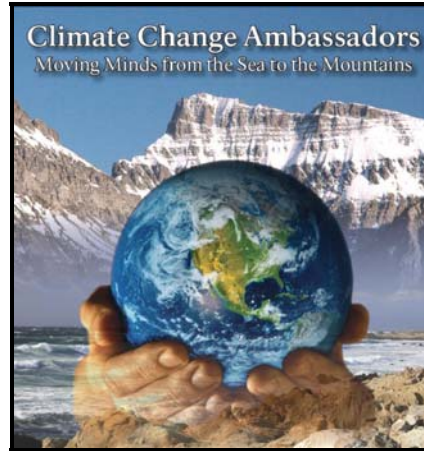


Southern California Research Learning Center 2010



Acknowledgements

Special thanks to our dedicated partners who have helped make the Southern California Research Learning Center (SCRLC) a success.

The SCRLC has implemented an aggressive strategy to build partnerships, seek grant funding, develop innovative stewardship programs, and implement research projects. The Mediterranean Coast Network (MEDN) Board of Directors have served to sustain many of the above mentioned projects by being directly involved in building partnerships, providing the support of park staff, and assisting the director to overcome obstacles. The Director wishes to acknowledge the dedicated support and innovative vision of the MEDN Board of Directors. The SCRLC Technical Committee has provided wise guidance and assisted the Director and partners in shaping the mission and goals of the SCRLC. The strong foundation provided by these two dedicated groups is evident in the success of this Research Learning Center. The SCRLC Director, Board of Directors, and Technical Committee thank all of our dedicated partners.



RLC Name	Parks Served	Initial/main Funding Source
Southern California Research Learning Center - SCRLC (2002)	Santa Monica Mountains National Recreation Area (CA) Cabrillo National Monument (CA) Channel Islands National Park (CA)	Natural Resource Challenge ONPS

The California Mediterranean climate represents one of only five locations in the world where Mediterranean ecosystems support sensitive endemics at risk due to a history of substantial human use, development, and invasive species. The Southern California Research Learning Center promotes and facilitates scientific and scholarly inquiry within National Park Service (NPS) units including; Cabrillo NM (CABR), Channel Islands National Park (CHIS) and Santa Monica Mountains National Recreation Area (SAMO).

In Fiscal Year 2010, the Southern California Research Learning Center (SCRLC) completed the Strategic Five Year Plan). Two part- time Biological Science Technicians were hired to assist with the Director with SCRLC operations and projects. The SCRLC funded one intern based in San Diego funded through a Cooperative Agreement with San Diego State University (SDSU) Field Stations Program and provided staff for the Sea to Shining Sea Distance Education program. A number of other internship and fellowship positions were funded through a partnership with the Santa Monica Mountains Fund. Several other unpaid interns serve the SCRLC including students currently enrolled in classes at California State University Channel Islands (CSUCI), SDSU and Santa Monica College. <http://www.researchlearningcenter.com/pages/pdfs/5yearPlan.pdf>

The SCRLC continued to work with the High Performance Wireless Research and Education Network (HPWREN) and CABR to host workshops, trainings, for National Park Service staff and educators towards expanding the audiences of NPS programs via Live Interactive Virtual Explorations (LIVE). Field surveys were completed for the Loggerhead Shrike Research project and study results were presented at the Wildlife Society Conference in October 2010.

Climate Change

Climate Change Monitoring at Cabrillo National Monument

The SCRLC, CABR, and Scripps Institute of Oceanography, and HPWREN collaborated to install two hydro- climate sensor stations which collect data valuable for understanding climate change and microclimates associated with Mediterranean type ecosystems and data as required by Cabrillo NM and Point Loma Fire Management Plans.

Climate Change Ambassadors – Citizen Science

Students from the Elementary Institute of Science, an urban minority serving after school science and leadership program, where students learn about “Science that Matters” devoted one year of study towards improving their understanding of current climate change research, and spend their summer weekends honing their scientific field methods skills, improving their wilderness skills, and demonstrating applied environmental ethics. The fall of 2010 begins the communication phase of the project where the cohort of 35 students and chaperones will fulfill the climate change ambassadors phase of the project and spend the next year engaging their community, peers, and public by sharing their knowledge of climate change and research experiences at the National Parks. This pilot program resulted in a replicable scientific engagement model for land management agencies and organizations.

