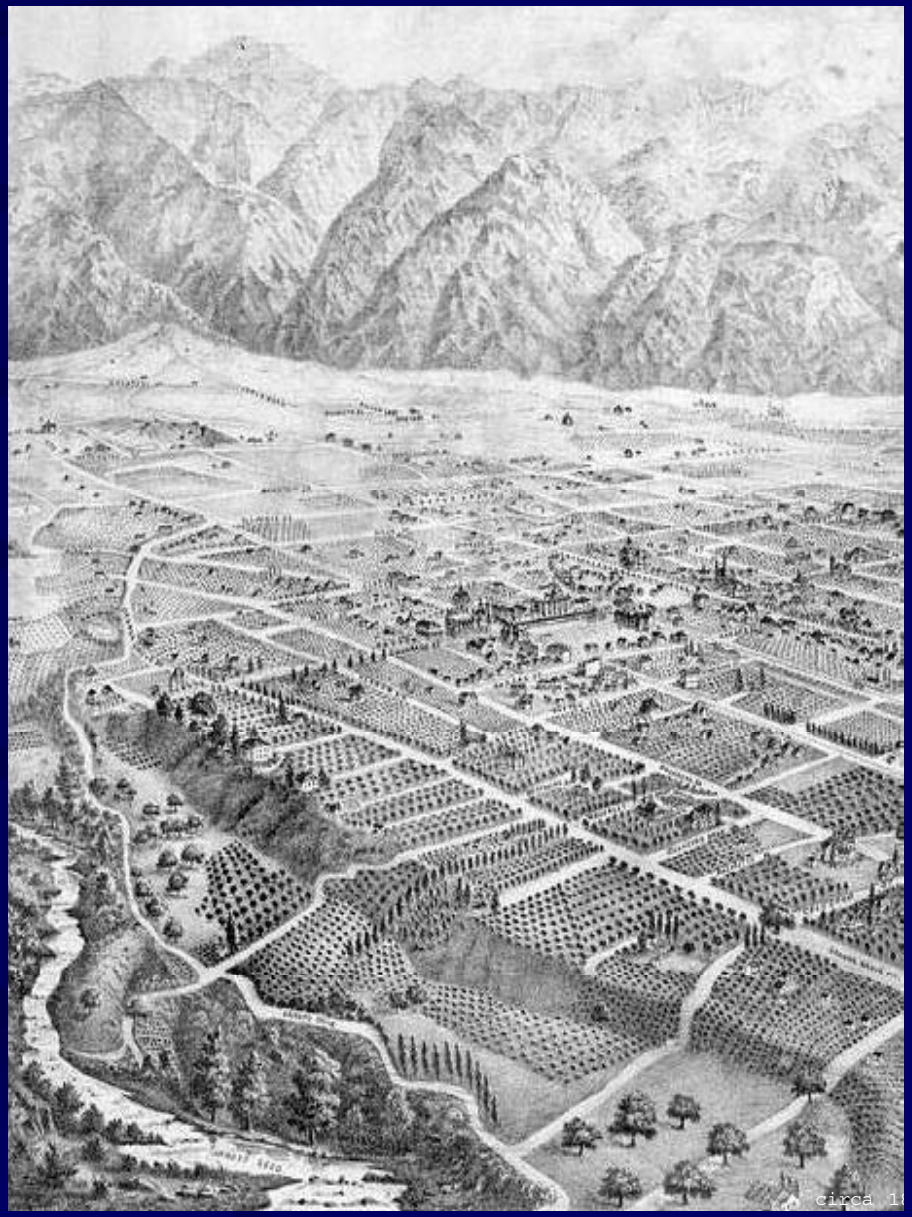
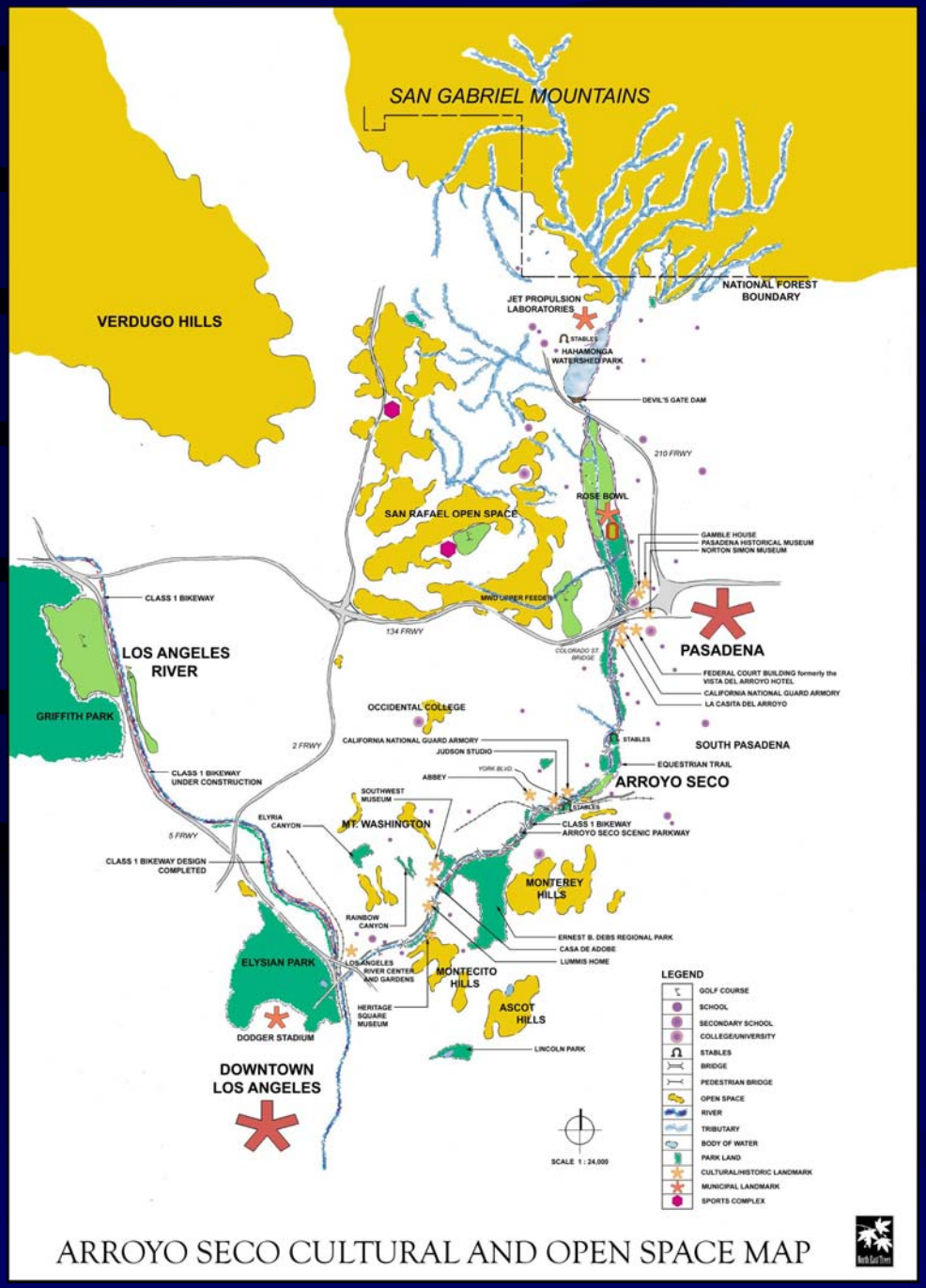
In the Arroyo Seco Watershed

Presented by Tim Brick, Managing Director, Arroyo Seco Foundation

A QUICK TOUR





REDISCOVERING THE ARROYO SECO

What are qualities that made this region so attractive to our predecessors?

Why has the Arroyo engendered so much creativity and culture?

How can we cultivate those talents today?

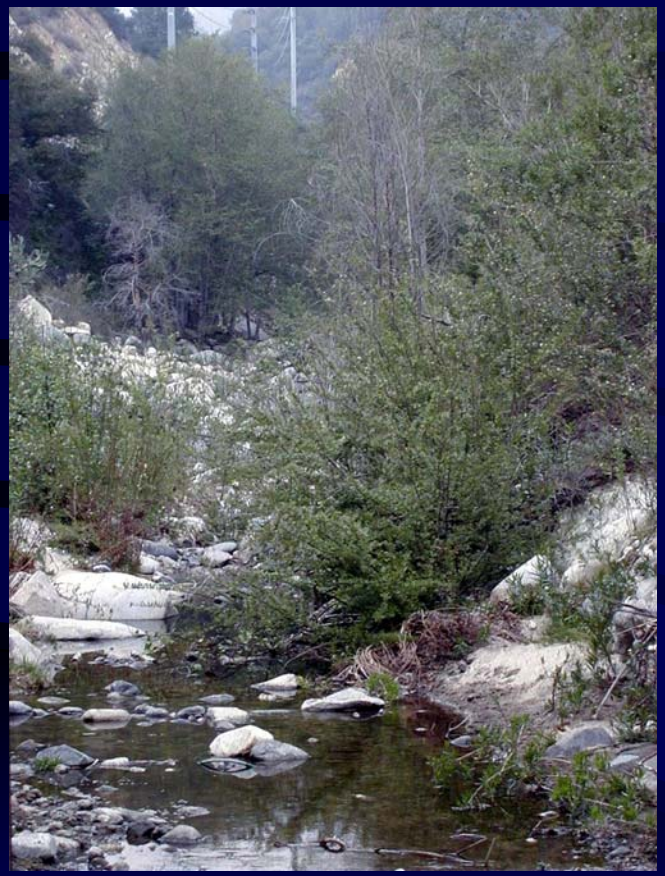
SNOW-CAPPED PEAKS

Topo View

- 46 square mile watershed
- 22 linear miles
- From the San Gabriel Mountains to downtown LA
- Linking the mountains to the city

Steep Upper Mountain Watershed

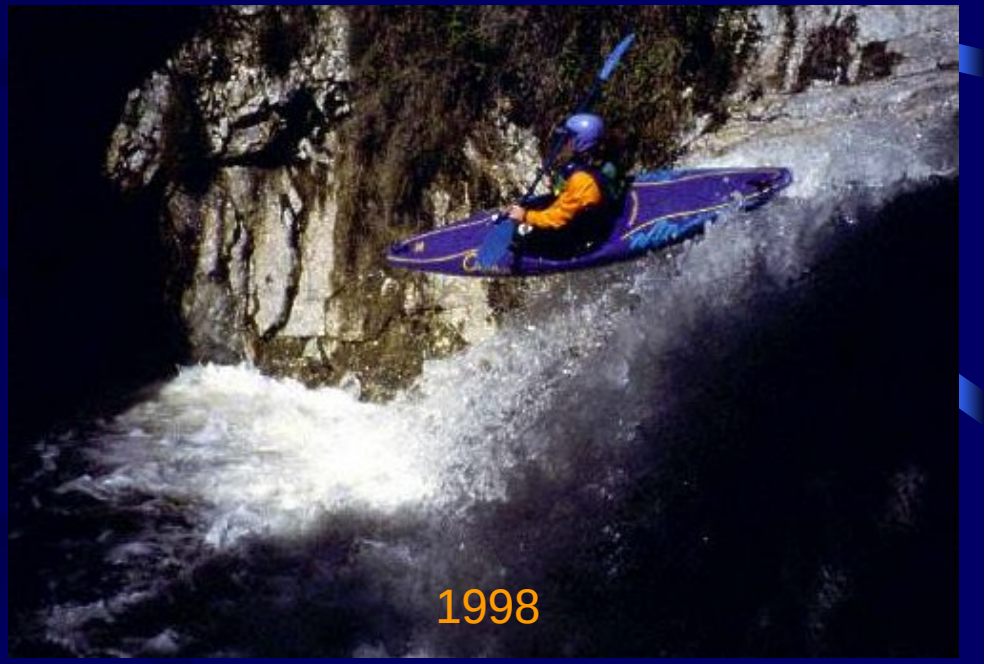
- 18 square miles
- 11 linear miles
- More than 60% slope
- Severe erosion
- Gabrielino National Trail
- Arroyo toad critical habitat



