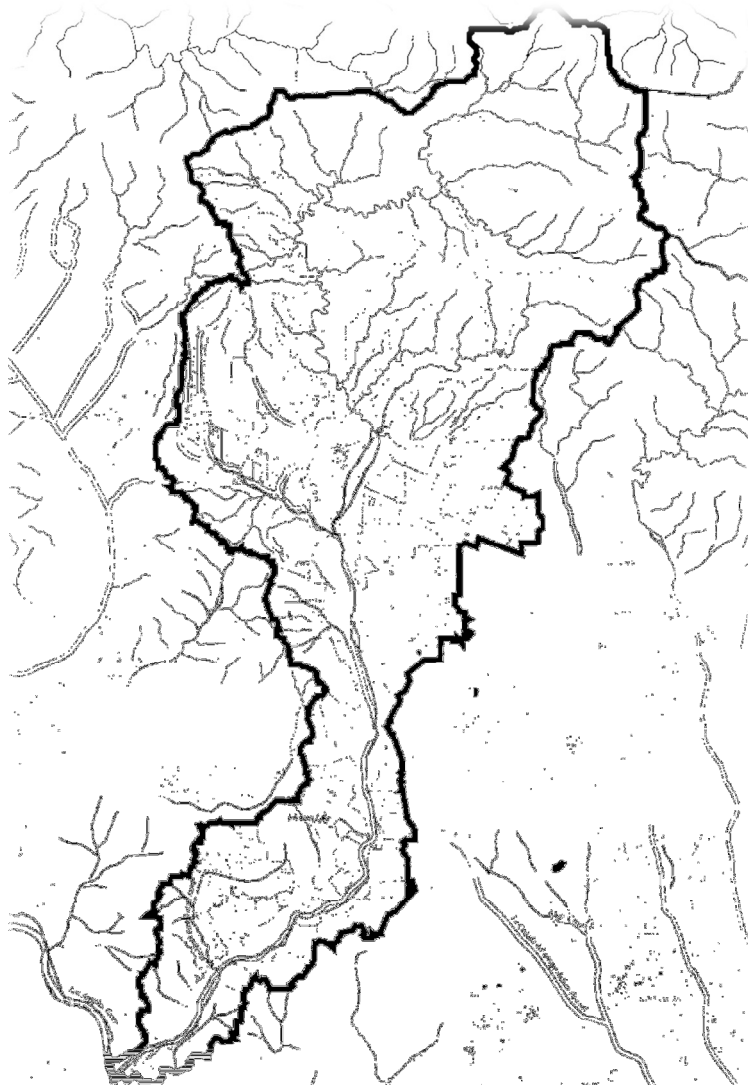




ARROYO SECO FOUNDATION

Preferred projects for

United State Army Corps of Engineers:  
Arroyo Seco Watershed Ecosystem Restoration



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## Hahamongna Watershed Park

1.5 miles in length at the foot of the mountains: Arroyo Seco is a natural channel in the Devil's Gate Dam reservoir area.

Potential projects:

Integrating wetland restoration and enhanced percolation methods

- Hahamongna Watershed Park is the most important area for natural resources management in the watershed, including habitat, sediment, open space, and power transmission, but with particular importance for water resources. The water resources management issues in Hahamongna are very delicate and critical to the environment, people and habitat. Hahamongna serves as the main groundwater recharge site throughout the watershed, and throughout the region. Contamination of groundwater from the Jet Propulsion Laboratory has been a major obstacle for providing clean drinking water to residents relying on Raymond Basin Groundwater as a source of fresh, potable water. The watershed area of Hahamongna is about 30 square miles, draining the entire natural upper watershed, and the urban areas of La Canada, Altadena and Pasadena. Storm water from these urban areas impacts the habitat and recreational activities of Hahamongna. Integrating storm water management with groundwater recharge will be a "win win" for water resources in Hahamongna, and will set the bar for MS4 permit projects. The opportunity for storm water remediation and groundwater recharge culminates perfectly with the potential for wetland habitat restoration in Hahamongna Watershed Park.