Collaboration with other Research Learning Centers:

TeacherTech Training at the San Diego Super Computer Center

Three National Park Service Research Learning Centers joined forces with HPWREN and San Diego State University Field Stations Program to host a four- hour TeacherTech workshop. Three National Park Service Research Learning Centers collaborated with the High Performance Wireless Research and Education Network team, the San Diego Super Computer Center, and San Diego State University to host a TeacherTECH LIVE workshop. The Appalachian Highlands Science Learning Center, the Murie Science and Learning Center and the SCRLC conducted LIVE broadcasts to teachers at the San Diego Supercomputer Center. In preparation for the workshop, Jim Hale, HPWREN, installed and tested a new wireless access point at the Old Point Loma Lighthouse at Cabrillo National Monument, while Pablo Bryant, SDSU, tested ten LIVE backpacks and provided technical advice to each of the National Park Service broadcast sites, which are part of the Sea to Shining Sea (StSS) Network of NPS parks participating in LIVE programs. Details are found at <http://hpwren.ucsd.edu/news/20100614/>.

Crown of the Continent Research Learning Center and SCRLC Youth Service Learning Project

SCRLC Staff interfaced with the Crown of the Continent Research Learning Center to plan a citizen science project for high school students which culminated in a service learning expedition to Glacier National Park. Students from the Elementary Institute of Science, an urban minority serving science after school leadership and science program, devoted one year of study towards improving their understanding of current climate change research, spend their summer weekends learning application of scientific field methods in Southern California, improving their wilderness skills, and demonstrating environmental ethics. Their studies culminated in participation in on- going climate research at a National Park most affected by climate change. Fall of 2010 begins the ambassador phase of the project where the students fulfill the climate change communication component of the project and spend a year engaging their community, peers, and public and sharing their knowledge of climate change and research experiences at the National Parks. This pilot program resulted in a replicable scientific engagement model for land management agencies and organizations.

Impacts to Accomplishments

Since 2002, the budget has remained flat at \$225,000 with no adjustments to keep up with increases in CPI and the locality rate for this geographic area. The travel ceiling at SCRLC host park, SAMO, continues to be an issue – limiting monthly travel by the Director and staff to CABR a network park served by the SCLRC. At the request of SCRLC Board of Directors, the Director drafted a network OFS package to request additional funding to more adequately meet the mission and goals of both the SCRLC and I&M programs.

Photographs



Climate Change Ambassadors, students at the Elementary Institute of Science are sworn in as National Park Service Volunteers in Parks, prior to departing for their citizen science work at the Crown of the Continent Research Learning Center (top left). Island Loggerhead shrikes feeding chicks was observed at the air field on Santa Cruz Island (top right, photo courtesy of Lyndal Laughrin, Santa Cruz Island Reserve). Ranger Griselda Herrera and a student discuss National Park Service careers at the Hispanic Association of Colleges and Universities (HACU) Conference (Photo courtesy of Pablo Bryant, San Diego State University). Craig Hansen and Loren Yellow- Bird talk about Native American cultural heritage at a LIVE broadcast during the Diversity Days Events.

Collaboration with other NPS Programs

The SCRLC strives to develop projects which benefit the MEDN network parks by incorporating the expertise available within the NPS Programs. The following are examples of projects implemented in FY09 which meet the goal of facilitating the use of Network parks for scientific inquiry.

- [Cooperative Ecosystems Studies Units](#). The SCRLC regularly collaborates with the Californian CESU to plan, fund, and implement research and education projects. The SCRLC and CABR worked with the Californian CESU to select and hire a botany intern from University of California Davis who was stationed at CABR.
- [Inventory and Monitoring Program](#). The SCRLC and the Mediterranean Coast I & M program are working together to share content from each other's databases, provide web users with links to information from both programs in a coordinated effort to reach as broad a public as possible. The Drupal resource centric template is on- line at www.mednscience.org.
- [Night Sky Team](#) The SCRLC continues to work with the NPS Night Sky Team and citizen science groups to collect night sky data from various locations in the network parks.

Santa Monica College continues to collaborate with the SCRLC and the NPS Night Sky team to plan the completion of the camera built to NPS specification which will be used by students to compliment the night sky data collected by NPS at SAMO and CHIS.

