



SD CHILDREN & NATURE

## San Diego High Schools and Colleges Community Asset Inventory

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### Project Summary

This community asset inventory describes opportunities for the San Diego Children and Nature Collaborative (SDCaN) to create liaisons with over 104 high schools and 13 colleges within San Diego County. The overall goal was to identify ways to identify community resources for future SDCaN networking, to provide more opportunities for nature awareness and activism for the targeted age group of teens to early twenties. Although the initial research focused on high school and college environmental clubs and programs, the scope broadened to include experiential outdoor activities, school gardens, job experience, internship possibilities, and nature-based field trips that link to existing academic curriculums.

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**Project Methods**

To encourage seamless and efficient communication, the initial method to contact schools used their websites to locate relevant club and educator phone numbers and e-mails. It was a formidable task to sift through hundreds of web links, and many leads resulted. An introductory letter and a self-explanatory fill-in form linking to a database followed. Due to extremely low (less than 1%) replies from individual contacts, this report cites and incorporates first-hand experiences and relevant and extensive information that was available on the internet. It was difficult to interact with overworked educators and institutions that, by design, limit interruptions. The few educators who did respond personally bent over backwards, but others who eventually connected, simply expressed apologies at being overworked and behind, with little time to answer phone calls or e-mails from someone they may or may not know personally.

Overall, this approach brought to light a huge number of relevant opportunities and contacts. The result is a formidable spreadsheet that identifies more than 133 high school contacts and 53 college contacts, each with a reasonable chance to link with a future SDCaN outreach effort.

This research utilized the *Community Action Guide: Building the Children & Nature Movement from the Ground Up* (Children and Nature Network 2008). This community asset-mapping concept derives from the report, *Community Culture and the Environment: A Guide to Understanding a Sense of Place* (U.S. Environmental Protection Agency 2002).

## **Demographics**

Private high schools, charter and magnet public schools, and most high schools in affluent San Diego County regions seemed to have the strongest environmental science and nature-based activities, although there were exceptions. Additionally, rural high schools often have agricultural components which display a natural affinity for the lifecycles of plants, animal life, and wildlife habitat. The nature activities connected with San Diego's colleges were defined more by the experiences and proclivities of their staff and faculty than by student demographics. Faith-based high school and college academic curriculums both shared themes of reverence for nature and a duty to community service. Budgets and funding sources ultimately play a keen role in the breadth of possibilities.

## **Key Organizations**

High schools and colleges have a wealth of existing nature-oriented activities that include a myriad of clubs, field trips, gardens, professional resource centers, internships, and community service obligations, although many may have lofty aspirations, but modest inspiration. Others are limited in scope by minimal budgets (Lee 2006). A few projects excel.

### **High School and College Environmental Clubs**

#### *Ecology and Environmental Clubs:*

Virtually all of San Diego schools have some environmentally-oriented activities. These range from campus and community recycling efforts and beach or watershed clean-ups to conservation awareness fairs, habitat restoration projects, and global environmental activism. The Advanced Placement (AP) Biology teacher and Ecology Club advisor from Mira Mesa High School, Lisa Yoneda, says she invites guest speakers on environmental issues and attracts similar professionals for career advice. Quite a few school clubs had partnerships between high schools and colleges for advanced field or lab experiments and research. However, students participating in the politics of environmental concerns do not always increase their personal awareness or appreciation for nature, but rather address the prevalent fear that nature is often a problem, not a solution.

#### *Outdoor Clubs:*

Although almost all schools have some outdoor sports programs, only a few incorporate outdoor hiking, camping, or non-team water-based activities. Several schools documented formalized outdoor educational opportunities. At the college level, both San Diego State University (SDSU) (Aztec Adventures) (<http://aztecadventures.sdsu.edu/>) and University of San Diego (USD) (<http://www.sandiego.edu/explore/guides/>) offer excellent guidance, training, and leadership opportunities for hiking, backpacking, camping, mountaineering, scuba, kayaking, rock-climbing, and naturalist training. Scripps Ranch High School has Outdoor Adventure Klub, which offers beginning to advanced activities for outdoor education and exploration (<http://members.cox.net/srhsoaklub/>). Mt. Carmel High School even has a fishing club.

