

A History of the Los Angeles River Watershed

1769 Los Angeles (LA) is founded and people settle along the banks of the river

1815 The Los Angeles River (LA River) floods and washes away the original Pueblo de Los Angeles

1825 A flash flood creates swamps and diverts the course of the free-flowing river southerly into its current location near Long Beach

1914 A disastrous flood claims lives and causes catastrophic property damage throughout the developing LA basin, bringing with it public outcry for action to address the recurrent flooding problems

1915 The Los Angeles County Flood Control District (LACFCD) is formed

1917 Taxpayers approve bond issues to build initial dams but not for substantial infrastructure downstream of the dams

1920 Devil's Gate Dam is the first dam constructed by the LACFCD

1936 The Flood Control Act of 1936 is passed, and authorizes the U.S. Army Corps of Engineers to construct dams, channels, and other flood control measures in LA County

1938 The Flood of 1938 heavily affects public opinion on the safety of rivers. Federal assistance is requested and the U.S. Army Corps of Engineers takes the lead role in channelizing the river

1960 The LA River channelization project is completed to form a 51-mile engineered waterway

1979 Voters pass Proposition A to allow for benefit assessments to supplement funding of the flood control system

1986 Friends of the Los Angeles River is founded, a nonprofit group dedicated to restoring the LA River

1990 The Mayoral Task Force is formed to study ways to increase opportunities along the LA River and improve its appearance

1991 The development of the Los Angeles River Master Plan is approved by the Los Angeles County Board of Supervisors

2001 The Los Angeles County Drainage Area (LACDA) project is completed and alleviates severe overflow potential by increasing flood carrying capacity of the Lower LA River. Twenty-two miles of bike trails are improved as part of this project

2007 City of Los Angeles adopts the Los Angeles River Revitalization Master Plan which designs a 32-mile greenway from Canoga Park through downtown Los Angeles to Vernon



Why are dams necessary?

Devil's Gate Dam, the first dam built by the Los Angeles County Flood Control District, was a direct response to catastrophic flooding within the Los Angeles River floodplain. Due to the construction of dams and the flood risk management they provide, today, many Los Angeles neighborhoods are built in floodplains. Dams allow water to be released in controlled amounts thereby reducing the risk of severe floods and mudflows during storms to Los Angeles residents living within the floodplain. Dams also store water which can later be used to replenish ground water basins. Local ground water sources provide one-third of the drinking water for Los Angeles County residents.

What are the challenges in returning the river to its natural state?

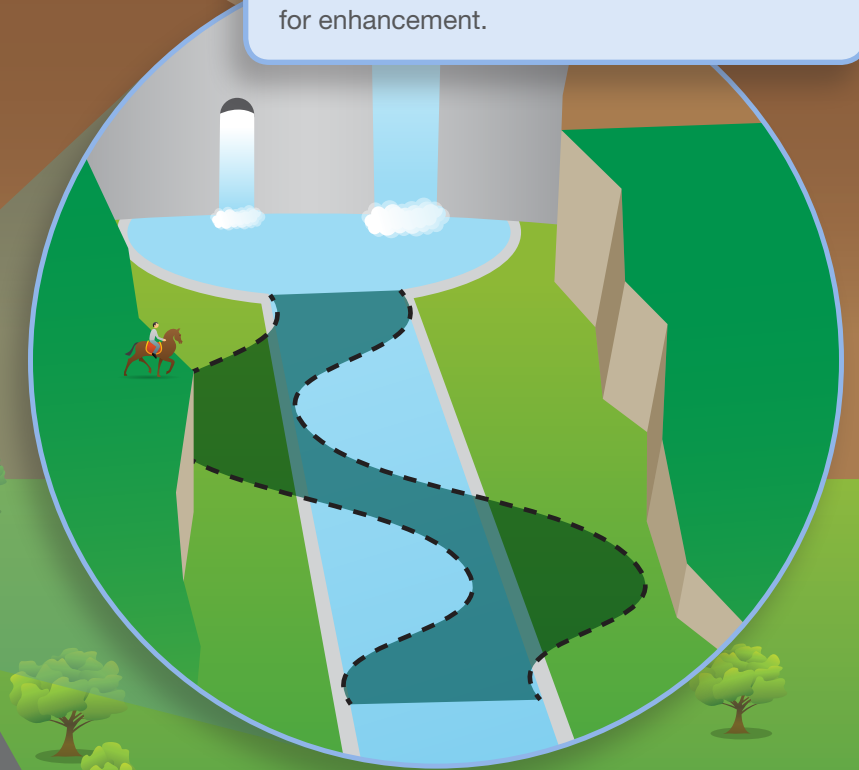
A river's path naturally shifts and bends (or meanders) over time, often moving from one side of a valley, or floodplain, to another. Bends and curves in the river are important because they help provide critical plant and animal habitat, trap sediment to improve water quality, and help prevent erosion by slowing water and protecting banks from damaging high flows.