- [Natural Sounds Program](#). Cabrillo National Monument and HPWREN are coordinating with the SCRLC to engage students interested in deploying acoustical equipment at Cabrillo National Monument or the Network parks. Sounds collected from rocky intertidal Zone 3 are currently available on the HPWREN website by date at: <http://hpwren.ucsd.edu/Acoustics/CNMZ3-acsensor1.html>.
- [Rivers and Trails Conservation Assistance Program - Green Team](#). The SCRLC partnered with the River and Trails Conservation Assistance Program, Groundwork San Diego, and the Elementary Institute of Science in San Diego to engage ethnically diverse high school students in "leave no trace" and carbon footprint reduction best practices training in preparation for climate change research service project hosted by the Crown of the Continent Research Learning Center.

Facilitating the use of the Network parks for scientific and scholarly inquiry

SCRLC Strategic 5 Year Plan

The SCRLC completed the Strategic Five Year Plan which tiers off the draft National Five Year plan for the National Park Service Research Learning Centers. Thanks to a multitude of partners, the Technical Committee, Board of Directors, and staff of all three network parks for support of the SCRLC and the planning process. A budget summary and implementation plans were added to the document at the request of the Board of Directors and was approval to complete the content of the Strategic 5 Year Plan. The plan is posted on the SCRLC website at: (<http://www.researchlearningcenter.com/pages/pdfs/5yearPlan.pdf>).

Loggerhead Shrike Study and Citizen Science Surveys – Channel Islands National Park

The goal of the Island Loggerhead Shrike project is to use statistically rigorous sampling methods and citizen scientist surveyors to study loggerhead shrikes on Santa Rosa and Santa Cruz islands, toward estimating abundance and determining locations of these birds. Representatives from the NPS, US Geological Survey, and Western Foundation of Vertebrate Zoology Island Loggerhead Shrike (LOSH) survey worked with multiple other organization and volunteers to complete the second year of field surveys. Citizen scientist surveyors or “shrikers” were elated by the success of the survey methods and were in high spirits as they departed the islands. The SCRLC and research partners conducted evaluations of the citizen science component of the project.

Social Science Study – Santa Monica Mountains National Recreation Area

The SCRLC, SAMO, and the Santa Monica Mountains Fund in collaboration with California State University Channel Islands have funded and launched a project titled “*Engaging and Connecting Minority Non- Traditional Audiences with Park Programs and Operations.*”. The project will complete a literature summary and analyses, develop a tool box for National Park Service staff to be posted to the SCRLC website, and conduct several workshops.

Permanent Water Quality Monitoring Station – Malibu Creek

The SCRLC led representatives from multiple federal and local agencies, as the group visited three sites along Malibu Creek before reaching consensus regarding the final location for installation of a real- time water quality monitoring station. The station will be located below the dam near the “start” pool along a stretch of the creek where anomalous illness and death of steelhead trout has been observed. The water quality station, modeled after similar stations at the Santa Margarita Ecological Reserve will collect continuous dissolved oxygen, conductivity, pressure, temperature, and possibly one additional parameter. The group suggested that a chlorophyll sensor be added to the probes.

New HPWREN Rocky Intertidal Zone Web cam

A new camera lens was purchased and installed by HPWREN at the Zone 3 sensor station at Cabrillo National Monument. The images captured by this solar powered camera provide close up views of the tidepools. Still photos are automatically compiled into video clips which clearly show limpets grazing algae on the rocks at low tide.

<http://hpwren.ucsd.edu/Acoustics/CNMZ3-acsensor1.html>.

Providing research information or value-added products to park staff and managers

Diversity Days – Department of the Interior

At the Request of the Chief Diversity Office, Department of the Interior, the SCRLC coordinated the broadcast of six LIVE Diversity Days programs from nine different National Park Service and partner locations across the country to the Main Interior Building in Washington, D.C. The Southern California Research Learning Center, the High Performance Wireless Research and Education Network (HPWREN), Cabrillo National Monument and eight other National Park Service Units collaborated to "Honor America's Heritage and Culture" at the multi-day event. Details are found at: <http://hpwren.ucsd.edu/news/20101025/>.