#### *Science Clubs:*

Most high schools have at least a few academic clubs geared to encourage scientific exploration outside the classroom. Some focus mainly on career development, while others provide in depth opportunities for research, experiments, or field trips. Biology and Environmental Science clubs are most prevalent, but earth science, chemistry, and physics clubs also exist. There are some unique high school clubs, including a Meteorology Club at Valley Center High School ([http://xweb.vcpusd.net/weather/Current\\_Vantage\\_Pro\\_Plus.htm](http://xweb.vcpusd.net/weather/Current_Vantage_Pro_Plus.htm)), which also has a registered weather station, the Marine Science Club at University High School, and the Astronomy club at Clairemont High.

All the colleges also have an array of science clubs, again largely centered on careers; however, there are wider opportunities beyond traditional high school science fields of study. Palomar College in San Marcos has a planetarium (<http://www.palomar.edu/astronomy/>) as well as a Campus Arboretum with a wood-reutilization program, while Southwestern College in Chula Vista has a new Botanical Garden on campus (<http://southbaybotanicgarden.org/>). San Diego's Mesa College has a Plant and Landscape Design Club that links to its Architecture department, and SDSU has a marvelous outreach program on local geological phenomena, which reaches out to the community at large as well as its enrolled students (<http://www.geology.sdsu.edu/outreach/>).

#### *Creative Arts Clubs:*

Nearly all schools also encourage the arts with clubs and extra-curricular programs. These are too numerous to cite individually, but they frequently link to nature for inspiration. Creative writing, fine art, photography, and even dance and theatre may find links to nature relevant.

### **School Gardens and Agriculture**

School gardens traditionally were limited to elementary-aged youth, but are creeping fervently into high school and college curriculums and clubs, and a few collaborate with Community Sustainable Agriculture. University of California Cooperative Extension (UCCE) Master Gardeners are mentors for eleven high school gardens (with others developing) (<http://www.mastergardenerssandiego.org/schools/schoolconsultanthm.php>).

Many Future Farmers of America (FFA) and Regional Occupational Programs (ROP) high school vocational curriculums integrate their crop and livestock training with practical gardening applications. Most every college has some form of garden, landscape, or habitat project, and a few programs use gardening to lure troubled teens toward healthier lifestyles.

#### *School Gardens:*

- A native plant garden at Montgomery High School in Chula Vista has National Wildlife Federation (NWF) Certification as a school habitat (<http://www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife/Schoolyard-Habitats.aspx>). A printable flyer displays their achievement (<http://nativeplants-geo.org/nativeflyer.pdf>).

- University City High School in San Diego has a nature champion in Lauriann Stanley, a psychology teacher (<http://teacherweb.com/CA/UniversityCityHighSchool/LauriannStanley/photo4.aspx>) who also advises the school garden club. This garden also gained NWF status as a habitat garden, and over the summer, they raised 25 Monarch butterflies (Stanley 2008).
- Mira Costa Community College in San Marcos has an active Horticulture club and school garden.
- Bishops School in La Jolla manages a school/community composting program.
- Other high school gardens exist at San Pasqual, Crawford, Escondido, San Dieguito, San Pasqual, and Serra High Schools.

*Farms and Orchards:*

- Terra Nova, a Morse High School Garden in Southeast San Diego, worked with the San Diego Roots Sustainable Food Project (<http://www.sandiegoroots.org/morse-garden/index.html>). A partnership with the San Diego Unified School District transformed a dirt lot into a 4000 square foot organic garden now managed by students.
- University of California San Diego's sustainable farm (<http://www.sandiegoroots.org/ucsd/index.html>) is also under the umbrella of the San Diego Roots Project.
- Just underway at this writing is Aztec Farms, an aspiring farming effort by faculty and students from SDSU. It originated on a piece of land at the Santa Margarita Ecological Reserve (<http://www.aztecfarms.org/>).
- Southwestern Community College boasts a fruit orchard, while it transitions a community partnership with the non-profit California Rare Fruit Growers Association as part of the new South Bay Botanic Garden.

