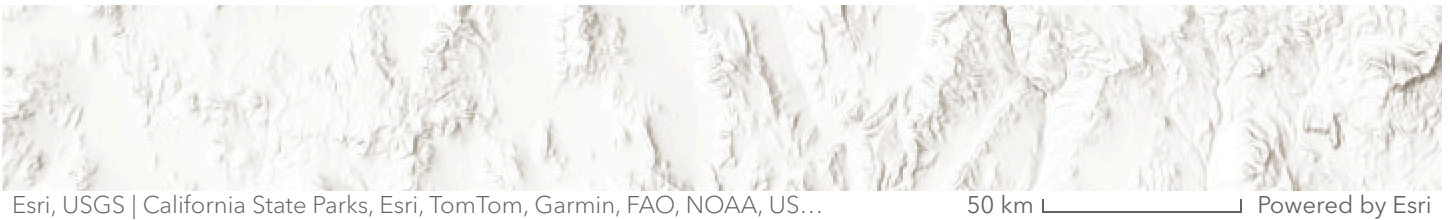




Case Study by CART

School and Community Partnerships to Build Youth
Stewardship and Engagement in the Mojave Desert

A CART Case Study on Community Engagement and Education
March 4, 2024



Introduction

Desert National Wildlife Refuge (NWR) is the largest U.S. wildlife refuge in the lower 48 states. Created in 1936, the refuge covers 1.6 million acres and hosts an abundance of Mojave Desert diversity. The refuge is less than 30 miles from Las Vegas and Clark County School District, the nation's fifth-largest public school district. This district educates 75% of Nevada students.

Get Outdoors Nevada (GON) is a non-profit organization dedicated to connecting the public with Nevada's diverse outdoor places. The organization especially focuses its efforts and programs on the needs and lives of families and school children, specifically those who are at-risk and have limited opportunities to experience the outdoors. By working within this district, 83% of the youth served through GON education programs are considered at-risk or underserved.

Since 2016, the US Fish and Wildlife Service (FWS) and GON have been working in partnership to engage southern Nevada community members with outdoor spaces like Desert NWR through education and creation of urban wildlife habitat. Through funding from the Nevada Partners for Fish and Wildlife (PFW) and other FWS programs, partners have leveraged resources to fund the creation of student-designed naturalized habitat areas on urban school grounds as well as other urban sites such as parks and community centers.

Urban areas are often overlooked for conservation projects because they are such heavily impacted environments. However, these areas can still provide important survival opportunities for many species like pollinators that move through cities. More

importantly, less-than-perfect urban conservation projects provide opportunities for people, especially youth, to participate actively in conservation, developing future conservation stewards. The integration of nature-based solutions, such as the creation of urban habitat areas, provides for human well-being and biodiversity benefits. The Service has identified nature-based solutions as a key strategy in the Climate Change Action Program to unify its climate response in accordance with the Department of the Interior's Nature Based Solutions Policy.

Building on these organizational collaborations, in 2017 Desert NWR was designated as an Urban Refuge within the FWS Urban Wildlife Conservation Program due to its close proximity to the Las Vegas urban area. This designation allowed partners to secure long-term funding through the National Fish and Wildlife Foundation Five Star and Urban Waters Restoration Grant Program to host field trips to the Desert NWR. These trips provide students the opportunity to witness the natural habitat they are helping recreate within Las Vegas.



Key Issues Addressed

Many Las Vegas Valley youth have limited opportunities to explore the outdoors. Despite being within 40 minutes of the Desert NWR, a majority of Clark County students have never visited the refuge or explored the wild habitat outside the city. Without a meaningful connection, often developed through multiple opportunities to engage in an outdoor space, a generation of stewards for the local ecosystem is lost and conservation efforts become less effective.

Urban expansion in the Las Vegas Valley has disrupted habitat quality and connectivity of species that can thrive in the Mojave Desert, including many pollinator species and the desert tortoise (*Gopherus agassizii*). Because of these threats, it is important to build habitat wherever possible. Urban habitats, including native plant gardens and constructed wildlife habitat within the city, are nature-based solutions that provide refuge and resources for crucial groups like pollinators and the desert tortoise, an important indicator species for the Mojave Desert ecosystem.

Increased awareness about vulnerable species like the desert tortoise and other local wildlife is important for their survival, especially when that information is received by younger audiences. Many organizations and agencies identify next generation engagement with nature as a priority, but don't allocate the resources to make it happen. Additionally, thinly spread public education funding and an overall lack of science instruction prioritization make it even more difficult to create meaningful, supplemental education programs to engage students with the outdoors.

Project Goals

- Bring Mojave Desert habitats, specifically those that support species like the native desert tortoise and a variety of

pollinators, back into the landscape in the Las Vegas Valley by building schoolyard and other urban habitat gardens

- Increase youth education on southern Nevada natural landscapes
- Increase youth access to the natural desert ecosystem through field trips to the Desert National Wildlife Refuge



Image Caption: *Desert Tortoise in Red Rock Canyon, Nevada.*
Courtesy of Get Outdoors Nevada.



Project Highlights

DESERT EXPLORERS

Partners have connected 611 students to the Desert NWR and aim to connect youth to the refuge twice, each time a steppingstone to further build a sense of pride of place and stewardship.