National Association for Interpretation (NAI) LIVE Workshop in Hartford Connecticut

The SCRLC and HPWREN a Sea to Shining Sea LIVE workshop which featured broadcasts from five National Park Service sites; 1) Cabrillo National Monument, 2) Santa Monica Mountains National Recreation Area, California 3) Dry Tortugas National Park, Florida, 4) Biscayne National Park, Florida, and 5) Mammoth Cave National Park, Kentucky to the National Association for Interpretation (NAI) annual conference in Hartford, CT. The Sea to Shining Sea multiple organizational Team hosted approximately 45 engaged and interested participants at the StSS LIVE demonstration and workshop on November 19, 2009. The majority of questions fielded during the demonstration were regarding the LIVE equipment and set-up time/effort. The LIVE backpack manual is available at http://hpwren.ucsd.edu/20081113_NPS-TT-Workshop/Kimberly_Mann_Bruch/.

TeacherTech Workshop San Diego Super Computer Center

Three National Park Service Research Learning Centers joined forces with HPWREN and San Diego State University Field Stations Program to host a four-hour TeacherTech workshop. Three National Park Service Research Learning Centers collaborated with the High Performance Wireless Research and Education Network team, the San Diego Super Computer Center, and San Diego State University to host a TeacherTECH LIVE workshop. The Appalachian Highlands Science Learning Center, the Murie Science and Learning Center and the SCRLC conducted LIVE broadcasts to teachers at the San Diego Supercomputer Center. Details are found at <http://hpwren.ucsd.edu/news/20100614/>.

Communicating the relevance of park research results

Celebrating Cultural Heritage via LIVE at Diversity Days Events in Washington D.C.

The Department of the Interior hosted six programs broadcasts from nine different National Park Service and partner locations across the country to the Main Interior Building in Washington, D.C. The Southern California Research Learning Center, the High Performance Wireless Research and Education Network (HPWREN) and nine National Park Service Units helped "Honor America's Heritage and Culture" at the Diversity Days events. Details are found at: <http://hpwren.ucsd.edu/news/20101025/>.

Southern California Research Learning Center website

The Santa Monica Mountains Fund and SCRLC continue to host the MEDN Inventory and Monitoring website pages, and is providing links for SAMO and the I & M site for expanded staff and public access to datasets and reports from the Network I & M program. <http://researchlearningcenter.org/>

Sea to Shining Sea LIVE: Distance learning in the National Parks

The Sea to Shining Sea LIVE project expands visitor access to National Parks and on both coasts of the United States via the Internet, wireless communications, and a Live Interactive Virtual Exploration (LIVE) backpack system developed by HPWREN. Audiences use the Internet and a computer to interact in real-time with Interpretive Rangers and scientists. The Sea to Shining Sea project website is on-line and continues to be improved, thanks to SCRLC Intern Monika Braun. Please review the Sea to Shining Sea website at: <http://seatoshiningsea.net/>.

- 2008 Evaluation Summary Technology Transfer and LIVE workshop (http://www.seatoshiningsea.org/Pdfs/StSS_report.pdf).
- 2009 Evaluation Summary National Association for Interpretation LIVE (http://www.seatoshiningsea.org/Pdfs/NAI_eval.pdf).
- 2010 Sea to Shining Sea Project Summary (http://www.seatoshiningsea.org/Pdfs/StSS_report.pdf).

Applied Methods Field Course - Santa Monica College

Santa Monica College (SMC) students participated in an Ecohelpers service learning activity at Zuma Canyon and were elated to learn that the plot they planted in previous years is thriving and had the highest survivorship of any other plots at the Zuma site. These field trips include science literacy activities where SMC students first learn about the SAMO carnivore program, then participated in a hands on activity to learn the operation of telemetry equipment and then used telemetry equipment to actually track a collared bobcats. The students discuss natural carnivore habitat in the park and how this habitat compares to the fragmented habitat at urban wildland interfaces and dense suburban residential tracks. We encouraged students to discuss and explore impacts to carnivore habitat, reproduction, and prey availability which may be associated with habitat in close proximity to high density residential areas.

Castro Peak Fire Observation Web Camera

The web camera is posted to the front page of SAMONet and is compiling daily animations from images collected every two minutes. The images from the cameras are available to the general public, via the SCRLC web site at <http://researchlearningcenter.org>.

