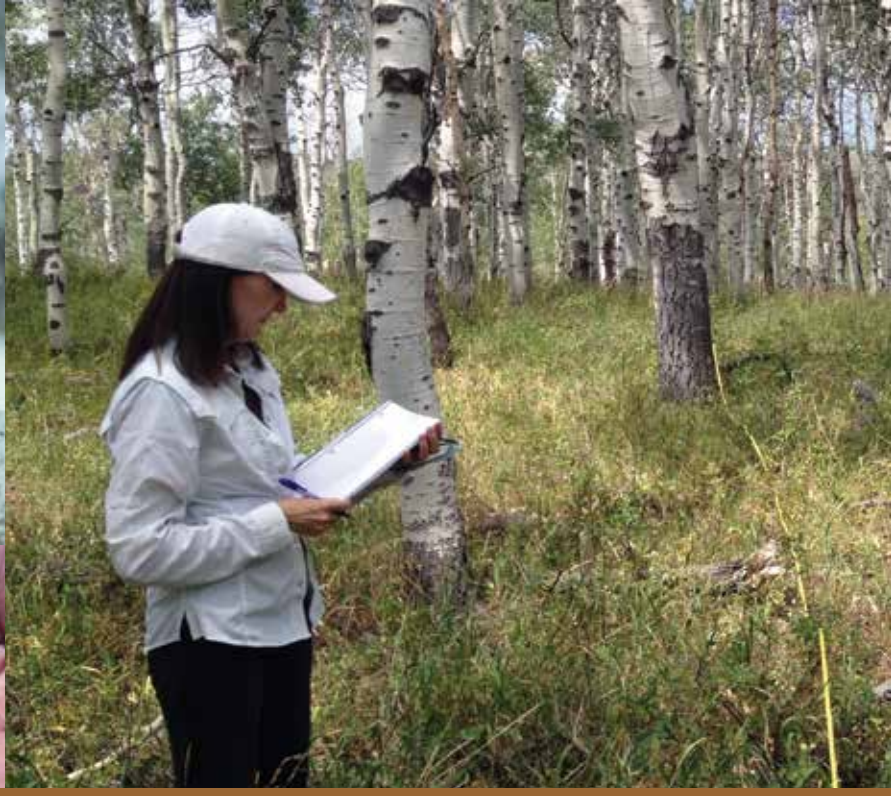
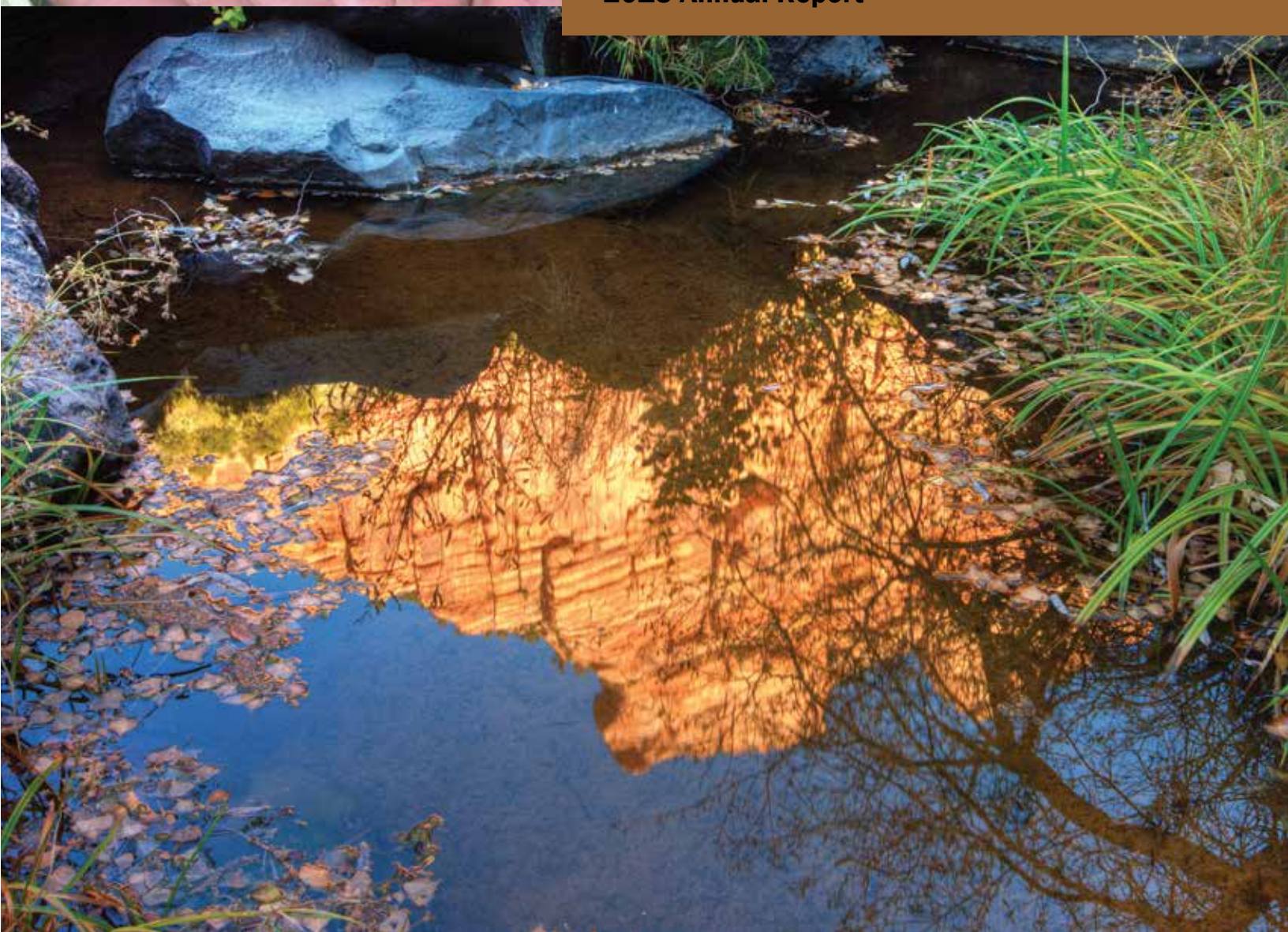


Wild Utah Project

2015 Annual Report



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Wild Utah Project

The mission of Wild Utah Project is to protect wildlife and improve wildland habitat on Utah public lands.

824 S 400 W Suite B117 | Salt Lake City, Utah 84101

801.328.3550 | info@wildutahproject.org | www.wildutahproject.org

Outside front cover, clockwise from upper right: *A Wolf Creek Ranch land-owner and citizen scientist learning Wild Utah Project's aspen regeneration survey protocol and assessing degree of health of the ranch's aspen stands. Redrock reflected in wetland, Zion National Park, photo © Jeff Clay, Clayhaus Photography. An adult boreal toad, photo courtesy of Chris Crockett, UDWR Native Aquatics Project Leader. Bighorn sheep, photo © Howie Garber, Wanderlust Images.*

Outside back cover: *An example of what Geographic Information System (GIS) technology can do. Map created by Emanuel Vásquez, Wild Utah Project's GIS Analyst.*

Introduction

It's a complicated world out there. As 2016 peeked over the eastern horizon, angry armed men occupied a national wildlife refuge in eastern Oregon, apparently motivated by their personal vision of how federal public lands ought to be managed, an amalgam of equal parts western mythology, scriptural interpretation, and perceived victimization. The recipe for their vision, whatever else it contains, is unseasoned by any recourse to science.

