Development of a strategic plan for the Highland Environmental Learning Center

Jessica Ann Sutorus

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DEVELOPMENT OF A STRATEGIC PLAN FOR THE
HIGHLAND ENVIRONMENTAL LEARNING CENTER

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Environmental Education

by
Jessica Ann Sutorus
December 2006
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Approved by:

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Dr. Darleen Stoner, First Reader

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Dr. Randall Wright, Second Reader

Nov. 14, 2006
ABSTRACT

In 2004, the Highland Library was awarded California State Library bond money to construct the first, completely integrated, library and environmental learning center in the United States. The facility would not only be the first of its kind for environmental learning, but be designed and constructed as a "green" building. This project focuses on the development of a strategic plan to justify the learning center for the future and to serve as a guideline for programming, budgeting, promotion, and staffing. The strategic plan supports the center's goal as a place to foster environmental sensitivity and environmentally responsible citizenship.
ACKNOWLEDGMENTS

I would like to acknowledge some very important people who have accompanied me during the journey on which this work is based. First, I must recognize my friend, mentor, and supervisor, Pete Deyo. Pete inspired me to pursue my master's degree and encouraged me to venture into the world of environmental education. His guidance has molded me into what I believe is a person who can change the world. The second person is Dr. Darleen Stoner. Dr. Stoner, my faculty advisor and teacher, is coordinator of the Master's Degree Program in Environmental Education at California State University, San Bernardino. Her teachings have heightened my level of sensitivity to environmental issues and the living world and she has guided me to accomplish this paper. Dr. Randall Wright is another person that I want to acknowledge. Dr. Wright graciously volunteered his time and expertise to add value to this project.

As a final point I would like to thank my hardworking staff, Lauren Bergh, Chris Kirkland, and Aimee Roach, for taking care of all the daily tasks around the Center while I was researching and compiling this work.
DEDICATION

This project is dedicated to my husband Steve Sutorus, the love of my life; our children, Lucas and Aurora; my parents, William J. Alves and Elena Maria Alves; and my mother-in-law and father in-law, Chuck and Barbara Sutorus. Only with their help, love, and support was I able to accomplish this.
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CHAPTER ONE

BACKGROUND

If you are thinking one year ahead, you plant rice. If you are thinking 20 years ahead, you plant trees. If you are thinking 100 years ahead, you educate people. (Chinese Proverb)

Introduction

I began my journey as an environmental educator at the Highland Library, which presently includes some allocated space for environmental learning. A year earlier, my would-be boss, mentor, friend, Pete Deyo had written what he thought was a vision to produce the first environmental learning specialty center in the San Bernardino County Library system. The dream became a reality in 2004 when the Highland Library was awarded bond money from the California State Library to construct the first library and completely integrated environmental learning center in the United States. The facility would not only be the first of its kind for environmental learning, but also be designed and constructed as a "green" building. When operating, the building will exceed Title 24 energy specifications and meet the silver rating
certification.

Now that the Highland Environmental Learning Center (HELC) had been funded and designed, it was necessary to develop a strategic plan for the Center. The strategic plan was developed based on investigating other nature centers, interpretive centers, and environmental learning centers to help define the purpose and mission for environmental education in a non-formal setting. This plan would justify and detail the proper usage of the learning center for the future. This strategic plan would be a guideline for programming and staffing for the Highland Environmental Learning Center.

Purpose of the Project

The purpose of this project was to develop the Highland Environmental Learning Center Strategic Plan. To accomplish this task I researched the establishment of nature centers, interpretive centers and environmental learning centers across the country. A major objective of this project was to illustrate, through proper strategic planning, that nature centers and environmental learning centers could meet goals of the field of environmental education when associated with a library. By examining the
physical features and necessary planning for these types of centers I could determine if the goals of environmental education could be met in the Highland Environmental Learning Center.

I needed to consider the guidelines of environmental education which have been re-written over the years. Many educators have confused the guidelines by trying to group environmental education with conservation education or outdoor education (Disinger, 2001, p. 18-22). Ultimately, environmental education evolved to have generally accepted guidelines that were developed from The Tbilisi Conference in 1977:

...to foster clear awareness of, and concern about economic, social, political and ecological interdependence in urban and rural areas; to provide every person with opportunities to acquire the knowledge, values, attitudes, commitments and skills needed to protect and improve the environment; to create new patterns of behavior of individuals, groups and society as a whole towards the environment. (in Simmons, 2001, p. 343)

With a comprehensive strategic plan in place, an environmental learning center and accompanying programming can uphold the guidelines accepted at The Tbilisi
Conference. Pete Deyo, founder and director of the Highland Environmental Learning Center will ultimately decide which components of the strategic plan, as presented in Appendix A of this project, will be implemented.

Context of the Problem

The context of the problem was to address the need for a strategic plan in order to guide future decisions in implementing program guidelines to teach environmental education. Without a strategic plan, the Highland Environmental Learning Center would lack the guidelines to establish a program basis to meet the goal of environmental literate citizenry in the community.

Limitations and Delimitations

During the development of the project, limitations and delimitations were noted. The limitations and delimitations are as follows.

Limitation

The following limitation applies to the project: lack of comparables. The Highland Environmental Learning Center and Library was designed to be the first of its kind in the United States because of its association inside a
public library, and therefore lacks another center for comparison.

**Delimitation**

The following delimitation applies to the project: the Highland Environmental Learning Center strategic plan will be a model for future center and library combinations across the United States in the field of environmental education.

**Organization of the Project**

The rationale of the project was divided into four chapters. Chapter One provides an introduction to the context of the problem, purpose of the project, significance of the project, and limitations and delimitations. Chapter Two develops the framework for a rationale for the strategic plan based on a review of relevant literature. Chapter Three documents the steps used in developing the project. Chapter Four presents the implication for education. The Appendices for the project consist of Appendix A: Strategic Plan for the Highland Environmental Learning Center; Appendix B: Budget Proposal; Appendix C: ABC's of the Highland Environmental Children's Programming; and Appendix D: Proposed Critter Assignments.
CHAPTER TWO
RATIONALE FOR STRATEGIC PLAN

Introduction

Chapter Two consists of a discussion of the relevant literature pertaining to the development of the Highland Environmental Learning Center strategic plan and its pertinence to the development of its mission statement. The topics include the definition of environmental education, the history of environmental learning centers and nature centers, and the value of urban nature education.

Definition of Environmental Education

Defining environmental education as it pertains to the development of a rationale for the Highland strategic plan is important because it tells the history of environmental education over the past 40 years.

The definition of environmental education has been a problem from the beginning. "Through the years, it has been characterized as many things, from environmental science to environmental activism, from tree hugging to tree farming, from an elitist movement to a populist cause" (Heimlich, 2002, p. 3). As environmental issues have evolved so has the definition of environmental
education. "For some, environmental education is a dimension of the environmental movement that gained momentum on the first Earth Day celebrated April 22, 1970" (Heimlich & Daudi, 2002, p. 13). For others "environmental education is trandisciplinary-based teaching and experiential learning, learner engagement with the natural world, and critical thinking" (Heimlich, 2002, p. 25). This is the common point of view for environmental educators today. It will surely evolve as it has in the past bridging conservation education and outdoor education.

Even with many different descriptions of environmental education a definition which has stood the test of time (Heimlich & Daudi, 2002, p. 13-14) was developed by William Stapp et al. in 1969. Stapp's definition stated, "Environmental education is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to solve these problems, and motivated to work towards their solution" (Stapp et al., 2001, p. 34). This is a widely accepted definition in the field of environmental education, but it did not come without criticism. Some felt environmental education failed in its creation because "it defined its objective so broadly that
almost anything could fit somewhere within it and it accepted the funds and sponsorships available from the cornucopian agencies and industries that helped create the problems in the first place” (Matre, 1990, p. 47). Even with this criticism, time has proven that Stapp’s definition is still the most widely accepted.