*School Gardens for Therapy:*

San Pasqual Academy is a residential, alternative public high school. It uses the school farm to pull delinquent teens away from self-destructive habits. Phoenix House Academy, an alternative school located in rural Descanso, has a school garden that provides positive therapy for teens enrolled in their drug rehabilitation program.

*Future Farmers of America (FFA) and Regional Occupation Programs (ROP):*

These two programs reach students that traditional academic nature program may not. Rural students often have innate nature awareness, regardless of their curriculums. Perhaps this makes sense, as nature and country living seem inseparable. In the rural/urban transition zones, goats might be pets, wildfire is a reality, open space involves acres, and local families may still make a living off the land. From personal experience, it was not so long ago when cows roamed around the outfield at a Julian high school softball game, (although they now pasture elsewhere). Outlying school districts could bring fresh insight to SDCaN's varied outreach approaches, and any future planning should consider the unique needs and awareness of rural families and their schools.

- El Capitan High School in Lakeside has a "Roots and Shoots Club" (<http://class.guhisd.net/PREP4.php?EMP=T317>) which combines aspects of environmentalism and conservation with community service, and works closely with their active FFA association.
- One of the best of these integrated projects is through the San Diego Environmental Literacy in Action (SanDELA). Sheri Freeman, the developer of this project, is an outstanding agriculture teacher from Warner Springs High School ([http://www.lretprod.com/sandela/content/hs\\_warner\\_springs.asp](http://www.lretprod.com/sandela/content/hs_warner_springs.asp)). This project has it all; its five main curriculum areas are agriculture science, environmental science, Earth science, Native American history, and local California history. It has won awards and grants, and it continues to integrate with the local and regional community (SanDELA 2008).

### **School-based Outdoor Activities**

Some unique outside-classroom nature programs available to high school youth, most of them loosely connected with a school. This is a representative, but not comprehensive, list.

#### *Camp Pacific:*

The residential military Army-Navy prep school (boys only) in Carlsbad runs a co-ed three-week overnight summer program called Camp Pacific (Academy by the Sea 2006), open to non-students. The recreation ranges from the predictable ping-pong and volleyball to surfing lessons in the open ocean; all in all, it provides lessons in sportsmanship and team building, and apparently bolsters adolescent self-confidence. Although primarily a sports camp, the video makes it seem like great outdoor fun for the seventh to tenth graders it serves.

#### *Highlander Camp:*

Temporarily cancelled for 2010 due to budgetary issues, the summer Highlander Camp has been a structured ninth grade outdoor summer camp at Helix Charter School in La Mesa, designed to improve student self-esteem through team building exercises, beach and mountain experiences, and community service (Kirk 2010).

#### *High Tech High:*

This charter school has numerous, specialized, academically-oriented, nature awareness programs, and one of these won faculty member Jay Vavra, PhD a precedent setting "Environmental Educator of the Year" award for his outstanding bio-technology classes (Go-Green Environmental Educator 2008). With this project, students researched sea life and tides, and publishing articles about their findings, all without a textbook. At all their campuses, High Tech High continues to receive the highest praise for its innovative, hands-on approaches to learning, frequently using nature as a teaching platform.

#### *Ocean Discovery Institute:*

Ocean Leaders trains teens in advanced marine and watershed studies, based at Hoover High School in City Heights. "Ocean Leaders is a series of interconnected after-school and summer programs and support services for middle school, high school and college age youth. This initiative offers a pathway for underrepresented students to progress from secondary school through university to science and conservation careers" (Ocean Discovery Institute 2009).