To return a channelized river back to more natural conditions, the river would need a floodplain, as well as space, to meander in order to accommodate high flows and provide important biological habitat.

In Los Angeles, the development of houses and businesses along many concrete channels, at times almost right up to the edge of them, means that enhancement of these rivers must be done very carefully, if at all. Concrete could be removed in portions of channelized rivers where flows are not expected to be so high that banks erode and neighboring properties are at risk.

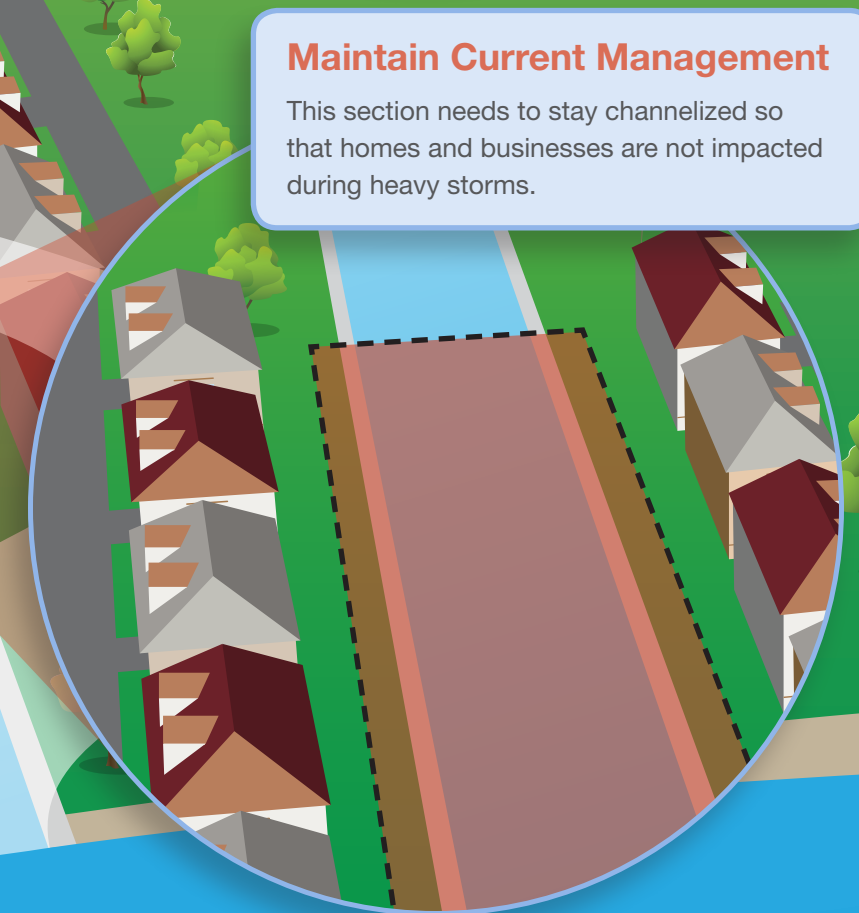
Enhancement Opportunity

Sections of rivers that are confined by a canyon or that have space to create a meandering channel are good opportunities for enhancement.



Maintain Current Management

This section needs to stay channelized so that homes and businesses are not impacted during heavy storms.





Benefits of Watershed Enhancement

Watersheds are home to plants and animals, provide water storage, and have a number of recreational uses. Anything that occurs on land can directly affect the quality of water in watersheds and other watershed features.

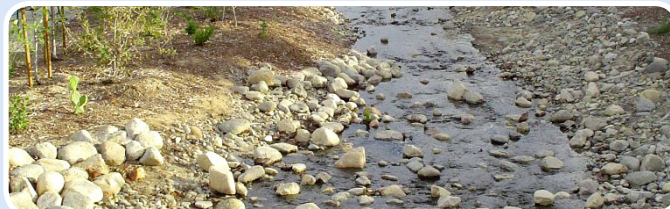
- New habitats
- Better water quality
- Restoration
- Beautification
- Recreation
- Education
- Protection
- Conservation
- Model projects

What have we done to enhance our watersheds?