The Oregon episode shines a spotlight on the divide between belief-based and science-based land management. Refuge employees have pointed out that the type of unregulated practices the militants demand has led to permanently degraded conditions, and the whole situation encapsulates why science, the core value of Wild Utah Project, is critical to understanding what is actually happening on western public lands. At the center of the occupiers' narrative is an intentional fire set by members of a nearby ranch family, allegedly to fight invasive cheatgrass. The ranchers blame the federal land managers and the regulations they enforce for their cheatgrass problem. The Bureau of Land Management contends that decades of overgrazing by grazing permittees like this family have created the perfect stage for the cheatgrass invasion that now threatens millions of acres in Western states.

Too often, the public conversation that circulates around this issue, and many others like it, feels like a never ending round of name calling, devoid of factual content, disconnected from any real hope of finding resolution. The mission of Wild Utah Project is to use science to change this conversation, to persuade the public and decision makers to accept the best available science as the keystone for crafting public lands policy.

It's not going to be easy. The West is rapidly changing, and change will always be frightening. As individuals and communities experience the transformation of their lifeways, their response may be anger and confusion, expressed in some version of, "circle the wagons, identify the enemy, and fight back with any tool at hand." How can the resulting conflict, and the energy it produces, be harnessed in the service of discovering real solutions, rather than channeled into more name calling and table thumping, at ever increasing volume?

Wild Utah Project has an answer to that question; first, do the science. In the arena of wildlife conservation on public lands, Wild Utah Project's special focus is to identify the crucial factual questions that lurk behind administrative decision making, marshal the relevant evidence, describe the logical conclusions, and advocate for the incorporation of our work into the decisions being made by federal and state policy makers.

An important way Wild Utah Project works to accomplish this goal is to train citizen scientists, individuals interested in the pursuit of wildlife and wildland data gathering. Each year, dozens of volunteers join our scientists, walking the land, identifying and counting, taking measurements, and recording what they discover. These citizen scientists allow us to collect the data we need to understand current land conditions and wildlife needs. The maps, graphs, and reports that result from our volunteer trips are making a difference.

Understaffed and underfunded government agencies use this information to strengthen the science component of the decisions they make. Other environmental groups, our conservation partners, access the science resources of Wild Utah Project, especially map materials, to buttress their own conservation campaigns. Media voices, looking for the science behind the issues, look to Wild Utah Project for the science perspective on wildlife issues, from sage-grouse protection on Utah sagebrush habitat to introduced mountain goats in the La Sal Mountains near Moab and boreal toads in the Cottonwood Canyons of the Central Wasatch.

A bumper sticker says, "Facts are the part of reality that exist whether you believe in them or not". Yet a significant component of the American public, including those armed men in Oregon, seem to operate as though facts are just one more type of belief, no different from those of the political or religious variety. Wild Utah Project stands for the opposing position, delivering the message that strong science trumps theatrics and sound bites.

Wild Utah Project is proud to be leading the campaign to include science in the conservation conversations reverberating throughout Utah. This brochure, our 2015 Annual Report, includes a detailed description of the work accomplished during the year. Your ongoing support and encouragement is what makes our work possible. Thank you.

Scott Berry
Board Chair, Wild Utah Project

Wildlife Science Program

From left to right: Matt Utley, Tracy Aviary Botanist, Kevin Labrum, US Forest Service Wildlife Biologist, and Nancy Sears, our Director of Development, conducting sagebrush habitat assessments in Rich County, Utah

In 2015, our wildlife science program included a historic area of Wild Utah Project's expertise, studies of sage-grouse habitats, in addition to our continued efforts to bring best science to the Mountain Accord process in the Wasatch, and our ongoing analysis of bighorn sheep habitat in the Uinta Mountains. Here are a few highlights:

Best Available Science in Support of Sage-grouse Conservation

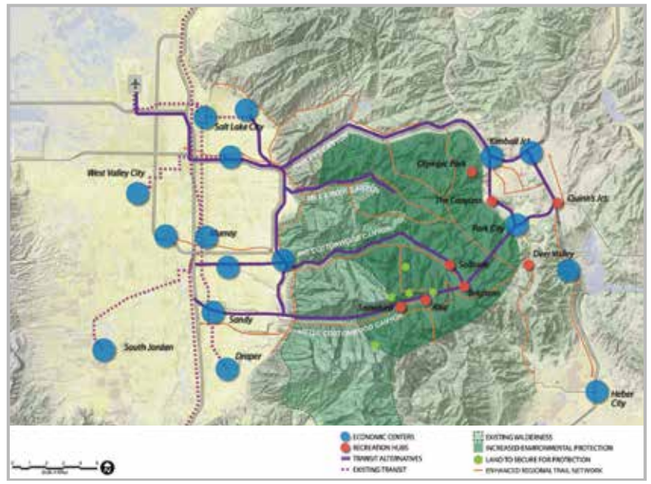
Wild Utah Project staff and citizen scientists advanced scientific understanding of this iconic bird as we continued our research and monitoring of sage-grouse and sagebrush habitats in northern Utah.

• **Long-term and landscape-scale study of sagebrush habitat at Barney Ridge within Rio Tinto's Kennecott Utah Copper landholdings:** Last year we logged in our seventh year of research to identify impacts of cattle when introduced back into sage-grouse habitat after sagebrush removal treatments, a standard practice of the Bureau of Land Management (BLM) in Utah. 2015 marked our third year of collecting both spring and fall data on our spring-only and fall-only grazed study plots. In each of these ~20 acre fenced study plots, we have left strips of untreated sagebrush that were purposely avoided in the fall of 2010 mechanical "chain harrow" sagebrush treatment. Each plot contains six permanent, 25 m^2 exclosures that will remain ungrazed. In all spring and fall grazing treatments conducted so far, our cooperating Kennecott cattle permittee has used the precise number of days per cow per unit area that roughly mirror stocking rates on northern Utah BLM sagebrush allotments, resulting in a 50% grazing utilization rate on the study plots. We are currently synthesizing these data to submit publications on the interaction between the mechanical treatment and the return of cattle grazing after a two-growing-season rest. This first manuscript details the effects of the treatment and seeding itself, and has recently been submitted for publication. The summary findings from this publication highlight the influences of cultivation history we saw on about half of the study plots, resulting from dry-land farming on these plots in the early to mid-1900's.

• **Continued sage-grouse habitat assessments in Rich County:** Together with our trained citizen scientist team including Hogle Zoo biologists, Tracy Aviary ornithologists and botanists, conservation partners from the Bear River Land Conservancy, and agency biologists from the US Forest Service (USFS) and BLM, Wild Utah Project has continued baseline data collection in the Three Creeks area of Rich County. As we reported last year, BLM and USFS are planning to pool cattle herds together across ten BLM and USFS grazing allotments in Rich County, and rotate the combined large herds through the landscape fairly rapidly. While some evidence proposes that this style of grazing may not be destructive in places that evolved with large herds of grazing animals like bison, the evidence is much less solid for more arid areas on the margins of historic bison range like Rich County. Wild Utah Project collected additional data in 2015 regarding the current habitat condition for late brood-rearing sage-grouse hens in a couple

of these grazing allotments. In addition to the line-intercept method that we have used in the past to emulate BLM protocols, we collected the same information utilizing an additional method, the Daubenmire frame protocol. These different, yet commonly used methods for measuring grass and forb cover and height are of interest for comparison, particularly as one or the other is typically used for assessing the suitability of sagebrush vegetation communities and their potential to support sage-grouse. Wild Utah Project, along with other sage-grouse conservation partners, is interested in documenting differences or similarities in the results for the two methods. We will conduct statistical comparisons across the two datasets collected from the same locations using the two different protocols to assess repeated variation among the results. In addition, the two seasons (2014-2015) of vegetation data will allow for a comparison of 'pre-treatment' and 'post-treatment' conditions, before and after the new grazing regime is implemented. Wild Utah Project along with our conservation partners and trained citizen scientists, will return to the same sites after 2017 to assess the habitat conditions for sage-grouse following the new grazing management strategy in the Three Creeks allotments.