#### *Poseidon Academy:*

Poseidon Academy is a marine science curriculum integrated with Mar Vista High School in Imperial Beach. It is "school within a school" and part of California Partnership Academies (Mattson 2010).

### **Public Nature Centers**

Local high schools use community-based nature centers for daytime field trips.

#### *Chula Vista Nature Center:*

This center currently serves over 144 schools in the San Diego region (Chula Vista Nature Center 2010). They have unique learning experiences tailored for grades K-12 on topics ranging from watershed ecology to habitat preservation, endangered species, and wildlife biology.

#### *Mission Trails Regional Park:*

Encompassing 5,800 acres of open space, Mission Trails offers ranger-guided school field trips and permits self-guided school activities. It has a reservation system for schools and provides K-12 educational learning packets for teacher use.

#### *San Diego Natural History Museum:*

Defying the traditional perception that museums are strictly indoor institutions, San Diego's Natural History Museum serves older students with its nature-based exhibits, films, and lectures, and offers



behind-the-scenes tours (SDNHM 2010a). Available from October to May, their docent-led Canyoneers (SDNHM 2010b) lead nature walks across a wide range of locations in the county.

*South Bay Botanic Garden (at Southwestern College):*

Only four acres, this brand new botanical garden achieved national recognition in 2008, although it has been a working part of the community college since 1974. There are plans to establish it as a community-centered educational resource for sustainable outdoor landscapes, supported by a partnership with the California Rare Fruit Growers Association. This garden has a formidable orchard and collections of appropriate landscape plants, and offers related educational lectures and tours. It is open to the public, although this garden is integral to the nursery technology curriculum offered at Southwestern College.

*Water Conservation Garden at Cuyamaca College:*

“The Garden” (as it is lovingly called in its e-mail), has launched a new Teen Corps Program. It aims to train teens to perform community service outreach at its fairs, festivals, and educational events. The Garden emphasizes messages about water conservation through smarter landscaping choices and wiser irrigation strategies.

**Community Service and Internships**

Virtually every high school and college in the county has a component for voluntary or obligatory community service. Some of the charter and private schools encourage internships, and a few require this as part of their required curriculum.

*Community Service:*

Sweetwater Union High School District in the South Bay has annual community service requirements for all high school students. Volunteering for a non-profit like SDCaN could satisfy this public service obligation (SUHSD 2009). Point Loma Nazarene University (PLNU), a faith-based institution, has a notable science curriculum coupled with a deep-seated belief in community connections. Students from PLNU recently helped with a beautification project in City Heights (PLNU 2010). Its students share a reverence for nature and the environment that seem to emanate deeply from their faith (PLNU 2010). For very divergent reasons, a common thread is evident. Many young people search to find relevant opportunities for fulfilling community service.

*Internships:*

Another avenue for high school and college community interactions are internships; the possibilities limited only by whoever influences the student and their chosen academic department. Many charter and private schools require that students propose a long-term senior project. In La Mesa, Helix Charter High School prods their students to reach out into the community to choose viable senior studies. These must be of sufficient duration to be challenging and to provide a worthwhile learning experience. Upon completion, students must prepare an oral narrative and written report, and present their findings to a panel of volunteer community professionals. Debi Byrd, the science department chairman/coordinator, is knowledgeable about what SDCaN is launching and would support student partnerships.

*Earned Recognitions:*

High-school aged Girl Scouts can earn the Gold Award, and can develop and implement a nature-oriented service project to benefit the community. Similarly, Boy Scouts can earn the Eagle Award, choosing a nature-oriented Eagle Scout Project.