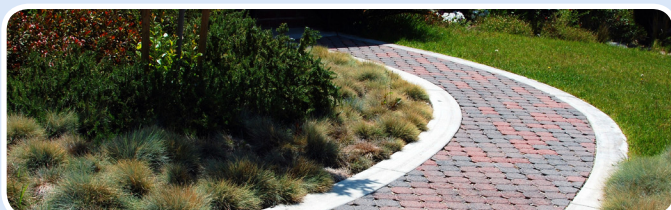
Dominguez Gap Wetlands

The Dominguez Gap Wetlands project enhanced an existing spreading grounds by converting it into a wetlands which can naturally treat runoff from the adjacent LA River. The 50-acre restoration project retains the site's flood risk management and water conservation elements, while improving water quality, enhancing the environment, and providing recreational and educational opportunities.



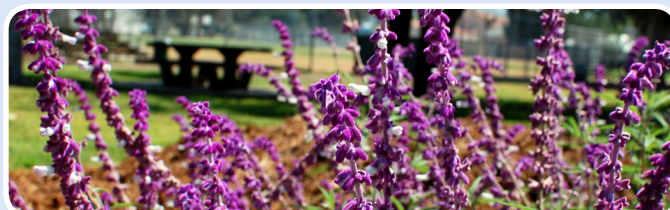
Tujunga Wash Greenway and Stream Restoration

The Tujunga Wash Greenway and Stream Restoration project was established to create a 1.6-mile naturalized stream course on the bank of the Tujunga Wash channel. The project provides desperately needed habitat and landscaping along both sides of the channel and paths for people to walk, jog, and cycle. Additionally, the greenway allows for groundwater recharge, enhances water quality, and serves as a model for the creation of a sustainable and healthy alternative stream system in a dense urban setting.



Low Impact Development Ordinance for Unincorporated Los Angeles County

Urbanization has the potential to affect the water resources in the County of Los Angeles. As land is developed, more areas become impervious which cause stormwater runoff to increase and groundwater percolation to decrease. Also, this runoff may collect and transport pollutants downstream to beaches, streams, and the flood control and water conservation systems of the County of Los Angeles. Low Impact Development, or LID, is a design strategy using on-site elements to lessen the impacts of development on stormwater quality and by retaining or infiltrating the stormwater on-site and reducing the amount of runoff. As of January 1, 2009, the County of Los Angeles instituted Low Impact Development requirements for development occurring within unincorporated portions of the County.



Sun Valley Watershed Master Plan

For well over 40 years, a chronic flooding problem has existed in the Sun Valley area. The Sun Valley Watershed Master Plan was created to solve the chronic flooding problem with multi-purpose solutions, acknowledging that rainfall is a significant component of the water supply in the area. The Plan is a planning document that identifies opportunities for projects with a focus on flood risk management, water conservation, water quality, habitat restoration, and recreational opportunities.

As part of the Plan, the Sun Valley Park Drain and Infiltration System Project was constructed to alleviate local flooding by collecting the runoff and routing it to a water quality treatment and infiltration system underneath the park.

The Strathern Wetlands Park Project is also a major component of the Plan and proposes to convert a 46-acre, inert landfill into a multi-purpose wetlands park that will reduce flooding in the surrounding areas.

Sediment Management

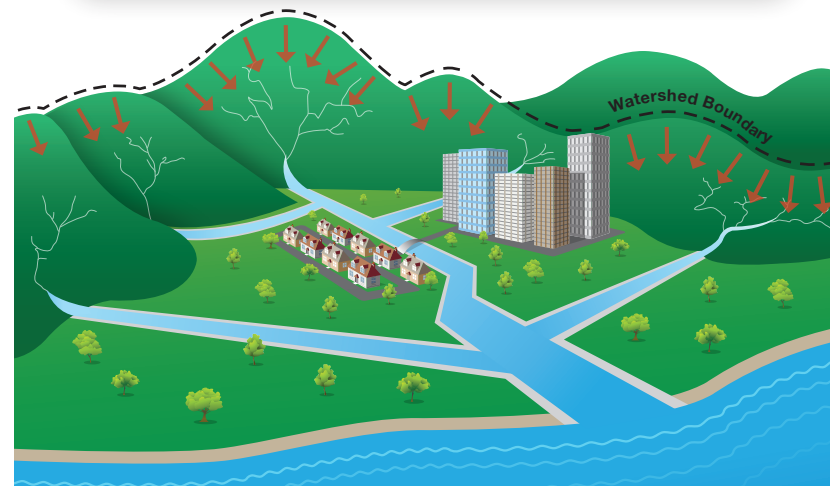
How can Los Angeles watersheds be enhanced?