Mountain Accord Phase I Involvement and Preparation for Phase II



The Proposed Central Wasatch Blueprint map. Map courtesy Mountain Accord.

Mountain Accord is comprised of over 20 organizations and nearly 200 stakeholders forming a multiphase and cooperative planning process to develop long-term transportation, recreation, economic and environmental solutions, in order to preserve the legacy of the Central Wasatch Mountains. Currently, the Mountain Accord is Salt Lake Valley's premier landscape-level planning effort and a pilot project with the Council on Environmental Quality. Phase I of the process resulted in a transportation development and land use proposal outlining a blueprint for parallel and interconnected environmental, recreation, transportation and economic strategies for the future.

As an active member of the Mountain Accord Environmental Systems Group, Wild Utah Project, along with other conservation partners, repeatedly insisted that project resources be allocated to environmental and wildlife habitat analysis. Our engagement in a series of meetings and document editing yielded modifications to the budget and schedule to accommodate data requests, identification of critical data gaps, as well as the best available science to ensure environmentally informed preliminary planning stages and the recognition of the need for an environmental assessment and monitoring tool tailored to the Central Wasatch.

MOUNTAIN ACCORD

Visit the Mountain Accord website for more information on this cooperative planning process.

www.mountainaccord.com

Significantly, the Mountain Accord Executive Committee voted to fund the development of an "Environmental Dashboard" framework, an applied habitat and inclusive ecosystem assessment tool. This document and online database will result in a thorough analysis of the current on-the-ground conditions of the Central Wasatch that will provide critical insights to reach desired ecosystem conditions (e.g. improving function, connectivity, and health of watersheds and indicator species habitats). Wild Utah Project will be increasingly involved in this new, essential component of the Accord along with local experts, scientists, and advisory panel members during the development of the Environmental Dashboard beginning in 2016.

Spatial Analysis of Bighorn Sheep Habitat and Forage Production in Uinta Mountain Domestic Sheep Grazing Allotments

Map of the High Uintas Domestic Sheep Analysis area in northeast Utah on the Ashley and Uinta-Wasatch-Cache National Forests.

2015 yielded a new Wild Utah Project initiative, which the collaborating organizations are calling the Uinta Healthy Watersheds Initiative. The purpose of this project is to restore and protect northern Utah's water supply and the other many watershed resources of the Uinta mountains that are now compromised due to overgrazing of domestic sheep, including in the 456,000 acre High Uintas Wilderness. This initiative was launched in response to the upcoming Environmental Impact Statement on the High Uintas Wilderness Domestic Sheep Analysis Project, which will impact grazing permit renewals. Under consideration is the renewal of 11 sheep grazing allotments on approximately 150,000 acres, located on the north and south slopes of this wilderness area located within the Ashley and Uinta-Wasatch-Cache National Forests. This area is a unique place as it is the only high elevation, forested link between the southern Rockies ecoregion and the greater Yellowstone; providing a critical "mega-linkage" for high elevation, wide-ranging carnivores such as lynx, wolverine, and wolf.

One species which stands to be most negatively impacted by domestic sheep grazing, as it struggles to expand its range on the east side of the Uintas westward, is the Rocky Mountain bighorn sheep. It is well-known that domestic sheep can readily transmit disease to the native bighorn sheep. Therefore, areas of overlap between the native bighorns and the domestic grazers may include prime habitat allotments that the USFS would be looking to retire.

Wild Utah Project has been leading Geographic Information System (GIS) analysis for the coalition, and we are now undertaking a critical analysis that the USFS has never to our knowledge conducted: a capability analysis based on estimated forage production in the wilderness area, to calculate the maximum number of domestic sheep the range can even support in an average production year. We anticipate there will be a strong case for removal or significant reduction of sheep on these allotments based on the current ecological carrying capacity of the land, in addition to the robust evidence that current domestic grazing has already caused ecological damage to native plant communities and stream-bank integrity. Without the elimination or reduction in livestock, these places are likely to experience increased upland erosion, which raises sediment levels in streams and speeds up flows, and can cause channel erosion that ultimately leads to downcuts and incised stream channels and lowered water tables. The improvement in watershed, stream and riparian health that stands to result from our project will in turn benefit not only downstream human communities (which are many) that rely on this water for agriculture and culinary uses, but the fish and other aquatic and riparian wildlife that similarly rely on functioning stream and riparian systems to thrive.

Left top: High Uintas stream in the West Fork Black's Fork allotment showing the impacts of domestic sheep grazing. Left botton: Photo of ungrazed streeam in the High Uintas. Photos courtesy of Dr. John Carter, Director, Yellowstone to Uintas Connection.

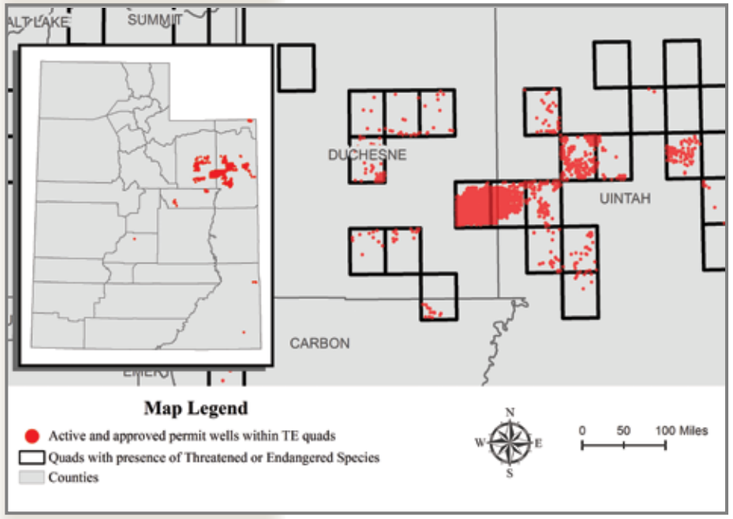
Upcoming and Recent Research Publications and Presentations

- Implications of long term rest from grazing in the sagebrush ecosystem: an alternative perspective. (response article to another publication — In press with *Journal of Rangeland Applications*)
- Cultivation legacy effects on vegetation structure and plant community composition following shrub reduction in Utah. (manuscript submitted to *Rangeland Ecology and Management*)
- Understory vegetation community assessment of ungulate herbivory pressures in quaking aspen forests. (manuscript in progress)
- A noise decay distribution analysis: modeling oil and gas extraction impacts on sage-grouse lek visitation. (manuscript in progress)
- Alpine vegetation impact assessment of the Mount Peale Research Natural Area: 2015 survey report. (presentation at Utah Division of Wildlife Resources 2015 Annual La Sal Mountain Goat Meeting)
- Documenting recovery of a stream/riparian system at the Jordan River Migratory Bird Reserve. (poster at 2015 Restoring the West Conference)
- Amphibian habitat assessments: Cottonwood Canyons citizen science bio-blitz. (presentation at 2015 Boreal Toad Conservation Team Meeting)
- Kennecott case study of sagebrush harrow and seeding impacts on herbaceous understory and interaction with livestock grazing return. (presentation at 2015 Annual Utah Chapter of The Wildlife Society Meeting)
- Quaking aspen at the developed-wildland interface: disentangling the impacts of elk herbivory on forest conservation. (presentation at 2015 Annual Utah Chapter of The Wildlife Society Meeting)

Wildlife Advocacy Program

Wild Utah Project's Wildlife Advocacy Program seeks to use our new network of activists to build understanding and engage the support of leaders, the public, and the media as we create a demand for solutions and design remedies for the threats to Utah wildlife that are both actionable and socially accepted.