**Future Connections to San Diego High Schools and Colleges**

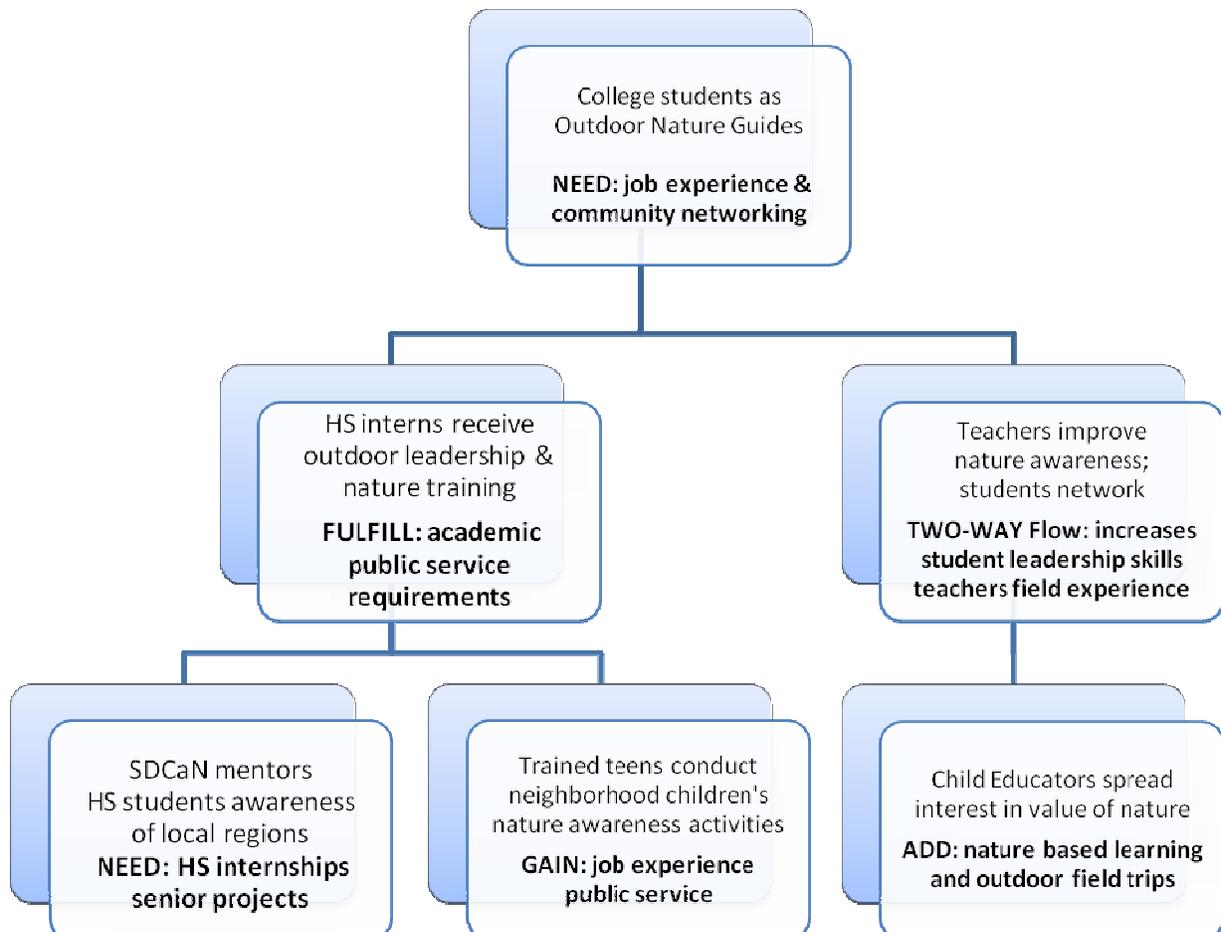
Although an extensive asset data sheet now exists, educators are extremely difficult to reach by phone or e-mail through their publicized school channels. Barraged with solicitations and overwhelmed with existing demands, most teachers acknowledged the reality that if a teacher does not know you, you may

not get a reply. At this point, a letter directed at a teacher or a club might elicit the best response, especially if linked to a concrete proposal, although patience and timing could be everything. Vague goals will not be effective to induce school responses and actions.