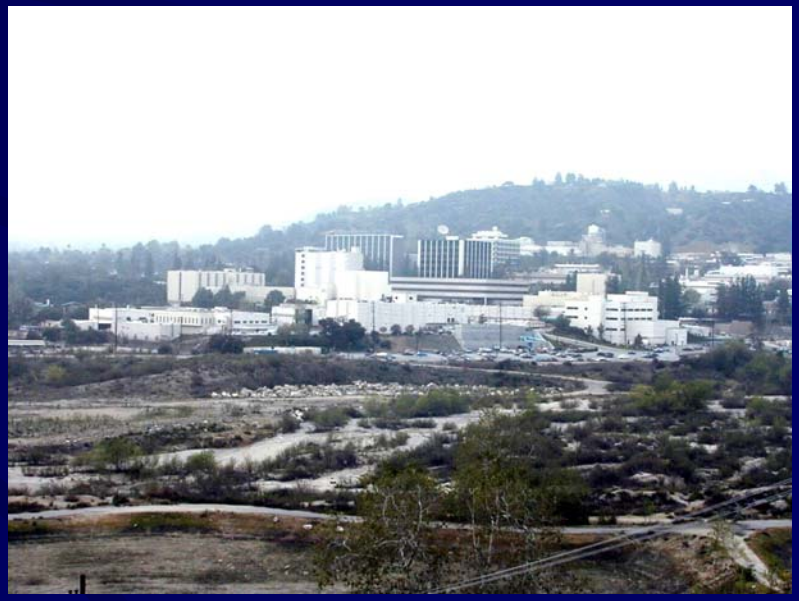
View from the top

Rugged Slopes

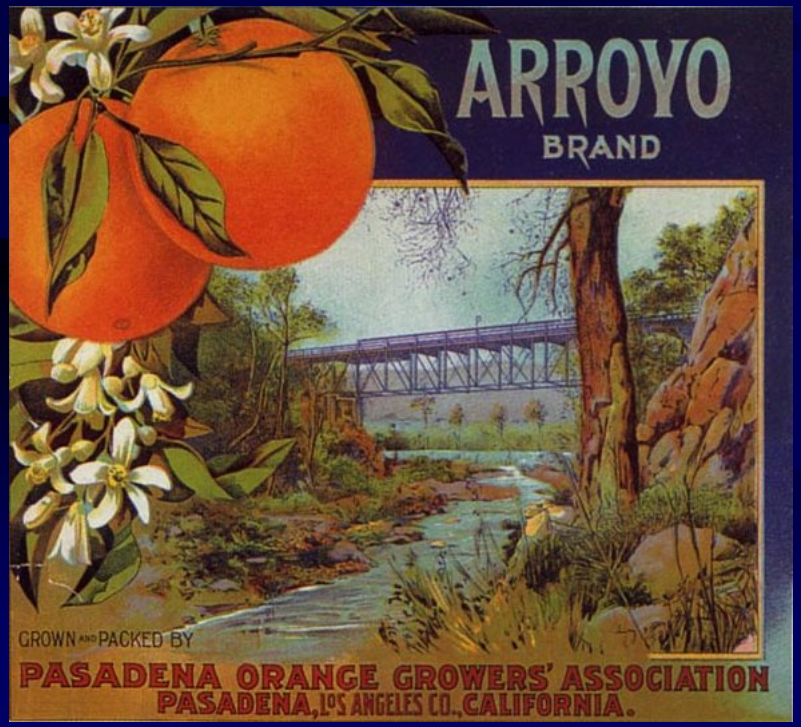
Playing in the Arroyo

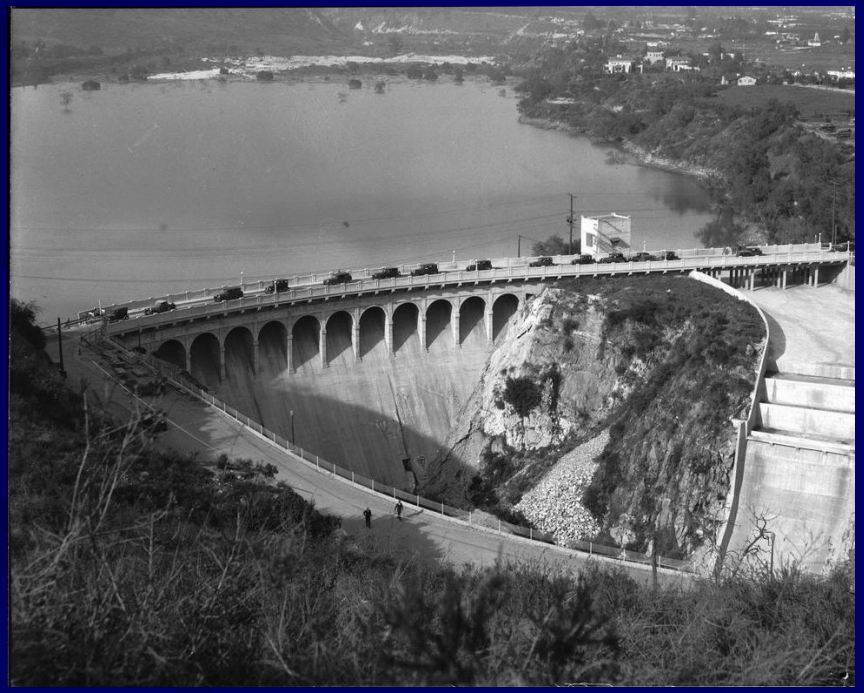


JPL View



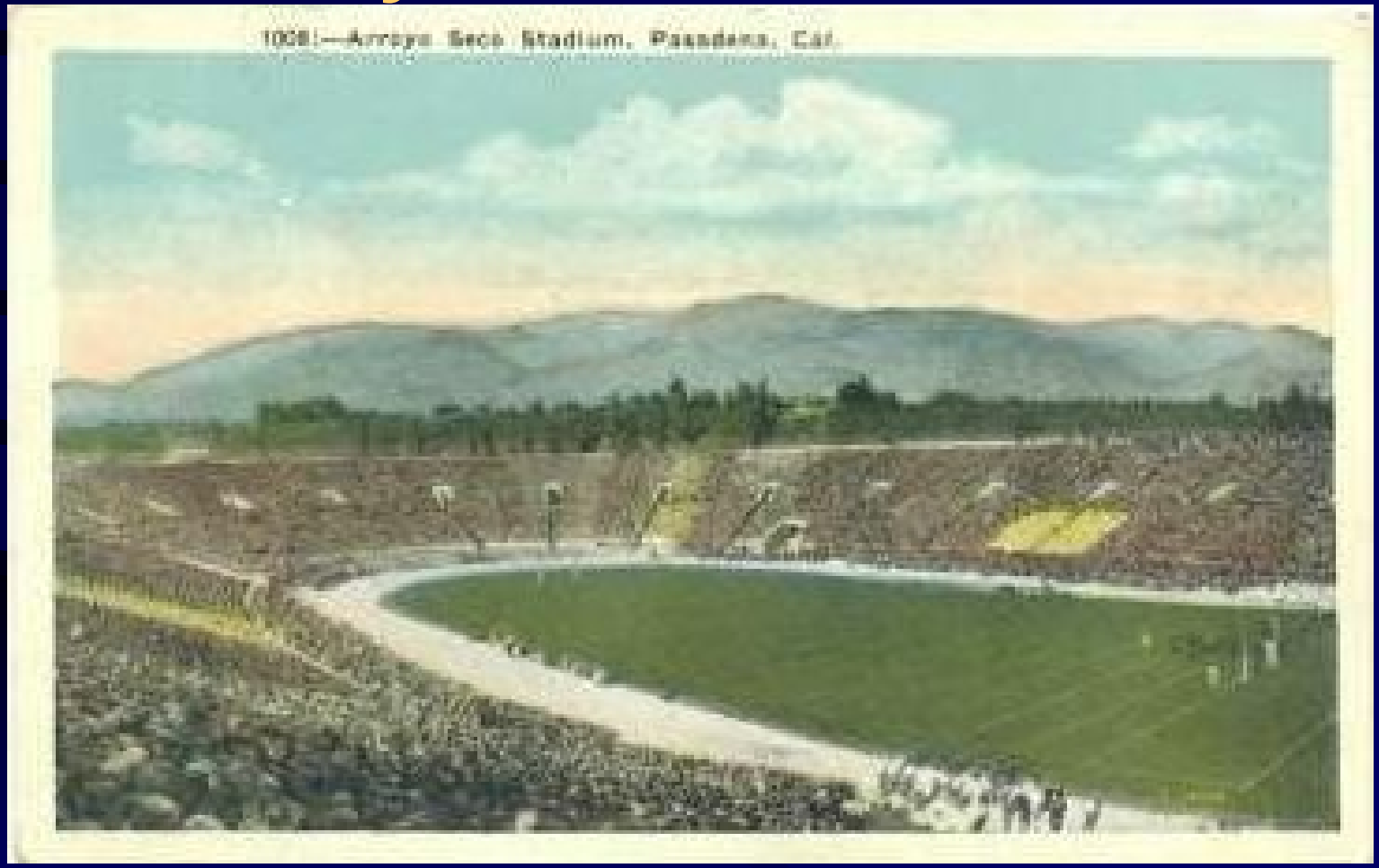
Devil's Gate


ARROYO
BRAND
GROWN AND PACKED BY
PASADENA ORANGE GROWERS' ASSOCIATION
PASADENA, LOS ANGELES CO., CALIFORNIA.



