



San Gabriel River Discovery Center Supplemental Environmental Project Revised Workplan

Submitted by:



August 2014

2014 Revised Workplan for the San Gabriel River Discovery Center Supplemental Environmental Project

This Workplan is a revision to the Discovery Center Supplemental Environmental Project (SEP) Workplan submitted to the Regional Water Quality Control Board (Regional Board) on January 12, 2007. The main purpose of this revision is to specify the components of the overall San Gabriel River Discovery Center Project that will be directly supported by the SEP-dedicated funds from the County Sanitation Districts of Los Angeles County as part of the settlement of the Administrative Civil Liability Order No. R4-2006-0040.

REVISED WORKPLAN

1. Organization proposing the SEP:

County Sanitation Districts of Los Angeles County¹ (Sanitation Districts), a public agency

Project Contact: Sharon Green
Technical Services Department
(562) 908-4288, extension 2503
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2. Third Party Completing the SEP:

San Gabriel River Discovery Center Authority (Authority)

Project Contact: Mark Stanley
Interim Executive Officer
(626) 815-1019, extension 100
mstanley@rmc.ca.gov

3. Names and qualifications of key project team members:

The Authority has primary responsibility for the Discovery Center Project. Mark Stanley, Interim Executive Officer of the Authority, is directing the actions of the Authority and is leading the effort to bring the Discovery Center Project to fruition. Contractors assisting the Authority for this project include AECOM (engineering and planning) and THA Architecture (architectural drawings).

4. Name and location of the project, including watershed where it is located:

Name: San Gabriel River Discovery Center (Discovery Center) SEP - the proposed SEP, as described in this workplan, is comprised of selected components of the San Gabriel River Discovery Center Project.

¹ The County Sanitation Districts of Los Angeles County refers to only the sanitation districts that are party to the November 13, 2006 Settlement Agreement, which was effectuated by the adoption of the Los Angeles Regional Water Quality Control Board (Regional Board) Order No. R4-2006-0040 on December 14, 2006. These sanitation districts, which are herein referred to as the "Sanitation Districts," include County Sanitation Districts Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34 of Los Angeles County, South Bay Cities Sanitation District of Los Angeles County, and Santa Clarita Valley Sanitation District of Los Angeles County.

Location: The 9.36-acre Discovery Center Project site is located within the Whittier Narrows Recreation Area (Recreation Area) in eastern Los Angeles County. The Recreation Area is located between the San Gabriel River and the Rio Hondo (a tributary of the Los Angeles River), approximately 10 miles east of downtown Los Angeles (see Attachment A).

Watershed: Los Angeles and San Gabriel River Watersheds.

5. Describe the project and how it fits into the Regional Board SEP categories.

a. Background

The San Gabriel River Discovery Center Authority (Authority) was established as a joint powers entity to oversee the planning and operation of the Discovery Center Project. The Authority members include the Upper San Gabriel Valley Municipal Water District (Upper District), the Central Basin Municipal Water District (Central Basin), the Los Angeles County Department of Parks and Recreation (LADPR), and the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC). The mission statement for the Discovery Center is as follows: “The San Gabriel River Discovery Center is an educational resource that interprets the San Gabriel River watershed to encourage exploration and to increase understanding, appreciation, and stewardship of the revitalized San Gabriel River region.”

b. Discovery Center Project Overview

The Discovery Center Project is a multi-disciplinary endeavor that will enhance a unique site where watershed, ecosystems and cultural history exist within the urban environment of Los Angeles County. The new Discovery Center will create an exceptional opportunity for watershed management by restoring a wetland area, provide a regional model of stormwater management best practices, integrate educational and recreational activities, and provide for new classrooms, exhibit spaces and administrative offices. The Discovery Center Project will provide regional park information and function as a gateway for visitors to discover other natural areas and outdoor activities in the watershed. Visitors will learn practical ways to add conservation and environmental consciousness to their daily lives, as the sustainable features of the building and site will themselves become an integral part of the interpretive message of the Discovery Center Project. The Discovery Center is part of the Emerald Necklace, which is envisioned as a 17-mile loop of parks and greenways connecting 10 cities along the Rio Hondo and San Gabriel Rivers (see Attachment B).

In order to maximize the use of available resources, the Authority is sequencing the Discovery Center Project in 3 parts:

1) Enhanced education and interpretive programming:

In 2012, the Authority established an environmental science education program, known as EcoVoices, to help schoolchildren understand the natural environment so that they may become stewards in protecting watershed resources and habitat. The Authority contracts with the Youth Science Center to implement the EcoVoices program, which currently offers programs to schools on Thursdays throughout the year at the Whittier Narrows Recreation Area. The EcoVoices program mission is to provide schoolchildren

hands-on field expedition experience by studying nature onsite. Additional information on the EcoVoices program is included in Attachment C.

2) Stage One, construction of water quality components and restoration of the site area:

Stage One consists of the majority of the site components, including a constructed wetland and adjacent bio-swales, site components to manage stormwater, native plant landscaping, a covered outdoor classroom, restoration of a walnut woodland, and interpretive elements. Project construction will involve disturbance of approximately 5 acres (construction impact area). In addition, Stage One includes approximately 2 acres of walnut woodland (approximately 0.22 acres) and other restoration areas. Stage One is described in Attachment D and illustrated in Attachment E.

3) Stage Two, construction of the main Interpretive Center Building and an outdoor classroom:

Stage Two includes an additional outdoor classroom and the main building facility to replace the current Whittier Narrows Nature Center buildings. The replacement facility is designed to be a 14,000–square-foot “green” building that will contain interpretive exhibits, a 100-seat multi-purpose room, a wet classroom, sales area, maintenance and administrative areas, and hands-on exhibits about the river’s ecology and other water-related topics. The existing Nature Center is within the footprint of the proposed main building and will therefore be demolished before the construction of the main building. The existing Nature Center will remain in place until it is time to construct the new building. Stage Two is described in Attachment D and illustrated in Attachment E.

SEP funds that originally would have been used to support the design development of the overall Discovery Center Project will be used as described in this updated SEP workplan. Specifically, SEP-dedicated funds from the Sanitation Districts will support construction of several water quality and watershed management elements of Stage One. Elements supported by the SEP include: construction of the wetland and bio-swale areas, native plant landscaping, erosion control, and stormwater management components. In the event that funds remain after completion of the above-mentioned elements, the remaining SEP-funds may be used for one or more of the following elements: 1) additional native plant landscaping, 2) water conservation fixtures, or 3) recycled water system installation.

c. How the Project Fits into the SEP Categories

i. Pollution Prevention and Watershed Management

The SEP supported elements of the Discovery Center Project will benefit water quality and implement watershed management practices through the following pollution prevention measures:

- Constructed wetland area: The wetland will filter and cleanse stormwater from the developed areas of the site, such as the main building, parking lot, and road, and will be sized to contain and subsequently infiltrate excess stormwater to prevent discharge directly to Lario Creek or the San Gabriel River. A portion of the wetland will be membrane-lined to prevent premature infiltration and minimize contaminant migration to

the groundwater. The wetland and bio-swale system in combination will have a capacity of approximately 1 acre-foot. Depending on the final site hydrology, this volume corresponds to approximately the 25-year storm and exceeds the ¾-inch storm event regulatory minimum. One goal of the project is to meet the requirements necessary to obtain the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Stormwater Management credits. One such credit requires that there be no net increase in the rate and quantity of stormwater runoff from existing to developed conditions. Therefore, the proposed drainage system will be designed to not exceed existing outflow conditions and to minimize water released without first being routed through the bio-swale and wetland system for treatment.