Promoting resource stewardship through partnerships

Hispanic Association of Colleges and Universities

The Southern California Research Learning Center, in collaboration with the High Performance Wireless Research and Education Network, Cabrillo National Monument, Biscayne National Park, and Santa Monica Mountains NRA hosted several interactive exhibits at the HACU conference towards recruiting promising Hispanic students into cool careers in the Great Outdoors of the National Park Service. A second goal at the HACU conference was to demonstrate and discuss the use of LIVE as an experiential distance education tool affecting higher education for Hispanics and Hispanic Serving Institutions (HSIs).

Hampton University –Historically Black College and University (HBCU) hosted Executive Leadership Summit

The SCRLC Director and LIVE partners Pablo Bryant, San Diego State University and Karl Pierce, Guadalupe Mountains National Park were invited by National Association for Equal Opportunity in Higher Education (NAFEO) and Hampton University to attend the Executive Leadership Summit as subject matter experts and provide presentations and demonstrate the use of LIVE as an experiential learning tool to engage African American students in National Park Service programs.

Quarters for CABR Ranger and SCRLC Intern at San Diego State University

The SCRLC worked with CABR and SDSU to implement a Cooperative Agreement to secure housing for SCRLC staff and LE Ranger stationed at CABR. NPS Rangers and interns continue to occupy quarters at the SDSU Santa Margarita Ecological Reserve. The Field Station Program at SDSU also benefits by having an experienced law enforcement officer and environmental science technician residing on site.

Office Space for the SCRLC and MEDN Inventory and Monitoring Program at California State University Channel Islands

The SCRLC and California State University Channel Islands proposed a formal collaboration among two National Park Service programs, the Southern California Research Learning Center (SCRLC) and the Mediterranean Network (MEDN) of the Inventory and Monitoring (I&M) Program to form of a no- cost task agreement under the existing cooperative agreement to co-locate our offices on the campus of CI. The purpose of the proposed agreement is to increase cooperation among our groups and further our collective missions.

Pasadena City College service learning activities

SCRLC staff continues to work with Professor Joe Conner to develop service learning projects at Santa Monica Mountains and Cabrillo National Monument. Each term 60- 70 PCC students participate in an ecobelpers service project, telemetry tracking exercises and learn about the native plants and animals of SAMO.

Connecting Youth to Parks

Water Initiative Program

The SCRLC, Rivers and Trails Conservation Assistance Program and Groundwork San Diego worked to build on the success of the 2008 Green Team by launching a new partnership with the Elementary Institute of Science (EIS) and expanding the program to incorporate visits to three network parks. Karl Pierce and Susan Teel attended the Elementary Institute of Science's Water Initiative Programs culminating event. This is the third year the SCRLC and CABR have worked with this leadership program for inner city youth in collaboration with River and Trails Conservation Assistance (RTCA) program and Groundwork San Diego.

Interpretive Naturalist Certificate Program with San Diego State University

San Diego State University Field Stations Program, Biological Sciences Department, and Recreation and Tourism Management Program (RTM) have the instructors, courses and facilities already in place to jump start a joint NPS- SDSU Naturalist Interpretive Certificate program. The National Park Service Interpretive Development Program and Foundations Course would further enhance the certificate program by adding practical experience to the SDSU courses. Recreation and Tourism Management Program and the Southern Californian Research Learning Center currently offer independent studies and internships which would provide opportunities for students completing the Naturalist certificate program to apply their knowledge and improve their skills in a work environment.

The SCRLC is helping the Mediterranean Coast Network parks achieve the GPRA goals below

Ia10, Wilderness

Ia13, Park Fire Goal

Ia1A, Park Upland Acres Restored

Ia1B, Invasive plants

Ia1D, Park riparian land condition

Ia1H, Park Lands Condition

Ia1J, Park Riparian Land Restored

Ia2A, T&E species

Ia2B, Species of Management Concern

Ia3, Air Quality

Ia4C, Water Protection

Ia4E, Water quality product

Ia5, Historic Structures

Ia7, Cultural Landscapes

Ia8, Archeological sites

Ib4A, NPS Trails

Ila0, Misc. Park-Specific Goals (Visitor Support)

Ila1A, Visitor satisfaction overall

Ila2A, Visitor Safety (accidents and fatalities)

Ilb0, Park Mission Level Goal

Ilb1, Visitor Understanding

Ilb2, Visitor satisfaction with programs

IVb1A, Park Partnerships

IVb2, Visitors attending facilitated programs

Plans

The SCRLC published a strategic five year plan and has begun implementation of tasks which support the mission and goals.