The Highland Environmental Learning Center strategic plan developed its mission statement based on Stapp’s definition (Stapp et al., 2001, p. 34) for environmental education (see Appendix A, Chapter 1). In the development of the mission statement the famous words of David W. Orr, “all education is environmental education” (1994, p. 12) is reflected in the writing of the strategic plan.

History of Environmental Learning Centers and Nature Centers

To develop a strategic plan for the Highland Environmental Learning Center it was important to look at the history of the development of nature centers. By investigating the history and development of nature centers it was expected to see what the future may hold for the Highland Environmental Learning Center.

“The best centers expand our vision and offer insights into our deep connections with the earth and each other” (Gross & Zimmerman, 2002, p. 3). These connections
are another aspiration of the Highland Environmental Learning Center. Building connections to the earth and awareness leading toward environmental sensitivity will further the mission statement of the Highland Environmental Learning Center’s strategic plan. Reviewing the literature of the history of environmental learning centers and nature centers will also aid the development of the center.

In 1926 the pioneer nature center was developed north of New York City. It was named the Trailside Museum at Bear Mountain Park on the Appalachian Trail (Gross & Zimmerman, 2002, p. 30). The center was developed from the vision of William H. Carr and Benjamin Hyde. Benjamin Hyde was a national scout leader who previously had noticed a small exhibit which William H. Carr had at Camp Mattincoc in Bear Mountain. In the beginning the exhibit only consisted of a few mini-dioramas, live plants, and animals. As time passed the mini-nature center at Big Bear Mountain developed into what “was a prototype for modern nature centers” (Gross & Zimmerman, 2002, p. 31).

William H. Carr became the director of the Trailside Museum and developed the nature center’s mission statement as follows: “1) encourage trail users to observe with understanding, 2) help visitors recreate intelligently,
and 3) stimulate people to apply their knowledge to the advancement of conservation in their own community" (Gross & Zimmerman, 2002, p. 31). From the first nature center's mission statement the beginning roots of environmental education were being developed. The effectiveness of this mission statement is important for allowing visitors to develop locus of control.

William H. Carr's Trailside Museum at Bear Mountain Park was the first to pave the way for other centers, but after World War II a new type of nature center began to appear all over the eastern United States. "A movement mushroomed in response to the urban sprawl that was engulfing the countryside. The East Coast was becoming one continuous mass of development. Many felt the loss of nature was diminishing the human spirit" (Gross & Zimmerman, 2002, p. 34). The solution to this problem was the creation of urban nature centers.

Urban nature centers were developed by setting aside land or parcels of nature that would be protected from development. With the leadership from Richard Pough, Director of Conservation for the American Museum of Natural History, the formation of the Open Space Action Committee was created (Gross & Zimmerman, 2002, p. 34). This committee was able to save several parcels of land
across the United States which would later become nature centers.

A visionary by the name of Arad Matthiessen believed that these urban nature centers should be established nationwide. To aid him in this task, Lawrence S. Rockefeller agreed "to lend his support to a national organization that would promote nature centers. This pioneer group was Nature Centers for Young America, Inc" (Gross & Zimmerman, 2002, p. 34). By 1960 Nature Centers for Young America, Inc. merged with the National Audubon Society which at the time had a nature center division.

As a result of the consolidation of the Nature Center for Young America, Inc. and the National Audubon Society, nature centers across the United States have evolved. These centers not only provide outdoor education but incorporate nature centers into an urban setting. Urban nature centers are built in a modern day urban environment, many times in the very center of suburbia, where very little is left of the native habitat.

The Highland Environmental Learning Center would be the latest example of urban nature centers. The Center will not only have energy efficient building standards, but will set an example of green buildings constructed and funded by the State of California. It will bring
environmental education to a place were many local residents would not have thought a nature center could be located. It will be built in the middle of suburbia, across the street from a public elementary school, and in the middle of a residential neighborhood.

The Value of Urban Nature Education

The value of urban nature education is important because the majority of the population in the service area of the Highland Environmental Learning Center live in an urban environment. Even though an urban environment is different than living in the woods or in the mountains, it can still be considered part of the natural world. According to Kahn, if humans are part of the natural world and human well-being is as an environmental consideration for living (Kahn, 2001, p. 212), then urban nature education is valuable to humans. Humans are part of the natural world even if they have never seen anything but concrete and human made parks.

Children share a sense of wonder of the natural world and will only learn to value the natural world if they have had the opportunity to process it through a multi-sensory experience. To facilitate this experience, an urban nature education program will be developed for
the rooftop garden component of the Highland Environmental Learning Center.

The rooftop garden will excite the visitor's curiosity about urban nature education and develop wonder for non-traditional nature education. For young visitors, the "environment of play, the juvenile home range, is the gestalt and creative focus of the face or matrix of nature" (Shepard, 1982, p. 126).

Reconnecting with nature through urban nature education "reverses our destructive process...and it creates tangible connections with nature and an environmentally responsible psychology that enables us to unlearn our destructive personal, social, and environmental ways" (Cohen, 1997, p. 68). Through urban nature education, a new era of environmental learning will take place in a local community without traveling out of town. This will allow visitors to reconnect with nature in their own backyards.

The manner in which humans continue to live on the earth is destructive. "We are losing the epic struggle to preserve the habitability of the Earth...the overwhelming fact is that virtually all important ecological indicators show decline" (Orr, 2004, p. 20). Introducing urban nature education will reach a large population of suburbia that
conceivably will begin to recognize the destructive ways that people have impacted the earth.

Without teaching urban nature education, a large number of people will continue to be environmentally illiterate. Those who are environmentally literate "believe nature and ecosystems to be worth preserving and that this is a matter of obligation, spirit, true economy, and common sense" (Orr, 2004, p. 21). It is the goal of the Highland Environmental Learning Center to bring all people to a point of environmental literacy.

In the development of the rationale for the Highland Environmental Learning Center strategic plan, the value of urban nature education is an important part of the goals and objectives to bring environmental literacy to the City of Highland. As environmental educators, it is "our job to educate, inform accurately, and help the public understand how to see the truth and discern large patterns of cause and effect" (Orr, 2004, p. 134).

Frank Golley has documented that urban nature education should be valued and even have some moral consideration in the everyday decisions humanity makes. "I find the environment to be comfortable, welcoming, and supportive of humans...clearly, we must give more people a positive experience with nature so that they see it as
worthy of their moral consideration" (Golley, 1998, p. 236-237).

Urban nature education can also help create a more ecologically aware citizen. The ecologically aware citizen takes responsibility for the place where he or she lives, understands the importance of making collective decisions regarding the commons, seeks to contribute to the common good, identifies with bioregions and ecosystems rather than obsolete nation-states or transnational corporations, considers the wider impact of his or her actions, is committed to mutual and collaborative community building, observes the flow of power in controversial issues, attends to the quality of interpersonal relationships in political discourse, and acts according to his or her conviction (Thomashow, 1996, p. 139).

Ecologically aware citizens with the knowledge of urban nature education can develop skills that will enable them to compost, maintain a community garden, and see that nature can be created in their own backyards, not just in the traditional mountain settings. Urban nature education will help reinforce the connection and dependency we have with nature. "Nature provides us with a steady supply of
the basic requirements for life. We need energy for heat and mobility, wood for housing and paper products, and nutritious food and clean water for healthy living" (Wackernagel & Rees, 1996, p. 7). Without these things we would perish.

Teaching urban nature education is as simple as learning to live sustainably and recognizing nature even in a city environment. "If we are to live sustainably, we must ensure that we use the essential products and processes of nature no more quickly than they can be renewed, and that we discharge wastes no more quickly than they can be absorbed" (Wackernagel & Rees, 1996, p. 7). Currently, as a global economy, "the economy's growing demands on nature endanger the planet's ability to support life on a much more fundamental level" (Wackernagel & Rees, 1996, p. 8). This makes it imperative to value urban nature education and take the responsibility to be ecologically conscious.
CHAPTER THREE

METHODODOLOGY

Introduction

Chapter Three documents the steps used in developing the project. Specifically, the project was to develop a rationale for, and the completion of, a strategic plan for the Highland Environmental Learning Center. The research reviewed important literature to understand how environmental learning centers and nature centers were managed in the past and present.

