

California's Surface Water Ambient Monitoring Program
A Model for Creating a Watershed
Outreach Slide Show

May 2008



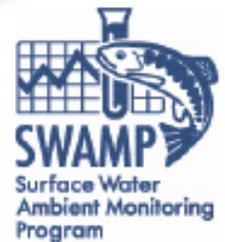
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This is a model for preparing your
own watershed slide show

Use a Catchy Title

A Tale of Two Rivers Long Beach, CA



Erick Burren, Environmental Scientist

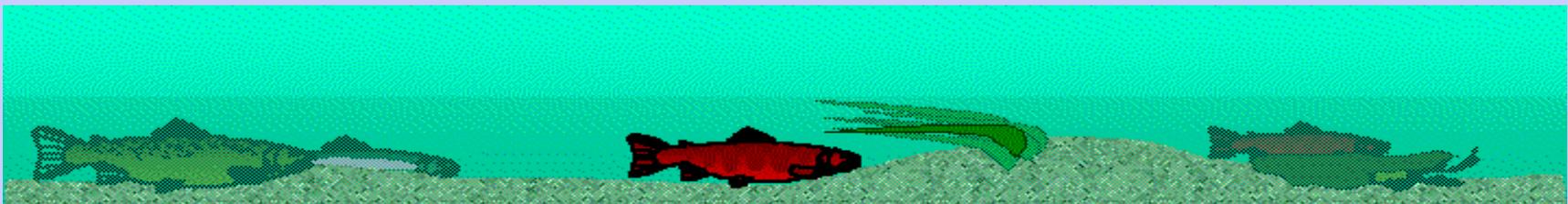
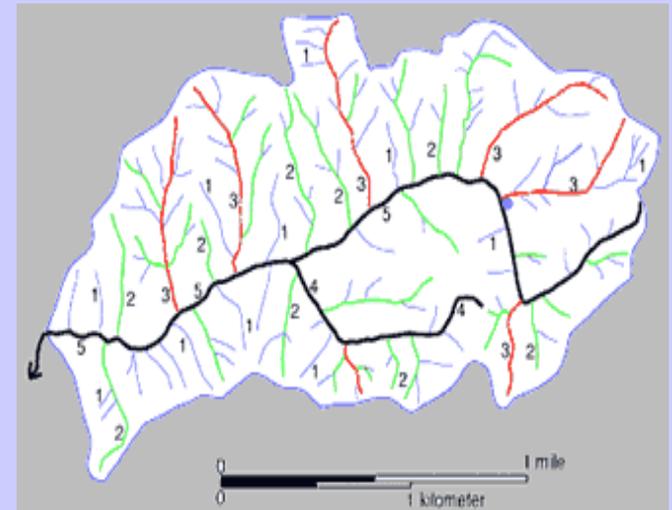
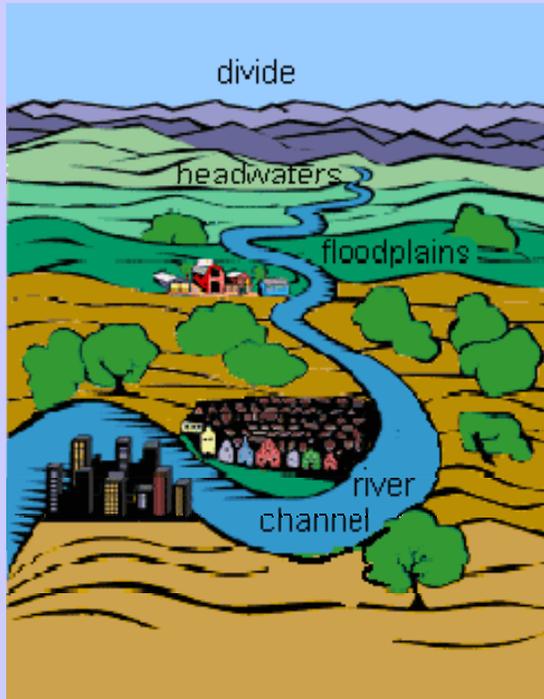
State Water Resources Control Board

The Clean Water Team

Define the Waterbody of Topic.

WHAT IS A RIVER?

A watershed is all the land which drains surface waters to a single specific point. These are often referred to as basins. A river is a stream of the highest order which drain a watershed and discharge its waters into a great water body such as a bay .