The Early Rose Bowl

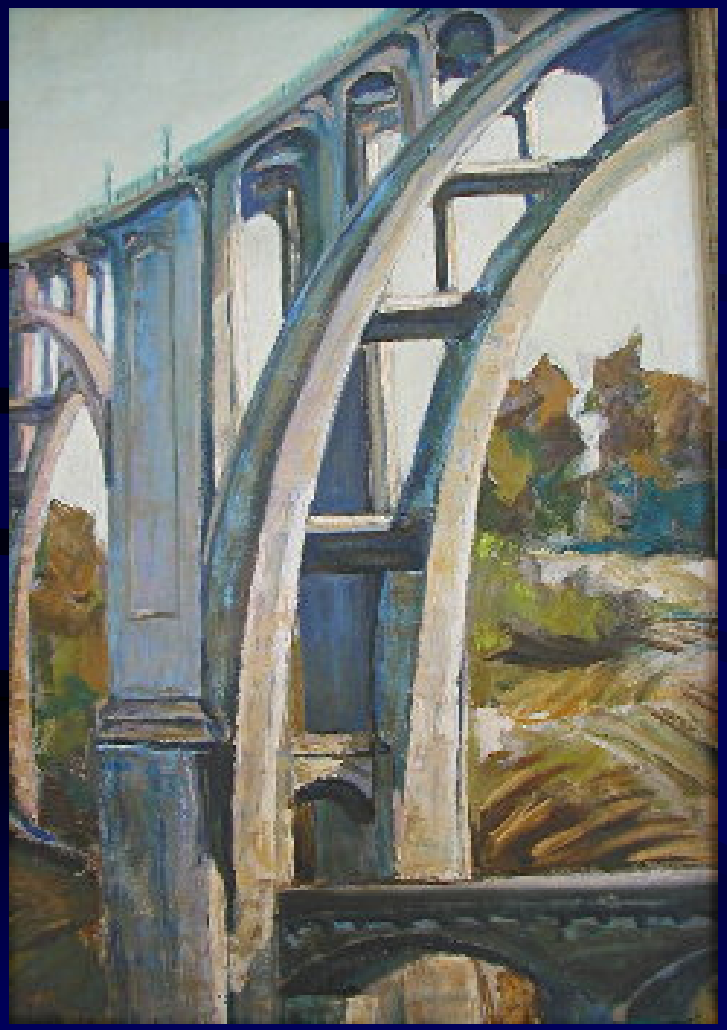
Arroyo Seco Stadium

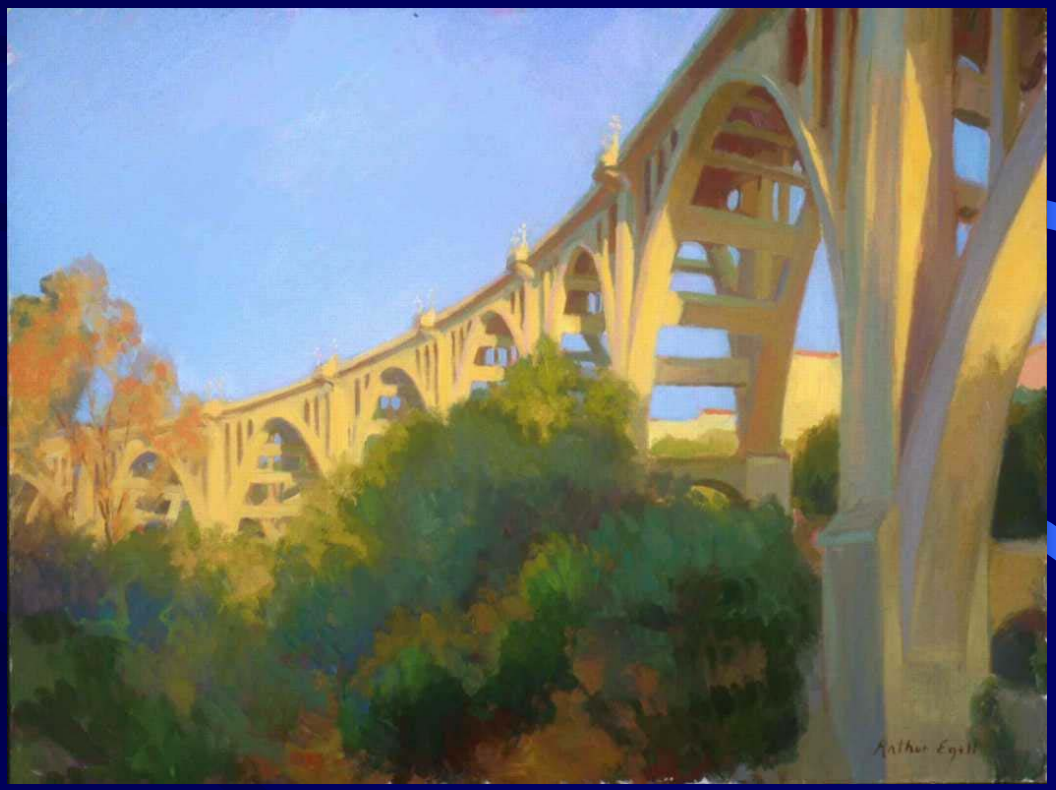


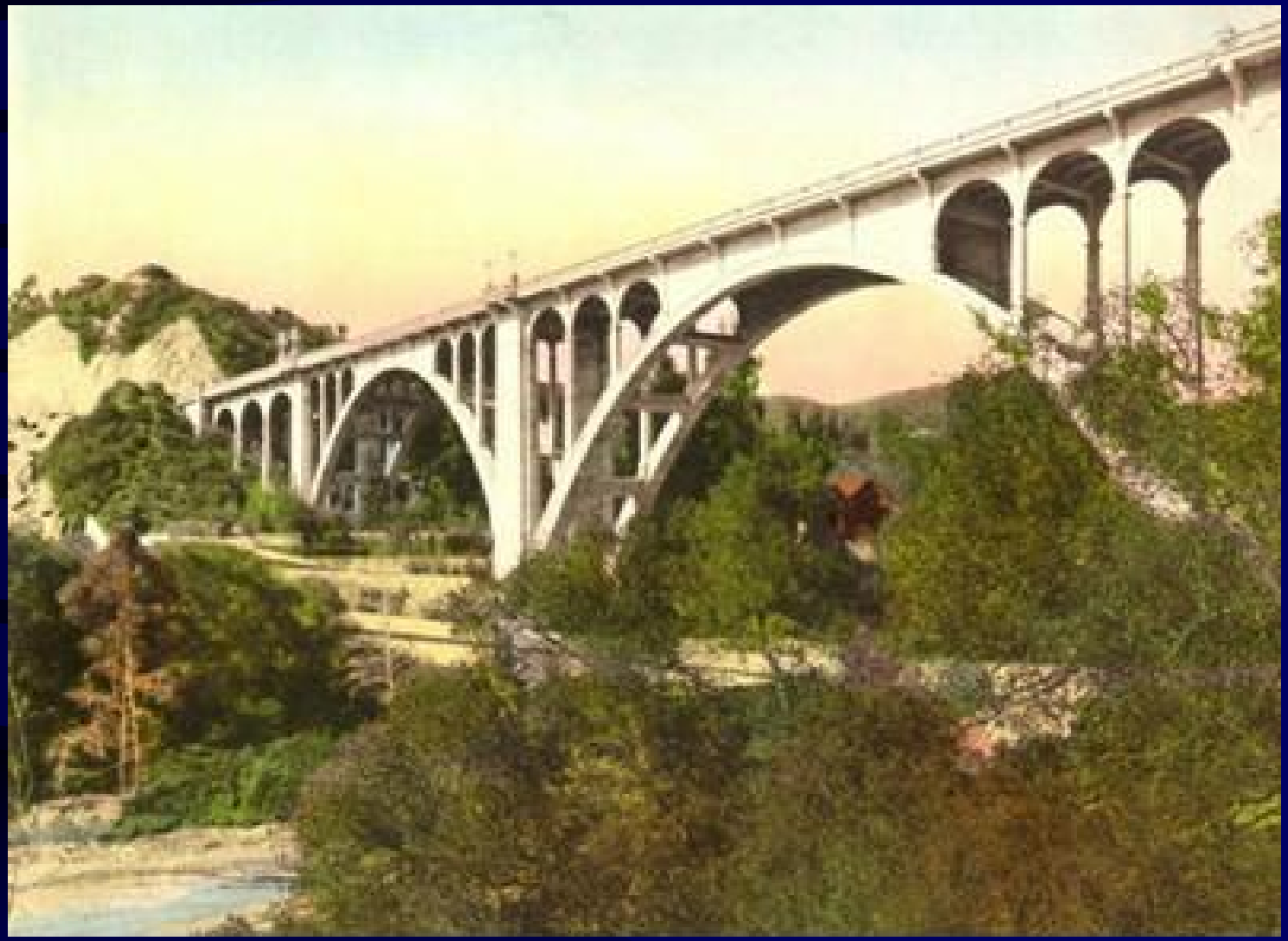
Bridges

- JPL Bridge
- Devil's Gate Dam
- Oak Grove Drive
- 210 Freeway
- Holly Street
- 134 Freeway
- Colorado Street
- La Loma
- San Rafael
- York Street
- SP/Gold Line
- Avenue 43
- 5 Freeway
- Avenue 26

The Bridge







Another View

The Channel in NE Los Angeles

Southwest Museum

Arroyo Culture

Natural

Native

Arts & Crafts Movement

Southwest

Charles Lummis and El Alisal

Museums

Five Major Museums Line the Banks of the Arroyo Seco

Heritage Square

Pasadena Historical Museum

Gamble House

Lummis Home

Southwest Museum

Judson Studios

The Arroyo Seco Parkway

Under Construction

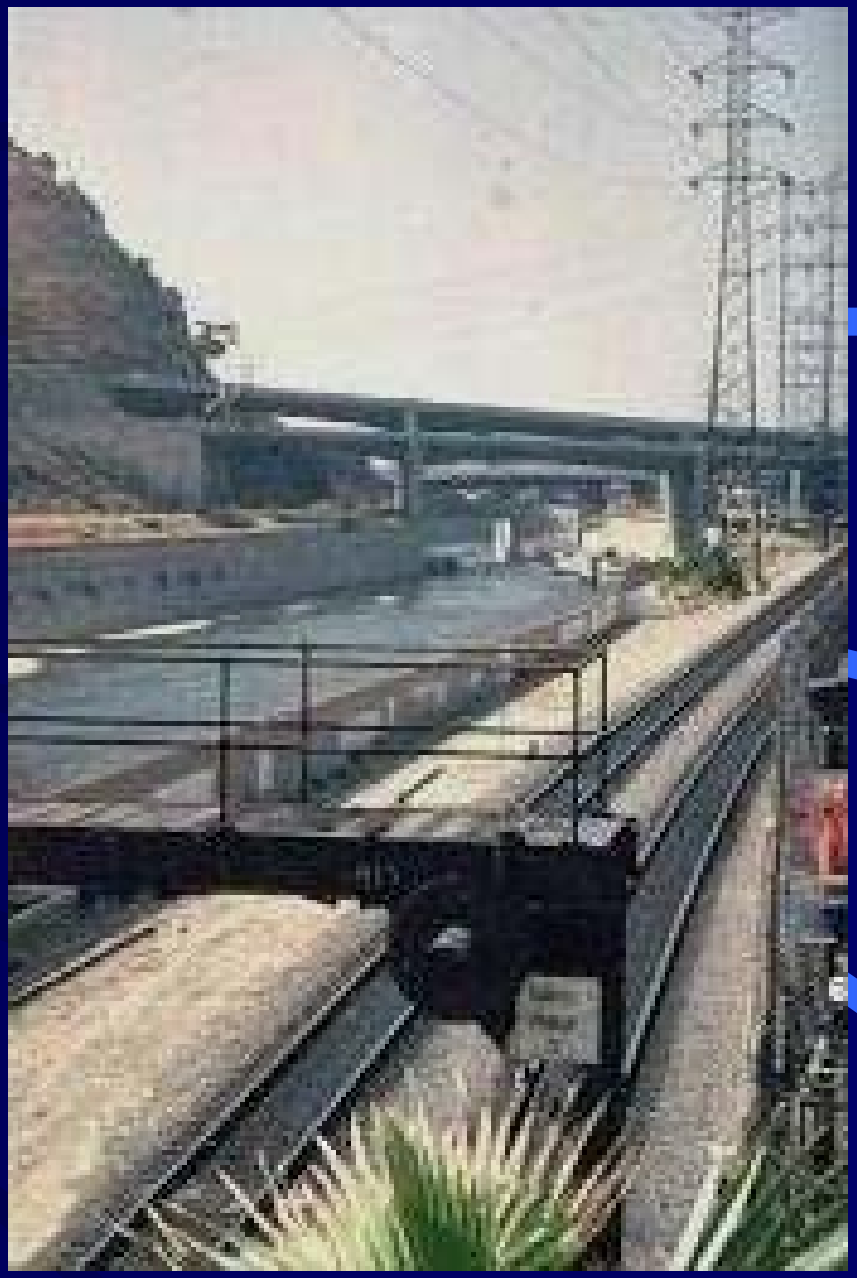
Opening Day

Arroyo Art

The View from Debs Park

The Confluence

Aerial



Downstream

WHAT IS THE ARROYO SECO?

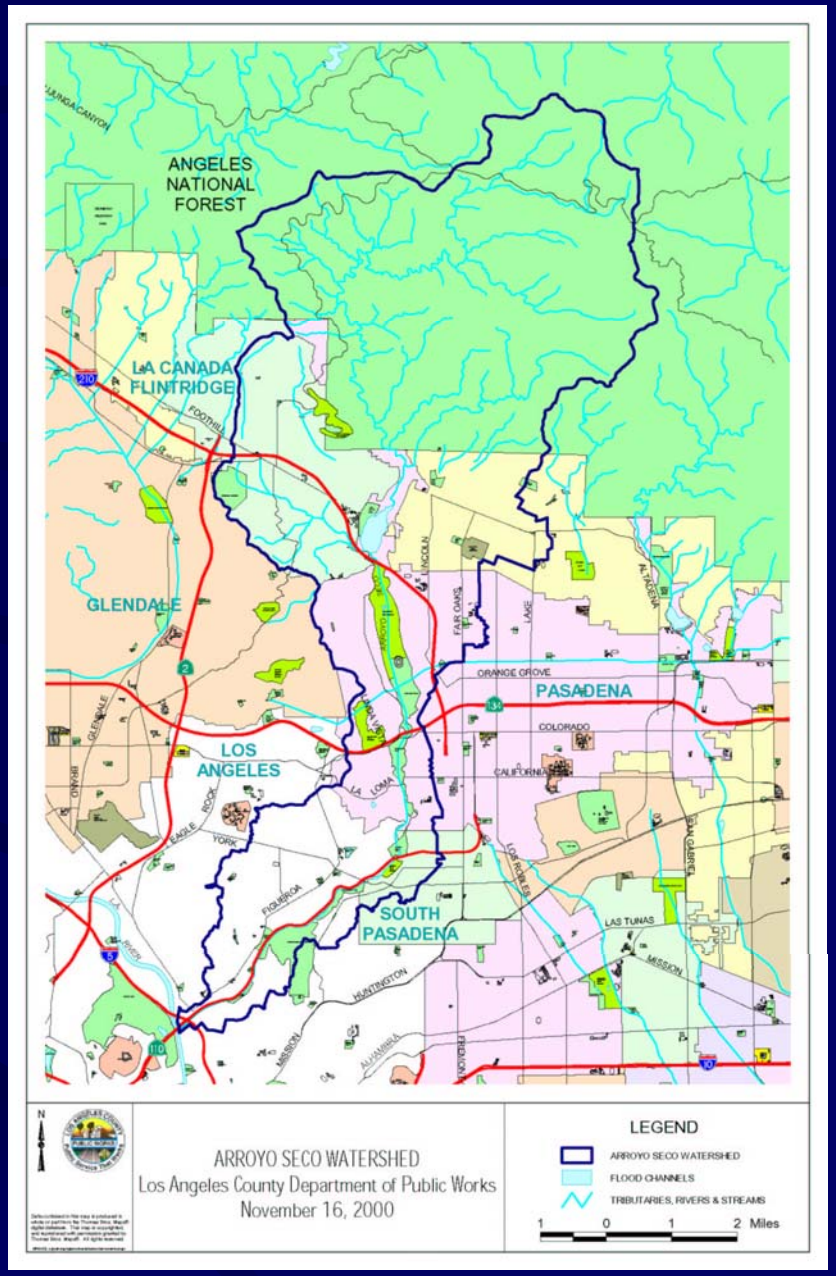
- A canyon
- A stream
- A transportation corridor
- A cultural haven
- Communities
- A watershed