Despite the pitfalls, the internet remains a vital resource to derive additional information about existing school nature programs. Most high schools and colleges have websites, and many have complex and detailed pages about ever-changing staff, classes, sports, clubs, and extracurricular and community service opportunities. This is useful, since many clubs find new staff advisors or elect student representatives each year, so hard copies would quickly become obsolete. Outside of this, the best educational connections may be at events where teachers congregate for enrichment courses, although this could limit choices to faculty with existing nature concerns, knowledge, and privilege.

Social media remains a good method to reach students. Additionally, it appeared that most students are time-challenged and reluctant to follow through with correspondence without long-range planning unless it might benefit them directly. Not one student representative replied to initial inquiries. This is why tapping into school requirements by SDCaN seems viable. The good news, as evidenced through ample social media, is that the current generation is increasingly aware and cares deeply about the environment and the life held within it. There is a resurgence of environmental activism in today's young people that has not been seen for 40 years.

### Conceptual Flow Chart of SDCaN “Win-Win” School Outreach



## Opportunities for Action

Most of San Diego's academic institutions were open to possibilities, but lack energy to initiate any new actions or projects. However, with adequate encouragement and support from SDCaN, local colleges and high schools might offer unlimited opportunities to increase youth and nature-based opportunities for students, families, and their respective communities.

A trickle-down effect from college to kindergarten could work to everyone's advantage and magnify nature awareness for everyone. An ideal scenario might be to tap into college groups trained in outdoor education, nature awareness, and leadership skills. With and their need for job experience and internships, they could be encouraged to organize useful internships for high school teens. These teens might subsequently lead younger children's nature hikes, outings, and educational trips.

Charter and private schools are untapped. Highly motivated Gifted and Talented Education and seminar students at Patrick Henry High (near Mission Trails Park) have a comprehensive and interdisciplinary curriculum. Lara Dickens, their Environmental Club faculty advisor, totally supports SDCaN's ambitions. Similar schools with easy proximity to an open space areas (like Mission Trails Regional Park) could implement similar programs.

Other opportunities are encouraging School Science Fair projects relating to nature, giving awards at the Science Fair from SDCaN, promoting and mentoring independent studies, or offering student internships with SDCaN. High schools in low-achieving regions that have taken first steps with nature activities (like Montgomery High's native plant garden) would be optimum targets for SDCaN community outreach efforts.

Staging nature photography, wildlife art, and even creative writing contests about the natural environment are also avenues where student and faculty interest have an unusually strong base of support. There is ample evidence at these grade levels that some of the finest appreciators of nature are not necessarily scientists, but artists. The upcoming Sustain La Mesa Environmental Awareness Festival on Oct 9, 2010 has an Environmental Literacy and Art Contest for K-12, called "Our Planet, Our Home" (<http://www.cityoflamesa.com/CurrentEvents.aspx?EID=1804>).

## Conclusions

Although the response rate from direct teacher inquiry remained low, a persistent optimism emanated via school club websites and revealed both student and teacher interest in the benefits of interaction with nature. Several retired teachers also expressed interest for SDCaN's goals and indicated they could become possible resources in the future. This group might require more investigation. Regardless, today's youth are tomorrow's environmental researchers, educators, and caretakers, and we need to connect.

This asset inventory concluded that for most high schools and colleges, teachers are generally too busy to follow through on their own, despite acknowledgment of the intrinsic value of the SDCaN's ideas. However, if something concrete is proposed and teachers or students find something to be mutually beneficial to meet school requirements, this could change rapidly. As a result, this initial inventory of schools, clubs, and programs may prove a useful first step. As ideas for connection mature, later on schools may take the bait, *and really do some fishing*.

## References Cited

Academy by the Sea. 2006. *Camp Pacific*. Retrieved May 28, 2010, from Academy by the Sea: <http://www.abts.com/camp/>.