Development

The rationale for the Highland Environmental Learning Center Strategic Plan was developed through researching how urban environmental learning centers and nature centers came into existence, and the importance of urban nature education in the development of programming for the Center.

The Highland Environmental Strategic Plan was developed based on a framework created by Tim Merriman and Lisa Brochu in Management of Interpretive Sites: Developing Sustainable Operations Through Effective Leadership (2005). The framework helped develop topic headings for chapters in the strategic plan.
The other appendices are supportive of the strategic plan. These include Appendix B: Highland Library and Environmental Learning Center 3-Year Approved Budget; Appendix C: ABC's of the Highland Environmental Children's programming; and Appendix D; Proposed Critter Assignments.

The appendices are followed by the references.
CHAPTER FOUR

IMPLICATION FOR EDUCATION

Upon the completion of the Highland Environmental Learning Center strategic plan, it became apparent that adults and children might benefit greatly from this new source of environmental education. The Highland Environmental Learning Center will be a model for environmental learning in an urban setting. Its location will be in the middle of the City of Highland with schools in close proximity, located in both the Redlands Unified School District and San Bernardino City Unified School District. It will have strong leadership, well trained staff, and a strategic plan that reflects the environmental needs and wants of the community through comprehensive goals and objectives (See Appendix A, Chapter 3).

The Highland Environmental Learning Center will be a place to foster environmental sensitivity and excite minds of all ages to be critical thinkers and environmentally responsible citizens. To accomplish these goals, school field trips will be available free of charge and programming for all ages will be scheduled on a regular basis. In addition teacher training workshops in
environmental education will be available. Budgeting and staffing are also important areas of focus in the strategic plan. The facility, currently under construction, is expected to be completed in the fall of 2007. An approved three-year budget has already been created to support the center until 2009 (See Appendix B; Highland Library and Environmental learning Center 3-Year Approved Budget). Before the grand opening, additional staff will need to be hired and trained in environmental education. All programming will directly depend on the availability of qualified staff.

Interpretive signage and exhibits are other important factors revealed by the strategic plan. Interpretive signage and interpretive exhibits engage the visitor to want to learn more about the topic. By producing signage and exhibits with interpretive principles in mind, visitors will be more likely to visit the center in the future.

In order to ensure that the Highland Environmental Learning Center is meeting the needs and wants of the community, a comprehensive evaluation plan was incorporated into the strategic plan (See Appendix A, Chapter 13). The evaluation plan will be used as a source of guidance to make changes to programs and exhibits.
APPENDIX A

STRATEGIC PLAN FOR THE HIGHLAND ENVIRONMENTAL LEARNING CENTER
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CHAPTER ONE
STRATEGIC PLAN INTRODUCTION

Vision

The Highland Environmental Learning Center will provide a learning environment that will raise the level of environmental literacy among the general population of the Highland Branch Library’s service area. A major goal of the Center will be to meet the public’s needs for critical information related to current environmental topics. The Center will encompass outdoor exhibits and displays, gardening programs and activities, environmental talks and demonstrations, and programs on nature encounters. The Environmental Learning Center is being established as a response from parents and teachers in the community who have expressed interest in resources, programs, materials, and services in the field of environmental studies. All of the resources of the San Bernardino County library system will provide back up information on environmental studies and environmental education.

Mission

The mission of the Highland Environmental Learning Center is to advance environmentally literate citizenry to
gain environmental quality in the Inland Empire. The environmental education provided is intended to promote awareness, knowledge, skill building and ownership for humans to accept themselves as part of nature.

Philosophy

The Highland Environmental Learning Center is based on the following philosophy: to serve the people as a residential center for environmental studies, literacy and education. This philosophy means convening institutes, workshops, and symposia for formal and non-formal educators who are concerned with the development of concepts that enhance a sanative environment. The Center will develop and implement education programs for use in pre-kindergarten through high school, college and university, as well as adult continuing education. The Center will establish and maintain a network of educators and education resources concerned with the development of a concept that maintains a healthful and healing environment. The Center will also establish diverse reports, newsletters, handouts, and units of study concerned with the development of a concept of conservation of natural resources.
Stakeholders

The Highland Environmental Learning Center has a vested interest to bring environmental literacy to the general population though the San Bernardino County Library system. The City of Highland and San Bernardino County Library have frequently convened meetings with the following project stakeholders to evaluate the needs of the community and opportunities for developing responsive resources: leaders or representatives of the community of Highland; professionals in government agencies or businesses; supporters willing to oppose opposition; financial and technical resource contributors; and facilitators of internal communication and problem solving.

Market Segment

The Highland Environmental Learning Center will be marketed by publicizing its accomplishments, products, services and all events in which it participates. Forms of publicity could be, but not limited, to web sites, press releases, environmental list-serves through the Network for Environmental Science Teaching (NEST) or the California Regional Environmental Education Community (CREEC), the Highland Environmental Education Coalition.
website www.h-e-e-c.org, and the San Bernardino County Library website www.sbcounty.gov/library/home. Flyers, bookmarks and posters will also be created with support from the San Bernardino County Library Public Relations Department.

Demographics

Table 1 shows the city population and growth from 1970 through 2020 (projected). As the population grows, the Highland Environmental Learning Center will adapt its programming to demographic changes.

Table 1

![Population Growth 1970 - 2020](image)

The population increases in the City of Highland are as follows: 1970 through 1980 = 83%; 1980 through 1990 = 62%;
1990 through 2000 = 19%; 2000 through 2020 = 59%;
(“Highland Demographics,” 2006).
CHAPTER TWO
ORGANIZATIONAL GOALS AND OBJECTIVES

Responsibilities

The resources, programs, materials and services of the Highland Environmental Learning Center will be reflective of the interests of parents and teachers in the community. Specialized electronic and print resources, as well as services of interest to those studying the environment, will be provided. Computer workstations will be available to provide access to a full range of informational resources. A variety of materials that support the objectives of environmental education, including educational games, an environmental discovery room, dynamic interactive environmental exhibits, environmental reference and research materials, and computer simulations, will be provided. The Center will also have outdoor areas designed for focused study such as an aviary, butterfly habitat, demonstration gardens, and a wet lab available for use of teachers and students.

Guiding Principles

The management plan for the Highland Environmental Learning Center with its guiding principles will be utilized to establish policies and procedures to ensure the success
of the programming for the public. The principles are based on the guidelines established by the North American Association for Environmental Education (NAAEE) to promote excellence in environmental education.

Seven guiding principles for the Highland Environmental Learning Center Strategic Plan are as follows:

A) Focus on People: to enable learners to have a role in planning their own learning experience at the Center. Opportunities will be provided for learners to make decisions and to accept the consequences from those decisions. Exhibits and on-site staff will aid the learner to discover the symptoms and possible causes of environmental problems. The focus will be on the best way to present information to the people and to allow them to consider their ever-changing needs and wants in regards to the environment.

B) Engage all parts of society: to provide information on local, national, regional and international environmental issues. The learners will receive insights into environmental conditions in local and other geographical
areas. Non-biased information will be emphasized.

C) Emphasize education at all levels: to emphasize education from pre-school through adult. A learning environment for environmental sensitivity, knowledge, and problem solving will be supported.

D) Sensory and experiential involvement: to facilitate sensory and experiential involvement with dynamic static and live exhibits. Displays will be supportive of critical thinking and investigation.