A little bit of wilderness flowing through our communities

COMMUNITIES OF THE ARROYO SECO

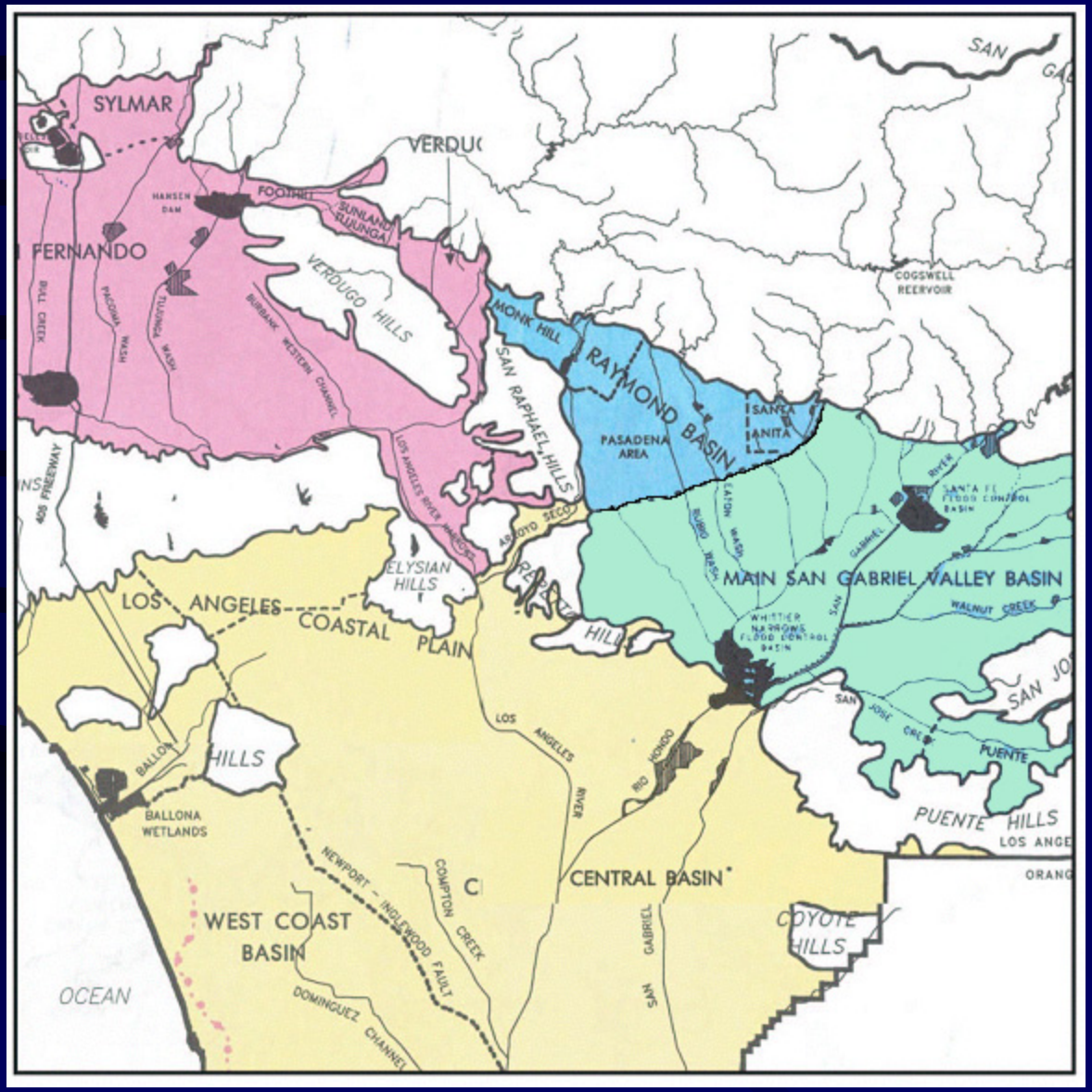
WHAT IS A WATERSHED?

. . . An ecological zone defined by a stream or river that unites communities



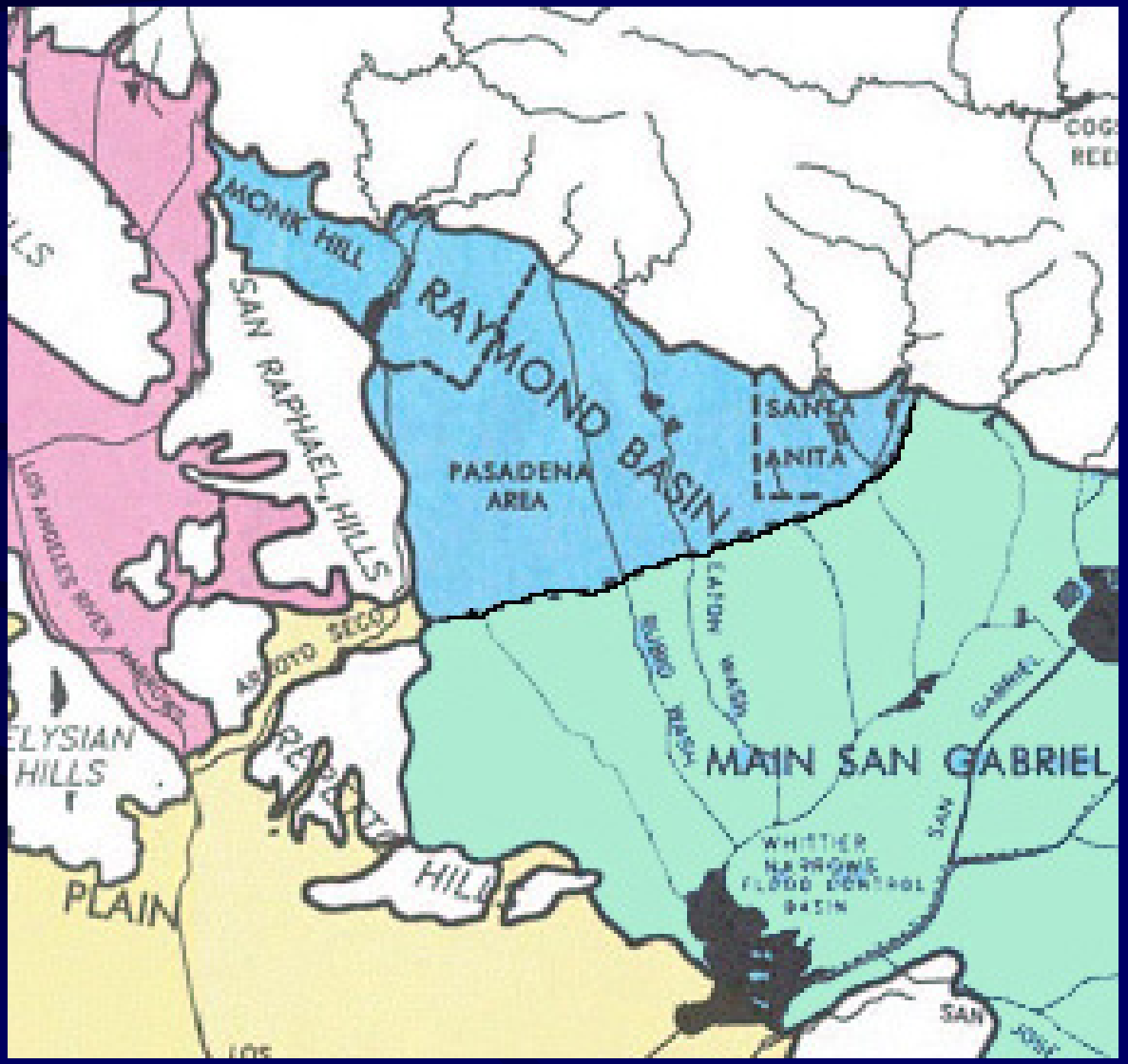
THE MOUNTAIN WATERSHED

- Angeles National Forest
- Angeles Crest Highway
- Gabrielino Trail



Los Angeles County Aquifers

The Raymond Basin



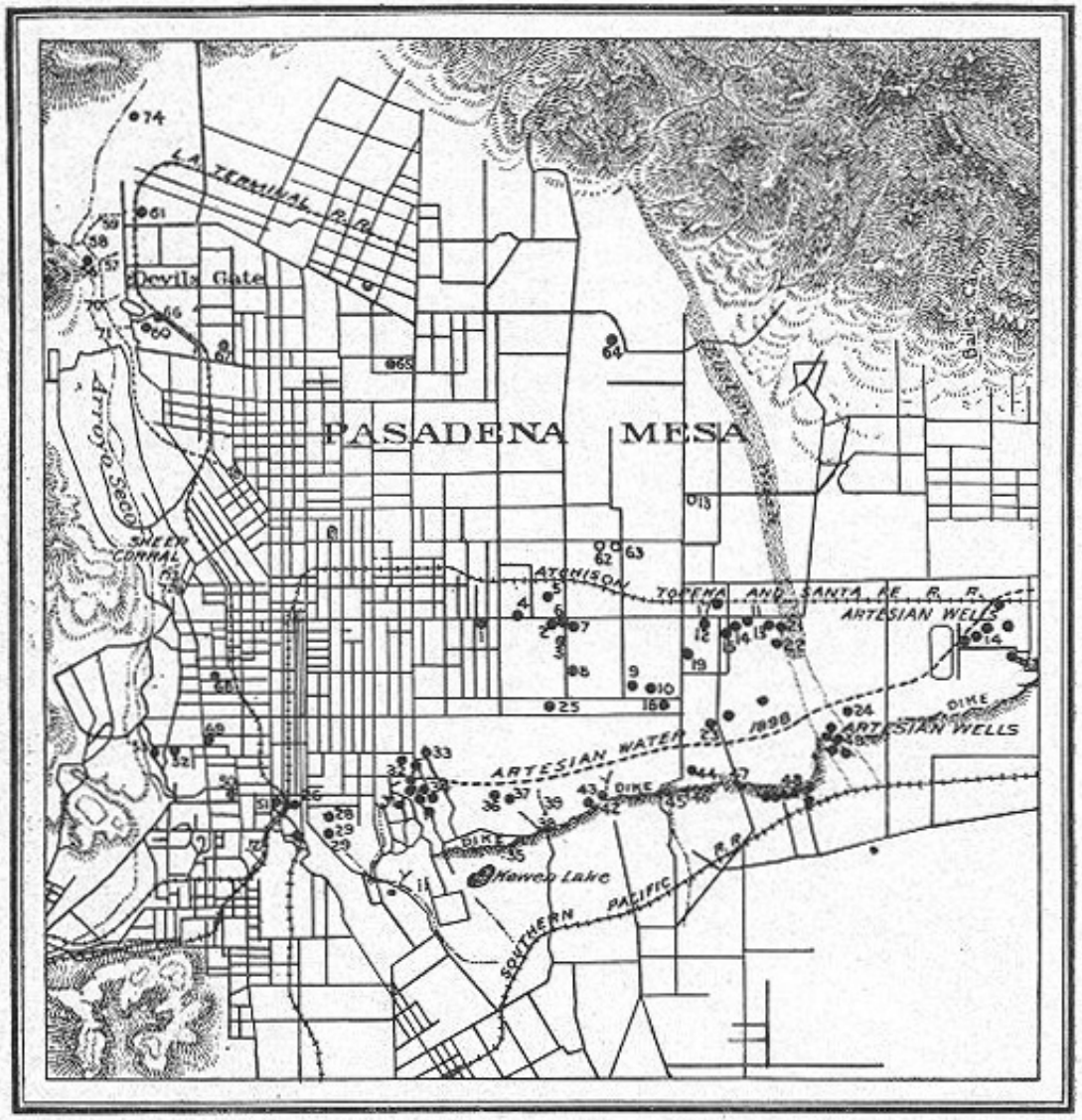
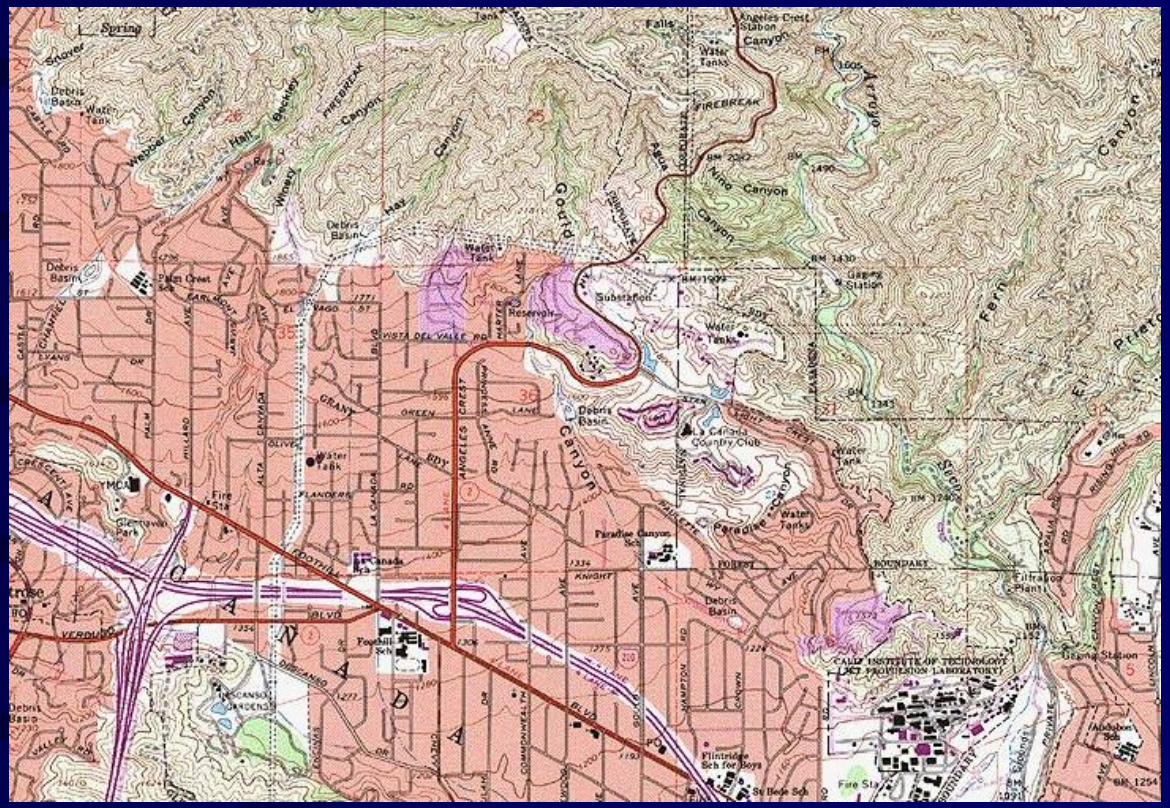


FIG. 217.—Map showing location of artesian wells in the vicinity of Pasadena, California.