Bringing the Transfer of Public Lands Act (TPLA) to Real Terms



A map included in the spatial analysis of overlapping oil and gas wells within occupied threatened and/or endangered species habitat.

As part of our efforts towards bringing science to the public land transfer controversy (see opposite page), last year we worked with attorneys at the Wallace Stegner Center of the S.J. Quinney College of Law at the University of Utah on a research paper that analyzes the implications of a transfer of public lands in light of the Endangered Species Act (ESA). Specifically, we demonstrate that the regulatory burden of the ESA would not be reduced on oil and gas producing units, whether those lands are retained by the federal government, or transfer to state hands. The report focuses on oil and gas development, given the importance of this economic sector to Utah's economy. Our analysis used GIS to estimate the number of oil and gas wells that currently overlap with occupied threatened and endangered species habitat, and hence represent wells that would be affected by a potential land transfer. The report discusses how these wells, and newly leased areas about to be developed, will lose their current ESA compliance (in the form of things like incidental take permits that have already been granted for the well or energy field) if the land manager that was granted the ESA compliance then changes—in this theoretical case of BLM lands converting to state land. The upshot is that if all these public lands were in fact transferred to state ownership, development of new and producing oil and gas wells would require the State to spend an enormous amount of resources to initiate new ESA regulatory procedures in any cases where wells intersect threatened or endangered species habitats. This paper will clarify the reality of implications of transferring public lands to the state of Utah. We expect the article will be published in mid-2016.

Calls to "keep public lands in public hands" echoed throughout the Capitol Rotunda on Monday, March 2, 2015, as Wild Utah Project and a diverse group of partners and citizens filled the cavernous hall to show the Utah State legislature that they do not have the public's support for the Utah Transfer of Public Lands Act (TPLA) legislation passed in 2012 demanding the Federal government transfer ownership of the majority of federal land in the state of Utah.

Citizens heard from an array of speakers including educators, environmentalists, sportsmen, and makers of outdoor gear, each of whom disputed various aspects of not only the premise, but also the legality of a state takeover of public lands.

As of March 2016, the state of Utah continues to press for the transfer of America's public lands to state control.

Founding Member of Brand New "Utah Friends of Wildlife" Coalition

Over the course of 2014, our partners at the Division of Wildlife Resources (DWR) reached out to Wild Utah Project to help lend a stronger public voice for the advocacy of conservation of non-game, "or non-consumptive" wildlife. Non-game wildlife has been historically and extremely underfunded and under-prioritized in Utah's budget, a reality that is becoming more widely understood by not only the conservation community but natural resource agencies as well. Our partners at DWR recognized something had to be done to direct focus towards management of non-game wildlife in Utah. In January of 2015 Wild Utah Project was asked to help put together an invite list for all the conservation groups in Utah that work on wildlife issues to join in a Wildlife Conservation Summit. At this summit, all of the various organizations acknowledged that a large part of the problem is the lack of a clear, unified voice advocating for non-game at the state capitol and the legislature. DWR employees pointed out that the hunting community is very organized and often lobbies on a shared platform, as do the anglers, who have organized all the separate angling groups into one coalition that carries a lot of weight at the legislature. DWR suggested that wildlife watchers and advocates would have much more impact with the governor's office and the legislature if we too could present ourselves *en bloc*, and speak with a unified voice for non-game wildlife.

The American pika is one of the roughly 90% of known species in Utah that are not hunted yet these ~90% of species receive less than 25% of UDWR's funding stream for their management and conservation. Photo courtesy of Lynn Chamberlain, Utah Division of Wildlife Resources.

As a result of follow-up meetings with the Wildlife Conservation Summit members, an alliance has been formed under the name Utah Friends of Wildlife. A core group consisting of Wild Utah Project, the Utah Audubon Council, Hogle Zoo, Western Wildlife Conservancy, Hawkwatch International, and the Tracy Aviary wrote the draft charter for the newly formed alliance, which we are pleased to report, has been signed by a dozen conservation groups (and counting). We have also been formulating a strategy for the 2016 legislative session. Wild Utah Project is an enthusiastic member supporting this precedent-setting development in Utah, with potential to bring about more focus on conservation and management of non-game wildlife in our state.

Citizen Science Program

Wild Utah Project is one of the few conservation organizations in Utah that offers hands-on experience to volunteers and interns—a chance to gather and then use data important in affecting the future of wildlife habitat and other natural ecosystems unique to our state.

We make a special effort to educate our volunteers and interns on the larger picture of systems ecology and the issues surrounding environmental protection in Utah.

Our citizen scientists learn why we choose to conduct scientific studies, what wildlife need, how to measure these needs, and how the data collected affects land and resource management.

In 2015, Wild Utah Project engaged 60 students and volunteers and one GIS intern who donated more than 2,000 hours of service on the following projects:

Rowland Hall Student Field Work on the Jordan River

As part of The Nature Conservancy's *Connect with Nature* campaign, Wild Utah Project staff joined Eric McCulley with River Restoration and Ben Smith and his Rowland Hall environmental science class at the Legacy Nature Preserve this past April. In support of larger efforts to restore, preserve, and protect unique wetland and riparian corridors along Jordan River's Legacy Nature Preserve, we assisted students in planting native wetland species and erecting temporary fencing to enable the establishment of the newly planted vegetation. We discussed the importance of these unique habitat types and the biodiversity they sustain. A month later, Wild Utah Project and the students returned to the site to monitor the success and viability of the establishing native species.

Cottonwood Canyons Bio-blitz: Year 2 of Amphibian Habitat Assessments

The 2015 annual Bio-blitz of aquatic habitats in Big and Little Cottonwood Canyons brought 30 volunteers including Westminster College students, Friends of Alta staff/interns, and Hogle Zoo employees plus staff members of our project partners — the Utah Division of Wildlife Resources (UDWR) and US Forest Service (USFS) — to Utah's splendid Cottonwood Canyons where we gathered important information regarding the status of aquatic habitats over the course of three days, totaling 383 hours of volunteer service. The ecological data on the presence and absence of indicator amphibian species (e.g. USFS-sensitive species, boreal toad) and aquatic habitat conditions (like water and vegetation metrics) describe where these rare and ecologically imperative habits occur and what their existing conditions are in advance of upcoming transportation development projects in the Cottonwood Canyons. Our data will inform decisions concerning the upcoming boreal toad reintroduction efforts by UDWR as well as the overall understanding of landscape connectivity of watershed habitats and aquatic species that will be directly relevant to upcoming landscape-level planning projects including the Mountain

Westminster ecology students Courtney Castro and Margaux Pugh assessing amphibian habitat metrics up Mineral Fork in Big Cottonwood Canyon.

Opposite: Eric McCulley, Watershed Scientist with River Restoration, and Ben Smith, with his Rowland Hall environmental science class, planting native riparian species at the Legacy Nature Preserve.

Accord transportation planning process in the Central Wasatch.

In addition to the identification and filling of data gaps in collaboration with USFS and UDWR biologists, funding from the R. Harold Burton Foundation supported an afternoon citizen science/outreach event where Wild Utah Project staff, alongside state and federal agency biologists, engaged students, family members of all age groups, and volunteers from our local partners in an educational field tour regarding the importance of aquatic habitats and amphibians as indicator species at Silver Lake up Big Cottonwood Canyon.

Wild Utah Project also presented the findings of this year's Bio-blitz at the 2015 Boreal Toad Conservation Team Meeting and fostered new partnership opportunities with other agencies and organizations working on boreal toads, amphibian conservation, and wetland habitat management/data gap filling in Utah.