- **Bio-swale areas:** Similar to the function of the constructed wetland, the bio-swale areas will also help to remove stormwater contaminants. Stormwater will pass through vegetation, which will provide abundant surface areas for physical filtering of runoff. The total length of the bio-swale areas will be approximately 730 feet and the width of the inundation area will be approximately 11 feet. As mentioned above, the wetland and bio-swale system will have a capacity of approximately 1 acre-foot.
- **Stormwater management components:** The developed areas of the site, such as the parking lot (approximately 42,762 square feet to accommodate approximately 122 cars, including 5 spaces that are Americans with Disabilities Act accessible, and 2 buses) and pedestrian walkways, will be constructed to direct stormwater runoff flow to the wetland and bio-swale areas to prevent discharge and pollution migration to Lario Creek or the San Gabriel River. Site components, such as an underground drainage pipework, trench drains, catch basins, and cleanouts, will be installed to manage the stormwater and prevent pollution.
- **Erosion control:** Control measures, such as silt fence, sand bags, and stockpile management will be employed to protect the site from erosion during the construction phase. These measures also minimize the impacts of stormwater runoff in regards to erosion and pollutant migration. A Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented for stormwater and pollution management during the construction process of the project.

ii. Education

Completion and implementation of the SEP supported elements will assist in enhancing public awareness and education as a part of the overall Discovery Center Project and EcoVoices program. The core focus of the Discovery Center Project is to address the region's need for enhanced educational and recreational facilities, especially as related to watershed management and pollution prevention. Like the EcoVoices program, the educational focus of the Discovery Center Project will be on the story of the San Gabriel River and its watershed and the importance of water resources and the natural values of the watershed. This will raise awareness of what watersheds are and how they function, how they are impacted by humans, and how they can be managed and protected. The purpose is to influence individual and community behaviors to protect water resources and habitat for future generations. The project will provide a multi-disciplinary educational resource that interprets the ecology and history of the San Gabriel River

Watershed. As such, the SEP supported elements will provide interactive tools to support the educational process and real examples of watershed protection through implementation of stormwater best management practices, and will supplement classroom learning, thereby enhancing the existing EcoVoices program. For example, a boardwalk and bridge will be constructed to allow visitors to directly observe the constructed wetland, with minimal disturbance. Visitors will learn about the wetland's functional components and its important role as natural "kidneys," and will observe how wetlands serve as a stormwater management tool and provide habitat for diverse plant and animal species.

d. Contingent SEP-Supported Element Benefits

As mentioned above, funds may remain after completion of the SEP-supported elements. The remaining SEP-funds may be used for one of more of the elements that have the following benefits:

- Additional native plant landscaping: As a habitat enhancement measure, the site will be planted with native trees according to planting and restoration plans.
- Water conservation fixtures: Incorporating low flow toilets and sensor activated fixtures in the restrooms will implement water conservation measures targeted to reduce potable water use.
- Recycled water system installation: Use of recycled water will reduce potable water use.

e. Additional Overall Project Benefits

The SEP supported elements will be constructed and implemented concurrent with the remaining Stage One elements, and together they will serve as a foundation for Stage Two of the Discovery Center Project. Although not specifically part of the SEP, the completion of additional Stage One and Stage Two elements will bring benefits in the following SEP categories:

- Education: A series of Americans with Disabilities Act (ADA) accessible trails are planned, that will radiate from the Discovery Center, consistent with the overall LADPR trails plan. Interpretive signs, displays, or shelters will be incorporated at key locations for the hands-on student activity and interpretations that is based in Science, Technology, Engineering and Math (STEM) education learning method and development of common core learning. These facilities will be open to the public for enjoyment and a place to learn about the value of our watershed. The audience will range from school children to adults. To that end, the Discovery Center will host a range of educational activities including youth, adult, family, and senior citizen nature trail and bird walks, clean-up events, docent and volunteer training, summer camps, junior ranger and naturalist programs, and moonlight and stargazing opportunities. On weekdays, the Discovery Center will accommodate school field trips and formal school programs focusing on watershed education, and special events would occur on weekends.
- Environmental Restoration: The project includes a habitat restoration component to restore the degraded environments by removing nonnative and invasive plant species, which will enhance the habitat for indigenous plants and wildlife.
- Pollution Prevention: The Discovery Center Project will not only teach about pollution prevention, but will put pollution prevention concepts into practice by incorporating

many pollution prevention features related to water conservation, energy, site disturbance, use of recycled products, air quality, and water quality. In addition, the Stage Two main Interpretive Center building will be designed and constructed in accordance with the LEED Green Building Rating System, Platinum Level, and will provide a demonstration of how pollution prevention principles can be used in urban building design.

6. Describe how the project benefits water quality.

The SEP funds will support the water quality elements of Stage One of the project. The project's benefits to water quality are described in Section 5(c).

7. Describe how the project benefits the public.

The Discovery Center will serve the diverse urban population of the Los Angeles Region by telling the whole story of the San Gabriel River watershed in one location through demonstration of conservation and sustainable practices. Currently, the closest regional water exhibit facilities are Diamond Lake, which is 65 miles away, and Pyramid Lake, which is 80 miles away. Other science based educational facilities are along the coast in the Los Angeles area, including: the Aquarium of the Pacific (Long Beach), Santa Monica Pier Aquarium, SEA Lab (Redondo Beach), City of Los Angeles Environmental Learning Center (Playa Del Ray), and Cabrillo Marine Aquarium (San Pedro). The San Gabriel River Discovery Center will provide freshwater wetlands, vegetative-swale, walnut woodlands and interpretative elements to provide a rich and unique educational opportunity to the 8.5 million residents who live within 20 miles of the project location.

Currently, the Whittier Narrows Regional Park is the most visited park in Los Angeles County, with 1.4 million visitors per year. However, due to the limited size and age of the facilities, the Whittier Narrows Nature Center attracts less than 50,000 visitors per year. In the past fiscal year (2013-2014), approximately 4,600 students have participated in the EcoVoices program at the Whittier Narrows Nature Center. It is anticipated that more than 70 percent of the visitors to the Whittier Narrows Nature Center will begin enjoying Stage One improvements as construction takes shape for Stage Two. It is also anticipated that the Discovery Center, upon completion of Stage Two, will accommodate at least 80,000-100,000 visitors annually.

Another unique aspect of this project is the extent to which it will serve many disadvantaged communities in Los Angeles County. There are many disadvantaged communities within close proximity of the project site that will benefit from the educational and recreational opportunities provided by this project. These communities are primarily located in the Cities of Bell, Bell Gardens, Commerce, Compton, Cudahy, El Monte, Hawaiian Gardens, Huntington Park, Long Beach, Lynwood, Maywood, Paramount, Rosemead, South El Monte, and South Gate, and the unincorporated communities of East Compton, East Los Angeles, and Walnut Park. Attachment F includes a figure demonstrating the need for equitable environmental educational opportunities in Los Angeles County.

Specific to the SEP-supported elements, the public will benefit from the water quality and watershed management project components, as well as the educational aspects of the project. The project will demonstrate to the public the importance of the water cycle and how an individual or the public's behavior can affect the watershed from riparian uplands, through streams and rivers, and to the oceans and groundwater. This understanding will benefit water quality and water management strategies in the region and ultimately benefit the public overall with an improved quality of life.

8. Include documented support by one or more of the following:

- A. Other agencies**
- B. Public groups**
- C. Impacted persons**
- D. Compliance with the California Environmental Quality Act**

a. Other agencies, public groups and impacted persons

The Discovery Center Project enjoys broad support from many public and private sector leaders, as well as those affiliated with non-governmental organizations. Many schools that have participated in the EcoVoices Program, and others familiar with the program, support the project as well. A list of the individuals and organizations that are on record in support of the project is attached (see Attachment G). A Stakeholder Advisory Committee promotes community involvement in the project.

b. Compliance with the California Environmental Quality Act

The California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) review processes were completed in January 2010 with an Addendum filed October 2011 (to relocate the 1,000 square foot maintenance building from a location on the eastern end of the parking lot to a location on the east side of the main building). The NEPA and CEQA processes were undertaken concurrently for this project in separate environmental documents, which can be found on the Discovery Center website (<http://discoverycenterauthority.org>). A Notice of Preparation of an Environmental Impact Report (EIR) was issued in August 2006, and a scoping meeting was held in September 2006. The final, certified EIR (State Clearinghouse #2006081154) will guide the Authority to address the environmental effects and mitigation measures of the Discovery Center Project. The underlying property owner, the U.S. Army Corps of Engineers issued a Finding of No Significant Impact on March 5, 2010.

9. Include a monitoring plan or Quality Assurance Program Plan (QAPP), if applicable.

Currently, there is no developed monitoring plan nor QAPP for the SEP-supported elements because the project components do not include any tasks that involve the use of existing environmental data and does not include any sampling and analysis tasks. However, a Storm Water Pollution Prevention Plan (SWPPP), which may include a monitoring plan, will be developed during the construction document phase for the project.

The San Gabriel River Discovery Center Authority is responsible for implementing the mitigation monitoring and reporting program as described in the Discovery Center Project EIR.

Several measures that will be implemented and monitored during the pre-construction and construction phases of the Discovery Center Project are relevant to construction of the SEP-supported elements. A list of the relevant mitigation measures is included in Attachment H.