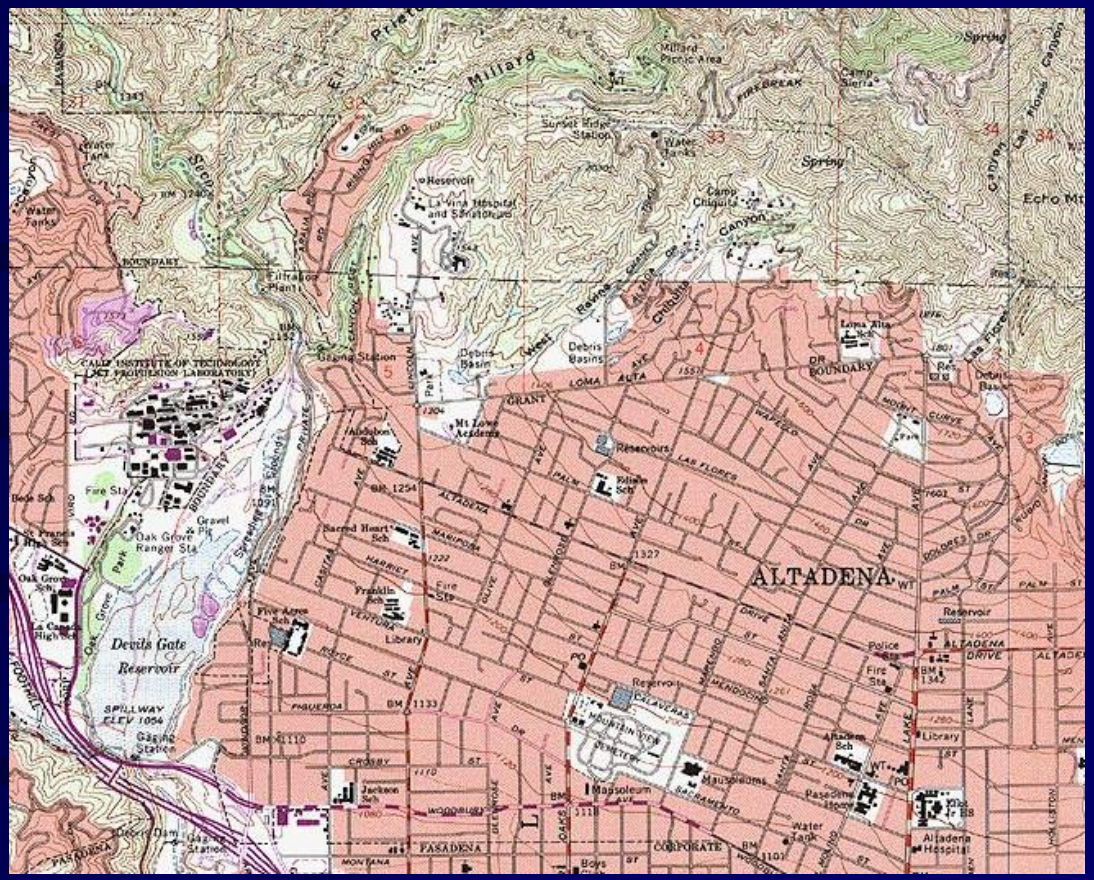
Artestian Springs

La Cañada Canyons



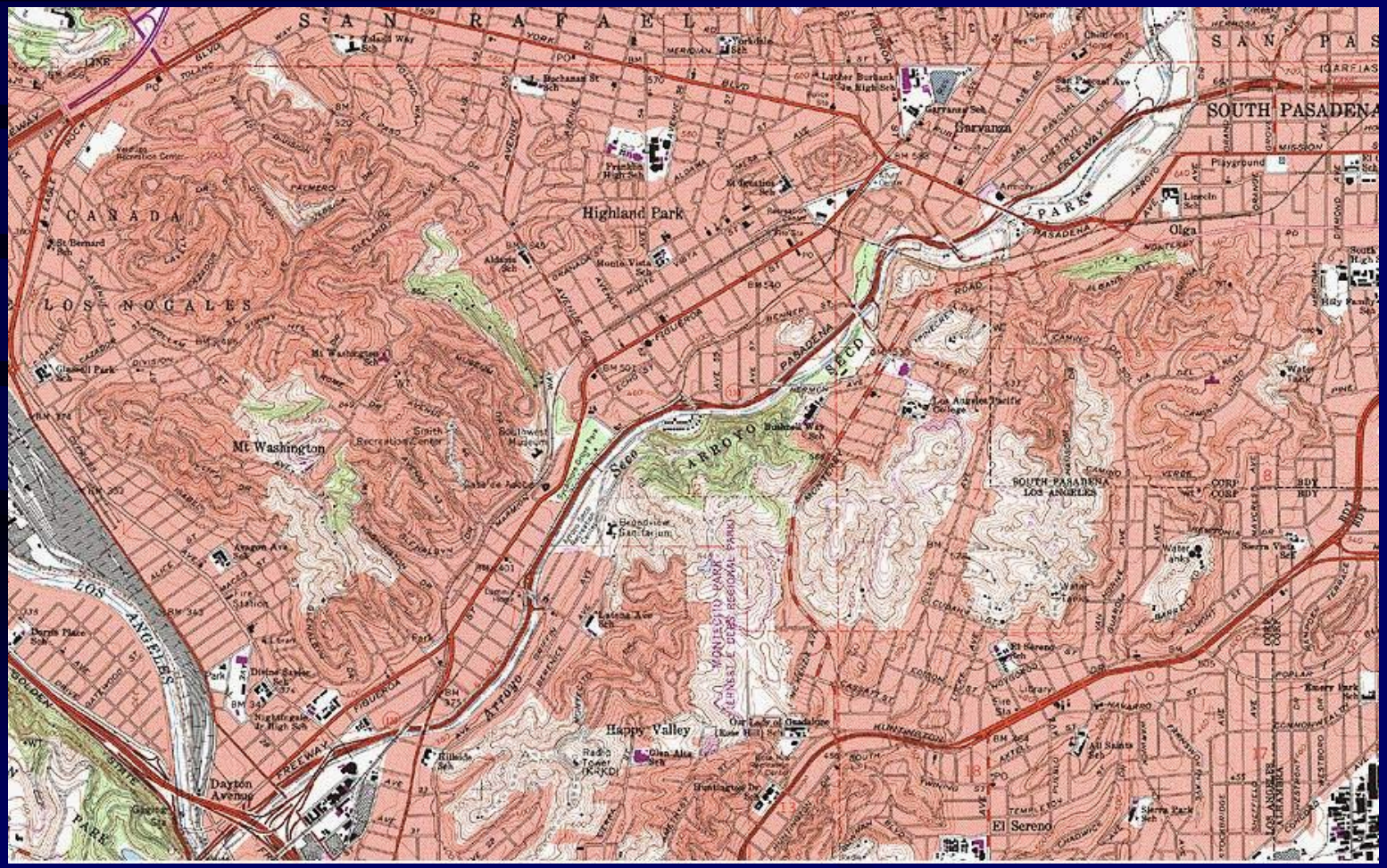
Canyon	Surface Flows to	Groundwater
Hay	Arroyo Seco (Pasadena)	Raymond Basin
Gould	Arroyo Seco	Raymond Basin
Winery	Arroyo Seco	Raymond Basin
Hall Beckley	Verdugo Wash (Glendate)	Raymond Basin
Webber	Verdugo Wash	Raymond Basin
Snover	Verdugo Wash	Raymond Basin
Pickens	Verdugo Wash	Raymond Basin

Pasadena/ Altadena Canyons

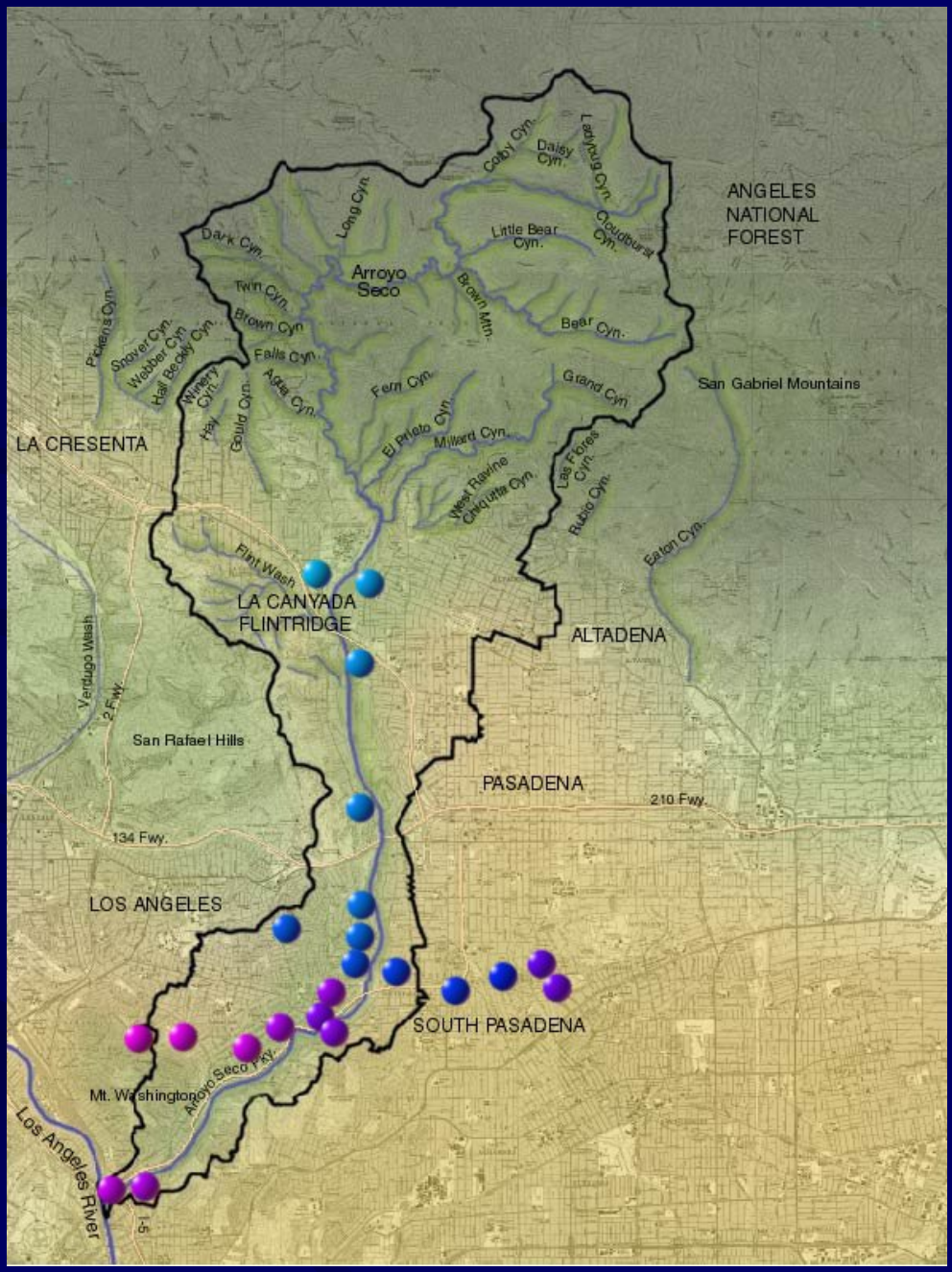


Canyon	Surface Flows To	Groundwater
Arroyo Seco	Arroyo Seco	Raymond Basin
Millard Canyon	Arroyo Seco	Raymond Basin
Las Flores	Rio Hondo	Raymond Basin
Rubio Canyon	Rio Hondo	Raymond Basin
Eaton Canyon	Rio Hondo	Raymond Basin

