



Share with Wildlife Endangered Species Curriculum Report

Educating Ecosystems Explorers



Key personnel and contact information:

Paul Mauermann, SMNHC Director; paul.mauermann@state.nm.us; (505)281-5259
Vanessa Barela, SMNHC Educator and Volunteer Coordinator; vanessa.barela2@state.nm.us; (505)281-5259

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Executive Summary

This curriculum was created and funded with the help of the New Mexico Department of Game and Fish Share with Wildlife program. Share with Wildlife is a New Mexico Department of Game and Fish program initiated in 1981 that depends on tax-deductible donations from the public. Its mission is to help those species that do not receive funding from any other source. The program funds four categories of wildlife projects: research, education, habitat enhancement, and rehabilitation. It receives much of its funding through the state income tax check-off program. It is also supported through Share with Wildlife license plate sales and direct donations. Matching federal funds maximize the program's support of New Mexico's wildlife. (Hummingbird photo on cover page by Mark Watson.)

The Educating Ecosystem Explorers Curriculum (EEEC) connects New Mexico children to the outdoors and to their heritage while supporting academic success by creating rigorous content material for students tying to their local areas.

This report provides an evaluation of the EEEEC and recommendations to strengthen and enhance the program.

Grant Program

Through this part of the Grant, SMNHC addressed the following task in the EEEEC.

Agreement

Task 1- Partially completed (curriculum was expanded and new activities reviewed by Agency staff. Classroom visits were not possible due to COVID-19).

Expand the Contractor's existing environmental education curriculum, which includes information on physiological and behavioral adaptations of wildlife and long term environmental data collection, to include lessons and activities focused on Species of Greatest Conservation Need (SGCN). These lessons and activities will focus on topics such as SGCN adaptations and habitat needs. The curriculum will identify the Public Education Department's New Mexico STEM Ready! Science Standards that it addresses. Submit the updated curriculum to the Share with Wildlife Coordinator for review by the Agency's Conservation Education Coordinator. After the Contractor receives written approval to proceed from the Agency, implement the curriculum and educational programs with students from Albuquerque Public Schools and other school districts as possible. Project will involve education delivery in a minimum of 15 classrooms.

Task 2- Unable to complete meeting but pictures were provided to the Share with Wildlife Coordinator.

Work with the Agency's Share with Wildlife Coordinator to schedule a meeting with project personnel to obtain pictures and information for a short article regarding the project for posting by the Agency on their website.

Task 3- Completed

No later than 30 June 2020, submit to the Agency a final project report that should summarize the updates to the Contractor's existing curriculum, describe curriculum implementation (i.e., timing, venue, number of students taught, etc.), and provide an assessment of student learning of the curriculum's key concepts and information content. The report should be submitted in electronic format (.pdf and .doc) to the Agency's Share with Wildlife Coordinator. A final invoice for this project should be submitted before or as close to 30 June 2020 as practicable, but no later than 6 July 2020.

Task 4- Completed

Acknowledge the Agency and the Agency's Share with Wildlife program in all publications or presentations for which Share with Wildlife funds provided direct support, including reports submitted to the Agency. During the period of this Agreement, any educational programs delivered or publications, reports, or other materials produced by the Contractor for this project, which acknowledge the Agency's Share with Wildlife program as a funding source, will not contradict the Agency's mission. This mission is to "conserve, regulate, propagate and protect the wildlife and fish within the State using a flexible management system that ensures sustainable use for public food supply, recreation, and safety; and to provide for off-highway motor vehicle recreation that recognizes cultural, historic, and resource values while ensuring public safety."

Task 5- Unable to complete as classroom visits had to be canceled due to COVID-19

Ensure that educational programs involving minor-aged students attending programs during school hours are conducted in the presence, at all times, of teachers/educators who have passed a criminal background check as necessary for a New Mexico teacher's license. Contractor will not allow any minor-aged student who is not accompanied by their parent or legal guardian to participate in any activities described in task 1) above that occur off school premises unless a waiver or permission slip, signed by a parent or legal guardian, is submitted on behalf of the student prior to the student's participation in these activities.

Task 6- Completed

Contractor must obtain appropriate written permission and/or any necessary permits for work on parks, refuges, and private lands and for handling and/or retaining state- or federally-protected species.

