

Sierra Nevada Conservancy-Progress Report

Sierra Nevada Conservancy Grant Program
Safe Drinking Water, Water Quality and Supply, Flood Control
River and Coastal Protection Act of 2008 (Proposition 84)

Grantee Name: SEQUOIA PARKS FOUNDATION

Project title: RANGERS IN THE CLASSROOM

SNC Reference Number: 070123 Submittal Date: March 31, 2011

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Check one:

6-Month Progress Report
 Final Report

6-Month Progress Reports should reflect the previous six months. Final Reports should reflect the entire grant period.

A. **Progress Report Summary:** (Please provide a general description of work completed during this reporting period.)

The Rangers in the Classroom (RITC) program outcomes outlined below fall within the Sierra Nevada Conservancy (SNC) grant period of June 3, 2008 to March 31, 2011, including non-interrupted program operation throughout the SNC funding freeze. During this period, Phases I, II, and III of RITC were successfully completed and all SNC grant deliverables were met, including: employ seasonal rangers to conduct educational outreach; produce, test, and evaluate curricula and "Traveling Trunks"; conduct Teacher Workshops; and submit 6- and 12-month progress reports.

B. **Deliverables or Outcomes completed during this Reporting Period or Milestones Achieved:** (Include specific information, such as public meetings held, agency participation, partnerships developed, or acres mapped, treated or restored.)

Conduct Educational Outreach utilizing Seasonal Rangers:

- Seasonal Park Rangers were employed to test and conduct RITC programs, with a focus on Tulare County. Some targeted outreach occurred in Fresno and Kings Counties.
- Students reached **September 2010 to March 2011 totaled: 12,533** (classroom-based programs only; includes classroom presentations via video conferencing to 929 students). *By the end of May 2011, outreach is expected to top 15,000 students.*
- Students reached **October 2009 to June 2010 totaled: 4,436** (classroom-based programs only).
- Students reached **October 2008 to June 2009 totaled: 4,293** (both classroom-based and auditorium-style programs).
- Students reached **June 2008 to September 2008 totaled: 550** (both classroom-based and auditorium-style programs).
- **Total number of students reached since program pilot inception (September 2007): 25,513**

Produce, Test & Evaluate Curricula:

- **A total of 8 stand-alone, classroom-based programs have been developed and tested:** "Meet Your National Parks"; "Up, Up and Away"; "The Bear Essentials"; "How to Read a Skull Like an Open Book"; "Explore Your Watershed"; "Life in the Zone"; "Guess Hoo's for Dinner"; and "Discover

Your Changing Climate.” Download a handout describing these 2011 RITC programs and each program’s completed curricula materials (CA State standards achieved, presentation outlines, lesson plans and resources) by visiting the Parks’ website at:

<http://www.nps.gov/seki/forteachers/index.htm>

In addition, one series (5 linked programs) was created called “SPROUTS.” SPROUTS (Student Phenologists Researching Oaks to Understand Trees and Science) engages students in recording and observing phenological events of oak species in their school yard. The SPROUTS program provides students with a hands-on learning opportunity utilizing two relatively new sciences: phenology and citizen science.

- **A new, more inclusive teacher evaluation was utilized during the 2009/2010 school year.** The following data was collected:
 - 131 programs were delivered (all classroom-based) in Tulare County.
 - There was a 75% (98) return rate. Evaluations were returned directly to a Park Ranger, faxed, or mailed.
 - Evaluations returned by program included:
 - Meet Your National Parks – 25
 - Bear Essentials – 36
 - Zones – 16
 - Skulls – 11
 - Watershed – 3
 - Evaluation questions and highest responses (out of 98) included:
 - Did this program meet your expectations? 83 replied “yes – definitely”
 - Length of program? 92 responded “just right”
 - Pace of activities? 95 responded “just right”
 - Relevance to curriculum? 64 responded “very relevant”; 27 responded “okay”
 - Enjoyment/fun? 92 responded “just right”
 - New learning? 97 responded “just right”
 - Student interest level? 79 responded “very”
 - Hands-on experiences? 86 responded “just right”
 - Nature connection? 95 responded “just right”
 - Would you recommend this program to other teachers? 94 responded “yes, definitely”
- **Traveling Trunks, which provides teachers with material to expand learning after students receive RITC presentations, were developed and tested.**
- **During the 2010/2011 school year, 22 pre-program and 22 post-program lesson plans were created (for each grade level and program).** Lesson plans help teachers prepare for and conclude classroom programs.