E) Focus on environmental literacy: to focus on environmental literacy as a fundamental understanding of the systems of the natural world, the relationships and interactions between living and non-living environment, and the ability to deal sensibly with problems that involve scientific evidence and uncertainty, as well as economic, aesthetic, and ethical considerations. This will be achieved by keeping in mind the following the goals from The Tbilisi Declaration:
• To foster clear awareness of, and concern about, economic, social, political and ecological interdependence in urban and rural areas

• To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment

• To create new patterns of behavior of individuals, groups, and society as a whole towards the environment (Tbilisi Declaration, 2001, p. 15)

F) Maintain integrity, balance, and credibility: to maintain integrity, balance and credibility by measuring program and personal performance. The Highland Environmental Learning Center staff will have annual training in the newest techniques of environmental education including, but not limited to, interpretive training, docent training, animal care, maintenance and enrichment, demonstration gardening, alternative energies, global warming, energy conservation, water conservation and pollution, land use, waste management, population education,
astronomy, air quality, computer technologies, green buildings, and habitat ecosystems and diversity.

G) Build and maintain partnerships: to build partnerships in the community and beyond. Partnerships will be maintained with the Wildlands Conservancy, San Bernardino and Riverside Superintendent of Schools, Inland Empire Resource Conservation District, California Conservation Corps, University of California Extension, Cucamonga Valley Water District, Santa Ana Watershed Project Authority, California Department of Fish and Game, California Department of Fire, San Bernardino County Storm Water Prevention Program, San Manuel Band of Mission Indians, East Valley Water District, San Bernardino City Water Department, Corps of Environmental Professionals, National Resource Conservation Service (NRCS), California Regional Environmental Education Community (CREEC), Network for Environmental Science Teaching (NEST), Inland Area Environmental Education
Committee (IAEEC), California ReLeaf, and Green Schools.
CHAPTER THREE

STRATEGIES

To achieve the vision and mission of the Highland Environmental Learning Center, the leadership of the Highland Environmental Learning Center has established six strategies along with accompanying five-year goals. These strategy focus areas are: Urban Nature Education, Resource Conservation, Communications and Outreach, Capacity Building, and Financial Resource Development. These strategies will be implemented in 2007 with the opening of the new facility and continue through 2011. These strategies should be updated every five years with addendums to the Highland Environmental Learning Center Strategic Plan.

Urban Nature Education Strategies

Urban nature education strategies will reflect, but not be limited to, Anna Botsford Comstock’s Handbook of Nature Study (1967). Professional development, at least once a year, for staff will be mandatory to keep up-to-date with the latest environmental education materials and resources. Urban nature education will be available for all ages preschool to adult.
A) Urban nature education for preschool and family: Environmental story hours will be conducted monthly along with additional scheduled family nature education program days (see Appendix C; ABC’s of the Highland Environmental Children’s Programming). Both programs will consist of a story or theatrical performance along with hands-on activities.

B) Urban nature education for young adults: The Highland Environmental learning Center will facilitate a young adult leadership club for local teens. The club will be mentored by the Environmental Learning Center staff.

C) Urban nature education for adults: Specific adult programs on nature will be scheduled along with a monthly environmental movie night. A round table meeting will be scheduled bi-annually to have a forum for local concerns in the environment. Interpretive talks for adults based on the flora and fauna of the Highland Environmental Learning Center rooftop garden will also be scheduled weekly.

D) Urban nature education for local schools: The Highland Environmental Learning Center will
provide field trip opportunities for all grade levels.

E) Urban nature education for educators: The Highland Environmental Learning Center will provide teacher training workshops. These workshops could be, but is not limited to, Population Connection, Project Learning Tree, Project POW (Planning of Wetlands), Project WOW (Wonders of Wetlands), Waste in Place, Project WILD, Project WET (Water Education for Teachers), Discover a Watershed, Our Wetlands our World, and Teaching Green.

Urban Nature Education Five-Year Goals

2007

Goal 1: Establish an urban nature education yearly calendar for children, family and adult programming.

Goal 2: Train staff in interpretation

2008

Goal 1: Administer surveys to children, family and adult after programs.

Goal 2: Tabulate surveys to improve programming for next year.
Goal 3: Facilitate teacher workshops on various environmental curriculums.

2009

Goal 1: Take the monthly environmental story hour to local preschools.
Goal 2: Form a young adult community group.
Goal 3: Facilitate a monthly nature poetry reading.

2010

Goal 1: Implement an annual eco art exhibition.
Goal 2: Implement an annual eco author book signing and wine and cheese gala.
Goal 3: Plan an amateur astronomy club.

2011

Goal 1: Schedule regular school field trips to the learning center.
Goal 2: Have bi-annual nature field trips with local interpreters.

Resource Conservation Strategy

Recycling programs to reduce waste will be implemented in the Highland Environmental Learning Center. Educational outreach to the public about resource conservation will be available through exhibits, pamphlet materials, and programs. Partnerships with the City of
Highland, Green Schools, Burtec and Jack's Disposal, and San Bernadino County Household Hazardous Waste department will be necessary to accomplish the goals set forth.

Resource Conservation Five-Year Goals

2007

Goal 1: Advertise and update recycling programs in place for inkjets, toner and cell phones.

Goal 2: Establish a recycling program for paper and cardboard for the Highland Library and Environmental Learning Center.

Goal 3: Partner with Green Schools to sponsor an energy saving light bulb exchange.

2008

Goal 1: Expand paper recycling to the 13 branch San Bernadino County library system.

Goal 2: Partner with the San Bernadino County Household Hazardous Waste department for technology waste disposal.

Goal 3: Create a float for The City of Highland’s 4th of July parade on recycling.

2009

Goal 1: Host a resource conservation fair that will demonstrate ways to conserve natural resources.
Goal 2: Create a resource conservation program for the public.
Goal 3: Create a teacher lesson plan for the classroom on resource conservation

2010
Goal 1: Develop a resource conservation static exhibit.
Goal 2: Encourage the youth action to schedule Highland cleanup days throughout the year.
Goal 3: Establish a community-based clean up restoration and education program

2011
Goal 1: Partner with the City of Highland to join Keep America Beautiful for Keep Highland Beautiful.
Goal 2: Sponsor a hike on community trails in the City of Highland.
Goal 3: Establish a no motor vehicle day in the City of Highland.

Communications and Outreach Strategies

Communication and outreach will be a vital part of the Highland Environmental Learning Center. Communication and outreach will be necessary to facilitate partnerships and the expansion of programming to the public. For example a merit badge for Boy Scouts and Girl Scouts
completing animal science, archaeology, bird studying, environmental science, energy, fish and wildlife management, forestry, gardening, insect study, mammal study, nature study, plant science, reptile and amphibian study, soil and water conservation, weather, ecology, eco-action, wildlife, and pet care, might be completed in conjunction with activities offered at the center.

Communications and Outreach Five-Year Goals

2007

Goal 1: Establish a committee with the Highland Environmental Education Coalition to do a “Green Eco Home Challenge.”

Goal 2: Continually update the Highland Environmental Education Coalition website for current information and schedule of events (www.h-e-e-c.org).

Goal 3: Schedule school fair and carnivals in the local service area to promote environmental education.

2008

Goal 1: Coordinate merit badges for Boy and Girl Scouts in the learning center.

Goal 2: Improve and expand environmental education partnerships statewide.
2009

Goal 1: Develop a dynamic volunteer leadership core for communicating to the public.

Goal 2: Provide professional development for teachers in environmental education.

Goal 3: Expand the number of publications produced by the Highland Environmental Learning Center.

2010

Goal 1: Conduct a survey of community needs and satisfaction.

Goal 2: Develop a comprehensive database and plan to build relationships with additional community partners.

Goal 3: Provide new environmental education teacher loaner kits with updated materials.

2011

Goal 1: Facilitate the planning and implementation of the annual youth leadership conference.

Goal 2: Actively promote environmental education programs, resources and activities based on evaluation and research.