Program Evaluation

This year's evaluation sought to measure program outputs and outcomes from the EEECC created by SMNHC. Teachers were originally booked for the classroom program. However, due to COVID-19, the classroom-based programs were unable to be completed. Teachers were offered content online as an alternative, but there was no response to the offer.

Challenges and Recommendations

In administering the program, the biggest challenges observed were largely related to the delay of releasing the contract and COVID-19 causing most trips to be cancelled.

Recommendations for future applications are to have an earlier window, so classroom visits can happen earlier in the fall.

Schools have also requested online materials, print materials, and simple activities that can support students in an online, virtual, or blended environment without knowing how long they will be unable to meet with students face-to-face.

Program History

Since the early 2000s, the Sandia Mountain Natural History Center (SMNHC) and its overseeing agency, the New Mexico Museum of Natural History and Science, have been successfully partnering with various state agencies to teach students in rural areas about ecosystems by using New Mexico's great State Park system as an outdoor classroom and the 2019-2020 school year has been no different. Due to closures resulting from the Covid-19 pandemic, classroom visits had to be cancelled. These trips would have had 9 classes equaling about 225 students.

In today's economic climate, most programs like the SMNHC depend on partnerships that leverage the work of several agencies working together and the partnership between the New Mexico Museum of Natural History and the New Mexico Department of Game and Fish's Share with Wildlife program is no different.

SMNHC provided for educators of the grant the following resources and letter in light of COVID-19.

Hello teachers,

Greetings from the Sandia Mountain Natural History Center. We hope that you are doing well and we are really sorry that you and your students were unable to participate in their classroom visit this year. However, we want to let you know that your students can still participate in our environmental education science activities with us – virtually.

We have produced on-location videos lessons based on the SMNHC's *Ecology Field Program*, the first four of which are now available for viewing. They can be found on the [APS YouTube channel](#) in *playlists* as well as on our [SMNHC YouTube channel](#). Of course, these lessons are aligned to the 5th grade Next Generation Science Standards and provide learning opportunities for students in the following topics:

- Lesson 1: Ecosystems – Biotic/Abiotic
- Lesson 2: Ecosystems - Producers, Consumers, Decomposers
- Lesson 3: Scat
- Lesson 4: Skulls
- Other topics forthcoming

Each of these videos also has a hands-on activity that your students can do from home and are described with directions in each video. For planning purposes, the accompanying lessons can be found on our website [here](#). We also have an online course we've created that can be used in your online classrooms for your district. It is made in Canvas. If you are interested in it, please email Vanessa.barela2@state.nm.us and I will work with you and your IT person to get the course or content uploaded for you and your students to use.

The great thing about YouTube is that you and your students can have YouTube translate the videos with subtitles in Spanish or any language you choose. Directions are below.

We are hopeful these videos will help your students better understand ecosystems as well as support your work in this challenging situation.

While we can't change what is occurring this year, we look forward to seeing you next year with your new students!

Thanks kindly,

Vanessa Barela

Advice for Future

Some teachers do not realize the rigor or expectations SMNHC staff has that are an integral aspect of the trips and ensuring success. It is important to let educators know that we plan educational activities for these visits, along with lists of items to be prepared, and bring relevant materials. It is also important for teachers to relay to their students that they are still in "classroom" mode even though they have visitors.

Schools have also requested online materials, print materials, and simple activities that can support students in an online, virtual, or blended environment without knowing how long they will be unable to meet with students face-to-face. The new activities, focused on Species of Greatest Conservation Need and developed with support of Share with Wildlife funds, will be a contribution toward fulfilling this request.

Recommendations and Program Outlook

SMNHC's collaboration with New Mexico Department of Game and Fish is able to bring a unique level of learning to a variety of species and support local communities.

We look forward to working with New Mexico Department of Game and Fish in the future, dependent upon grants and contracts that enable SMNHC to provide environmental education, develop curricula, and field-based learning opportunities to students across New Mexico.

SMNHC is grateful to be an active partner with New Mexico Department of Game and Fish in helping the state's students learn about their heritage and stewardship responsibilities through New Mexico Department of Game and Fish visits and delivering associated classroom presentations on these important topics.