10. Provide a description of the scope of work, work products, and project milestones.

a. SEP Scope of Work

Stage One of the project, which includes the SEP-supported elements, will install essential elements of the project that include restoration and educational opportunities, water conservation, stormwater management, pollution prevention, visitor experiences, and environmental stewardship. A description of the scope of work and work products is provided below for each element that will be supported by the SEP funding.

i. SEP-Supported Elements

CONSTRUCTED RIPARIAN/WETLAND of approximately 29,150 square feet will filter and cleanse storm water from the developed areas of the site. The wetland will be created to encourage habitat and will be sized to contain and subsequently infiltrate excess stormwater so that no stormwater will discharge directly into Lario Creek or the San Gabriel River. Components for the constructed wetland will include a liner to prevent water from prematurely infiltrating, sands, gravels, boulders, and plantings. Concrete boardwalks, connected to the site's trail system, will allow visitors to observe the wetland while minimizing disturbance. ***Scheduled milestone completion: May 2017.***

NATURALIZED BIO-SWALES will combine natural riparian habitat with stormwater treatment functions. A diversity of tree and shrub canopy heights will be provided to maximize bird and insect species diversity. Stormwater will pass through grassy segments, some stands of rushes and sedges, and zones dominated by woody species. Grasses, rushes and sedges will provide abundant surface areas for physical filtering of runoff. The soil may be amended to slow downward percolation, helping to detain seasonal moisture at the parking lot edge for sycamores that will shade the parking lot. ***Scheduled milestone completion: May 2017.***

SITE STORMWATER MANAGEMENT COMPONENTS will enable the developed areas of the site to direct stormwater runoff flow to the wetland and bio-swale areas. Site components, such as an underground drainage pipework, trench drains, catch basins, and cleanouts, will be installed to also manage the stormwater and prevent pollution. ***Scheduled milestone completion: May 2017.***

EROSION CONTROL during site preparation and demolition will be implemented. Control measures, such as silt fence, sand bags, and stockpile management will be employed to protect the site from erosion during the construction phase. A SWPPP will be developed and implemented for stormwater and pollution management during the construction process of the project. ***Scheduled milestone completion: May 2016.***

NATIVE PLANT LANDSCAPE AND IRRIGATION will be provided in the project area. All

areas are to be planted and irrigated according to the planting and restoration plans and by utilizing nursery-grown local native plant species. Planting areas are to be cleared of exotic vegetation and weeds including roots with a minimum of two consecutive grow and kill cycles (except for the protected trees). All new plantings will have irrigation. Additionally, tanks will be used to store water that has undergone treatment through the wetland system, which will be used as irrigation water and to maintain wetland recirculation. Furthermore, the tanks will help the wetland remain stable during irrigation water extraction, which would otherwise draw down the water surface. The tanks will hold a combined total of 6,000 gallons. ***Scheduled milestone completion: May 2017.***

ii. *Contingent SEP-Supported Elements*

Inclusion of one or more of the following elements in the SEP project is dependent on availability of SEP funding beyond what will be needed for the elements listed above.

NATIVE TREE LANDSCAPING will be provided in the project area according to the planting and restoration plans.

LOW FLOW TOILETS AND SENSOR ACTIVATED RESTROOM FIXTURES will implement water conservation measures targeted to reduce potable water use.

RECYCLED WATER SYSTEM INSTALLATION will include an irrigation system and pipeline necessary to connect to the nearby recycled water distribution system.

11. Include a budget for the SEP scope of work.

The SEP funding will be used for the design and implementation of the water quality related components of Stage One, as described in this workplan. During the bidding process, if bids contain cost estimates significantly greater than projected in this SEP workplan, the Sanitation Districts and Authority will reevaluate which elements may be funded by the SEP Fund and seek Regional Board concurrence. If SEP funds remain after the completion of the SEP-supported elements, remaining funds may be used for one or more contingent elements. For a more detailed breakdown of the Water Quality Components expenditures, see Attachment I.

a. *SEP-Supported Elements* (costs rounded to nearest thousand dollars)

Constructed Wetland Area	\$ 735,000
Bio-swale Area	\$ 351,000
Erosion Control	\$ 68,000
Site Stormwater Management Components	\$ 157,000
Native Plant Landscaping and Irrigation	\$ 689,000
Landscape and Civil Design	\$ 200,000
Total	\$ 2,200,000

b. *Contingent SEP-Supported Elements*

If SEP funds remain after the completion of the above mentioned SEP-supported elements, the

remaining funds may be used for one or more of the following elements:

Native tree landscaping	\$	97,000
Water Conservation Fixtures	\$	8,000
Recycled Water System Installation	\$	118,000
Total		\$ 223,000

c. Total Stage One and Two Project Costs

Stage One total cost is estimated at \$6,087,000

Stage Two total cost is estimated at \$14,587,000.

d. Other Sources of Funding

The Authority has expended and/or secured commitments for funding for Stage One through funds pledged for its completion. The Authority has expended funds on the design development and environmental assessments for CEQA and NEPA, totaling approximately \$3,000,000 (not part of Stage One cost). The balance of the funding for Stage One, after considering SEP funding, is committed from Los Angeles County, San Gabriel Valley Municipal Water District, Central Basin Municipal Water District, and San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy.

An aggressive effort is underway to conduct fundraising for completion of Stage Two, which includes the main Interpretive Center building and exhibits and another outdoor classroom. The project has gained significant momentum and completion of Stage One will continue to add more momentum and assist in garnering additional support and funding for Stage Two. The outlook on full funding has improved with the inclusion of a water bond on the ballot in the November 2014 election, which, if enacted, may provide new funding opportunities for this project. Additionally, there is significant support from the education community for the EcoVoices program, which may help garner funds for the project. Completion and implementation of Stage One elements, especially the outdoor covered classroom, wetland area, bio-swales, trail network and natural area, will allow enhancement of the EcoVoices Program and is expected to increase public awareness and education. The EcoVoices program, as well as general public use of the pedestrian pathways and grounds, is expected to continue to grow during the time that the main Interpretive Center and other outdoor classroom remain to be constructed. It should be noted that none of the Sanitation Districts' SEP contribution will go towards fundraising. The Authority plans to establish a Trust Fund to provide ongoing operations and maintenance funding. Fundraising efforts include a focus on securing funding for this purpose.

12. Describe the reporting procedures (Quarterly Progress Reports, Final Report).

The Sanitation Districts will provide quarterly progress reports, as well as a final report, to the Regional Board and the Division of Financial Assistance of the State Board, on activities undertaken with this SEP. At a minimum, the reports shall include a list of all activity on the SEP, since its approval by the Regional Board on December 14, 2006, and during each reporting period, an accounting of funds expended, and the proposed work for the following quarter.

Reports will be submitted no later than the 1st of the second month following the end of each reporting period in accordance with the schedule shown below. Until such time as expenditure of SEP funds has commenced, the Sanitation Districts may submit only the report due on August 1st. The Sanitation Districts shall submit progress reports on the SEP until the SEP-supported elements portion of the project is completed and the SEP contribution is fully expended or otherwise approved by the Regional Board Executive Officer.

<u>Reporting Period</u>	<u>Report Due Date</u>
January - March	May 1 st
April - June	August 1 st
July - September	November 1 st
October - December	February 1 st

13. Provide a time schedule for implementation, including any milestones.

The SEP-supported elements of the project are the water quality related elements of Stage One design and construction. These project tasks are anticipated to begin in Fall 2014. The Stage One schedule of major milestones for the SEP-supported elements is outlined below. The construction of other Stage One elements is also projected to be completed by May 2017. Updates to the schedule will be provided to the Regional Board in the required progress reports.

Begin project tasks.....	Fall 2014
Construction documents completed.....	April 2015
Permits obtained.....	October 2015
Award of contract.....	January 2016
Erosion control element completed.....	May 2016
Construction completed (remaining SEP elements).....	May 2017

14. Identify the amount of liability that will be suspended or excused upon timely and successful completion of each milestone.

Proportionate amounts of liability will be suspended until satisfactory completion of the individual SEP-supported elements. Below is a schedule of completion dates with the corresponding amount of liability suspended. Updates to the schedule will be provided to the Regional Board in the required progress reports.

Construction documents completed.....	April 2015.....	\$ 200,000
Erosion control element completed.....	May 2016.....	\$ 68,000
Remaining SEP elements completed.....	May 2017.....	\$ 1,932,000

15. Describe performance standards and related measures or indicators.

Completion and implementation of the SEP-supported elements are factors in assessing the SEP's success:

- Design and construction drawings are finalized.
- Erosion control implemented and effective during storm events.
- Bio-swales constructed and effective during storm events.