Tables

Housing

The SCRLC does not have allocated housing facilities, thus schedules housing needs when space is available at Santa Monica Mountains NRA and Channel Islands National Park. SCRLC partnership with San Diego State University Field Programs provides low cost housing, meeting areas, and internet access for researchers and no cost for lodging CMRCL staff. Housing and classroom facilities at the Field Stations Program at SDSU facilities are available for nominal charge to student groups on NPS led field trips to San Diego. The SCRLC also uses housing, a conference room, and computer space at the UC Santa Cruz Island Reserve.

The SCRLC continues to use of US Navy officer's quarters for housing for NPS staff while in San Diego.

Transportation

Scientists working on any of the five NPS Channel Islands must consider the costs associated with transportation to the islands. Transportation is by boat or plane. Channel Islands National Park vessels are available for transportation of SCRLC staff and researchers on normal scheduled trips to the islands at no cost to the SCRLC or researchers. Special trips to the islands via the NPS vessels incur a cost to the SCRLC of approximately \$1,700 per day. The equivalent private rate for a vessel in the area is approximately \$3,500 per day.

Housing and Transportation Table - FY 2010

The SCRLC assists researchers and students by paying for lodging while they are working and studying when possible. During Fiscal Year 2010, SCRLC associated researchers and students did not pay costs associated with housing or transportation to Channel Islands National Park. These costs shown in the table below were absorbed by the SCRLC and were not passed on to researchers or students.

Researcher- educator/nights housed:	<u>1,099</u>
Approximate savings to researchers:	<u>\$ 235,712</u>

Type of Housing	\$ / Night @ # Nights	Total Cost	Equivalent Private Lodging	\$ / Night @ # Nights	Total Private Value	Savings to Researchers
CHIS dorm housing	\$ 8/n @ 50 nights	\$ 400	\$ 149/night	\$149/n @ 50 nights	\$7,450	\$7,450
SAMO dorm housing	\$ 8/n @ 234 nights	\$1872	\$ 149/night	\$149/n @ 234 nights	\$34,866	\$34,866
UCSB Santa Cruz Island Reserve	\$ 7 /n @ for 120 nights	\$ 840	\$ 149/night	\$149/n @ 120 nights	\$17,880	\$17,880
UCSB vehicles	\$30/day @ 20 days	\$600	\$ 139/ day	\$ 139 x @20 days	\$2,780	\$ 2,780
SDSU Santa Margarita Ecological Reserve	\$ 10/n @ 365 nights	Fee waived	\$149/night	\$149/n @ 365 nights	\$54,385	\$54,385
Camp sites space	\$ 25/n @ 210 nights	Fee waived	\$ 50/n	\$ 50/n @210 nights	\$10,500	\$10,500
Navy Base Point Loma	\$47/n @ 100 nights	\$4,700	\$ 149/night	\$149/n @ 100 nights	\$ 14,900	\$14,900
Type of Transport	\$/ leg x legs x # of people	Cost	Equivalent Private Transportation	\$/ leg x legs x # of people	Total Private Value	Savings to Researchers
Commercial Island Packers	\$32/leg x 2 legs x 130 persons	\$ 8,320	\$ 60 per leg	\$60/leg x 2 legs x 130 persons	\$ 13,440	\$13,440
Transportation to CHIS- NPS		No cost	\$ 3,500 per day	\$3,500/day x 2 days	\$7,000	\$7,000
Channel Islands Aviation	\$ 844/hr +3.50 pp/leg 50 people	\$ 8,257	\$ 1000/hr	\$1,000/hr x 9.57 hrs 50 people	\$97,500	\$97,500
Total		\$24,989				\$260,701

Partnerships – FY 2010

The SCRLC has approximately 27 university research partnerships.
 The SCRLC has approximately 44 education partnerships
 The SCRLC has approximately 36 funding partnerships

Southern California Research Learning Center Research Project Involvement:

The numeric key below indicated the quality and level of involvement of SCRLC staff in Mediterranean Coast Network Parks.