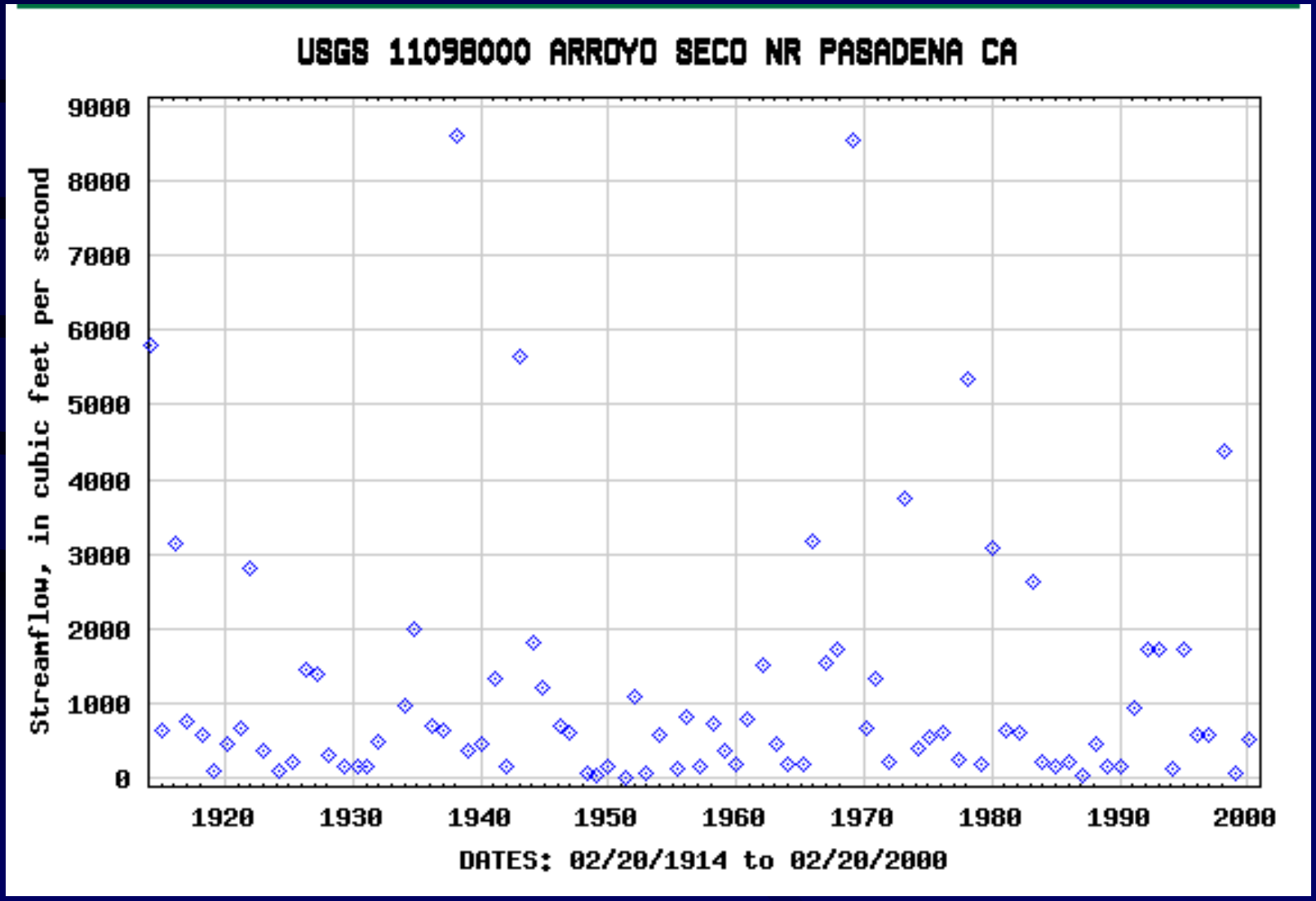
South Pasadena/ Northeast Los Angeles



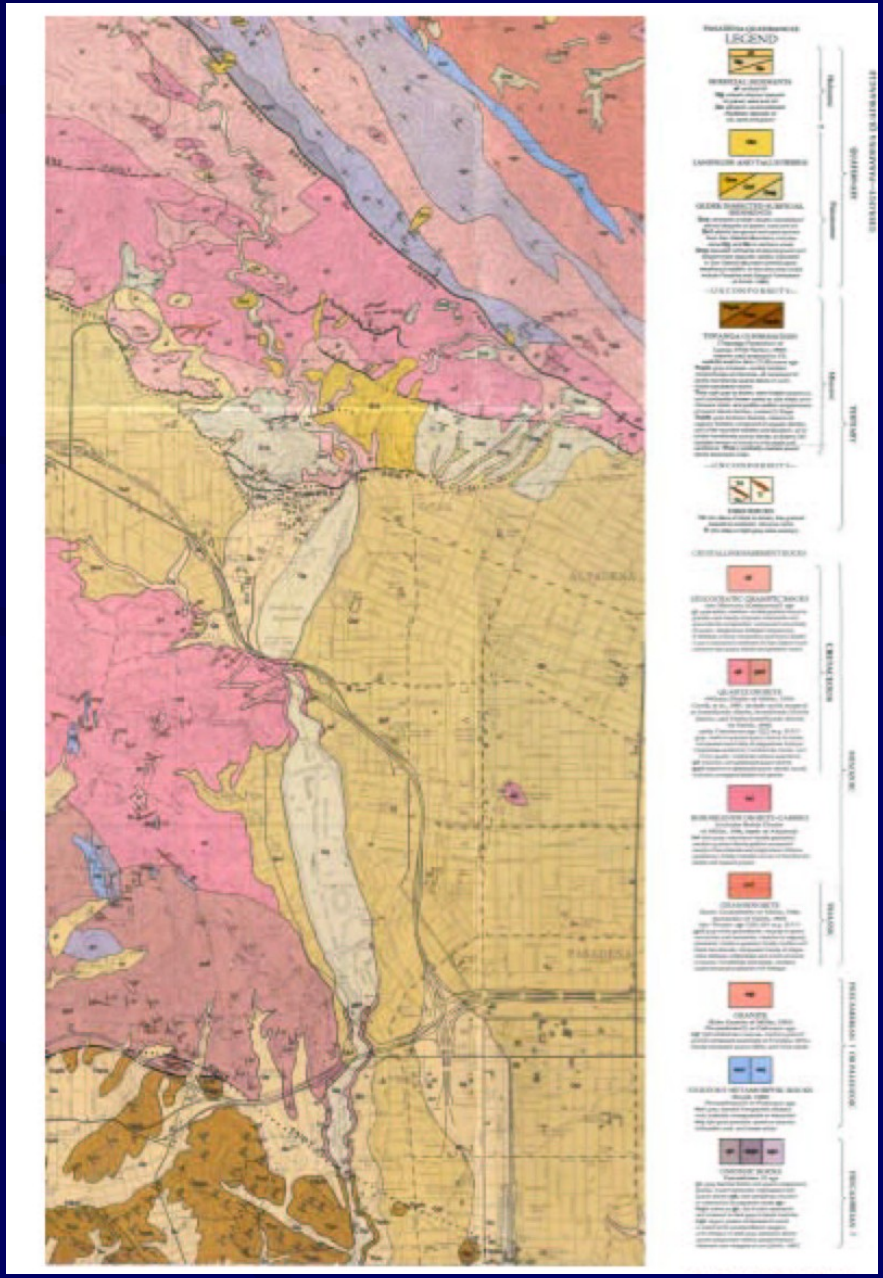
Streams and Springs



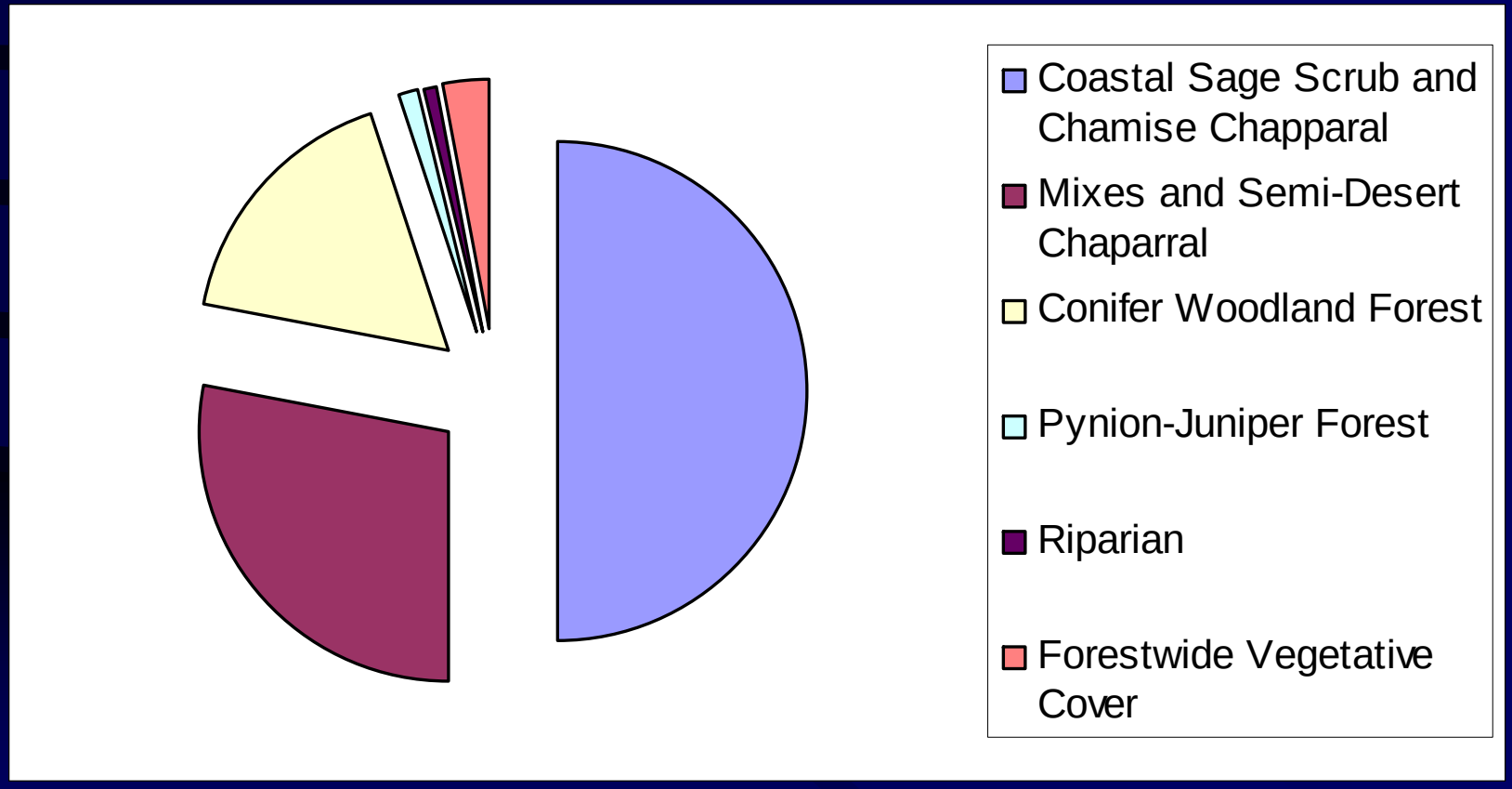
Streamflow


USGS 11098000 ARROYO SECO NR PASADENA CA
Streamflow, in cubic feet per second
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1920
1930
1940
1950
1960
1970
1980
1990
2000
DATES: 02/20/1914 to 02/20/2000