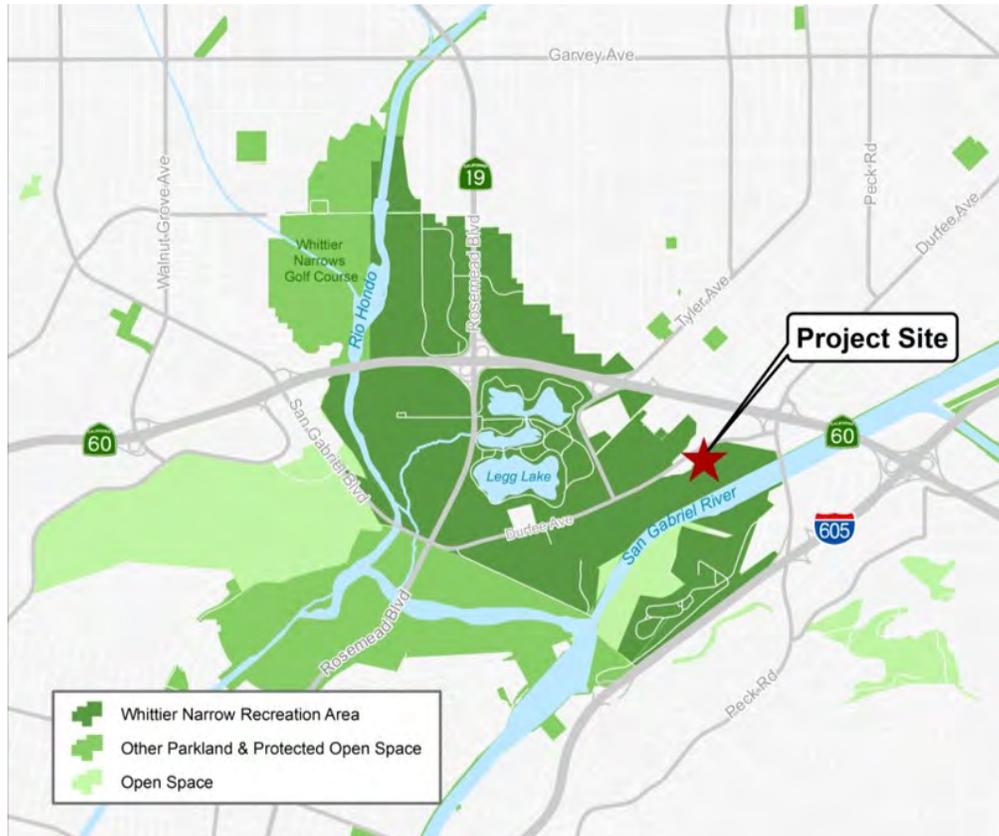
- Wetland area constructed and effective during storm events.
- Onsite stormwater runoff collected to bio-swale and wetland areas.
- Plant area landscaping has been completed and installation of irrigation system has been completed.

Over time, the overall success of the Discovery Center will be assessed by various measures, including those currently employed by the Los Angeles County Department of Parks and Recreation (LACDPR) and the Authority's member water districts, related to annual visitation and facility usage, numbers of school group visits, and, ultimately, increased public awareness and knowledge of the San Gabriel River and Watershed.

16. Consistent with the Regional Board's SEP guidance, the Sanitation Districts are ultimately responsible for meeting the SEP milestones, standards, and indicators.

Attachment A

Project Site



Attachment B

EMERALD NECKLACE

FEASIBILITY STUDY & IMPLEMENTATION PLAN: MASTER PLAN

Westside Trail - North

Airport Project Area - Peck Road Water Conservation Park to Valley Blvd.

- 1 Trail Development for Riding and Hiking from Lower Azusa Road to Water Conservation Park Loop Trail
- 2 At Grade Pedestrian Crossing w/Signal at Santa Anita Road or Underpass
- 3 At Grade Pedestrian Crossing w/Activated Signal at Lower Azusa Road and adjacent trail development
- 4 Trail Development for Riding and Hiking from Valley to Lower Azusa Road
- 5 Bridge at Arcadia Wash and adjacent trail development
- 6 El Monte Street Class II Bike Lanes and Pedestrian Bridge Crossing
- 7 Rio Hondo Pedestrian Bridge at Rio Vista Park to East Side
- 8 Underpass at Railroad Bridge
- 9 At Grade Pedestrian Crossing w/Activated Signal at Valley Blvd or Underpass

Airport Project Area - Eastside Project

- 10 Rio Hondo Eastside Access

Westside Trail - South

Valley Blvd. to Eaton Wash

- 11 Underpass Improvements at Interstate 10 and MTA Bridges for a Multi-Use Trail
- 12 Improve Gate and Ramp Access from Valley Blvd to Multi-Use Trail

Eaton Wash

- 13 Eaton Wash Trail Connection

Eaton Wash Park and Bridge to Eastside Class I Bike Path

- 14 Eaton Wash Pocket Park
- 15 Pedestrian Bridge across the Rio Hondo at the Eaton Wash Confluence

Eaton Wash to Garvey Ave.

- 16 Ride and Hike Trail from Rosemead Blvd to Eaton Wash
- 17 Underpass at Rosemead Blvd.
- 18 Connections to Rosemead Blvd from Ride and Hike Trail

Alhambra Wash to Garvey Ave

- 19 Multi-Use Bridge Crossing
- 20 Westside Multi-Use Trail Development

Legg Lake

- 21 Class I Bike Path from Rio Hondo to Legg Lake
- 22 Class I Bike Path Rosemead Blvd to Legg Lake
- 23 Class II Bike Lanes Durfee Ave to Legg Lake
- 24 Class I Bike Path thru Lario Creek to Legg Lake

Lincoln Ave./Bosque Del Rio Hondo

- 25 Class I Bicycle Trail from Bosque del Rio Hondo to Lincoln Ave.

Lario Creek

- 26 Lario Creek Multi-Use Trail

PROJECT COMPONENTS



Proposed Location of the San Gabriel River Discovery Center Authority

MAP LEGEND

- Phase I - Proposed Trail
- Future - Proposed Trail
- Phase I - Proposed Bridge
- Future - Proposed Bridge
- Existing Class I Bicycle Path
- "Green"-able Areas (Trees Allowed)
- Rivers
- Railroads
- City Boundaries
- Metro Transit Connection
- Creeks & Washes
- Destinations

Sawpit Wash

- 27 Trail Development on Sawpit Wash North (north segment of Clasp Option)
- 28 Trail Development on Sawpit Wash South (south segment of Clasp Option)

Buena Vista Wash

- 29 Trail Development on Buena Vista Wash (Clasp Option) to San Gabriel River Trail

Quarry Clasp Option

- 30 Trail Development from Peck Road Water Conservation Park to San Gabriel River Trail

Ramona Blvd

- 31 Class II Bicycle Lanes on Ramona Blvd.

Walnut Creek

- 32 Duck Farm and Walnut Creek Nature Center Trail Connection
- 33 Valley Blvd. Bridge Crossing

Avocado Heights

- 34 Equestrian Trail BMPs
- 35 4th Ave Street End Equestrian Access
- 36 Equestrian Park and Staging

San Jose Creek

- 37 Extension of the San Jose Creek Bicycle Trail to the North Side
- 38 Extension of the San Jose Creek Bicycle Trail to the San Gabriel River Bicycle Trail
- 39 Bridge Crossing for Equestrian Access

Pellissier Village

- 40 Peck Road Bridge Access
- 41 Eastside San Gabriel River Multi-Use Trail Improvements

Whittier Narrows Equestrian

- 42 Multi-Use Bridge across San Gabriel River
- 43 Formalization of Equestrian in-channel trail crossing
- 44 Hardened Pedestrian Path adjacent to Equestrian Trail from Peck Road to Horseman's Park

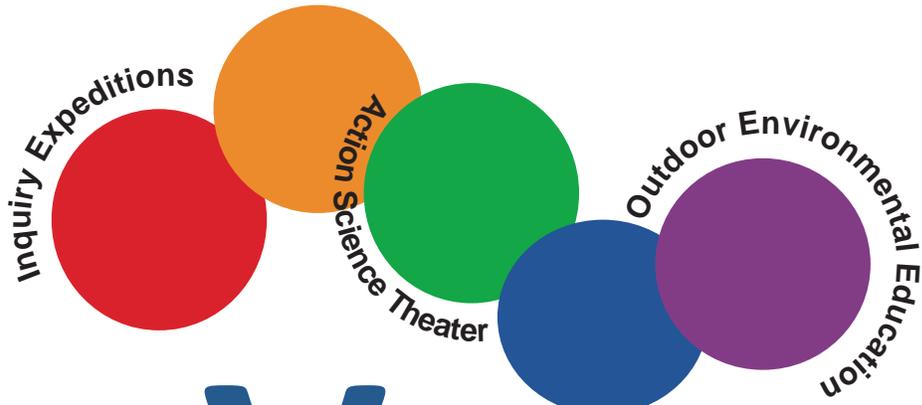
EMERALD NECKLACE STEERING COMMITTEE:



PLANNING CONSULTANTS:



Attachment C



EcoVoices

Not just a field trip, an **INQUIRY EXPEDITION!**

Explore

The wonder of dynamic change in the San Gabriel River Watershed!



Learn

The practices of Ecological & Environmental Sciences!

Restore

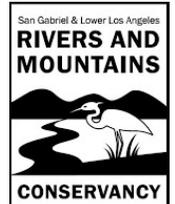
The vitality of the ecosystem as Environmental Stewards!



Students are guided by a highly qualified staff of certified coaches, all versed in scientific methods and research techniques to develop knowledge of environmental sciences among youth of all ages! We are preparing the next generation to understand the natural environment and to protect watershed resources and habitat.