Conduct Teacher Workshops:

- **A Teacher Workshop was offered June 5 and 19, 2010.** During this in-Park workshop, teachers were introduced to the program, explored Traveling Trunk content, and provided feedback on how to improve RITC. Teachers also participated in a fieldtrip to Kaweah Oaks Preserve to conduct environmental education programs and learn about a local natural resource. Five teachers participated.
- **A Teacher Workshop was held in the Parks on September 20 and October 4, 2008.** The agenda included an introduction to RITC, usage of the draft curricula and Traveling Trunks, evaluation of the program content and a tour of the Parks. Sixteen teachers participated in one or more days.

C. Challenges or Opportunities Encountered: (Please describe what has worked and what hasn't; include any solutions you initiated to resolve problems. If your project is not on schedule, please explain why here.)

- Improvements have been made to the way RITC addresses and meets State education standards, teachers'/schools' needs, and RITC goals. Overall, the program continues to be refined and improved. For example, when "Discover Your Changing Climate" was piloted, Park Rangers discovered that many students had not heard of climate change; it was a false assumption to believe that students in the 4th grade had that knowledge. Park Rangers struggled with how to have that conversation in a meaningful way. Because students in the 4th grade are learning about adaptations, Park Rangers began the conversation by talking about why certain adaptations occur in different life zones and their relationship to watersheds. Once students have that foundation, a discussion about how plants and animals adapt if the climate changes is possible. Students are then able to make predictions on how climate change will affect Park resources, especially watersheds.
- Funding was a challenge for this new program, along with staffing changes. Despite not being able to hire as many seasonal Park Rangers as the program demands to expand into Fresno County, the Program Manager managed to conduct outreach to a large number of Tulare County classrooms, and continue developing programs and improving curricula. Working with seasonal environmental education staff presents some ongoing challenges, such as hiring and training different Park Rangers at the same time in preparation for the start of the school year, and retaining the same employees through the end of the school year.
- The program underwent significant development and reformatting, including a move away from large, auditorium-style programs to classroom-centered presentations. Feedback from teachers indicated that classroom-based programs were more effective. Park Rangers were unable to have conversations or conduct impactful environmental education when presenting in large-group settings, such as auditoriums, because students were unable to ask questions, interact with materials, or immerse themselves in the program content. Classroom-based presentations proved to be more conducive to learning, allowing students to explore and examine materials up close. Evaluation of classroom-based programs successfully demonstrated knowledge of material taught and ability for students to apply their knowledge to real situations.
- Additionally, the way the original curricula components were presented was modified. It was more successful to weave certain concepts into all of the programs, as opposed to isolating different topics. For example, "Explore Your Watershed," which remains a stand-alone program, is now interwoven into all programs. The topic of watersheds is a cornerstone of all the RITC programs, because it allows the students to follow the water from their homes to the Sierra Nevada mountains; it is a tangible connection from the Central Valley to the Parks.
- Teachers expressed a significant need for earth and natural science experts, and it was discovered that Park Rangers can serve that need. Initially, when curriculum was developed, program content was based on many "hot" topics. RITC is now better focused on meeting teachers' needs, and using the Parks resources to examine those topics.
- Traveling Trunks have not worked well. Teachers feel overwhelmed by large trunks of material. They simply do not have time to learn something new, then attempt to teach it to their students. Teachers prefer Park Rangers to come to their classrooms. The Program Manager is working on developing future teachers' workshops to better acquaint teachers with Traveling Trunks. As teachers become more familiar with RITC, this increased knowledge will better equip and inspire them to use the Traveling Trunks to further classroom education. In addition, many Traveling Trunks were redesigned to better serve classroom needs with hands-on, interactive activities.
- Park Rangers benefitted by utilizing Traveling Trunk materials to expand program offerings. In spring 2010, Park Rangers conducted so many programs that they needed to employ some of the Traveling Trunks in order to conduct the same program in multiple locations on the same day. If

needed, Park Rangers can present twice as many classroom programs by using the Traveling Trunks, which are currently being underutilized by the teachers.

- Teacher Workshop participation during the summer has continued to be a challenge, as teachers are on vacation, and the available teaching credit is not incentive enough. However, the workshops have provided some of the best feedback for improving the program.
- D. Unanticipated Successes Achieved:** (Please describe any additional successes beyond completing scheduled tasks or meeting scheduled milestones.)
- Every student contacted during the 2009/2010 school year received a Park Fee Waiver (for free admission to the Park). Since then, **a total of 222 fee waivers have been remitted**, providing an opportunity for hundreds of youth and their families--who might not have otherwise—to visit the Parks.
 - The program has received **requests from teachers** across Tulare County and beyond to expand the programs offered. For example, teachers are requesting geology and earth science curricula.
 - **Schools across the country are inquiring about RITC.**
 - RITC received a \$15,000 grant to develop a **phenology-based education program** that fits under the climate change umbrella, which resulted in the SPROUTS program.
 - RITC is worked with the Kings County Office of Education to offer RITC programs to classrooms via **video conferencing**.
- E. Compare Actual Costs to Budgeted Costs:** (Please refer to your grant agreement to list your deliverables/budget categories and budgeted costs compared to actual costs incurred during this reporting period in the table below.)