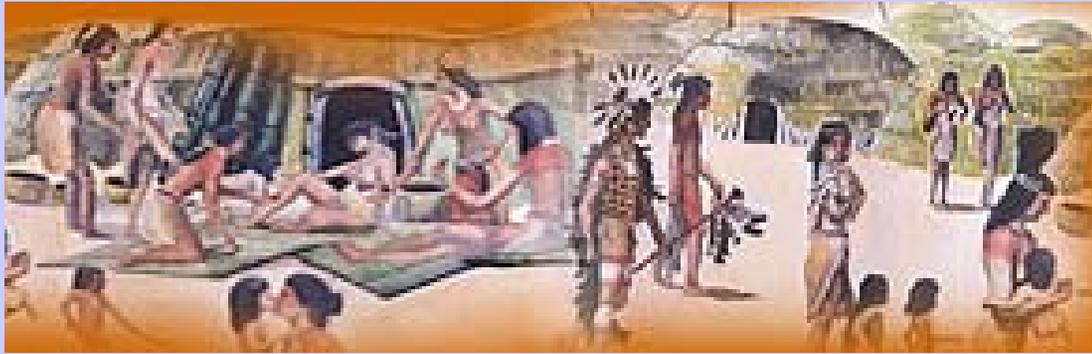
Present a Historical Perspective
of the Watershed or Waterbody

Cultural

Biological

Geological....

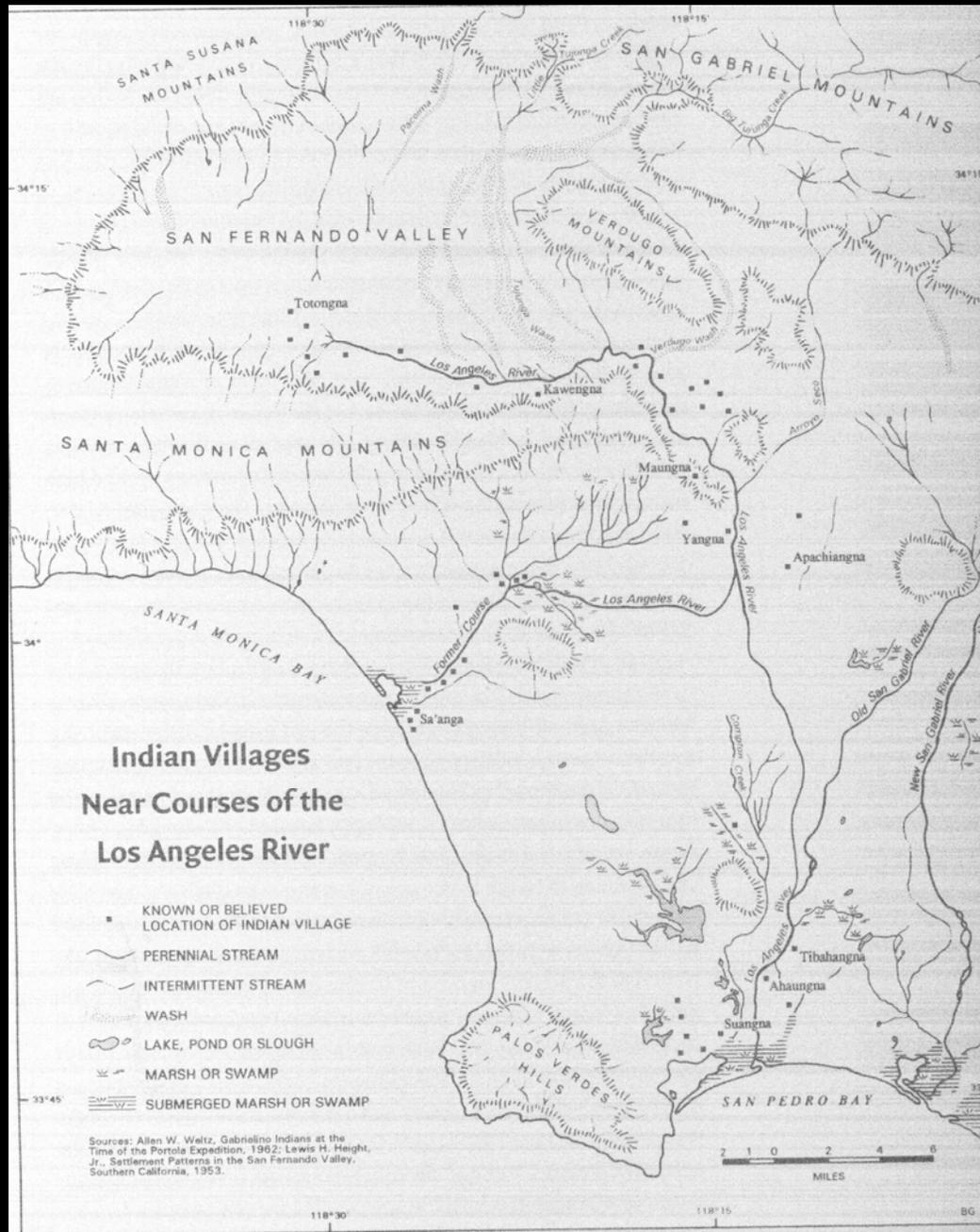
HISTORICAL PERSPECTIVE



The **Tongva**, "people of the earth", inhabited the area in and around what we know as Los Angeles. Their identified place of origin is in Long Beach. This tribe has been indigenous to the area for 7,000 years. (These people are also known as Gabrielenos.)