Goal 3: Set, communicate and monitor operational objectives, methods, priorities, timelines, quantity and quality standards.
Capacity Building Strategy

In order for the Highland Environmental Learning Center to achieve its mission certain goals need to be established to improve its capacity as an organization.

Capacity Building Five-Year Goals

2007

Goal 1: Develop upon and articulate vision, mission, and philosophy.

Goal 2: Plan strategy: how to accomplish goals/objectives for longevity.

Goal 3: Identify stake-holders, market segment and demographics.

2008

Goal 1: Develop a financial plan: capital acquisition, revenue generation, cash flow, and fundraising.

Goal 2: Obtain, provide, and maintain adequate facilities.

Goal 3: Plan organizational and program structure, timetable and milestones.

2009

Goal 1: Recruit, select, develop, and promote personnel per succession plan.

Goal 2: Reestablish and maintain policies and procedures.
Goal 3: Reestablish management programs and operational tactics.

2010

Goal 1: Formally and regularly measure program and personnel performance against established standards, incorporate feedback, adjust accordingly, take corrective action, and recognize accomplishments.
Goal 3: Reevaluate effectiveness: troubleshoot, problem-solve, take decisive corrective action.

2011

Goal 1: Update marketing plan: promote and publicize accomplishments, products, services, and value added; share resources and methodology with others.
Goal 2: Update evaluations to ensure patron/user satisfaction along with celebrating accomplishments and learning from mistakes.

Financial Resource Development Strategy

Financial strength will be maintained by increasing income, investing only in strategically important activities, and appropriately sponsoring environmental education programming. The Highland Environmental Learning
Center’s revenues will be invested in restricted and unrestricted funding. Its funding sources and earned income will be diversified through expanded marketing and the established non-profit 501c3 Highland Environmental Education Coalition (HEEC). A financial plan should be developed for each fiscal year (see APPENDIX B; Highland Library and Environmental Learning Center 3-Year Approved Budget).

Financial Resource Development Five-Year Goals

2007

Goal 1: Identify and procure funding sources prior to launching new initiatives.

Goal 2: Promote a fundraising approach in a team effort, not only for specific programs but for the organization as a whole.

Goal 3: Communicate the value of environmental education programming to the donors.

2008

Goal 1: Establish a major gift fundraising program with the Highland Environmental Education Coalition fundraising committee.

Goal 2: Expand relationships with the local business community donors to a corporate level.
Goal 3: Reexamine the Highland Environmental Learning Centers non-profit membership dues and teacher loaner kit pricing.

2009

Goal 1: Determine how to coordinate each fundraising program to maximize potential.
Goal 2: Seek grants for new programming.
Goal 3: Seek partnerships with groups such as the Inland Area Youth Leadership Committee to offset cost and expenditures.

2010

Goal 1: Rent auditorium or rooftop garden for weddings.
Goal 2: Reevaluate fees for adopt a live exhibit program.
Goal 3: Establish a plant propagation nursery for native plants for selling on the rooftop garden.

2011

Goal 1: Open an environmental learning center gift shop for patrons of the Highland branch library and visitors.
Goal 2: Establish a rooftop garden store for seeds, books and tools of native plants.
Goal 3: Construct a hummingbird aviary and charge a small fee for children to give nectar to the hummingbirds.
Outcomes

The outcomes of these goals and strategies will be measured in qualitative and quantitative figures. All goals will be evaluated before and after the beginning of each fiscal year. Qualitative surveys of patron or user reaction and commentary to programs will be evaluated. Instruments for measuring other successes will be established for quantitative review through written evaluations and data collection.
CHAPTER FOUR

MASTER BUILDING PLAN

Introduction

The Highland Environmental Learning Center will be a model in the new age of library and nature centers for the 21st century. Following the lead of the American Libraries Association's (ALA's) efforts on Libraries Building Sustainable Communities, the new Highland Library supports identified needs of the educational community.

San Bernardino County has five EPA Superfund clean-up sites; one is within a mile of the site. With adjacent forest land, watershed, water pollution, and waste management issues affecting the community of Highland daily, the need for information and education on many environmental subjects is imperative.

The goal of this Master Building Plan is to consider the best environmental education possible for the public through the design and resources of the building.

History

In 2000, a small Environmental Learning Center was established at the Highland Branch Library, with the intention of eventual expansion into a new building. It was located in a small, crowded three foot by 17 foot area
in the entry of the library. Materials such as posters and activity sets had to be put in storage because there was insufficient space to display or use the materials in the overcrowded library. The Center's displays included maps, posters, plants, live animals and reptiles, and a few small static exhibits. These served to inform, entertain and arouse curiosity among the many children who stopped frequently to visit.

Several factors led to the decision to expand the Highland Environmental Learning Center: 1) the receipt of $2 million grant from the U.S. Environmental Protection Agency; 2) the assignment of an environmental librarian to the branch, whose master's project was the specific design of an integrated library and environmental learning center for the county and city; 3) the interest expressed by parents and teachers who participated in surveys conducted by the county and city; 4) the close proximity of the proposed site to the University of Redlands and the Redlands Institute, where the Director of the Environmental Studies Department has enthusiastically supported the learning center with student interns and research services. Dr. Monty Hempel, a renowned author and nationally recognized expert in environmental studies, has partnered with the Highland Library and Environmental
Learning Center. Pete Deyo, founding director of the center and the environmental librarian, researched and analyzed 80 leading nature and environmental learning centers nationwide in 1999, and provided a synthesis of the program, resource, material and service elements found in these exemplary centers.

Implementation Schedule

The Highland Library and Environmental Learning Center was first created on paper in 1998 as a master’s project from the founding Director Pete Deyo. In 2001 the California State Library awarded the Highland Branch Library and Environmental Learning Center with competitive grant money in the amount of $5.2 million. The project, currently under construction, is scheduled to be opened in the fall of 2007.

Project Cost

The total construction cost for the Highland Environmental Learning Center and Library will be $13,048,167. The project cost breakdown is divided as follows: base building construction, $10,748,040; children’s portal, $524,837; solar energy, $358,842; “Courtyard of the Mountains” Serrano Cultural Exhibit, $1,220,00; roof garden, $96,448; and special collection,
$100,000. The funding is secured as follows: State Library Bond Act, $5,200,000; San Bernardino County Library, $2,500,000; City of Highland, $3,378,167; San Manuel Band of Mission Indians, $1,220,000; Federal Environmental Protection Agency, $300,000; and community fundraising from the Highland Friends of the Library and the Highland Environmental Education Coalition, $300,000.

Physical Facility

The Highland Environmental Learning Center physical facility will include a Discovery Room, Exhibit Room, Exhibit Prep Room, Wet Laboratory, enclosed outdoor auditorium, Multi-Media Room and a unique rooftop landscape for outdoor programming and displays. The Discovery Room will house a collection of living and non-living examples of plants and animals. The Exhibit Room will house permanent and rotating interactive displays on a number of environmental topics, such as consumer recycling and energy conservation to "green" architecture and sustainable building examples. Permanent displays will include a Living Machine® and Living Wall® to demonstrate the air and water cleansing processes of nature. Programs will be developed for K-12 students for the Environmental Learning Center. Class activities will
be conducted in the multi-media room or wet laboratory and the Outdoor Auditorium. The rooftop landscape area will house a weather station, a display of solar applications, a composting demonstration, organic garden plot, native species garden, aquatic pond, and other experiential learning areas to engage students and teacher in tactile learning.

A special collection of environmental documents, books, videos, CDs and other print and electronic resource will be developed, maintained and centrally housed for use by the 28 member branch library system.

Design Criteria

The Highland Environmental Learning Center was designed with the highest criteria for green building standards. The construction of the Highland Environmental Learning Center and Library will be guided by the U.S. Green Building Council’s (L.E.E.D) Certification Program, and will exceed Title 24 requirements at a level that will achieve the Council’s certification.