**Every Thursday, 9:30 am to 4:30 pm at the
Whittier Narrows Nature Center
1000 North Durfee Avenue, South El Monte, CA 91733**

*For Further Information: Contact Project Manager
Diana Padilla at (626) 588-7818
diana@youthsciencecenter.org*





EcoVoices

Inquiry Science Action
Science Theater
Outdoor Environmental Education

The San Gabriel River Discovery Center Authority and the Youth Science Center have collaborated in creating a *new* environmental science education program for youth called *EcoVoices*, featuring more than a field trip, an inquiry science expedition: every Thursday from 9:30 am to 4:30 pm.

Students explore and study the San Gabriel River watershed ecosystem at the site of the Whittier Narrows Nature Center. The name of the program, *EcoVoices*, evokes a dialogue between *students as science colleagues* and the *voices of nature* that students discover by exploring 11 acres of ecological diversity.

Each day the program sponsors busloads of K-12 schoolchildren from Los Angeles County School Districts, as well as Recreation and Community Centers. This includes: Basset Unified, Hacienda/La Puente Unified, Los Angeles Unified, Montebello Unified, South El Monte Unified, West Covina Unified, Whittier City Elementary, and Rowland Unified and more...Boys and Girls Clubs: Variety Boys & Girls Club in Boyle Heights, East Valley Boys and Girls Club in La Puente, and the Boys and Girls Club of Pomona Valley.... just turning the corner past the 4000 mark in the number of children reached by the *EcoVoices Program*.

Students explore the natural area along the river trails. They experience a hands-on collaboratory as part of the adventure of the outdoor field expedition. Students experience what it is like to be COMMUNITY SCIENTISTS and how to practice SCIENTIFIC METHODS used to produce and communicate new scientific knowledge. Students handle rocks, bioacoustics equipment, and water testing instruments. They keep science journals, handle sophisticated science instruments, such as microscopes, pipettes, and pH paper— all to advance the understanding of nature. More than that, they *apply* their newly discovered appreciation to consider the responsibility of environmental stewardship— how to apply what they have discovered on the expedition to their everyday lives and their community's well-being.

As a central feature, students also participate in the Action Science Theater featuring the Sci Mi Theatre Troupe, communicating watershed ecosystem concepts through mime and improvisational theater! Then they share what they've discovered by creating their own action science performances.

Youth Science Center's highly qualified Leadership Team and Inquiry Coaches collaborate with scientists from local universities: the Center for Urban Resilience at Loyola Marymount University, the Geoscience and Environment Department and the BioSecurity Program at California State University, Los Angeles, the Environmental Science Department at Whittier College, and the Landscape Architecture Department at Cal Poly Pomona, *just for starters*. Youth Science Center leverages long-time partnerships with City and County agencies. Participating students learn alongside working scientists, graduate students, and science-savvy inquiry coaches as they conduct studies in water quality, biodiversity, and urban resilience— and apply what they have learned to create community science and environmental stewardship projects.



LMU|LA Center for Urban Resilience
Loyola Marymount University



Developing **Science Creativity And Talent**
for more information call

Dr. Richard Shope

EcoVoices Project Director
562.201.7889

shope@youthsciencecenter.org

Diana Padilla

Project Manager
626.588.7818

diana@youthsciencecenter.org

EcoVoices, the River Exploration and Discovery Education Program: On-Site & Outreach

The Discovery Center through the Authority and its Foundation is engaged in a capital campaign to construct the San Gabriel River Discovery Center. Though the new facilities are not complete, the Authority initiated the educational activities to which the Center will eventually be home. The River Exploration and Discovery (RED) program, under the brand *EcoVoices*, develops and incorporates the outdoor research, education, and youth workforce program elements that will be in the Center's education menu. The goals of the *EcoVoices* program are to:

- Establish a connection between area students and the San Gabriel River watershed's ecosystem. For a continuous educational opportunity that will last all through their elementary and secondary school years
- Maintain connection by encouraging return visits – with family and friends – to the watershed's natural areas
- Inspire students to conserve and protect the valuable resources contained in the watershed
- Motivate the development of expertise and leadership skills that will help today's students become the environmental and community leaders of tomorrow.

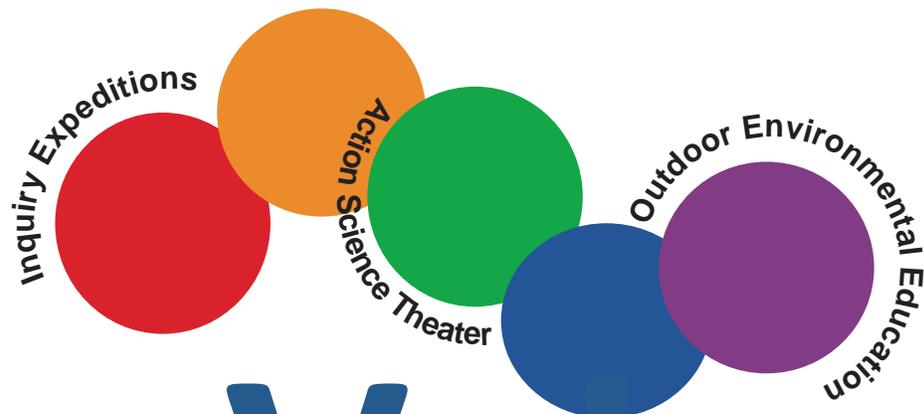
The San Gabriel River Discovery Center Authority (the Authority) currently contracts the Youth Science Center (YSC) to implement its River Exploration and Discovery (RED) education program, under the brand *EcoVoices*, in cooperation with Los Angeles County public schools, recreation, and community centers, during the 2012-2013 and 2013-2014 school years. Program planning is on the way for the 2014-2015 school. During the summer when schools are not in session, community groups are welcomed and do participate in program activities. Thus far the program has reached over 5,600 students, in grades K-12, with ecological and environmental stewardship education aligned with the Next Generation Science Standards, placing emphasis on the *inquiry-driven practices of thinking like scientists and doing science*. Central to the approach is also the notion that the purpose of the science emphasis is to *inform the process of determining appropriate actions of environmental stewardship*. Thus the SCIENCE and the STEWARDSHIP go hand in hand.

Busloads of students visit the site of the Whittier Narrows Nature Center for (typically) a 3-hour field expedition to learn about the natural history, anthropology, geology, and ecology of the San Gabriel River Watershed system and its relation to Regional and Global ecosystems and ecosystem services.

The *EcoVoices* On-site program is offered to schools *at no charge*. As an expanded activity, YSC is in the demonstration phase of providing *EcoVoices* Outreach programming to a suite of school assemblies, performance workshops, teachers institutes, traveling community expeditions, and after school programs as a joint enterprise. YSC is the liaison to participating school districts, schools, and youth community centers.

Youth Science Center, a 501(c)3 California Corporation.

Contact Person: Dr. Richard Shope, Program Development Consultant
Shope Performance Group, 13244 Helmer Drive, Whittier, CA 90602
Tel: 562-201-7889 Email: shope@youthsciencecenter.org



EcoVoices

SAN GABRIEL RIVER DISCOVERY CENTER
ECOVOICES PROGRAM

STATISTICS as of March 7, 2013-June 2, 2014

EcoVoices	Total
Students	4621
Elementary	1993
Middle School	1285
High School	549
Youth Workforce Events	768
College	26
Programs	66
High Schools	7
Middle Schools	19
Elementary Schools	22
Community Centers	11
After School Programs	7
Youth Workforce/WIA	18
Valley High	5
Workman High	1
El Rancho High	7
South El Monte High	2
Civitas	3
Internships/Volunteers	4

Attachment D

San Gabriel River Discovery Center Project

Stage One elements include:

- Constructed wetland area: The wetland will filter and cleanse stormwater from the developed areas of the site, such as the main building, parking lot, and road, and will be sized to contain and subsequently infiltrate excess stormwater to prevent discharge directly to Lario Creek or the San Gabriel River. A portion of the wetland will be membrane-lined to prevent premature infiltration and minimize contaminant migration to the groundwater.
- Bio-swale area: Similar to the function of the constructed wetland, the bio-swale area will also help to remove stormwater contaminants. Stormwater will pass through vegetation, which will provide abundant surface areas for physical filtering of runoff.
- Stormwater management components: The developed areas of the site, such as the parking lot and pedestrian walkways, will be constructed to direct stormwater runoff flow to the wetland and bio-swale areas to prevent discharge and pollution migration. Site components, such as an underground drainage pipework, trench drains, catch basins, and cleanouts, will be installed to manage the stormwater and prevent pollution.
- Erosion control: Control measures, such as silt fence, sand bags, and stockpile management will be employed to protect the site from erosion during the construction phase. These measures also minimize the impacts of stormwater runoff in regards to erosion and pollutant migration.
- Native plant landscape and irrigation: Site areas will be planted and irrigated according to the planting and restoration plans and by utilizing nursery-grown local native plant species. Additionally, tanks will be used to store water that has undergone treatment through the wetland system, which will be used as irrigation water and to maintain wetland recirculation. Furthermore, the tanks will help the wetland remain stable during irrigation water extraction, which would otherwise draw down the water surface. The tanks will hold a combined total of 6,000 gallons.
- Walnut woodland restoration will restore 0.22 acres at the northern edge of the parking lot. Existing native trees will be preserved. The existing walnut woodland is not indigenous to the site but is comprised primarily of eastern black walnut (*Juglans nigra*), along with hybrids. The intent is to establish a range of understory species and a more diverse soil ecology than appears present in the existing walnut woodland. Lower statured and shrubbier in form than the existing eastern black walnuts and hybrids, the proposed native walnuts and associated species alongside the existing woodland will enhance existing habitat functions by adding both vertical and horizontal structural diversity, including a much greater diversity of potential wildlife food sources. This should particularly enhance insect and bird species diversity in the area as the new plantings mature.
- Habitat buffer will be planted to minimize the visibility of the parking lot from the site, provide additional nesting trees for birds and provide a clean edge and shade for the inside of the parking area.
- A covered outdoor classroom will consist of a 1,255-square-foot structure adjacent to the constructed wetland with two restrooms and storage areas (see “Stage 1 Elements” #6 in Attachment E). A ramp will provide access from the site walkway to the elevated

viewing area.

- Outdoor interpretive elements will include signage, displays and interactive elements relating to history, ecology, and watershed management, as well as the constructed wetland, site paths, and restoration areas.
- Vehicular parking area striping will accommodate 122-cars, including five ADA stalls, and a bus drop-off area for two buses.
- Site furnishings will include drinking fountains, bike racks, litter receptacles, picnic tables, and path and parking lot lights.
- Restoration outside of development footprint will include native restoration plantings and temporary irrigation on 30% of the remaining site (1.85 acres). There will be a five-year monitoring program for restored areas as required by the Final EIR.

Stage Two elements include:

- An open-air classroom will be constructed immediately south of the main building and allow for casual seating of 50 to 120 people.
- The main building will replace the existing small and deteriorated nature center built over 75 years ago. The new building will be LEED certified and will contain interpretive exhibits, a 100-seat multi-purpose room, a “wet” classroom, and other administrative and maintenance areas.
- The exhibit content for the main building was designed to consider affective, cognitive and behavioral goals, which were developed with input from the Discovery Center Stakeholder Advisory Committee and Authority partners. The exhibits will provide school groups and other visitors with opportunities to learn about the unique characteristics of the Whittier Narrows Nature Area and its relationship to the larger ecosystem and urban areas of the San Gabriel River Watershed. The exhibits will integrate critical conservation issues related to the watershed. The following themes of the interpretive program will communicate the messages of the Discovery Center: Introducing the River, River Ecology and Natural Area, Exploring the River, Working with the River, Watershed Management, and Revitalizing the River. Interpretive displays will be located throughout the site, such as on the trails and around the wetlands, habitat, and restoration areas.

Attachment E

Site Plan



Figure 2.3: Project Site Plan

Stage 1 Elements



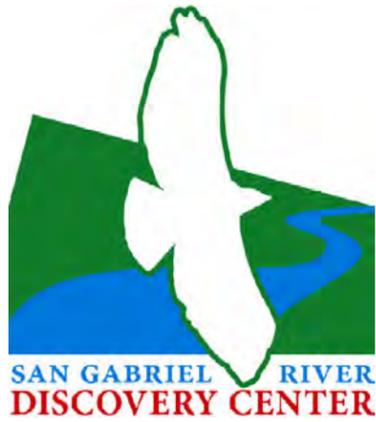
Figure 3.1: STAGE 1 SITE PLAN

Stage 2 Elements



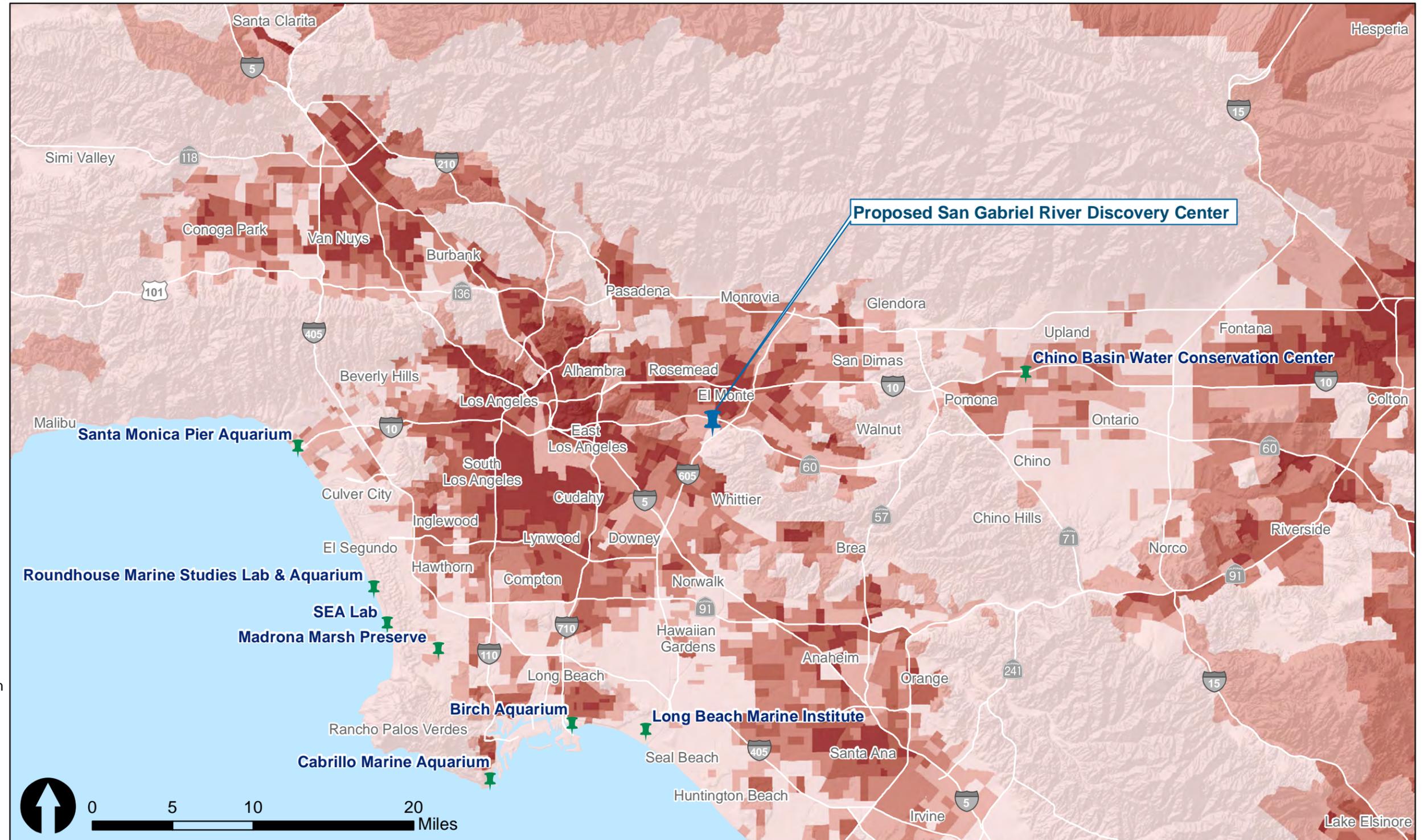
Figure 3.3: STAGE 2 SITE PLAN

Attachment F



Need for Equitable Environmental Educational Opportunities in Los Angeles County

Index of Need for Environmental Educational Opportunities based upon disadvantaged community status. Level of need is determined by: 1) distance from existing water focused educational facilities in Los Angeles County, 2) educational attainment and 3) poverty. Specific data indicators include: Adult educational attainment less than high school diploma; households receiving food stamps and households below the US poverty level displayed by Census Tract.



- Very High Need
- High Need
- Moderate Need
- Low Need
- Very Low Need

Data sources: Demographic information is from the U.S. Census Bureau 2012 American Community Survey 5-year estimates, Tables B15003 and S2201. Spatial information including Census Tracts and freeways from the U.S. Census Bureau 2013 TIGER/Line database.

Map prepared on April 9th, 2014

Attachment G



San Gabriel River Discovery Center: Supporters List *July 2014*

The San Gabriel River Discovery Center serves as an important anchor for the revitalization of the San Gabriel River, creating a healthier and more livable region for plants, animals and humans. The Discovery Center will ensure equitable environmental education opportunities for all residents of Los Angeles County and meet growing demands for 21st century learning opportunities for the future scientists and engineers currently enrolled in our local schools. Supporters of the Discovery Center project include the community, environmental and educational leaders, and elected officials listed below.