- **Local Engagement through Urban Habitat:** GON's Native Habitat Program, built collaboratively with FWS, provides funding for restoration projects that rehabilitate urban spaces into livable wildlife habitat for threatened and endangered species while providing environmental outreach in the urban area. This provides a win-win situation where both habitat quality and youth engagement in the outdoors is increased, demonstrating the multiple benefits associated with nature-based solutions. Urban habitat projects like planting native plant gardens and constructing desert tortoise habitats are developed at both local schools with students and other public properties like the Craig Ranch Regional Park.
- **Conservation Curriculum:** Participating partners, including both schools and community sites like recreation centers, have access to GON pre-developed curricula modules that cover a variety of environmental topics such as native plants and desert wildlife. Modules, which are led by GON staff and accordingly modeled to teachers, entail three days of in-classroom instruction and a field trip to a local ecosystem site.
- **Community Outreach:** Teachers worked closely with GON staff to integrate an already designed native habitat curriculum into their classrooms. Not only did students learn through this programming, but their families learned by chaperoning field trips and participating in planting events. Many parents had never explored these ecosystems either and were equally engaged and excited to learn.
- **Student Visions:** Students are involved in the planning and decision-making around what their school's native habitat areas look like, increasing ownership over the space and attention to the creatures that use it.
- **Gauging Success:** Both teachers and students were surveyed on how they felt about the native habitat and field trip programming. Partners often relied on qualitative responses for gauging student interest on how they felt in the outdoor environment. As most students had never been to the Desert NWR before, assessing comfort in the outdoors, pre- and post-field trip, was important for determining success.



Image Caption: *Native Habitat Planting at Craig Ranch Regional Park. Courtesy of Get Outdoors Nevada.*



Lessons Learned

Program coordinators first initiated contact by reaching out to principals, but partners found engaging with teachers directly to be more effective than moving through administrators. Through working with the school district's School-Community Partnership Program, outreach and program materials were distributed directly to teachers and administrators. This helped facilitate information-sharing and increased teacher engagement in the programming.

GON, PFW, and the Desert NWR took advantage of the growing schoolyard garden efforts of the mid 2010s. These schools were already interested in revitalizing their schoolyards. This made integrating native plants and wildlife habitat into these spaces an

easier sell and assured partner schools were already engaged in the program mission. When enthusiastic schools had no specific programs in place, partners offered to integrate their own native habitat programming into school curriculums.

The process of getting approval to build habitat at schools was complicated because some potential public habitats were incompatible with their zoned land uses. The program had to adapt by expanding from public schoolyards to property owned by local jurisdictions, such as public parks and community centers, that could be repurposed. It is important to adapt programming to your specific area and get creative with your partnerships. The successful implementation of this multifaceted program, from in-classroom programming to outdoor field trips, stemmed from collaborating across multiple partners and leaning on the support and resources of collaborators already engaged in native habitat work.

Partnerships within and across agencies are critical, and these are facilitated by having partners in close geographic proximity. For example, multiple FWS programs, Refuges, Ecological Services, and Partners for Fish and Wildlife are co-located in the Las Vegas office making it easier to pool funding sources and collaborate on shared priorities for engaging area youth through this program.

Image Caption: *Planting Natives at Blue Diamond Elementary School. Courtesy of Get Outdoors Nevada.*



Next Steps

- Analyze long-term impact of program by assessing success of restoration sites in terms of native plant health, subsequent pollinator support, and long-term community involvement and commitment
- Continue expanding restoration work to include new schools and project sites throughout the greater Las Vegas area
- Seek additional funding sources to ensure program longevity

Image Caption: *Eldorado High School Students Visiting DNWR.*
Courtesy of Get Outdoors Nevada.



Resources

November 2020 Case Study Handout

Collaborators

- [Get Outdoors Nevada](#)
- [Desert National Wildlife Refuge](#)
- [US Fish and Wildlife Service, Partners for Fish and Wildlife Program](#)
- [City of North Las Vegas](#)
- [State Tree Nursery, Nevada Division of Forestry](#)
- [Tortoise Group](#)
- [Gilcrease Orchard](#)
- [Go. Mt. Charleston](#)
- [Lee Canyon](#)

- [Nevada Department of Wildlife](#)
- [Red Rock Audubon Society](#)
- [Inspiring Connections Outdoors Program, Sierra Club](#)
- Doyle Wayman

Funding Partners

- [National Fish and Wildlife Foundation, Five Star and Urban Waters Restoration Grant Program](#)
- [US Fish and Wildlife Service, Partners for Fish and Wildlife Program](#)

Resources

- [Get Outdoors Nevada Annual Report 2019](#)
- [Get Outdoors Nevada Curriculum Module Overview 2020](#)
- [Desert National Wildlife Refuge](#)
- [Winchester Cultural Center visit to Desert National Wildlife Refuge](#)

Photo Gallery

- [Photo Album and Credits](#)

Contacts

- Jennifer Heroux, Chief of Visitor Services, Desert National Wildlife Refuge Complex, US Fish and Wildlife Service:
jennifer_heroux@fws.gov
- Shelly Kopinski, Education Program Director, Get Outdoors Nevada: skopinski@getoutdoorsnevada.org
- Cheresa Taing, Education Program Manager, Get Outdoors Nevada: ctaing@getoutdoorsnevada.org
- Christiana Manville, Biologist, Partners for Fish and Wildlife Program, US Fish and Wildlife Service:
christiana_manville@fws.gov

Case Study Lead Author

- Anna Weinberg, CART Research Specialist, University of Arizona, akweinberg@arizona.edu

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Image Caption: *View from Mormon Wells Road in DNWR.*
Courtesy of Alan O'Niell.

More Information on CART