PROJECT BUDGET CATEGORIES	Budgeted SNC Dollars	Actual Dollars
Facilitate Curriculum Review and Testing	\$11,000	\$11,000
Curriculum & Traveling Trunk Production	\$13,857.85	\$13,857.85
Teacher Workshops	\$1,519.83	\$1,519.83
Seasonal Park Rangers	\$33,102.30	\$33,102.30
Transportation	\$5,520.02	\$5,520.02
GRAND TOTAL	\$65,000	\$65,000

Explanation: (if needed)

- F. Do you have information to report on the project-specific Performance Measures for your project?** (If so, please list the Performance Measures below and describe your progress.)

See B.

- G. Were there any other relevant materials produced under the terms of this Agreement that are not a part of the budgeted deliverables? If so, please attach copies.** (Include digital photos, maps, media coverage of project, or other work products.)

- Phenological program.
- In partnership with ConvergenceMedia Productions, the Sequoia Parks Foundation created a promotional RITC video. Visit www.sequoiaparksfoundation.org to view the video under the “What We Do” tab.

- H. Next Steps:** (Work anticipated in the next 6 months, including location and timing of any scheduled events related to the project.)

- Continue outreach in Tulare County.

- Seek funding to expand to Fresno and Kings Counties.

Please Complete this Section for FINAL Report ONLY

Description of Project Accomplishments:

1. Most Significant Accomplishment

Describe in one concise, well-written paragraph, the most significant accomplishment that resulted from this grant.

RITC planted the seed of inquiry in Central Valley classrooms, inspiring youth to learn about and connect with Sequoia and Kings Canyon National Parks. Teachers often learn alongside their students and are equally inspired by what they see, touch, smell and experience. The program gives teachers the opportunity to learn how to use local resources to teach not only to the CA State standards, but also through a “sense of place.”

2. WOW Factor

If applicable, please describe anything that happened as a result of the project or during the project that is particularly impressive.

In her own words, RITC Program Manager Denise Robertson shared the following:

“For me, one of the WOW moments came when I presented a program in Dinuba. After I finished, a teacher stopped to tell me I was the science in her school. What I interpreted this to mean was that the school no longer had the funding to teach science. In some instances, RITC was this school’s only form of science throughout the year. Luckily, the school had six RITC programs scheduled that year. This school became involved in the program through a teacher who had attended one of RITC’s teachers workshops.

It was impressive to see how the students remembered each of the Park Rangers by name; we had become friends with all those students. The Park Rangers represented people in uniform that students knew they could approach for help and with questions.

Another special moment for me is that so many people said, “It can’t be done.” I kept hearing that schools have too many tests, teachers have no time, and nature is not a priority. What I saw was just the opposite. The desire is there, we just need to nurture it. We have more requests than we can support. We built a program, and the teachers came—they came in droves—and they are still coming.

Last, we hired a local displaced teacher as a Park Ranger this year. By the end of his season, he told us that this experience improved his skills as a teacher. Not only did he enjoy himself, but also he learned strategies to inspire students to become emotionally invested in their public lands and the natural and cultural resources that surround them.”

3. Design and Implementation

When considering the design and implementation of this project, what lessons did you learn that might help other grantees implement similar work?

It is important to grow and adapt along with the audience you intend to serve. In the beginning, the goals were to release a suite of programs and traveling trunks that teachers would utilize in their classrooms. Feedback from teachers revealed a complete sense of overwhelming challenges. Teachers did not feel

comfortable with the new information, new concepts, and new equipment. As a result of evaluations and one-on-one feedback from educators, RITC evolved into a series of eight classroom-based programs and pre/post visit lesson plans. classroom.

4. Indirect Impact

Please describe any indirect benefits of the project such as information that has been developed as a result of the project is being used by several other organizations to improve decision-making, or a conservation easement funded by this grant that encouraged other landowners in the area to have conservation easements on their property.

Teachers have been educated on how to teach about the natural world and the connections people have to their local landscapes. Students learned how to look at their local landscapes with discovery instead of despair. It was important to realize and acknowledge the majority of the Parks' neighboring youth, regardless of how close they live, do not visit Sequoia and Kings National Parks. The community needs to be asking "Why."