Wild Utah Project will be orchestrating a third year of the Bio-blitz in 2016 with collaboration from UDWR, USFS, and Hogle Zoo. The expanded effort will include both indoor and in-the-field training components along with the opportunity for avid hikers and experienced backcountry enthusiasts to sign-up in advance to check out equipment and survey more remote habitats. We'll also sponsor an all ages/activity levels educational day. This two-pronged approach to citizen science will give volunteers of varying ages, skill levels, and outdoor capacities the ability to learn more about amphibians as indicators for ecological health and aquatic habitats, while extending the data collection efforts that will be used to inform habitat management decisions and potential future reintroductions of native amphibian species.

3-Creeks Citizen Science Sage-grouse Assessments

As featured in the Wildlife Science section, last summer we collected sage-grouse habitat condition data on some grazing allotments that are targeted for a new grazing rotation scheme in Rich County. We figured this would lend itself nicely to a multi-day Citizen Science data collecting trip, and we were right. About a dozen volunteers participated in three days of data collection on these grazing allotments. Once again, our volunteers became adept at the monitoring protocol for grass and forb height and cover. We also got to do a 'round-up' as cows had moved into our campground through a section of downed fencing!

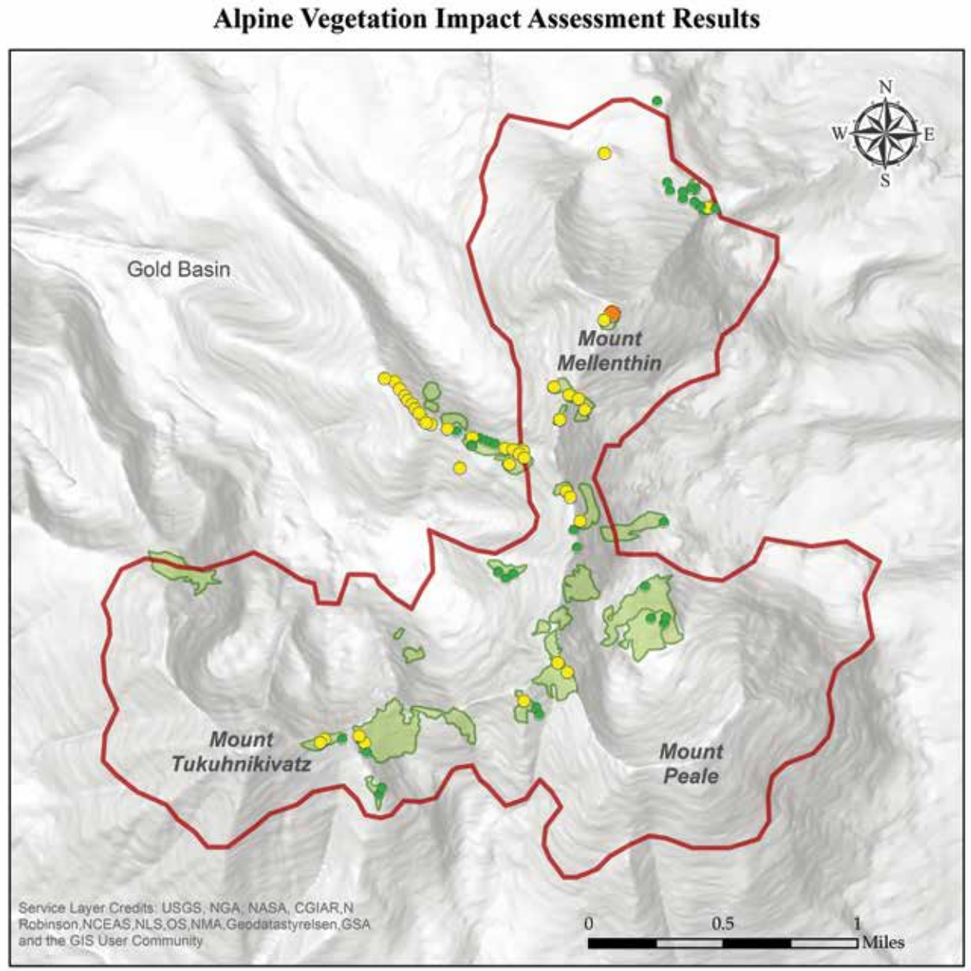
After a long day in the high La Sal's our citizen scientists take a break while descending to camp to spin around and sing a round of The Sound of Music.

Rare Plant Surveys in Research Natural Area of La Sal Mountain Range

Wild Utah Project and the USFS Moab Ranger District began a partnership in 2014 to provide assistance in ground-truthing rare plant distribution models in the high alpine plant communities of the La Sal Mountain Range and surveying for mountain goat impacts within the Mount Peale USFS Research Natural Area (RNA). In 2015, we collected baseline information on special-status plant occurrences and tracked impacts of humans and ungulates—including recently introduced non-native mountain goats—on the unique alpine plant communities in the RNA.

Citizen scientists hailing from the Utah Native Plant Society, the Natural History Museum of Utah Herbarium, and Grand Canyon Trust joined Wild Utah Project in a training session with USFS survey protocols conducted by Barb Smith, USFS wildlife biologist and botanist, alongside Wild Utah Project biologists. Within three field days, citizen scientist teams visited 73 vegetation assessment sites randomly selected by USFS based on predicted habitat and previous vegetation and human impact survey locations. Using the USFS protocols, 34 of the 73 locations were rated as 'pristine' and 38 sites were rated as having a 'change from pristine' with the majority of detectable impacts associated with evidence of human and game trails, trampling, general soil disturbance, and grazing. One of these was rated as 'significant change' and was predominantly associated with mountain goat wallowing and grazing impacts to soil and vegetation, including uniformly grazed special status plant species. The results of this methodical assessment of the Mount Peale RNA alpine vegetation are summarized in the 2015 survey report Wild Utah Project prepared for the Moab Ranger District of the Manti-La Sal National Forest. Wild Utah Project also presented a summary of the survey results at the UDWR 2015 Annual La Sal Mountain Goat Meeting. The survey findings can be used by USFS as an assessment of both human recreation use and ungulate impacts to this unique vegetation community in the high La Sals. We anticipate these data will be used in conjunction with ongoing USFS efforts to monitor target alpine plant species occurrences and inform future management of both recreation activities and potential removal or new introductions of mountain goats in the area. Wild Utah Project and our USFS collaborators plan to return to the Mount Peale RNA between 2018 and 2020 to repeat the alpine vegetation impact assessments and continue to track impacts to these "sky islands" of unique habitat for rare and endemic plant species.

Opposite: Mapped alpine vegetation impact assessment results for the Mount Peale Research Natural Area.



Wild Utah Project Intern Spotlight

2015 Biology Field Intern: Bret Hansen

Bret came to Wild Utah Project with a B.S. in biology from Brigham Young University and field experience with water quality best management practices, stream invertebrates, and wetland and stream restoration projects. During his summer with Wild Utah Project, Bret was integral to several different citizen science projects including the Cottonwood Canyons Bio-blitz, rare plant surveys in the La Sal Mountains, and sage-grouse habitat assessment protocols in Rich County. Additionally, Bret was instrumental in helping us sort through documents we received from the USFS on all the studies in Region 4 files that showed impacts of non-native mountain goats anywhere they have been introduced, and summarizing all of these reports into a comprehensive literature review.

Bret also participated in a week-long data collection excursion in Grand Staircase Escalante National Monument, led by our partners at Grand Canyon Trust. Condition and location information for cryptobiotic soils was used to assess the status of cryptobiotic soil crusts in multiple grazing allotments and inform the upcoming revised grazing management plan for the monument. Bret has gone on to pursue a Master's in environmental science at the University of Utah with an emphasis in water quality and fluid dynamics.