Space Utilization

The space utilized within the Environmental Learning Center will be professionally designed and created to give the best environmental education experience for all
visitors. The Discovery Room will house a collection of living and non-living examples of animals, reptiles, amphibians, plants, and aquaria, as well as providing visitors with the ability to access print electronic information. The Exhibit Room will house permanent and rotating interactive displays on a number of environmental topics as previously referred in the "Physical Facility" section. The outdoor amphitheater, "Courtyard of the Mountains," will be utilized as a walking museum exhibit on the rooftop garden. This courtyard will be dedicated to the Serrano native people, who first lived in Highland and will consist of a stage, seating for 100 people, and multi-media equipment for outdoor programming. The Activity Room or Wet Lab will serve as a working classroom. This room will hold up to 40 students for experiments or presentations by the Environmental Learning Center staff or other educators. The rooftop garden outdoor area will be used for programming demonstrations on composting, organic gardening, native plant gardening, and other experiential activities to engage students and teachers in tactile, experiential learning. Other space within the library will be utilized to house randomly placed mobile Environmental Learning Center materials and exhibits that will change with time.
The Highland Environmental Learning Center, being completely integrated into the Highland Branch Library, makes it difficult to have any definitive lines drawn between the learning center and the library. Approximately 7,500 square feet of the total 30,000 square feet of the Highland Branch library is allocated to the Environmental Learning Center. This is about 25% of the total building. The square footage of rooftop garden is not included in the square footage of the Environmental Learning Center because the rooftop is considered the exterior of the building.

The approximate square footage allocated is as follows: 1,002 square foot Discovery Room, a 2,100 square foot Exhibit Room, an enclosed outdoor auditorium titled “Courtyard of the Mountains,” and a unique 15,000 square foot rooftop landscape area for outdoor programming and displays. Approximately 180 square feet is the office of the Environmental Librarian; 24 square feet is the custodial closet; 430 square feet is the staff workroom room; 54 square feet is the restroom; 119 square feet is the Environmental Program Specialist office; 36 square feet is the storage room; 1,996 square feet is the joint use (Library and Environmental Learning Center)
Multi-media Presentation room; 450 square feet is the activity room or wet lab; and 328 square feet is allocated to the Exhibit Preparation Room.
CHAPTER FIVE
FACILITIES AND EQUIPMENT PLAN

Facility Information

The Highland Library and Environmental Learning Center will be a 30,000 square foot facility located in Highland, California. Extensive use of natural light, recycled materials, high-efficiency heating and cooling systems, landscaped roof for added insulation, and environmental control systems will be implemented to minimize energy consumption and operating costs. North-facing light scoops will provide natural illumination in the main stack areas, and extensive use of solar reflective tube lighting will diffuse high levels of natural illumination for offices, hallways, and restrooms. Light sensors and compensators will be used to turn lights on and off, and to maintain maximum efficiency by balancing natural and artificial light levels automatically during operating hours.

West facing windows have also been added to the design to protect the library from direct sun and heat by fenestration that uses low emissivity and high reflectiveness for energy conservation. Fenestration includes the use of small openings set high on walls. On
the project site, pervious surfaces have been designed to minimize runoff, and shade trees will be used extensively in parking areas to eliminate heat island effects. Trees will also be planted around the building's perimeter to minimize solar gain in summer. Water conservation measures will include faucets with automatic turnoff, waterless urinals, drip irrigation, xeriscape landscaping, and minimized turf area.

Site Assessment

The Highland Library and Environmental Learning Center is part of a 30 acre site owned by the City of Highland. It is part of a community development effort as a multi-purpose complex consisting of a Community Center, Library and Environmental Learning Center, Community Park, Community Sports Fields, affordable single family housing, and a City Corporate Yard. More than 90% of the city's population is located within a three mile radius of the site. Future development and expansion occurring on the east side of the city will still result in 90% of the city's population within four miles of the site. The site is less than one mile from freeway access, and is easily accessible from four major east-west arterial streets, and four major north-south arterial streets. Major retail
areas lie within the three mile radius. The city boundaries form a long, narrow city, running east-west. To the north lies the natural barrier of the San Bernardino Mountains. To the south lies the Santa Ana River drainage complex. Here the confluence of the North and South Forks of the Santa Ana River are fed by City Creek and Mill Creek, forming a broad natural barrier along the southern and eastern edge of the city, ending at the Seven Oakes Dam. Along the southern and western edge, San Bernardino International Airport and Industrial Complex form an artificial barrier. The site, which also sits within a Redevelopment Area known as the Neighborhood Initiative Project, was strategically selected for its equidistant egocentricity to the maximum library service area, including those large pockets of residential areas belonging to the neighboring urban City of San Bernardino and who are geographically closer to the Highland County Library than to their own city library.

Interpretive Experience

The Highland Library and Environmental Learning Center will not only leave a lasting impression, but one of learning and remembering. To accomplish this Tilden's
six Interpretive Principles are used to enhance the interpretive experience (in Veverka, 1994, p. 20).

1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.

2. Information, as such, is not interpretation. Interpretation is revelation based upon information. These are entirely different things. All interpretation, however, includes information.

3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is in some degree teachable.

4. The chief aim of interpretation is not instruction, but provocation.

5. Interpretation should aim to present whole rather than a part, and must address itself to the whole person rather than any phase.

6. Interpretation addressed to children (through age twelve) should not be a dilution of the presentation to adults, but should follow a
fundamentally different approach. To be at its best it will require a separate program

Facility Resources and Management

The facility resources will require animal care products to be purchased on an on demand basis for all live exhibits. Every attempt will be made to breed live food for reptiles, arachnids and amphibians. The facility will also require a maintenance schedule for all exhibits live or static. Management for these purchases will be dictated by a management tree (see Appendix D; Proposed Critter Assignments). Purchasing power will lie within the Director of the Environmental Learning Center and the Environmental Program Specialist.

Existing Resources

Existing resources for the Highland Environmental Learning Center include a collection of live exhibits and educational environmental resources (see Appendix D). These resources include environmental learning videos, posters, and activity kits. The resources have been and will continue to be made available for educators interested in teaching environmental education.
Goals and Objectives

Objectives and goals are as follows:

- Acquire or add 250 books and other library materials to the Environmental Learning Center collection in order to research environment related questions.

- Assist patrons and educators by answering environment related questions and interpreting environment displays and exhibits.

- Develop and distribute pathfinders to guide patrons and educators to the most useful areas of the Center’s collection for specific information needs, such as “What are Fossils” or “How to Interpret Information from a Weather Station.”

- Develop and distribute exhibit guides and informative fliers on environmental topics.

- Acquire at least one sophisticated database for Environmental Learning resources for students.

- Provide at least six workshops on the environment, utilizing the gardens, aviary, live animal exhibits, environmental exhibits, mineral and geology display.
• Provide demonstrations on environmental topics such as backyard wildlife, composting, green architecture, rainwater collection, and recycling.

• Provide areas for group study, equipped with access to computer resources, including environmental software.

• Develop and implement a plan to withdraw outdated and underutilized non-fiction books from the Environmental Learning collection, create and maintain an extensive reference collection of environment-oriented books.

• Anticipate providing environmental information service to an additional 5% of patrons per year.

• Maintain acquisitions at first year levels or greater, updating environment resources in a timely manner.

• Create a series of local field trips and storytelling programs associated with the environment.

• Develop environmental poster, poetry, essay, art and activity contests to involve school children in environmental study.
• Develop and administer an Accountability Assessment Survey that measures patron satisfaction with improved Environmental Learning Center service levels, displays and exhibits.

• Evaluate and review space allocations and arrangements for environmental resources, electronic workstations and public seating; make changes as appropriate.

• Create and maintain outreach opportunities to the schools and bring environment programs to older high school students, work with school teachers to identify environment-related programs of value to students.