5. Collaboration and Conflict Resolution

If you worked in collaboration or cooperation with other organizations or institutions, describe those arrangements and their importance to the project. Also, describe if you encountered conflict in the project and how you dealt with it, or if there was conflict avoided as a result of the project.

- **The most meaningful partnership was the one developed with local teachers.** The SNC grant and support of the Sequoia Parks Foundation allowed the Parks to develop, pilot, and grow RITC through successful relationship-building with the local teachers and their communities. As teachers' confidence in and requests for the program grew, RITC grew to support the needs.
- **In 2007, the RITC Program Manager facilitated Advisory and Planning Committee meetings** prior to implementing program testing, which were held on June 24, July 23, and October 16, to discuss and review program design and content. Meeting participants included partners from Sequoia and Kings Canyon National Parks, Tulare County Office of Education, Sequoia Natural History Association, Sequoia Riverlands Trust, the U.S. Army Corps of Engineers at Lake Kaweah and the Sequoia Parks Foundation.
- **Through these partnerships a conflict was discovered and resolved.** Two agencies expressed concern that RITC might take away their opportunity to present their classroom programs. The Program Manager worked together with these agencies to insure that RITC offered programs that best supported the Parks' mission and area of expertise, without duplicating other organization's programs or conflicting with their presentation schedules.
- The Program Manager continued to partner with RITC Advisory & Planning Committee partners throughout the SNC grant period, while **new partnerships were developed** with:
 - Courage to Change, a gang rehabilitation group that volunteers in the Parks (to participate in RITC programs).
 - Kings County Office of Education (to conduct classroom presentations via video conferencing).

6. Capacity-Building

SNC is interested in both the capacity of your organization, as well as local and regional capacity. Please describe the overall health of your organization including areas in need of assistance. SNC is interested in the strength and involvement of your board, significant changes to your staff, size and involvement of membership. In addition, describe how your project improved capabilities of partners, or the larger community.

During the 2010/2011 school year, the Parks hired four seasonal Park Rangers to present eight programs to Tulare County schools, and Kings County students through video conferencing. Before partnering with the Sequoia Parks Foundation and receiving the SNC grant, the Parks were unable to conduct educational outreach outside the borders of Sequoia and Kings Canyon National Parks. The SNC grant provided much-needed capacity required by the Parks to design, pilot, and complete RITC. RITC, a model environmental outreach program, now directly serves thousands of youth in surrounding communities and provides an invaluable resource to educators nationwide.

At the time this report was being submitted, the federal government was under a continuing resolution until April 8, 2011, and the National Park Service's budget had not been adopted. The Parks continue to seek an increase in their base funding in order to sustain and support the full implementation of RITC, but future funding is uncertain. The Sequoia Parks Foundation continues to support RITC with private individual donations and grants.

7. Challenges

Did the project face internal or external challenges? How were they addressed? Describe each challenge and any actions that you took to address it. Was there something that SNC did or could have done to assist you? Did you have to change any of your key objectives in response to conditions "on the ground"?

The most significant change was to modify the overarching themes of the classroom programs. Initially, the topics were broad, including climate change, air quality, and watersheds. It was discovered that these topics on their own were often too broad to serve as an introduction to students. In response, the Program Manager worked to embed these concepts within programs about tangible subjects such as bears, owls, bats and ecosystems.

8. Photographs

Grantees are strongly encouraged to submit photos, slides or digital images whenever possible. These images will be used for SNC publications such as annual reports or on the website. Please make sure you clearly identify location, activity, and your project with each submitted image. Images will be credited to the submitting organization, unless specified otherwise.

Please refer to previously submitted photographs.

9. Post Grant Plans

What are the post-grant plans for the project if it does not conclude with the grant? Include a description of the following (if applicable): (1) Changes in operations or scope; (2) Replication or use of findings; (3) Names of other organizations you expect to involve; (4) Plans to support the project financially, and; (5) Communication plans?

The most significant change in program operations was to ask those served what they needed, instead of assuming. That has been a valuable lesson. The Parks will continue to engage educators in dialogue to produce the best educational outreach products. As RITC continues to grow, the Program Manager intends to offer a program that can serve as a model for other organizations and National Parks across the country, and be used to leverage funding and support for teachers and schools in the future. Finally, a future goal of the Program Manager is to present the RITC program and results to the National Association of Interpretation and/or National Association of Environmental Education and strive to write articles as a resource to help other environmental educators, interpreters, and teachers.

10. Post Grant Contact

Who can be contacted a few years from now to follow up on the project? Please provide name and contact information.

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SNC-approved Performance Measures: (Please list each Performance Measure for your Project, as identified in your Grant Agreement, and the results/outcomes)

See B.