Bird nesting preservation

- The Least Bell's Vireo, an endangered bird species, has been recently identified to be seasonally nesting in Hahamongna. With the LA County Sediment Removal and Management Program set to begin shortly, along with the JPL parking structure, Pasadena's formerly titled "Multi-Benefit/Multi-Use" project, the Arroyo Seco Canyon Project and other development projects in the area, the potential for disturbing the birds of Hahamongna is quite large. Hahamongna is one of the best locations for bird habitat in Southern California, and a project to ensure the preservation of high quality bird nesting habitat is needed immediately.

Riparian canopy along stream out of the canyon

- Hahamongna is the interface between a wild, scenic, mountainous and mostly natural river, and the concrete lined, high velocity, storm drain fed river of the Los Angeles urban plane. The river habitat should be capable of providing aquatic habitat, native vegetation, natural sediment dynamics, clean and fresh water, and should also be accessible to recreational users of Hahamongna. A key ingredient in these goals is the riverside canopy providing shade, habitat, stability and aesthetics to a natural open space area that is accessible to millions of LA County residents.

## Brookside Area

Central Arroyo Seco (2.5 miles in length, which includes Brookside Park and the Rose Bowl): From the Devil's Gate Dam, the Arroyo Seco flows through a short natural canyon and is contained primarily in a trapezoidal concrete channel extending from the golf course to north of Seco Street. South of Seco Street, the Arroyo Seco transitions to a rectangular concrete channel, extending 750 feet south to the natural drainage channel passing under the Holly Street and the SR-134 bridges before continuing to the next reach.

- The Brookside Park Golf Course
  - The Brookside Park Golf Course Arroyo Seco Channel Naturalization project is an integrated recreation, water resource, and habitat enhancement project within Brookside Park extending from the Devil's Gate Dam downstream to Colorado Boulevard that will improve public safety, recreation, flood control, sedimentation, water quality, and ecosystem health not only in the park, but also in downstream reaches extending to the Los Angeles River and beyond. This project culminates years of grassroots planning efforts and analysis focusing on southern California ecosystems that are becoming increasingly endangered and dynamic geomorphic processes that cannot be ignored. This golf course has over two hundred acres of potential riparian habitat. Restoring the stream will integrate a habitat restoration project with a unique public golfing venue.
  
- The Rose Bowl
  - The Rose Bowl is one of the most iconic images of Pasadena and is one of the biggest attractions in the San Gabriel Valley. The feature most often cited for the Rose Bowl's appeal is the natural setting and beautiful environment. While this is undeniable, the potential for improving the natural ecosystem function and habitat value of the area and enhancing the aesthetics further is often overlooked. The gigantic parking area of the Rose Bowl is land use in direct contradiction to the natural ecosystem. The floodplain of the Arroyo Seco near the Rose Bowl is lacking in habitat and biodiversity. ASF's Central Arroyo Stream Restoration Program implemented a very successful land use scheme that can provide the millions of visitors to the area with their parking needs, and has restored high quality ecosystem function in the area.

## Lower Arroyo Seco Park

Pasadena's Lower Arroyo Seco (1.5 miles in length): This reach extends from the Colorado Street Bridge to the South Pasadena boundary just south of the SR-110 Bridge. At the Colorado Street Bridge, the natural Arroyo Seco drainage channel flows over a spillway back into the concrete channel. The channel is located in a narrow, highly urbanized canyon

- Removing the concrete flood channel from just downstream of the Colorado Street Bridge to the Pasadena city limit
  - Remove the concrete from the Arroyo Seco River in Pasadena's Lower Arroyo Park area, restore a fully functioning ecosystem influenced by natural hydrology, including periodic flooding, without causing a risk of flood damage to privately owned property. This project will also serve to enhance public access to rivers and the great outdoors, connect wildlife from the San Gabriel Mountains to the Santa Monica Mountains, and improve water quality in the Arroyo Seco and Los Angeles River Watershed.