• Evaluate workshops available and programs offered, design and implement appropriate programs for keeping patrons knowledgeable in accessing information resources about the environment.
CHAPTER SIX
MAINTENANCE PLAN

Public Use and Access Plan

The Highland Environmental Learning Center will be open for public use Monday through Saturday from 10 a.m. to 5 p.m. Crosswalks, four-way stop signs, sidewalks and planned parks area pathways and bicycle paths will provide a variety of safe pedestrian and bicycle access to the proposed site. Local zoning requires nine bicycle parking accommodations. The plans call for 12 secure, covered bicycle rack spaces near the front entrance. The site allows for automobile access from Central Street, a north-south sub-arterial two-lane road connecting the four major east-west arterial routes (Highland Avenue, Baseline Road, Ninth Street and Fifth Street). Just south of the construction site, Fifth Street is the main east-west corridor for traffic between downtown San Bernardino and the master-planned new residential area of East Highland. Fifth Street connects residents in East Highland to Interstate 10. Additional freeway on and off ramps are located at Baseline and Highland Avenue, making the site easily accessible from almost any point in the city. Traffic is well controlled by signals and four-way stop
signs, and freeway congestion at any of the exit points is not a factor.

There are also two public transit stops located within a quarter mile of the site. The public bus service, Omnitrans, operates 12 routes that connect all areas of the San Bernardino Valley. There are two bus stops at Ninth Street and Central Avenue. Omnitrans has agreed to add a bus stop between the Highland Community Center and Library facility. These stops connect to all lines, enabling any resident in the larger valley area to access the site by public transit.

Target Audience Objectives

The Highland Environmental Learning Center's target audience objectives are as follows:

- Provide quality non-bias environmental education for pre-Kindergarten to adult.
- Create an inviting atmosphere for field trips, science investigation, and inquiry.
- Create interpretive programs for pre-Kindergarten to adult.
- Partner with the Inland Area Environmental Leadership Committee for pre-teen environmental youth leadership conference.
• Partner with Green Schools.

• Create internships and recruitment for college environmental students in the local region.

Visitation Objectives

The Highland Environmental Learning Center will recognize that all visitors are autonomous and seek choice and control of their experience, are diverse in style, physical and mental ability, gender, race, age, nationality and that their visits occur within a personal and social context (Gross & Zimmerman, 2002, p. 156-157). Our visitation objectives, based on the goal of giving to give the best experience possible, are as follows:

• Allow visitor to engage in leisure once they enter the center.

• Allow the visitor to leave with feeling they have experienced something valuable whether fulfilling their curiosity or a novel experience.

• Recognize that the visitor is a free autonomous learner and will have the opportunity to choose from a wide variety of interpretive opportunities and experiences.
• Recognize the social context of visiting the Highland Environmental Learning Center.

• Recognize that every single person will have a different experience when visiting. "Everyone filters information though the lens of previous knowledge, experience and belief" (Gross & Zimmerman, 2002, p. 157).

• Recognize that a visitor comes with an agenda and a set level of expectations.

• Recognize that the building itself will have a strong influence on the behavior of the visitor.

• Strive to make the interpretation accessible to a diverse audience.

Programming Delivery Objectives

• Develop a docent training program in order to provide tour guides with the tools they need for interpretation of the Highland Environmental Learning Center.

• Deliver all programming to the appropriate age group and be sensitive to the needs of a diverse audience.
• Use an evaluation technique for measuring the satisfaction of the audience and success of the person teaching the program.

Volunteer Objectives

The Highland Environmental Learning Center will actively recruit and embrace all volunteers to schedule tours around the facility. Volunteer coordinators and trainers will be assigned to one of the full or part time staff members. Volunteers will be assisted by staff adhering to the following:

• Help the volunteers understand the organization goals and their assignments.

• Giving them meaningful and fulfilling jobs. No matter how small, show them the importance of doing it.

• Put fun in their job.

• Make them feel needed and wanted.

• Encourage ownership of the learning center by involving them in program decisions.

• Recognize them publicly and privately. (Include them in the San Bernardino County Library volunteer recognition party.)

• Listen to suggestions and ideas.
• Thank them time and time again. Surprise them with small gifts, birthday cards, flowers in the office, candy in a jar and so on.

• Build a community among the volunteers; have parties, pot-luck dinners, etc.

• Keep them abreast of organizational goals and changes (Evans & Evans, 2004, p. 129-130).

Evaluation Objectives

Evaluation is imperative to measure success and justify financial commitment. It also ensures the best experience for the visitor. Some evaluation objectives are as follows:

• Create benchmark marks to measure success with any program within the Highland Environmental Learning Center.

• Develop an evaluation process to determine meaningful results.

• Decide what information is relevant and how it should be used.

• Decide on an appropriate method to collect the information.
• External evaluations should be done with self-evaluations completed by the presenter for an accurate account of the program.
CHAPTER SEVEN

STAFFING PLAN

The Highland Environmental Learning Center staffing plan for 2007 will consist of the following:

- One full-time Director
- One full-time Environmental Program Specialist
- One full-time Program Assistant
- One part-time Environmental Assistant
- Four part-time Environmental Interns

The Highland Environmental Learning Center staffing plan for 2008 forward will consist of the following:

- One full-time Director
- One full-time Environmental Program Specialist
- One full-time Program Assistant
- One full-time Environmental Assistant
- One full-time Environmental Page
- Four part-time Environmental Interns

Environmental volunteers will be recruited and trained as needed.
CHAPTER EIGHT
FINANCIAL PLAN

Fundraising Objectives

The Highland Environmental Learning Center established the Highland Environmental Education Coalition, a non-profit 501c3, in order to expand the access of monetary donations for programming. The goal of the Highland Environmental Learning Center is to increase funding to aid in the programming and maintenance of the exhibits. Its long term goals are to provide funding that will give care and maintenance of exhibits without the aid of San Bernardino County funds. Suggestions for accomplishing these goals are as follows:

• Partner with other non-profit organizations.
• Partner with public entities to further each others cause.
• Coordinate annual giving programs.
• Seek in-kind contributions.
• Adopt an exhibit campaign (live or static).
• Encourage donations through the sales of bricks and tiles.
• Raise money by renting out the facility for conferences.
• Establish a rooftop garden store for seeds, books, and tools of native plants.
• Have wishing well statuary for donations.
• Establish a donation box for volunteer events.

The Highland Environmental Learning Center and the Highland Environmental Education Coalition will follow the four R’s of fundraising: research, romance, request, and recognition (Evans & Evans, 2004, p. 162-164). Researching potential donors before contacting them is an important step. When a contact is made, an attempt to find a connection with the Center is the second step. The third step is establishing a relationship. The fourth step is making a request and the final step is publicly recognizing the donor.

Revenue Plan

The current revenue at the Highland Environmental Learning Center comes from a recycling program with active community participation. There are cartridge, toner and cell phone recycling drop-off boxes located at the entry way of the Highland Branch Library. Established local partnerships with businesses have drop off boxes that are maintained on a monthly basis. The future plans are to expand the program and build partnerships with businesses
and community groups. The Highland Environmental Learning Center could become a regional drop off location for recycling a new generation of E-waste (electrical waste). Currently, the E-waste recycling along with cans and bottles is the consistent funding source to purchase fresh vegetables that go to feed the live exhibits.

Future revenue could possibly be generated in the following ways:

- Establish paper recycling programs.
- Establish a fee to train to be an animal caregiver for a day.
- Expand the recycling program with publicity. (Possibly the school that collects the most electronic waste will get a free program in the classroom)
- Recognize and thank those who participate in electronic waste recycling.
- Post businesses on the Highland Environmental Education Coalition web page (www.h-e-e-c.org) for free advertisement.
CHAPTER NINE
INTERPRETIVE PLAN

Interpretive strategies for the Highland Environmental Learning Center include:

• Outdoor signage of landscape
• Indoor exhibits, discovery room
• Talks and demonstrations from environmental educators and docents.
• Environmental movies and multimedia events.
• Story hour programs and poetry sessions.
• Theater and puppet shows.
• Live animal demonstrations of enrichment.
• Animal feeding demonstrations.
• Native plant workshops.
• Gardening programs and projects.
• Xeriscaping demonstrations.
• Native American talks and ceremonies.
• Composting demonstrations.