Organizational affiliations are provided for identification purposes only.

Elected Officials

Gloria Molina, LA County Supervisor, 1st District
Ian Calderon, Assemblymember, 57th District
Ed Chau, Assemblymember, 49th District
Ed Hernandez, State Senator, 24th District
Kevin de León, State Senator, 22nd District
Fran Pavley, State Senator, 27th District
Roger Hernandez, Assemblymember, 48th District
Christina Garcia, Assemblymember, 58th District
Anthony Rendon, Assemblymember, 63rd District
Monica Garcia, Boardmember, LAUSD, 2nd District
Mark Ridley-Thomas, LA County Supervisor, 2nd District
Zev Yaroslavsky, LA County Supervisor, 3rd District
Michael D. Antonovich, LA County Supervisor, 5th District
Andre Quintero, Mayor, City of El Monte
Norma Macias, Councilmember, City of El Monte
Victoria Martinez, Councilmember, City of El Monte
Brent A. Tercero, Mayor, City of Pico Rivera
Salvador Ramirez, Boardmember, El Monte Union
High School District
Mike Eng, Trustee, Los Angeles Community College District
Robert Gonzales, Councilmember, City of Azusa
Xilonin Cruz-Gonzalez, President, Azusa Unified School
District
Luis Marquez, Mayor Pro Tem, City of Downey
John Fasana, Councilmember, City of Duarte
Mary Ann Lutz, Mayor, City of Monrovia
Gilbert Cedillo, Councilmember, 1st District, City of LA

City Councils

South El Monte
El Monte
Rosemead
City of Industry
Whittier
Temple City
Monterey Park
Maywood

Community, Environmental & Public Health Leaders

Claire Robinson, Amigos de los Rios
Danny Oaxaca, San Gabriel Valley Conservation Corps
Julia Bogany, Gabrieleno/Tongva of San Gabriel Valley
Sandonné Goad, Gabrieleno/Tongva Nation
Bruce Saito, Los Angeles Conservation Corps
Ruskin Hartley, Heal the Bay
Liz Crosson, Los Angeles Waterkeeper
Damon Nagami, Natural Resources Defense Council
Adrian Martinez, Earth Justice
Colin Bailey, Environmental Justice Coalition for Water
Darryl Molina Sarmiento, Communities for a Better
Environment
Alina Bokde, Los Angeles Neighborhood Land Trust
Joe Edmiston, Santa Monica Mountains Conservancy
David McNeill, Baldwin Hills Conservancy
Miguel Luna, Urban Semillas
Tracy Drake, Madrona Marsh Preserve & Nature Center
Alfredo Gonzalez, The Nature Conservancy
Jodi Delaney, Trust for Public Land
Andy Lipkis, TreePeople
Omar Bronson, LA River Revitalization Corporation
Patricia Ochoa, Coalition for Clean Air
Elizabeth Goldstein, California State Parks Foundation
Tommy Randle, Black American Political Association
Mavis Hansen, San Gabriel Valley District of Women's Clubs
Eric Bruins, Los Angeles County Bike Coalition
Mark Masaoka, Asian Pacific Planning and Policy Council
Veronica Padilla, Pacoima Beautiful
Jerilyn Lopez Mendoza, Southern California Gas Co.
Glen Dake, Dake Luna Landscape Architects
Jane Paul, Antioch University, Urban Sustainability Dept.
Doug Carstens, Chatten-Brown and Carstens
Manal Aboelata, Prevention Institute
Elsa Barboza, SCOPE
Lark Galloway-Gilliam, Community Health Councils, Inc.
Isela Garcian, East Los Angeles Community Corporation
Jessica Meany, Safe Routes to School National Partnership
James Rojas, Latino Urban Forum

Educators

Roberto A. Martinez, Superintendent, ESC East, LAUSD
Debra Kaplan, Superintendent, West Covina Unified School District

Oscar Cisneros, Principal, South El Monte High School
Juan Muñoz, Principal, Wilkerson Elementary, El Monte
Berenice Rios, Principal, Torch Middle School, La Puente
Alicia Aceves, Principal, Andrews Elementary, Whittier
Reanna Mendoza, Principal, Mill Elementary, Whittier
Shannon Brann Zelaya, Principal, Los Nietos Middle School, Whittier

Hector Galicia, Principal, Hollencrest Middle School, West Covina

Sonia Gonzalez, Principal, Merlinda Elementary, West Covina

Jeffrey S. Schwartz, Principal, Montebello High School

Rich Nambu, Principal, Walnut Grove Intermediate, West Covina

Cinzia Fissore, PhD, Professor, Whittier College

Gabriel Griego, Principal, Bassett High School, La Puente

Luis Lopez, Principal, Wilson High School, Los Angeles

Jose Huerta, Principal, Garfield High School, Los Angeles

Francis Gipson, Principal, El Sereno Middle School, Los Angeles

Teresita Saracho de Palma, Principal, Farmdale Elementary, Los Angeles

Gregory Jackson, Principal, Civitas High School, Los Angeles

Patricia Heideman, Principal, Nightingale Middle School, Los Angeles

Rosa Trujillo, Principal, Berendo Middle School, Los Angeles

School Boards

El Monte Union High School District

El Monte City School District

Rio Hondo Community College District

Garvey School District

Hacienda La Puente Unified School District

Azusa Unified School District

Alhambra Unified School District,

Boys and Girls Clubs

Anna Araujo, Boys & Girls Club of East Los Angeles

Maria Casteneda, East Valley Boys & Girls Club, Baldwin Park

Charles Karsch, East Valley Boys & Girls Club, La Puente

Amy Borton, Boys & Girls Club of the Foothills, Pomona

Nancy Reyes, Boys & Girls Club of Pomona Valley, Monrovia

Frank Reyes, Boys & Girls Club of West San Gabriel Valley, Monterey Park

Patricia Sequeiros, Variety Boys & Girls Club, Los Angeles



Abridged Timeline

2000: Planning begins with 20 stakeholder groups

2003: Stakeholder Committee forms and develops initial program focus

2005: Site selection process prioritizes the WNNA

2006: Environmental review process begins

2007: \$9.6 million of proposed \$22 million budget secured

2009: Release of draft Environmental Impact Report (EIR)

2010: EIR certified and schematic design produced

2011: SGRDC Foundation established to raise funds for Discovery Center

2012: EcoVoices educational program developed

2013: EcoVoices weekly field trips offered on site

2014: Sequenced work program finalized to deliver project in two stages

For more information about the Discovery Center visit www.sangabrielriverdiscoverycenter.org

Produced by the San Gabriel River Discovery Center Foundation • 323-397-1554

Attachment H

San Gabriel River Discovery Center Project - Mitigation Monitoring and Reporting Program

Source: *Findings of Fact and Statement of Overriding Consideration for the San Gabriel River Discovery Center at Whittier Narrows Final Environmental Impact Report (SCH No. 2006081154)*, San Gabriel River Discovery Center Authority, January 2010. A copy of this report can be found at http://discoverycenterauthority.org/library/eir_final/.

Mitigation Measure ¹	Implementation Phase ²	Monitoring Phase ²
BIO-B Of the total 27 mature native and nonnative trees ³ that would be potentially impacted, 4 trees are salvageable. No more than 33 percent of the root matrix for each tree shall be removed during the transplanting process in order to assure or contribute to recovery and survival during and after the transplant process. No subsurface disturbance shall encroach the dripline extent of the tree (dripline is the furthest margin of the crown radiating out from the main stem [tree trunk]). For transplanting trees, pragmatic and practical concerns about handling ability (among other issues) become paramount in the transplant process. Therefore, for replanting relocated trees, no more than 2 to 3 feet of dripline encroachment shall occur to ensure root disturbance and impact is kept to a minimum. After replanting, the tree's root matrix shall be accessible 360 degrees and not asymmetrically obstructed (i.e., a tree abutting a wall or other structure), to prevent adequate rootball formation.	Construction	Construction
BIO-C The native trees 8-inch inches diameter at breast height (dbh or larger) in natural areas of construction impact area lost to project-related activities shall be replaced in-kind at a ratio of 2:1. These trees shall be replaced with a minimum 15-gallon tree replanted in clusters of 3 to 4 under advisement of a qualified restoration ecologist in cooperation with the landscape architect(s) for the project. Each non-native mature tree (8-inches dbh or larger) removed from a landscaped area around the WNNC shall be replaced at a ratio of 1:1 with a 36-inch box tree of a species native and known to the floodplain of the San Gabriel River. The replacement trees shall be planted in small groupings (3 to 4 trees) within landscaped areas of the construction impact area near the proposed interpretive center. Salvaged materials shall be used or supplemental plantings of native species appropriate to the site (occurring within the San Gabriel River floodplain and of local genetic stock) shall be used if necessary. Post-construction monitoring shall be conducted by a qualified biologist to ensure 100 percent survival for the first year and 80 percent survival for the year after. Additional information for the proposed mitigation strategy is included in Appendix C of the EIR.	Construction	Construction and Operations
BIO-D Prior to the start of construction, a qualified biologist shall conduct focused pre-construction surveys for the coastal western whiptail. If encountered, the species shall be relocated to an approved location based on consultation with the California Department of Fish and Game. ⁴	Pre-Construction	Pre-Construction

¹ The San Gabriel River Discovery Center Authority is responsible for enforcement of each mitigation measure listed in this table.