- Children and Nature Network. 2008. *Building the Children & Nature Network Movement from the Ground Up*.
- Chula Vista Nature Center. 2010. School Programs. Retrieved June 2010, from Chula Vista Nature Center: <http://www.chulavistanaturecenter.org/programs/pSchoolsList.html>.
- Go-Green Environmental Educator. 2008. Jan 20. *San Diego Insider*. San Diego, CA: High Tech Tech – Projects.
- Herbert Hoover High School. 2010. *After-school Program Coordinator Melissa Katigbak*. Retrieved June 28, 2010, from Herbert Hoover High School - Aquatic Adventures: Ocean Leader: [http://www.hoovercardinals.org/apps/pages/index.jsp?uREC\\_ID=136979&type=u](http://www.hoovercardinals.org/apps/pages/index.jsp?uREC_ID=136979&type=u).
- Kirk, J. 2010. *Highlander Camp*. [www.highlandercamp.helix.groupfusion.net/](http://www.highlandercamp.helix.groupfusion.net/) Retrieved May 28, 2010, from Helix Charter High School.
- Knufken, H. 2008. *SELCC - Conservancy Education Portal*. Retrieved June 17, 2010, from San Elijo Lagoon Conservancy: <http://www.sanelijo.org/education/index.html>.
- Lee, P. 2006. September 25. *College application padding problem*. Retrieved May 27, 2010, from the Paly Voice: <http://voice.paly.net/node/17553>.
- Mattson, Christopher. 2010. June 9. *California Partnership Academies (CPA)*. Retrieved June 23, 2010, from California Department of Education: <http://www.cde.ca.gov/ci/gc/hs/cpagen.asp>.
- Ocean Discovery Institute. 2009. *Ocean Leaders*. Retrieved June 2010, from Ocean Discovery Institute: <http://www.oceandiscoveryinstitute.org/ocean-science-leaders.php>.
- PLNU. 2010. *SEA-Students for Environmental Awareness*. Retrieved May 27, 2010, from Point Loma Nazarene University: <http://www.pointloma.edu/CampusLife/ClubsSocieties.htm>.
- SanDELA. 2008. *Warner Springs Outdoor Academic Experience - Warner High School, Warner, USD*. Retrieved May 28, 2010, from SanDELA - San Diego Environmental Literacy in Action: [http://www.lretprod.com/sandela/content/hs\\_warner\\_springs.asp](http://www.lretprod.com/sandela/content/hs_warner_springs.asp).
- SDNHM. 2010a. *SDNHM - School programs*. Retrieved March 11, 2010, from San Diego Natural History Museum: [http://www.sdnhm.org/education/teachers/7\\_12.html](http://www.sdnhm.org/education/teachers/7_12.html).
- SDNHM. 2010b. *Volunteers: Canyoneers Guided Nature Walks*. Retrieved June 13, 2010, from San Diego Natural History Museum: <http://www.sdnhm.org/canyoneers/index.html>.
- Stanley, LauriAnn. 2008. *The Garden Project*. Retrieved Feb 2010, from University City High School: <http://teacherweb.com/CA/UniversityCityHighSchool/LauriannStanley/photo4.aspx>.
- SUHSD. 2009. January. *Community Service Requirement: A Guide for School Personnel*. Retrieved May 2010, from SUHSD - Sweetwater Union High School District: [http://www.suhsd.k12.ca.us/orh/pdfs/suhsd\\_community-service\\_requirement.pdf](http://www.suhsd.k12.ca.us/orh/pdfs/suhsd_community-service_requirement.pdf).
- The Water Conservation Garden. 2010. *Teen Corps Program*. Retrieved June 28, 2010, from Water Conservation Garden at Cuyamaca College: <http://www.thegarden.org/volunteer/teen-corps-program.html>.
- U.S Environmental Protection Agency. 2002. *Community Culture and the Environment: A Guide to Understanding a Sense of Place*.
- South Bay Botanic Garden. 2010. *Walks and Talks*. Retrieved July 1, 2010, from South Bay Botanic Garden: <http://southbaybotanicgarden.org/index.php/index.php/index.php/index.php/index.php/events>.