Managing Los Angeles' rivers – balancing flood risk management, water storage, and river enhancement

Over the last 100 years, homes and businesses have been built along Los Angeles' rivers. These rivers have been managed with dams, channelization, and other means; therefore, any efforts to return these rivers to a more natural state need to carefully consider potential impacts to residents and property owners. The current system helps reduce flood risk for Los Angeles communities and helps store scarce water for later use.

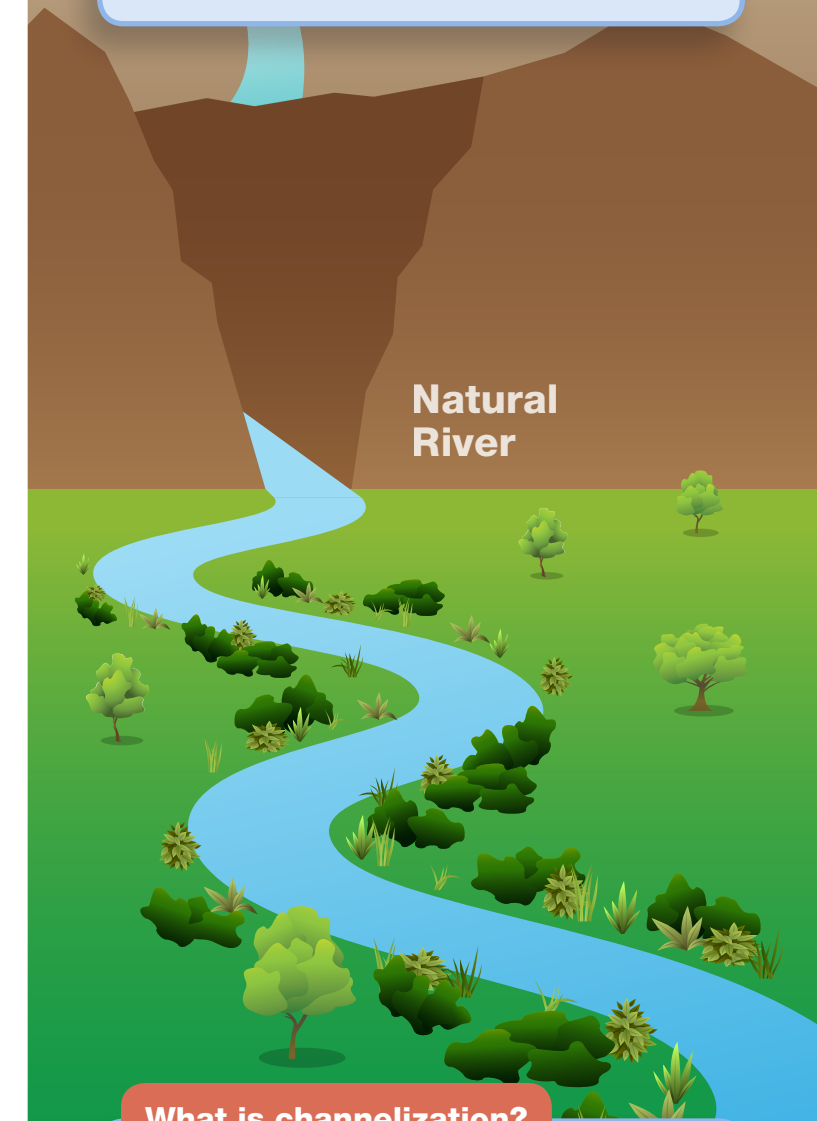
What is a watershed?

A watershed is the area of land where water collects and drains into a specific river, ocean, lake, or other body of water. For example, the Los Angeles River watershed includes all of the land draining into all of the streams, creeks, and rivers that eventually flow into the Los Angeles River and ultimately out to the Pacific Ocean. Watersheds vary in size from the largest rivers, such as the Mississippi River's watershed which covers all or part of 31 states, to the smallest creeks which can have watersheds of only an acre or more.



What is a floodplain?

A flat, or almost flat, area near a creek or river that is likely to flood. The Los Angeles basin is a floodplain that, prior to the channelization of the Los Angeles River, was prone to severe flooding, causing catastrophic damage and loss of life.



What is channelization?

Los Angeles' rivers have been straightened, widened, deepened, and relocated to help prevent flooding and to keep the rivers from changing course and flowing through Los Angeles neighborhoods and business districts. Some channelized rivers have concrete lining and little or no habitat. Sometimes, these changes make the rivers less suitable for plant and animal habitat and less enjoyable for people.