² The Implementation and Monitoring phases are broken down into four categories: Final Plans and Specifications, Pre-Construction, Construction, and Operation. "Final Plans and Specifications" indicates that the mitigation measure must be incorporated into the final approved design, plans, and specifications for the project. "Pre-Construction" refers to measures that are required prior to the start of construction. "Construction" refers to all aspects of project construction, including, but not limited to, site preparation, paving, material hauling, and construction of new facilities. "Operations" includes all measures that must be implemented during routine operations of the project.

³ Mature trees are defined as those trees measuring 8 inches diameter at breast height or higher. Native trees are those indigenous to California.

⁴ In addition to the San Gabriel River Discovery Center Authority, the California Department Fish and Game is responsible for enforcement of this mitigation measure.

Mitigation Measure ¹	Implementation Phase ²	Monitoring Phase ²
BIO-E Should tree or other vegetation clearance and/or construction work need to occur during the breeding season for migratory nongame native bird species (generally March 1-September 1, as early as February 1 and as late as September 15 for raptors), weekly bird surveys shall be performed to detect any protected native birds in the trees to be removed and other suitable nesting habitat within 300 feet of the construction work area (500 feet for raptors). The surveys shall be conducted 30 days prior to the disturbance of suitable nesting habitat by a qualified biologist with experience in conducting nesting bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work. If a protected native bird is found, the construction contractor shall delay all clearance/construction disturbance activities in suitable nesting habitat or within 300 feet of nesting habitat (within 500 feet for raptor nesting habitat) until August 31 or continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest (within 500 feet for raptor nests) shall be postponed until the nest is vacated, juveniles have fledged, and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest shall be established in the field by a qualified biologist with flagging and stakes or construction fencing. Construction personnel shall be instructed on the sensitivity of the area. The results of this measure shall be recorded to document compliance with applicable state and federal laws pertaining to the protection of native birds.	Construction	Construction
BIO-F The Authority shall inform the construction contractor(s), prior to the bidding process, about the biological constraints of the project site. The construction contractor(s) shall be responsible for impacts to sensitive biological resources beyond those identified in this report that occur as a direct result of construction activities. All sensitive habitat areas to be avoided shall be clearly marked on proposed project maps provided to the contractor by a qualified biologist. These areas shall be designated as "no construction" zones. The project biologist shall flag these areas prior to the onset of construction activities. Resources may need to be fenced or otherwise protected from direct or indirect impacts.	Pre-Construction	Pre-Construction
BIO-G The Authority shall implement a contractor education program to ensure that contractors and all construction personnel are fully informed of the sensitive biological resources associated with this project. This program shall focus on (a) the purpose for resource protection, (b) contractor identification of sensitive resource areas in the field (e.g., areas delineated on maps and by flags or fencing), (c) sensitive construction practices, (d) protocol to resolve conflicts that may arise at any time during the construction process, and (e) ramifications of noncompliance. This program shall be conducted by a qualified biologist.	Pre-Construction	Pre-Construction
BIO-H Construction in or adjacent to sensitive areas shall be appropriately scheduled to minimize potential impacts biological resources (i.e., outside of the nesting bird season and/or blooming periods of sensitive species with the potential to occur in the vicinity of the proposed project site).	Pre-Construction and Construction	Pre-Construction and Construction
BIO-I Topsoil shall be stockpiled in disturbed areas presently lacking native vegetation. Stockpile areas shall be delineated on the grading plans and reviewed by a qualified biologist.	Final Plans and Specifications	Final Plans and Specifications
BIO-J Staging areas shall be located in disturbed area (i.e., within the grading footprint). Staging areas are prohibited within sensitive habitat areas. Staging areas shall be delineated on the grading plans and reviewed by a qualified biologist.	Final Plans and Specifications	Final Plans and Specifications

	Mitigation Measure¹	Implementation Phase²	Monitoring Phase²
BIO-K	Fueling of equipment shall take place within existing paved roads and not within or adjacent to drainages or native habitats. The construction contractor shall be responsible for inspecting construction equipment for leaks prior to operation and repaired as necessary. "No-fueling zones" shall be designated on construction maps and shall be situated a minimum distance of 50 feet from all drainages.	Construction	Construction
BIO-L	Erosion and siltation into off-site areas during construction shall be minimized. An erosion control plan and a Storm Water Pollution Prevention Plan shall be required of the construction contractor prior to the start of construction. The Authority shall be responsible for ensuring that the erosion control plan is developed and implemented per the requirements to the County of Los Angeles Department of Public Works. The plan shall include the use of hay bales, silt fences, siltation basins, or other devices necessary to stabilize the soil in denuded or graded areas during the construction and revegetation phases of the proposed project.	Pre-Construction	Construction
BIO-M	All nighttime lighting from the proposed project site shall be shielded. Parking lot lighting shall be located around the perimeter of the parking lot facing inward away from native vegetation located around its edges.	Construction	Construction
BIO-N	Signs shall be posted near sensitive biological resources and sensitive habitat areas to educate staff and the public to avoid disturbance to these resources. The Authority shall post educational signage, both inside the interpretive center and at trail heads emphasizing the protection of all natural features of the Natural Area.	Construction	Construction

Attachment I

San Gabriel River Discovery Center SEP - Budget

SEP-Supported Elements

	Item Description	Total Element Cost
1	<i>Constructed Wetlands</i>	\$ 734,791
	Constructed wetland	\$ 298,359
	Wetland soil prep	\$ 18,838
	Wetland irrigation	\$ 75,350
	Concrete board walk with guardrails, bridge	\$ 33,954
	Wetland native vegetation	\$ 113,025
	Wetland Site clearing and grading	\$ 124,303
	Wetland water utility	\$ 12,237
	Demolish existing asphalt concrete paving	\$ 56,513
	Demolish existing concrete pavement	\$ 2,211
2	<i>Bioswale</i>	\$ 351,354
	Bioswale, River gravels and native vegetation	\$ 170,485
	Bioswale soil preparation	\$ 13,114
	Bioswale irrigation	\$ 52,457
	Bioswale Site clearing and grading	\$ 106,825
	Bioswale water utility	\$ 8,473
3	<i>Erosion Control</i>	\$ 68,189
	Erosion Control - silt fence	\$ 24,411
	Erosion Control - sand bags	\$ 8,637
	Erosion Control - stockpile management	\$ 4,612
	Protect in place existing misc.	\$ 25,983
	Protect in place existing utilities	\$ 4,547
4	<i>Stormwater Management Components</i>	\$ 156,872
	Storm drainage pipework	\$ 65,282
	Trench drains	\$ 3,897
	Cleanout	\$ 5,846
	Catch basin	\$ 15,590
	Rip Rap	\$ 27,282
	Perforated pipes around walls and footings	\$ 38,974
5	<i>Native Plant Landscaping & Irrigation</i>	\$ 688,926
	Landscape Soil preparation	\$ 46,468
	Landscape native vegetation	\$ 278,807
	Landscape irrigation	\$ 185,871
	Landscaping clearing and grading	\$ 39,183
	Water Utility	\$ 33,431
	Remove existing trees	\$ 7,730
	Transplant trees	\$ 5,197
	Water storage tanks	\$ 40,273
	Stored water piping, pumps, filters and controls	\$ 51,966
6	<i>Design Fees</i>	\$ 199,868
	Landscape	\$ 171,698
	Civil	\$ 10,000
	Architectural Coordination of Civil and Landscape	\$ 18,170
Total SEP-Supported Elements		\$ 2,200,000

San Gabriel River Discovery Center SEP - Budget

Contingent SEP-Supported Elements

	Item Description	Total Element Cost
7	<i>Additional Native Plant Landscaping</i>	\$ 97,436
	Native trees	\$ 97,436
8	<i>Water Conservation Fixtures</i>	\$ 8,055
	Water closet – low flow and sensor activated	\$ 4,092
	Laboratories – sensor activated	\$ 3,962
9	<i>Recycled Water</i>	\$ 117,492
	Reclaimed water	\$ 34,672
	Meter (1)	\$ 11,368
	Backflow prevention	\$ 58,461
	Connect to existing (1)	\$ 12,991
Total Contingent Elements		\$ 222,982