0=no involvement

1=little or superficial involvement (e.g. communicate with researchers about projects via phone or email or at professional or in-park meetings)

2=moderate involvement (e.g. provide short term housing, participate in scientific meetings/workshops on research topic, facilitate communication of research results to managers or public)

3=significant involvement (e.g. provide long term housing – several weeks to months, provide computer access, actively solicit projects, co-write research proposals, focused effort to communicate research results to managers or the public)

a) RPRS records the RLC helped to facilitate		
Permit number - active	Title/description	Level of RLC involvement
UC Reserve SCI-Active Ca.F&G-in progress	Western Foundation for Vertebrate Zoology – Citizen Science Loggerhead Shrike Survey - CHIS	3
Active	Remote Sensor stations and LIVE Distance Education – HPWREN - CABR	3
Active	Hydro-climate data Stations	3

Southern California Research Learning Center Student Table - FY 2010

Degree Sought	Number of students	Fields of Research	Research Topics	Types of Products
Masters	1	Environmental Science	Biology and Ecology	Communication Products
Bachelors	2	Environmental Science	Internships	Environmental Sensors Communication Products
	72	Field Course and Trips	Applied Field Methods Service Learning	Education Program
High School	32	Environmental Science	Climate Change Service Learning	Educational Program

Southern California Research Learning Center Communication Table – FY 2010

The SCRLC generated over 5,000 VIP work hours and had more than 11,000 total contact hours with participants in SCRLC led programs.

Type of Product or Event	Audience P=public T=Teachers or students M= Mgmt or Staff S=scientists or professionals	Title of Product/Event	Program Objective	Number of Scientists Involved or Contributing	Type of Recipients, Benefactors, or Participants	Number of Recipients, Benefactors, or Participants (% signed as volunteers) Note estimates w/ an *	Length of Event (hours)	Total Contact (# of participants x hours)
Hispanic Association of Colleges and Universities (HACU)	M,S,T	LIVE from CABR	Education Stewardship	2	Students Department of Interior SES Leadership University Leaders	56	1 hour	56 x 1=56
Executive Leadership Summit Historically Black Colleges and Universities (HBCU)	M,S	LIVE from SMER	Education Stewardship	2	Historically Black College and Universities and DOI Leaders	33	2 hour	33 x 2=66
TecherTech Workshop	T	LIVE workshop	Research Education	3	Teachers	22	4 hrs	22 x 4=88
National Association for Interpretation (NAI) Workshop	T,M	LIVE at NAI – SCRLC booth From shark tank and GUMO	Education Stewardship	5	Educators and Interpreters	30 plus *	2 hours	60 x 2 =120
Climate Change Ambassadors	T	Climate Change Ambassadors training and	Education Stewardship	7	Students	26 complete program	10 days x 10 hrs/day	26 x 100=2,600

SCRLC Report to Congress FY10

		service learning						
Field Trip Pasadena City College	P, T	CABR	Education Stewardship	5	Students	72	3 days 10 hr/day	72 x 30 = 2,160
Field Trip Santa Monica College	P, T	CHIS-field methods - LOSH	Education Stewardship	5	Students	35	3 days 10 hr/day	35 x 30=1,050
Field Trip CABR	P, T	CABR-field methods	Education Stewardship	3	Students	20	3 days 10 hr/day	20 x 30=600
Technology Transfer - Tower Climbing Training	S	National Park Service staff	Training	3	NPS Staff	5	2 days 10 hrs/day	5x20=100
LIVE CABR Living History	T	LIVE	Research Education	1	Native American Students and Adults	20	1 hour	20 x 1 =20
LOSH Citizen Science	P,M,S	LOSH citizen Science	Research Stewardship	9	Citizen Scientists	114	4 days/ 10 hrs/day	114x 40=4,560
SAMO Admin workshop	M	Admin workshop	Training	3	NPS staff	5	1 day/ 10 hrs	5 x 10=50
Web site and cameras	P, M, S, T	website	Research Education Communication	Many	Public scientists, students	Average of 501 computers per day access the web cameras at CABR with an average of 31,000 hits per day in July 2010*.	Assume 5 minutes/ website access x 501 computers /day x 365 days/60 minutes	15,238
							Total	contact Hrs 26,708