2015 GIS Intern: Matt Adolphson

Wild Utah Project had the pleasure to host our summer GIS intern Matt Adolphson, who earned both a certificate in GIS and a Bachelor's degree in environmental studies and anthropology from the University of Utah in 2012. With a strong background in data collection and interpersonal skills, Matt was a key facilitator in our citizen science field trips. He reports that his overall experience "has been awesome! I've enjoyed gaining the hands-on experience working with GIS along with the insights gained from working within a conservation focused, non-profit environment. Field work provided badly needed time away from the computer, and even the tedious data management work has been enjoyable, because I think that seeing the raw data gives a better understanding of the issues."

Conservation Community Support

For almost 20 years, our Conservation Community Support program has provided our conservation partners with GIS services and scientific expertise in order to advance the protection of wildlife habitat in Utah. Our first historic contribution dates back to 1996 when Wild Utah Project was commissioned by the Utah Wilderness Coalition to develop the methods to assess and map wilderness that later resulted in the America's Red Rock Wilderness Act.

In 2015, we continue to serve this import role in the conservation community and completed projects that provided valuable information that allows our partners to more effectively comment on federal land use plans and actions, plan and carry-out citizen science efforts, and work to improve land and wildlife stewardship on both private and public lands. Here are some of the projects Wild Utah Project completed for or with our conservation partners in 2015:

Ecological/Field Study Partner Support

- **Ecological analysis of Labryinth Canyon:** At the Southern Utah Wilderness Alliance's request, Wild Utah Project performed an ecological analysis and submitted the results summary in a white paper to the Grand County Council because SUWA had enlisted the Council's assistance in an effort to incorporate this proposed wilderness unit into Congressmen Rob Bishop's Public Land Initiative.

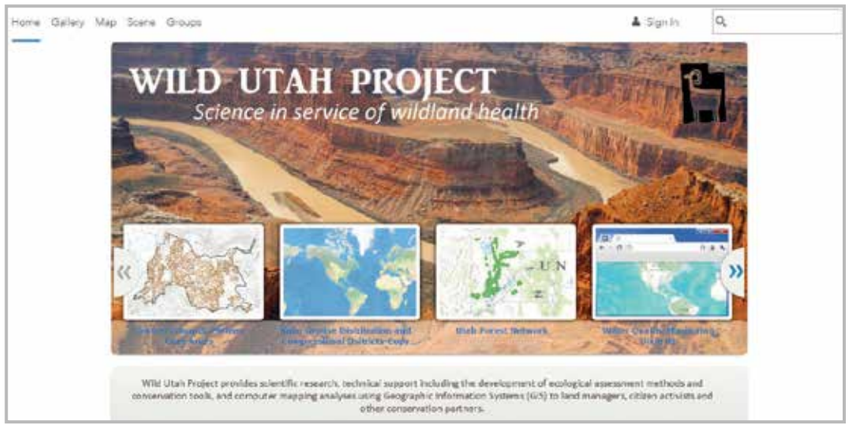
Elk herd at Wolf Creek Ranch. Photo courtesy of Jim Shuler, Chairman of the Environmental Preservation and Ecodiversity Committee of the Wolf Creek Ranch Homeowners Association, Inc.

- **Expert peer review for Wolf Creek Ranch Stewardship Plan:** Allison and Mary teamed up with Jim Catlin, our founder and "Emeritus Extraordinaire," to provide expert peer review for our long-time private land partners at Wolf Creek Ranch, which contains some aspen stands situated among the urban/wildland interface adjacent to the Uinta-Wasatch-Cache National Forest. These ecology-minded landholders were preparing to release a new Comprehensive Stewardship Plan for the ranch, prepared for them by our fellow partners Utah Open Lands and ecologist Marc Coles-Ritchie.

- **Indian Creek Riparian Assessment:** In a joint effort with Jim Catlin, we responded to SUWA's need for expert assistance, with a riparian analysis for Indian Creek outside Canyonlands National Park. Jim used the BLM's own Properly Functioning Condition (PFC) assessment method to evaluate the level of function of this creek, and

provided expert testimony for SUWA in their administrative appeal of the BLM's newly designated Indian Creek ATV trail. Last year this appeal was successful, and the BLM subsequently closed this trail.

• **In-depth sage-grouse analysis for Alton expansion:** At the request of the Sierra Club, Allison provided 22 pages of detailed comments on the Supplemental Environmental Impact Statement (SDEIS) on the proposal to expand coal strip-mining on BLM lands outside the town of Alton. Allison explained the impacts of the current mine, which is located on adjacent private lands, on sage-grouse and the habitats that support them, and demonstrated the serious effects mine expansion could have on the already beleaguered Alton sage-grouse population. Predictably, our ecology-based comments recommend the BLM choose the "No Action" alternative, which would prevent expansion of the mining operation onto public lands.



GIS-related Partner Support Efforts

• **Implementation of our Web-GIS platform:** Inspired by the new trends in GIS technology, last year we worked on implementing a platform that allows us to host and publish geographic information to be used in web-mapping applications. The new platform was established through a grant from the ESRI Conservation Program, Norcross Wildlife Foundation, and with IT support from our longtime volunteer Jeremiah Roth. With this new deployment platform now in place, we are expanding in technological capabilities and diversifying our GIS services to better serve the conservation community. We have already received great reviews from our partners that started to make use of such technology in a variety of applications that include web-mapping for land use planning, comment preparation, field data collection, and geographic data distribution.

• **GIS support for Save Our Canyons:** In 2015, we signed a retainer agreement with our next door neighbor Save Our Canyons to provide GIS services as needed, all year long, to this critical Wasatch Front advocacy organization. For the last two years, SOC has invested time and resources in important initiatives such as the Wasatch National Monument and the Mountain Accord, multi-stakeholder efforts that seek a better balance between conservation needs and development in the Wasatch Mountains. Wild Utah Project was thrilled to be part of SOC's work by delivering specialized GIS support that enhanced and made their work more effective. Completed work for SOC included cartography, spatial analysis, and web-mapping.

• **Mobile GIS and water quality monitoring:** In the summer of 2015, we partnered with Western Watersheds Project to assess water quality in several locations of the Manti-La Sal, Fishlake, and Dixie National Forests. As part of this effort, we developed and deployed a web-based application for data collection and trained and equipped a student intern and a seasonal field surveyor who collected water samples and conducted on site water quality tests. Our staff used field tablets to plan field visits, navigate to the sites, and store data collected in each visited location. After each field trip, these interns were able to use the tablets to synchronize the collected data with our database and more efficiently track the progress of this project.

Utah's 2015-2025 Wildlife Action Plan

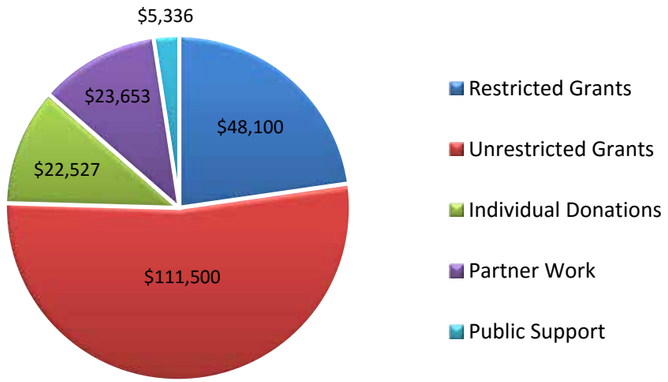
Over the past couple years, the Utah Division of Wildlife Resources, along with many stakeholders and conservation and agency partners, has been working to revise the State's 2005-2015 Wildlife Action Plan (WAP). The new WAP objectives include identifying sensitive species and their habitats, developing a plan to pinpoint threats, determining limiting factors and problematic threat thresholds for species and habitats, as well as recognizing crucial data gaps.