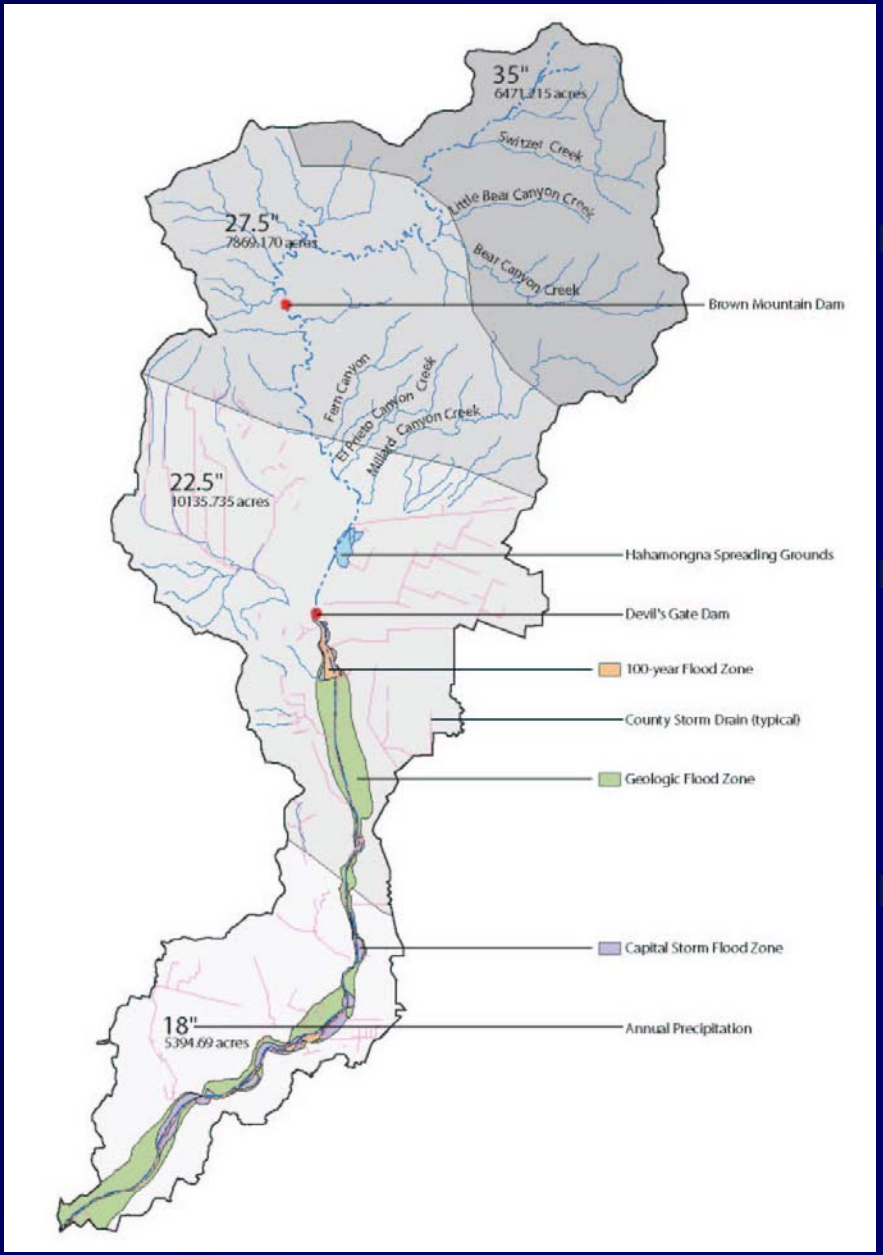
Geology



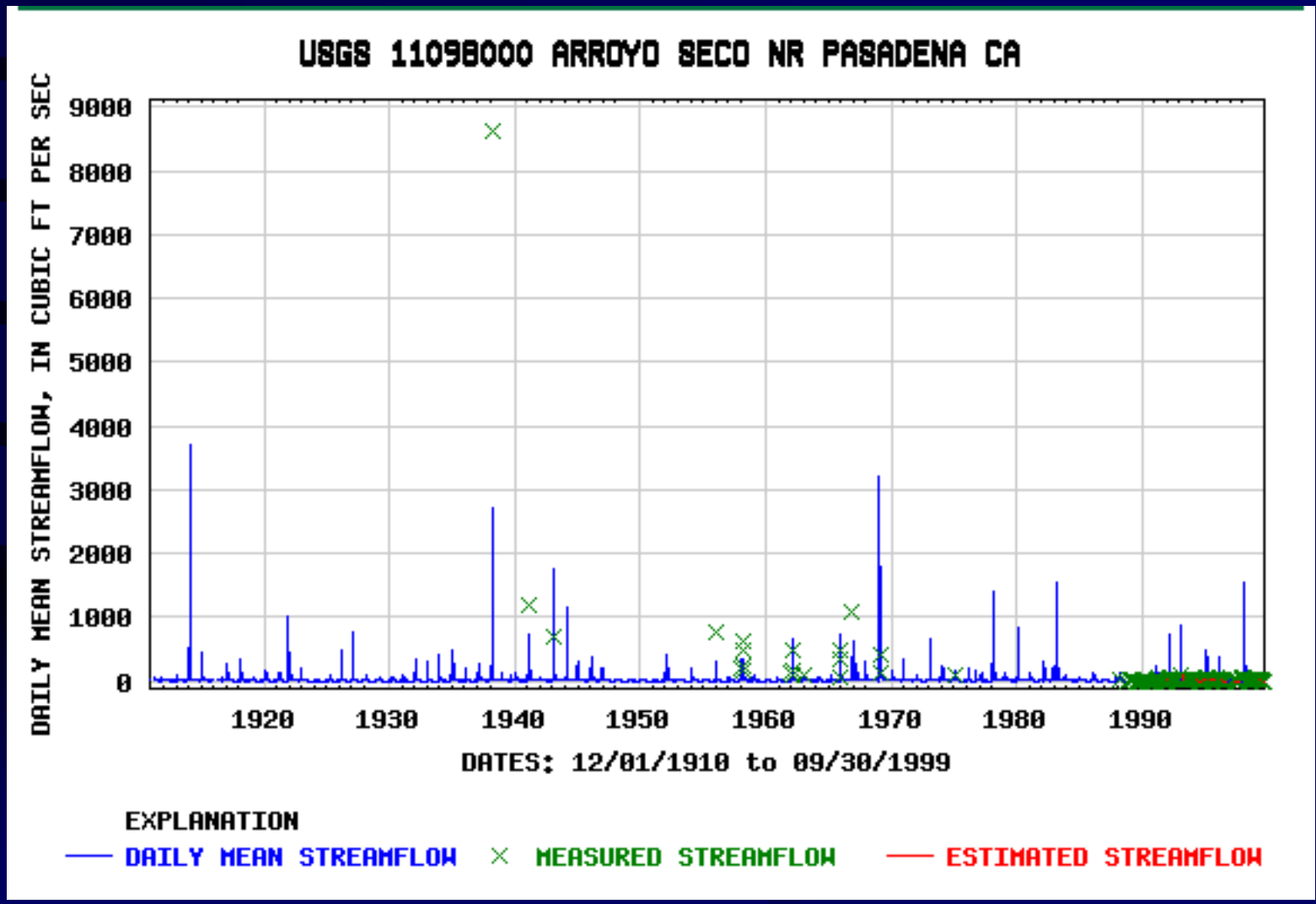
Vegetative Mix – Upper Watershed



Precipitation



Streamflow


USGS 11098000 ARROYO SECO NR PASADENA CA
DAILY MEAN STREAMFLOW, IN CUBIC FT PER SEC
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1920
1930
1940
1950
1960
1970
1980
1990
DATES: 12/01/1910 to 09/30/1999
EXPLANATION
DAILY MEAN STREAMFLOW
MEASURED STREAMFLOW
ESTIMATED STREAMFLOW

Major Fires

Year	Acres Burned in Watershed	Percent of Undeveloped Watershed (15,107 acres)
1896	6,385	42
1934	3,743	25
1955	424	3
1959	10,729	71
1975	809	5
1979	1,328	9

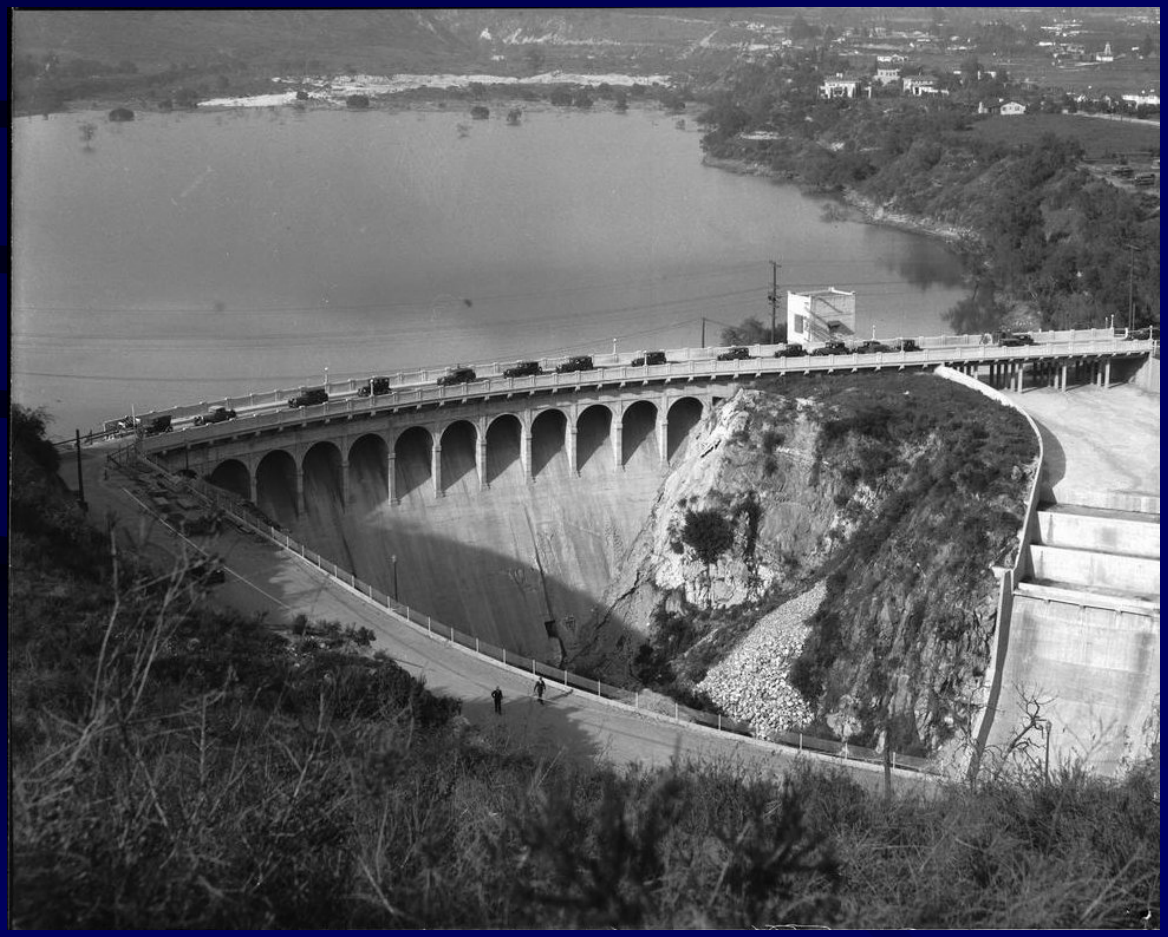
Source: LACDPW, Hydraulic/Water Conservation Division, “Devil’s Sate Dam & Reservoir Hydrolgic Reanalysis,” August 1993

Three Principles Structures Have Altered the Natural Functions of the Arroyo Seco:

- Devil's Gate Dam
- The Flood Channel
- The Arroyo Seco Parkway

"The trend of human influence on the landscape has been to attempt to stabilize what are inherently dynamic systems."

Structures 1:



- Devil's Gate Dam (1920)

Structures 2: The Stream

Becomes a Flood Channel

1934 - 1947

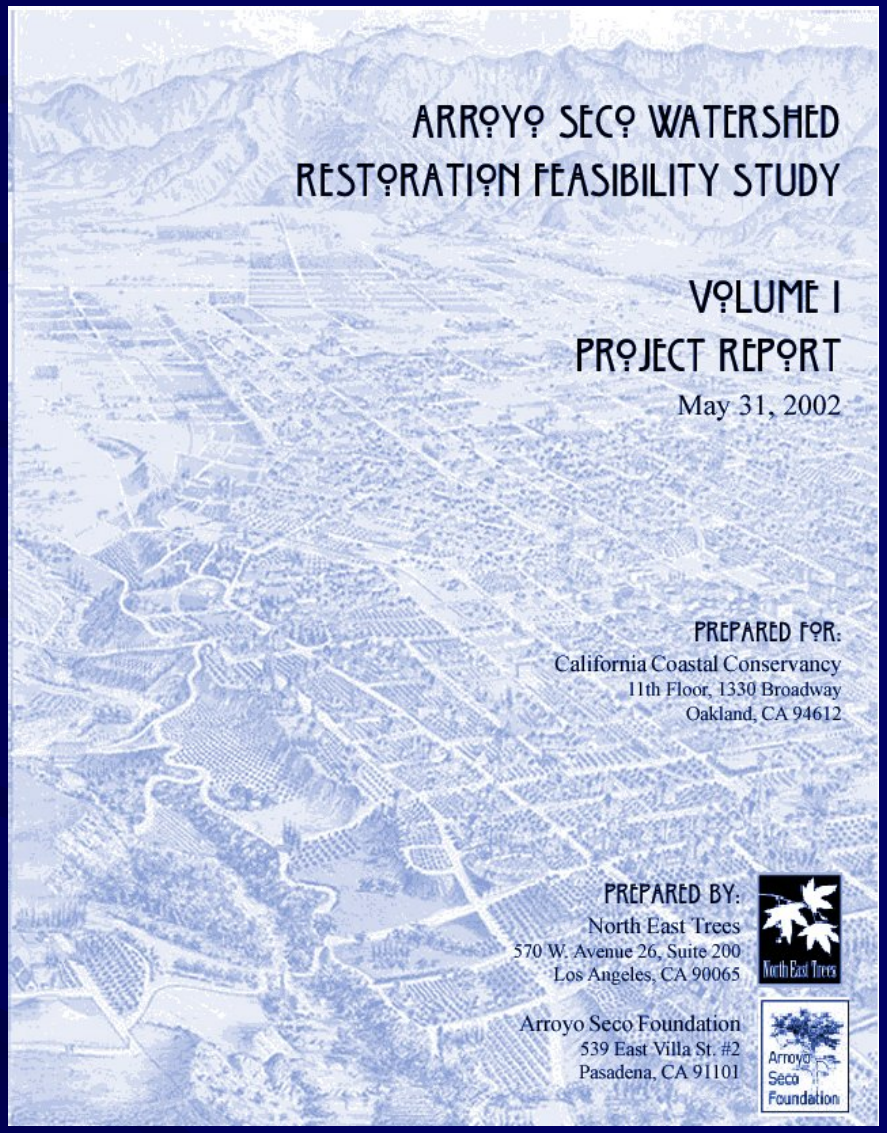
Structures 3:

Arroyo Seco Parkway

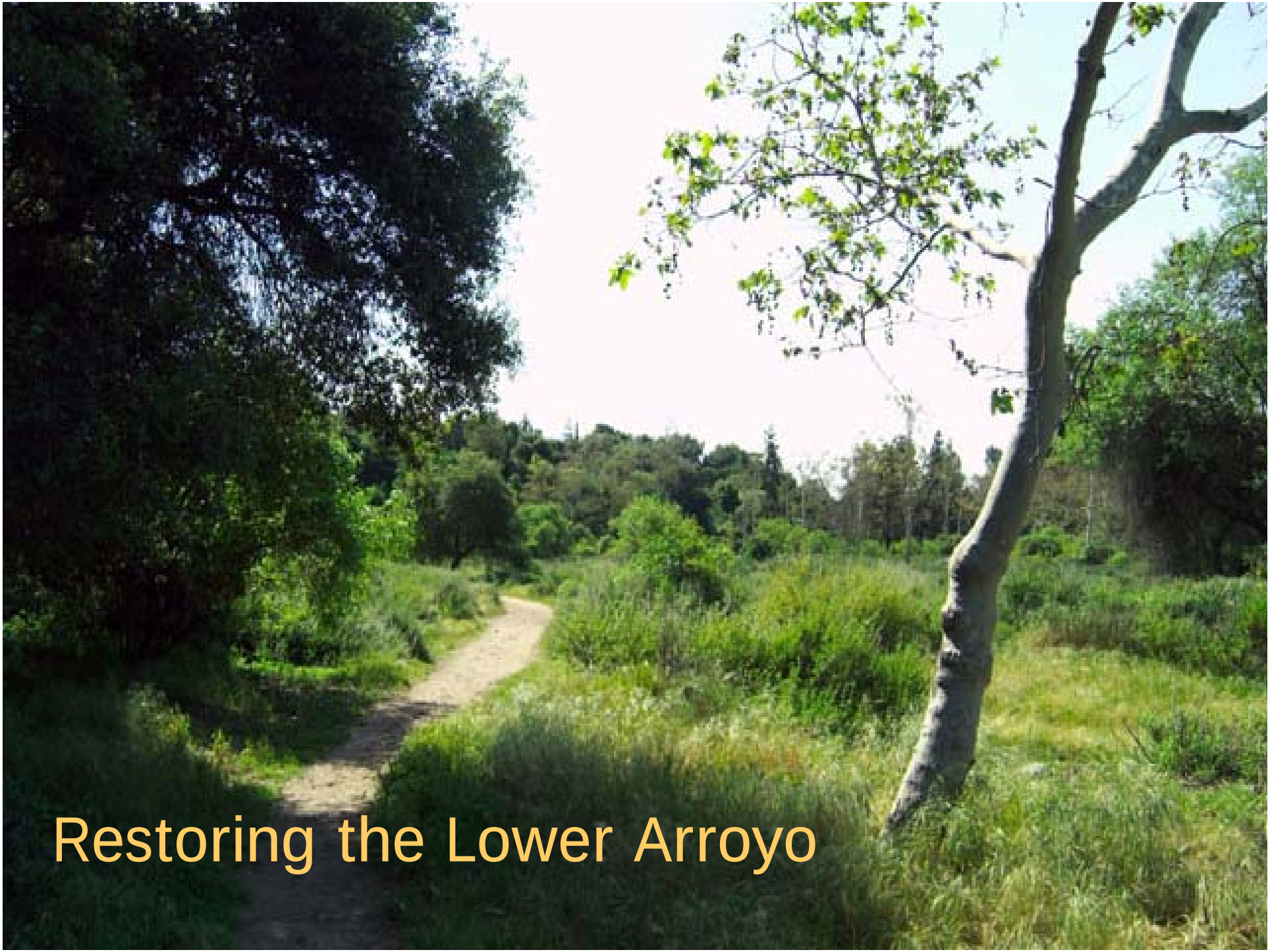
1941

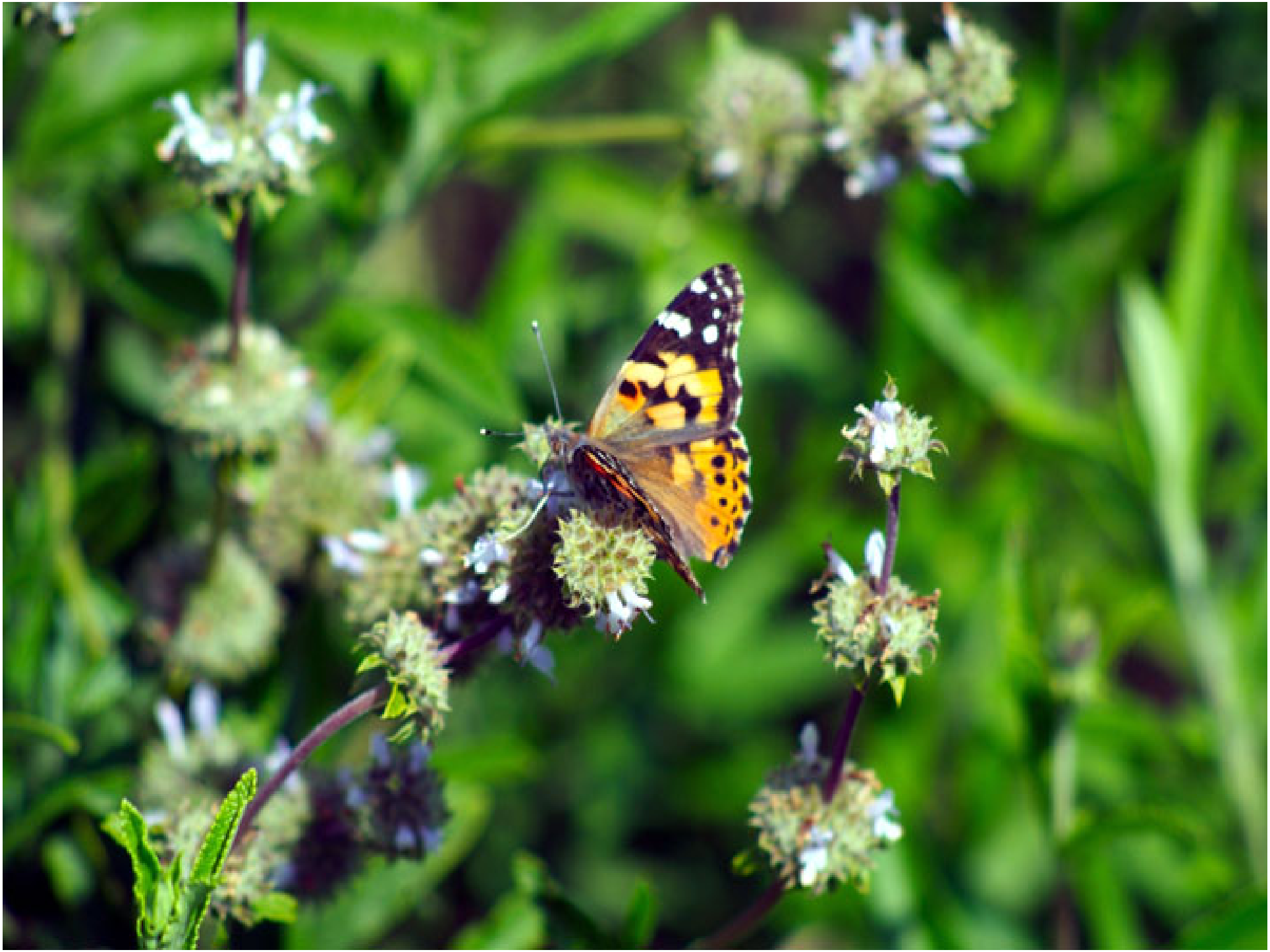
The Arroyo Seco watershed has changed dramatically over time.

It will continue to change in the future.



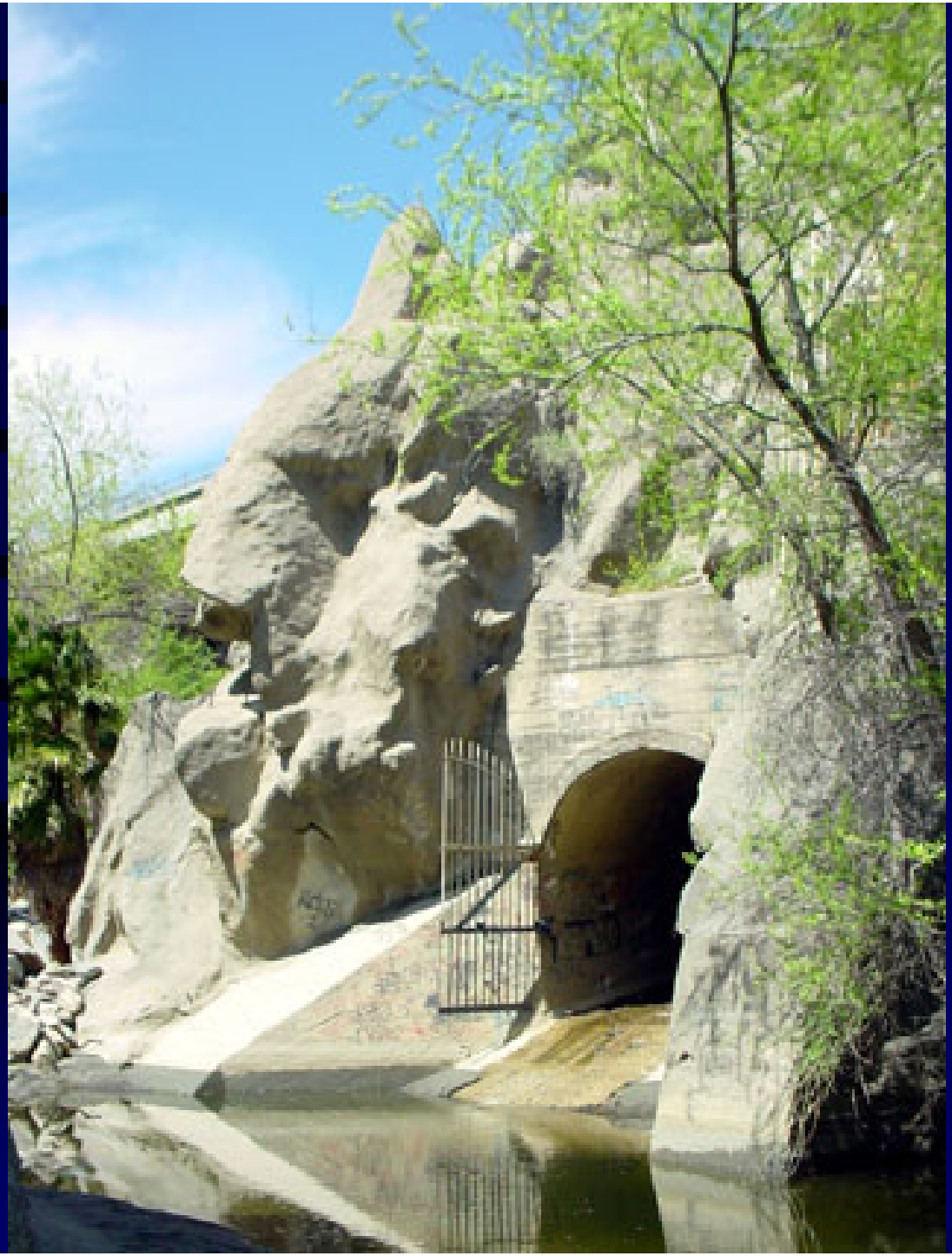
You will decide its future direction.


Restoring the Lower Arroyo



Stewards

Restoring the Arroyo Stream



Devil’s Gate

GEHL
GEHL

Bobcat
10710
Bobcat

GEHL
373
337

GEHL

GEHL
373

Bobcat
T250

Erosion Control

Native Habitat

"The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased and not impaired in value."

Teddy Roosevelt

For more information:

www.arroyoseco.org

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