The execution of all the programs will be completed gradually and upon staffing and budget considerations. Programming and exhibits will evolve as environmental topics change from year to year.
CHAPTER TEN
PROGRAMMING PLAN

The Highland Environmental Learning Center will conduct programming on a monthly basis. The programming will consist of a mix of personal media and non-personal media. Personal media and non-personal media is defined below:

Personal media will include such things as guided walks, tours, living history demonstrations, special events, theater, outreach presentations, campfire presentations and other similar events. Non-personal media includes exhibits, publications, signs, sale items, landscape features, sculptures, recorded media, playscapes, and a variety of other creative methods of delivering (Merriman & Brochu, 2005, p. 44).

Programming will be age appropriate and be advertised two weeks in advance. Some programming will be scheduled monthly such as the environmental story hours that are every last Thursday of the month.

Programming will be designed to fit the area and facility. For example the Indian Creek Nature Center has a program titled the “Burn School.” The program teaches
young adults to adults how to safely burn grasslands and woodlands to control invasive non-native plants (Evans & Evans, 2004, p. 75). This program fits well with the location of the Indian Creek Nature Center, but would not fit the urban area of Highlands Environmental Learning Center. Key outdoor opportunities for programming will be the urban forest rooftop garden, grounds around the center, the City creek, and the Courtyard of the Mountains interior courtyard. As an urban environmental learning center the goal of nature education in the outdoors should be done in and around these outdoor opportunities.

For children's programming a plan was developed (see Appendix C: ABC'S of the Highland Environmental Children's Programming). Children's programs will be imaginative and exciting creating hands on participative learning.
CHAPTER ELEVEN
EXHIBIT PLAN

Interpretive exhibits will be integrated throughout the Highland Environmental Learning Center and Highland Branch Library. Interpretive exhibits will consist of the following techniques and principles:

- Exhibits will provoke interest or curiosity (otherwise no one will even stop to look at them).
- Exhibits will relate to the everyday life of the viewer.
- Exhibits will reveal the story through a unique ending or viewpoint.
- Exhibits will be part of a theme or story helping to illustrate, and fit into the big picture (Veverka, 1994, p. 126).

The interpretive exhibits will be rotated every two months or as needed. The live exhibits will include reptiles, amphibians, arachnids, rodents, and aquaria (see Appendix D; Proposed critter assignments). All live exhibits will have a daily activity log book to ensure proper care, enrichment, and health.
CHAPTER TWELVE

MARKETING AND PUBLICITY PLAN

Marketing for all programs will begin with knowing the target audience. The appropriate program needs to be marketed specifically to the attending group. Preparation for programs will need to be thoughtfully planned in order to lead to a publicity plan which should be created several months in advance. Options for marketing and publicity include the following,

- Choose topic, dates, times and location.
- Create a photo or graphic of a program for a flyer.
- Advertise in local newspapers.
- Advertise in local entertainment magazines such as Inland Empire.
- Make an announcement to the Highland Chamber of Commerce.
- Keep an updated annual newsletter.
• Create contacts with local schools and other environmental organizations.
CHAPTER THIRTEEN
EVALUATION PLAN

The evaluation plan will be an option to measure success of programming and productivity. Bench marks could be created and implemented to measure outcomes and impacts. The measure of outcomes would be quantified by the number of visitors, number of programs delivered, and the amount of brochures distributed. These numbers would track outputs. To measure the impacts an evaluation after each program could be administered. The data collected from the evaluations would give recommendations for future programming. Other evaluations could be given by the presenter of a program by qualitative personal interviews to measure increased knowledge. Other measurement techniques could include supervisory staff watching, listening, and recording visitor's reactions from a distance. After a year of programming with this evaluation plan, objectives would be evaluated and changed according to the observations and data collected.
APPENDIX B

HIGHLAND LIBRARY AND ENVIRONMENTAL LEARNING CENTER 3-YEAR APPROVED BUDGET
# Highland Library and Environmental Learning Center

## 3-Year Approved Budget

<table>
<thead>
<tr>
<th>Expenditures</th>
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<th>2009</th>
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APPENDIX C

ABC'S OF THE HIGHLAND ENVIRONMENTAL

CHILDREN'S PROGRAMMING
ABC'S OF THE HIGHLAND ENVIRONMENTAL CHILDREN'S PROGRAMMING

A is for the aquariums and aviaries within the center which will allow children to view many different fish and birds.

B is for the beauty all nature is through the eyes of a child.

C is for the critters housed in the Discovery Zone terrariums, aquariums and caverns waiting to greet all guests to the center.

D is for the Discovery Zone where children will be able to observe various species of animals in simulated natural habitats.

E is for the Environmental Learning Center for children's to play and learn.

F is for feeding time, children can watch the animals eat on a weekly scheduled basis.

G is for the community garden that will grace the buildings rooftop and allow small fingers to grow their own plants adding to the beauty of the environment.

H is for hands-on; children learn better when they are allowed to touch and feel, see and hear the environment around them; many programs will require audience participation from crafts to gardening and even caring for the animals!

I is for interaction; children will be able to interact directly with the ELC staff and volunteers during weekly scheduled Q and A sessions with the animals of the center.

J is for the journey a child has, from innocence to adulthood, growing up to be an environmentally literate citizen.

K is for kits teachers can borrow from the Highland Environmental Learning Center and use in their classroom with corresponding curriculum all year-round.
L is for the love we share for the earth and taking care of it.

M is for meaning. What we do not find meaning in we cannot care for.

N is for the Native Americans whose knowledge about our environment is rarely surpassed; the courtyard dedicated to the local Serrano tribes will honor their knowledge and legacy.

O is for outdoors. Learning does not just take place behind four walls.

P is for the programming which will cover topics ranging from plants and animals of the past and present to the environments of outer space currently being explored.

Q is for questions because children are curious.

R is for recycle, reuse, and reduce. Children can learn responsible habits with the three R's.

S is for weekly story hour, all children are welcome.

T is for turtle. Children can see learn and touch our turtle.

U is for understanding. Children understand more when they play and explore.

V is for vehicle. The Environmental Learning Center wants to be the “driving force” for children to care about their environment.

W is for wonder. Without wonder scientists would not have discovered planets in other solar systems.

X is for xeriscape. Children can explore the drought tolerant garden.

Y is for yes. Yes, we will lead children to discover the path in saving our environment.

Z is for zest. Zest for saving the earth begins when you’re young.
APPENDIX D

PROPOSED CRITTER ASSIGNMENTS
PROPOSED CRITTER ASSIGNMENTS

Suncatchers will be built-in aquariums in the wall which house small ecosystems. The quad viewer will be a walk around free-standing tank, which houses four different critters. The aviator will be a small aviary which houses birds inside the discovery zone. The octagon petting zoo will house small rodents for hands-on learning. The water based tanks, integrated into a rock wall, will house amphibians and water turtles.

Suncatcher 1: Sonoran Milk Snake, Corn Snake, Gopher Snake, and Rosy Boa

Suncatcher 2: Gecko, Chinese Water Dragon, Green Anoles, and Lizards

Suncatcher 3: Russian Tortoise, African Spurred Turtle, and Walking Sticks

Quad Viewer: Tarantulas, Giant African Millipedes, Hissing Cockroaches, and Fancy Mice

Aviator: Love Birds and Cockatoo

Octagon Petting Zoo with security lids: Dumbo-Eared Rat, Guinea Pig, Fancy Hamster

Water Based Tanks: Axolotis, Frogs/Toads, and Turtles,
REFERENCES