The Lower Arroyo Seco is one of the most beloved and cherished landmarks in Pasadena because of its open space, recreation and access to nature. This area is known throughout the region for its natural setting, peacefulness and abundant wildlife. The potential, however, for a complete restoration of historical ecosystem function is beyond question. Unlike many sites along the channelized Los Angeles River Watershed almost no flood threat comes from removing the concrete from the stream in the Lower Arroyo. The concrete does a fine job of controlling flood flows in the area, but for the most part, there is no risk of property damage from even the highest of potential floods. The Lower Arroyo Seco Channel Removal Project is a culmination of years of grassroots planning efforts and analysis focusing on southern California ecosystems. This area is incredibly valuable to habitat connectivity, including aquatic habit. The Lower Arroyo has had its share of anthropogenic stressors on its ecosystem, but has endured and thrived with the help of conservation and restoration activities.

Project components are designed to:

- Improve flood water, sediment and debris conveyance and storage through reestablishment of a natural channel/floodplain system
- Improve water quality due to floodplain and groundwater/surface water interactions that remove sediment and filter flows
- Restore endangered aquatic and riparian ecosystem communities
- Reestablish fish passage through the elimination of migration barriers including the concrete channel and the spillway from the newly restored Central Arroyo Seco.
- Provide active and passive recreational areas that are integrated into native ecosystem habitats
- Provide an awareness of the impacts river channelization, water quality issues, invasive habitat and the benefits of an ecosystem influenced by natural hydrology.

## Arroyo Seco through Los Angeles

Los Angeles Arroyo Seco (5.5 miles in length): The Arroyo Seco channel is concrete-lined and located in a narrow, highly urbanized canyon to the confluence with the Los Angeles River, and is adjacent to many parks and other city owned property.

- Arroyo Seco River Parks through the City of Los Angeles
  - The Arroyo Seco is lined with parks from the very top near the famous Mt. Wilson Observatory to about 2 miles upstream from The Confluence. Most of these parks, up until the Los Angeles city limit integrate the river and appropriate riparian habitat with recreational opportunities. The Arroyo Seco River Parks system through the City of Los Angeles will complete the stream side trail system for the entire 22 mile Arroyo Seco. The implementation of river themed parks, complete with river access, riparian and wetland habitat, and water quality improvements will maintain traditional park uses while enhancing recreation options and environmental awareness.
- Lower Arroyo Linkages
  - The Lower Arroyo Linkages project is a series of integrated transportation, water resource, and habitat enhancement projects along the lower Arroyo Seco river corridor that will improve public safety, transportation, economic vitality, recreation, water quality, and ecosystem health in neighborhoods in the City of Los Angeles, including Highland Park, Mt. Washington, Garvanza, Hermon, Montecito Heights, and Cypress Park. In the lower reaches of the watershed, this project is a culmination of years of grassroots planning efforts focusing on the spine of the Arroyo Seco Watershed: the Arroyo Seco and the Arroyo Seco Parkway (a National Scenic Byway Corridor).
- Cooperation with the LA River Ecosystem Restoration
  - The US Army Corps of Engineers is completing an Ecosystem Restoration Program on the Los Angeles River through the "ARBOR" reach from Glendale narrows to downtown Los Angeles. This program includes the Arroyo Seco Confluence from the Los Angeles River up half a mile of the Arroyo Seco River. Major restoration of The Confluence area will include removal of concrete, expanding the flood prone width of the river, establishment of wetland and riparian habitat, and trail connectivity. The Arroyo Seco is presented with the amazing fortune of being included in two USACE ecosystem programs. This unique opportunity will allow for a comprehensive ecosystem enhancement and massive river restoration throughout the urban portion of the river. The two programs should coordinate and cooperate throughout their life spans to provide maximum benefit to habitat, stream restoration, water resources, recreation and quality of life.