The southern population of the **Chumash** lived in the Malibu area and in parts of the western portion of the upper Los Angeles River.

The **Tataviam** which was the smallest group of original Los Angeles native people occupied villages north of the San Fernando Valley and in the Santa Clarita Valley.



Historic Residents

Some Other Historic Residents



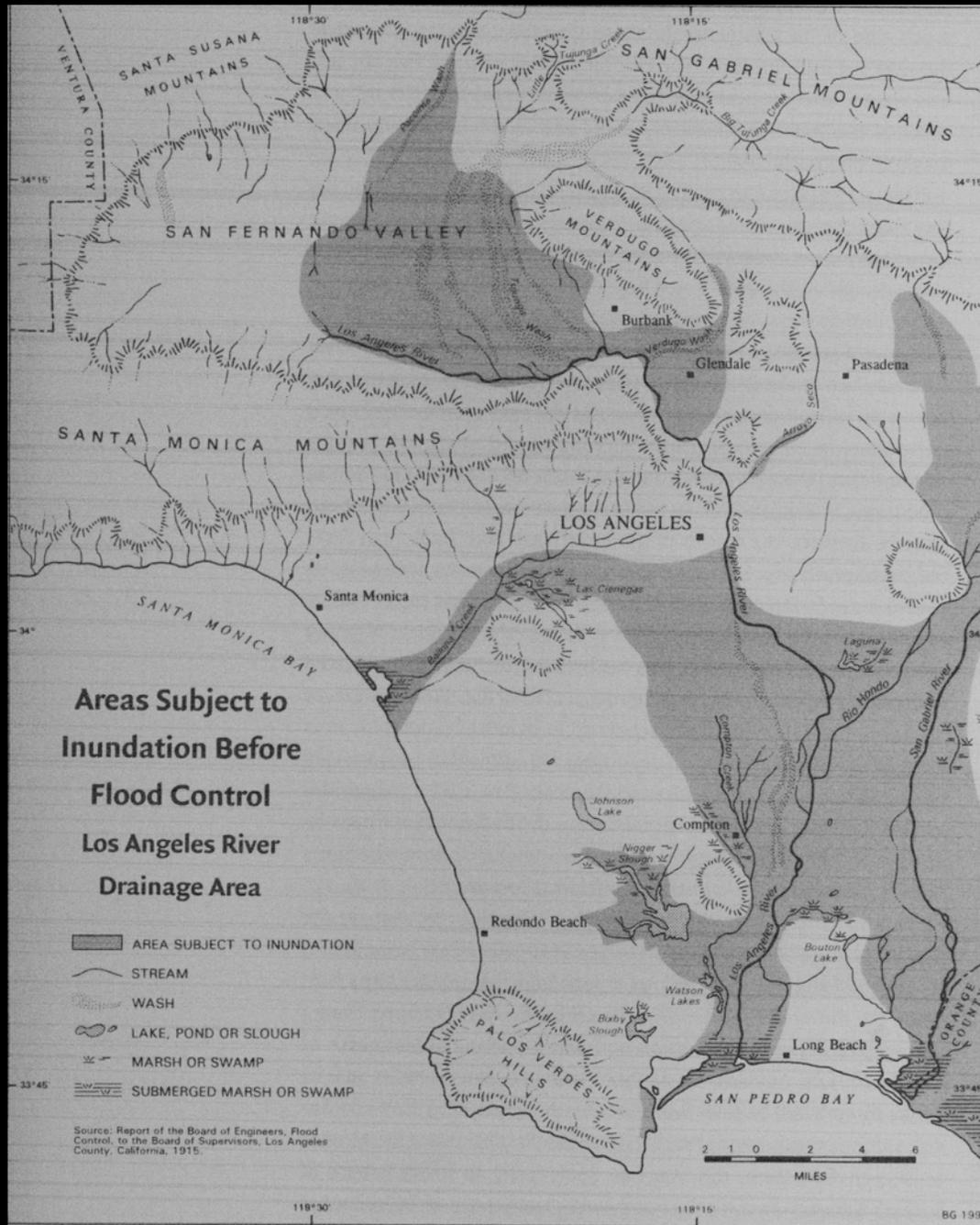


THE NAMING OF OUR TWO RIVERS



In 1769 Gaspar de Portola led an expedition across southern California with Franciscan Padres Junipero Serra and Juan Crespi. Portola named a "beautiful river" they discovered "**El Río de Nuestra Señora la Reina de los Ángeles de Porciúncula**," "The River of Our Lady the Queen of the Angels of the Porciuncula," *porciúncula* meaning "little portion."