Wild Utah Project was an active member on the steering committee and working group, which developed the framework and algorithms for identification of Species of Greatest Conservation Need and the top 10 key habitat types of focus in Utah's 2015 revision of the statewide WAP.

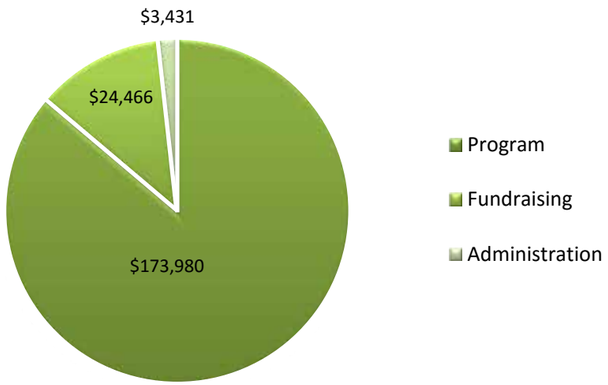
Wild Utah Project's involvement contributed to the capacity of the Wildlife Action Plan to provide discrete, clear, and actionable guidance for improving habitats and strengthening wildlife populations. We will continue to be an active partner in the WAP implementation and planning meetings in 2016.

2015 Wild Utah Project Income and Expenses

Income: $211,116



Expenses: $201,877



Acknowledgements

Our work would not have been possible in 2015 without support from the following:

The Community Foundation of Utah
Lawrence T. & Janet T. Dee Foundation
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Maki Foundation
Melling Family Foundation
My Good Fund Trust
National Forest Foundation
New-Land Foundation
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Steiner Foundation
Steve's Foundation
Tracy Aviary Conservation Fund
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State & Private Forestry Organization
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Agency and University Collaborators:

Brigham Young University
Bureau of Land Management
National Park Service
Natural Resource Conservation Service
University of Utah
U.S. Department of Agriculture -
Agricultural Research Service
U.S. Forest Service
U.S. Fish and Wildlife Service
Utah Division of Wildlife Resources
Utah Partners for Conservation and Development
Utah Governor's Office
Utah State University
Weber State University
Westminster College

Wild Utah Project works closely with:

Alta Environmental Center
Bear River Watershed Council
Bird's Eye View GIS
Center for Biological Diversity
Friends of Alta
Grand Canyon Trust
Grand Canyon Wildlands Council
Great Old Broads for Wilderness
Hawkwatch International
Round River Conservation Studies
Save Our Canyons
Sierra Club
Society for Conservation Biology
Society for Conservation GIS
Southern Utah Wilderness Alliance
The Nature Conservancy
The Wilderness Society
Three Forests Coalition
Tracy Aviary
TreeUtah
Trout Unlimited
Uinta Mountain Club
Utah Conservation Corps
Utah Farm Bureau
Utah Friends of Wildlife
Utah Wants Wolves
Wasatch Mountain Club
Western Resources Advocates
Western Watersheds Project
Western Wildlife Conservancy
Western Wildway Network
Wild Earth Guardians
Wildlands Network
Wolf Creek Ranch Homeowners Association,
Environmental Preservation and Ecodiversity
Committee
Yellowstone to Uintas Connection

Looking Ahead

Here's a quick glance at a couple of our 2016 programmatic goals:

Environmental Dashboard

We are pleased to announce that Wild Utah Project, along with our partnering team members at the University of Utah DIGIT Lab, Colorado Natural Heritage Program, and the Brendle Group have been selected by the Salt Lake and Summit County selection committee to develop an Environmental Dashboard Framework for the Central Wasatch Mountains. The Environmental Dashboard will be an applied species and ecosystem assessment tool as well as a guidance document and open source data base for informing adaptive management planning efforts. The spatial and non-spatial database along with the framework document will provide a necessary understanding of the current level of function and condition of critical ecological systems in the Central Wasatch Mountain Accord project area, as well as an assessment of the threats, including vulnerability to climate change. Wild Utah Project will be increasingly involved as a part of the local experts, scientists, and advisory panel meetings during the development of the Environmental Dashboard during 2016.

Photo courtesy of Carl Fisher, Executive Director of Save Our Canyons, taken off the wing of pilot Larry Swanson's Cessna while conducting aerial surveys of potential wildlife corridors within the Mountain Accord project area with Eric McCulley, Watershed Scientist with River Restoration, and Mary Pendergast our Conservation Biologist/Ecologist.

Current activity at the Coal Hollow mine outside of Alton, UT. The mine owners are hoping to more than double the size of the mining footprint on to adjacent BLM lands.

Partnership with Rowland Hall

We have enjoyed many years of mentoring our up-and-coming conservationists in the environmental science class at Rowland Hall Upper School. In 2016, instead of taking them on a local field trip to the Wasatch Range or Jordan River to collect aspen data or monitor planting success, we are heading down to Alton, Utah to study conditions of sage-grouse habitat after pinyon juniper removal, and visit the sage-grouse lek to take decibel readings of the ambient noise from the strip-mine operating less than a mile away.

Celebrating our 20th Anniversary in 2016!

Throughout 2016 Wild Utah Project will be hosting several special events in celebration of our 20th anniversary.

On Tuesday, March 1 we're hosting a local screening of the Wild & Scenic Film Festival and on May 3 we'll be joining SUWA for a special reception at the JCC.

Check our website for more information on upcoming events or see the last page of this report to learn more about ways to get involved with Wild Utah Project.

Wild Utah Project Staff

Allison Jones, Executive Director, received her B.A. in Environmental Studies at the University of California at Santa Cruz under the guidance of her mentor and advisor, Michael Soule. She then completed her M.S. in Conservation Biology at the University of Nevada, Reno in 1996. Her Masters study analyzed the effects of cattle grazing on small mammal communities in the Great Basin. She then worked as an ecological consultant in both Colorado and Utah as an endangered species specialist, where she performed habitat assessments and surveys for federally threatened birds, small mammals and plants. As staff conservation biologist for the Wild Utah Project, Allison provided biological analyses for Utah conservation groups that do not typically have these services in-house. Allison has also been appointed by the Director of Utah Division of Wildlife Resources to sit on two state task forces: one to rewrite Utah's black bear management plan, and another to write Utah's first wolf conservation and management plan. In 2014 Allison was the recipient of the "Jasper Carlton Activist in the Trenches" award, received from Rocky Mountain Wild.

Mary Pendergast, Conservation Biologist, joined the Wild Utah Project in February 2014. Mary received her PhD from Utah State in Biology and Community Ecology under the guidance of her mentor and advisor, Jim MacMahon. Her doctoral research explored the relative impacts of changes in vegetation architecture and prey availability on arthropod communities in a sage-steppe ecosystem. Mary went on to work as an Ecologist and Wildlife Biologist with a local consulting firm where she coordinated and conducted biological resource studies and habitat

assessments with various stakeholders including federal and state agency biologists, the public, and project developers. Additionally, Mary is an adjunct faculty member at Westminster College where she teaches ecology and field biology courses. As the staff conservation biologist for Wild Utah Project, Mary provides biological analyses for agencies, local working groups, and other nonprofit organizations. She presents research, develops manuscripts for publication, and produces and/or reviews conservation analyses in preparation for status reviews, listing petitions, and land management plans. She also engages in and oversees data collection efforts such as student internships and citizen science programs.

