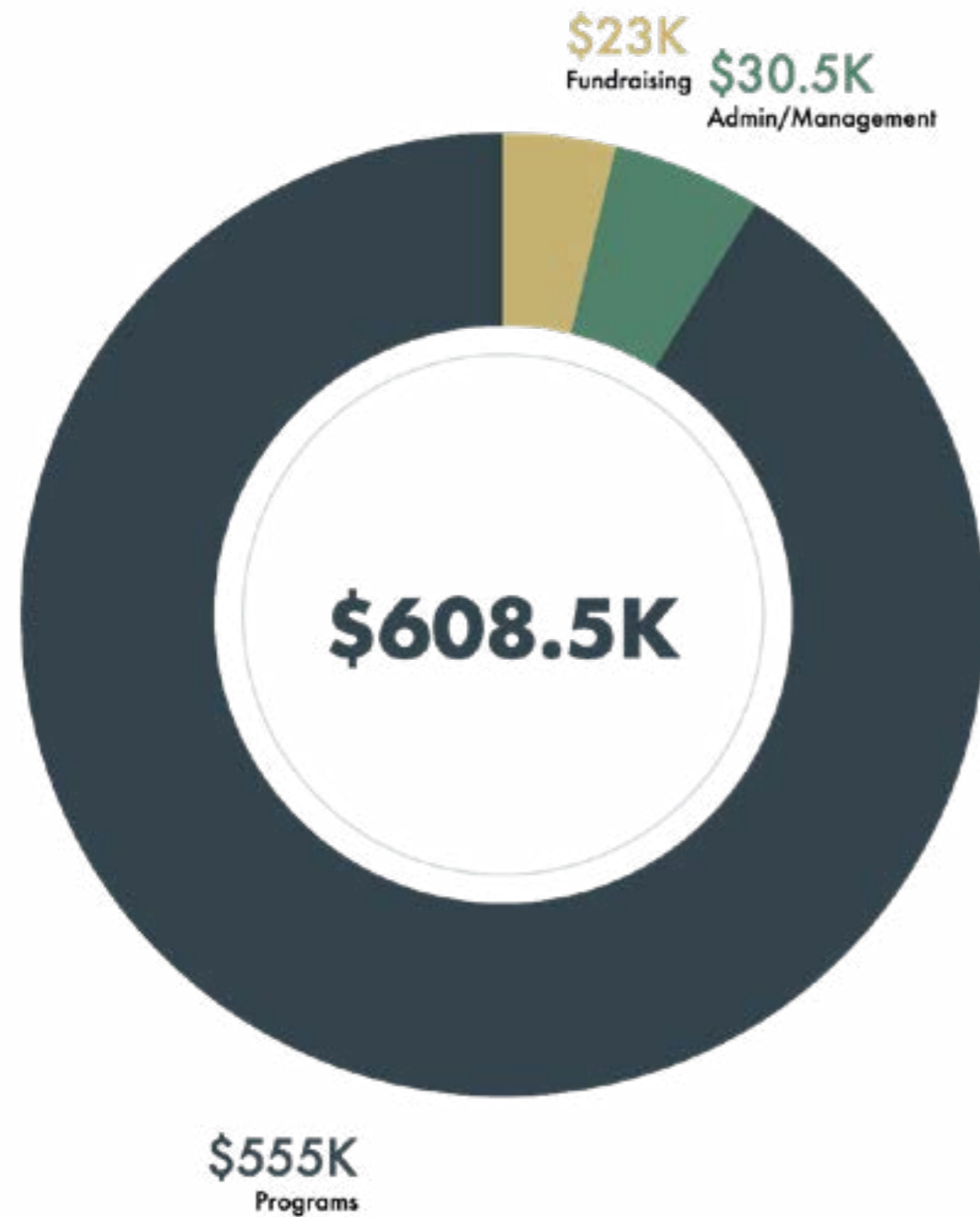
Cole Nelson

Chris Reisinger



Photos: Sierra Hastings

2022 Expenses



*See full financial report at sagelandcollaborative.org/accountability

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If you are able to give, **please consider donating** to ensure that this work continues. Visit www.sagelandcollaborative.org/donate to make a tax-deductible donation today.

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For over 25 years, Sageland Collaborative has provided science with a large-scale vision for the West. We believe that humans can live together in harmony with wildlife, but only if we use good data to support bold, strategic decisions.

Thank you for making our vision possible.

Our Intermountain West Shorebird Survey brought together volunteer birders, biologists, and many others to support shorebirds at Great Salt Lake and beyond. Photo: Max Malmquist.



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