Emanuel Vásquez joined the staff of Wild Utah Project in 2010 as our GIS Analyst. He worked for ten years in many conservation efforts that include the creation of a municipal park and the preservation of 82,000 acres of forestland in the Highlands of Guatemala, including 9 of the country's 23 volcanoes. He has earned an Associate's degree in Forestry from the National School of Agriculture in Guatemala and a B.S. in Business by Galileo University Guatemala. More recently he earned a certificate in GIS with emphasis in Remote Sensing at the University of Utah. In 2015 Emanuel received his Masters in Geographic Information Science degree from the University of Utah. Emanuel is quick to point out that he feels "very fortunate to have worked in conservation in Guatemala and to be able to continue this work in the United States."

Nancy Sears joined Wild Utah Project in December 2013. Nancy has extensive communications and fundraising experience through her work for Duke University's Nicholas School of the Environment, the North Carolina Chapter of the Nature Conservancy, The University of Washington, and as a Regional Director of Development for the National Parks Conservation Association. In addition, Nancy holds a Master in Graphic Design from North Carolina State University. Her work has been widely recognized for design excellence with numerous national organizations. Nancy settled in Utah in 2011 after traveling and living abroad. She loves exploring the wilds of Utah through hiking, biking, climbing and yet unknown adventures.

Our *Emeritus Extraordinaire*, **Jim Catlin**, founder of Wild Utah Project, continues to work on many grazing-related issues in Utah. Jim, a native Utahn, has been active in public land issues for more than 30 years and is widely recognized as one of the principal architects of Utah's present day conservation movement. Jim's MS in regional land use planning at the University of Utah analyzed Wasatch Front air quality. His PhD from the University of California at Berkeley focused on GIS and land use planning. In 1996, under the guidance of The Wildlands Project (now Wildlands Network), Jim founded the Wild Utah Project to support the work of other Utah conservation activists. His awards include the John Muir Award, the Sierra Club's highest conservation award, and the Southern Utah Wilderness Alliance Conservation Award. Jim currently serves on the Executive Committee of the Utah Chapter of the Sierra Club.

Wild Utah Project 2015 Board of Directors

A sixth generation Utah, **Kirsten Allen** holds a B.A. in English from Westminster College and a Master of Public Health degree from the University of Utah. She is the literary acquisitions and development editor at Torrey House Press. Her previous professional background includes public health data analysis, college writing instruction, private piano instruction, and freelance writing and editing. She loves to travel, read, hike, and cook. She has two grown children.

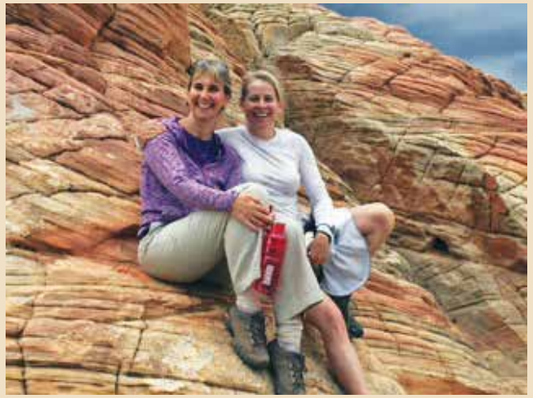
Mark Bailey is a retired partner from Wasatch Advisors, Inc., an investment management firm headquartered in Salt Lake City. A sixth generation Utahn, Mark grew up in Utah, California, and Florida before returning to Salt Lake City in 1974 to study engineering and finance at the University of Utah. Now publisher and topical nonfiction acquisitions editor at Torrey House Press, Mark is also a private pilot, X-country and downhill skier, amateur astrophotographer, avid reader, and is writing an E-book on the intrinsic value of wilderness. He has two grown children.

Scott Berry is a lifelong resident of Utah, citizen conservationist since 1973, trial attorney, Wayne County home owner, and public lands explorer, on foot, raft, skis, and bike.

Lindsey Christensen Nesbitt While her undergraduate degree was in wildlife biology from BYU, her PhD in Ecology from Colorado State University took a "systems" (or a broader) approach to understanding ecosystems. This helped lead Lindsey into more applied experiences with, for example, environmental consulting, here in Utah. Currently, Lindsey teaches Environmental Biology and Global Change Ecology at the University of Utah, but is also involved with systems modeling research with the U's Environmental Engineering department, and helping to run the new Professional Masters program in Science and Technology at the U.

Veronica Egan Born in Cleveland Ohio, Veronica (Ronni) grew up on the shores of a dead Lake Erie. She and her siblings were not allowed near the water because of its toxicity, so the notion of a damaged environment became familiar to her at an early age. Her family moved to New Mexico in the mid 60s, and has been an advocate for the environment and its creatures all her life. Her time in New Mexico as a pack trip operator allowed her to "use her saddle as a soapbox" while enabling guests from around the world to experience some of the West's wildest places. She served on the Boards or volunteered with no less than seven non-profit civic, animal and/or conservation groups, including Great Old Broads for Wilderness, which she eventually directed from Durango Colorado starting in 2005. In 2014 Ronni finally succumbed to the call of the canyons and moved to Teasdale, UT, where she now resides. A long-time admirer of Wild Utah Project, she looks forward to serving on the board and helping to execute the WUP mission in southern Utah.

Kathy Metcalf is currently a Masters student in Environmental Humanities at the University of Utah. Her previous professional background includes Art Director for Patagonia, Inc., and Designer & Marketing Director/Owner of Wingspan Design in Park City. A twenty five year resident of Utah, she was raised on the west coast which accounts for her love of the water. She and her husband Peter are long-standing conservation activists. She has three grown children, loves rivers and non-fiction, and is an avid Laser sailor, private pilot, and artist.



Wild Utah Project staff and board convene annually for a planning retreat in Torrey — time for a group hike is always an important part of the agenda!

Want more information?

Many of our publications are available on our website and are free of charge. Most are downloadable from our site. From our homepage, click on the ***LIBRARY*** tab.

Get Involved!

Would you like to do more on behalf of Utah's wildlife and public lands but don't know where to get started? Here are a few suggestions to help you on your way!

~ Volunteer with Wild Utah Project.

Throughout the year, Wild Utah Project has many opportunities for volunteers to get involved with various aspects of our work. Over the years, volunteers have helped us with field inventory projects including mapping potential wilderness boundaries, surveying amphibian habitats, measuring vegetation productivity on public land grazing allotments, monitoring rare-plant communities on National Forests, and assessing the health of riparian areas around the state. We also have internship opportunities for a variety of GIS computer mapping projects.

All of Wild Utah Project's Citizen Science single and multi-day field trips are free of charge and are listed on our website. From our homepage, click on "What We Do" to access the Citizen Science page. You can also contact us at *info@wildutahproject.org* or give us a call at 801-328-3550.

~ Support our science with a financial contribution.

Wild Utah Project is a 501(c)3 nonprofit and all contributions are tax deductible to the extent allowed by law. Below are a few examples of how your contribution can help bring sound conservation science to today's land management challenges in Utah.

- $3,000 to arm our interns with a handheld data collector and mobile GIS device
- $1,500 to provide our interns with a field laptop for on-the-spot data analysis and communication capabilities
- $500 to provide a stipend for an intern
- $250 to fund a day in the field of data collection
- $100 to fund the publication of an intern's final report

Checks made payable to Wild Utah Project can be sent to our office at:

824 S 400 W, Ste B117
Salt Lake City, UT 84101

Donations can also be made online at *WildUtahProject.org/donate*

~ Visit the "Get Involved" page on our website, or "Like Us" on Facebook for up-to-the-minute action alerts.

Wild Utah Project

The mission of Wild Utah Project is to protect wildlife and improve wildland habitat on Utah public lands.

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High Uintas Wilderness Area

Elevation, Countours, and Streams