Junípero Serra chose to be the patron saint of their new mission the Archangel **Gabriel**, whose very name means "Strength of God". The valley around and the river next to the mission were then named the same. 1771



Present Current Information on the Watershed or Waterbody

Cultural

Biological

Geological

Beneficial Uses

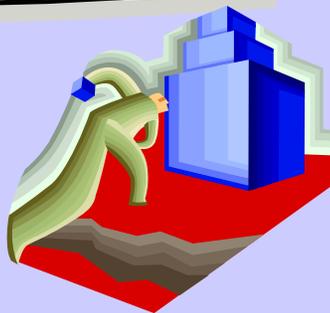
Stakeholders

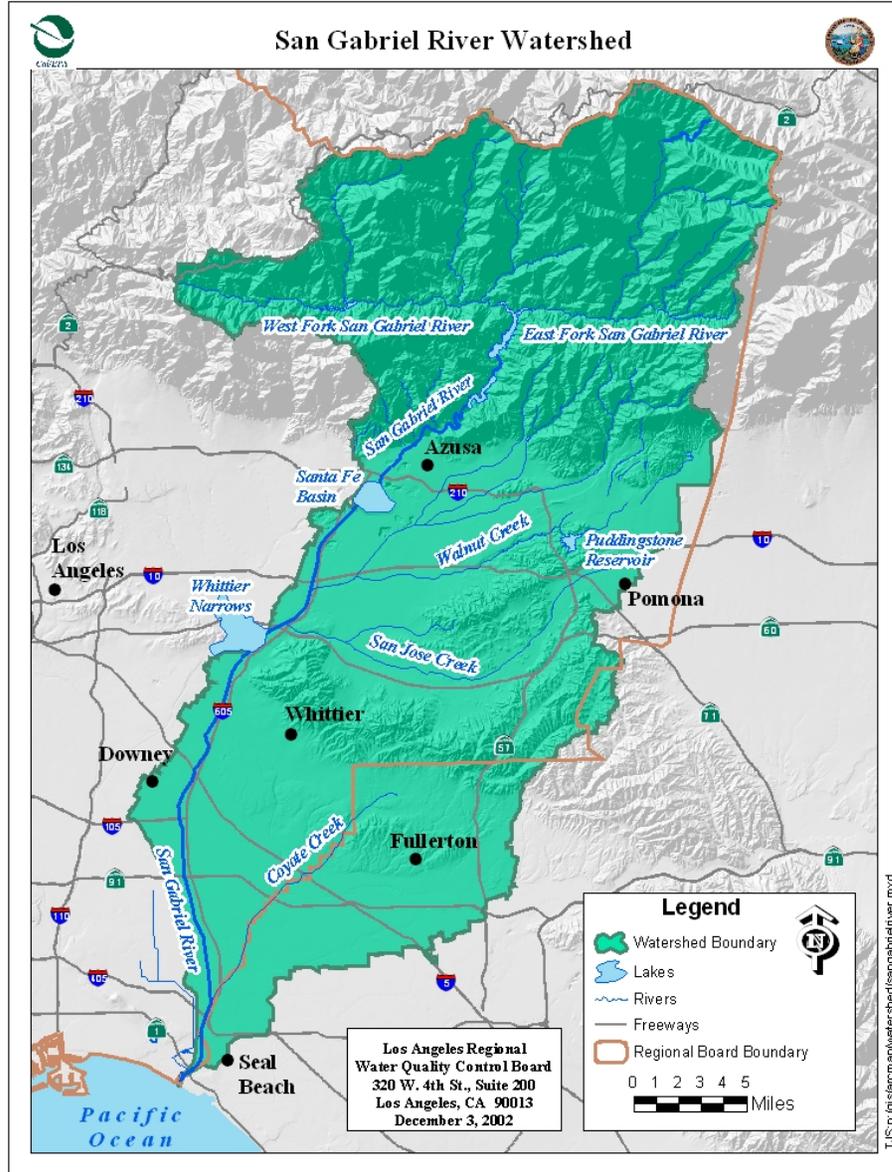
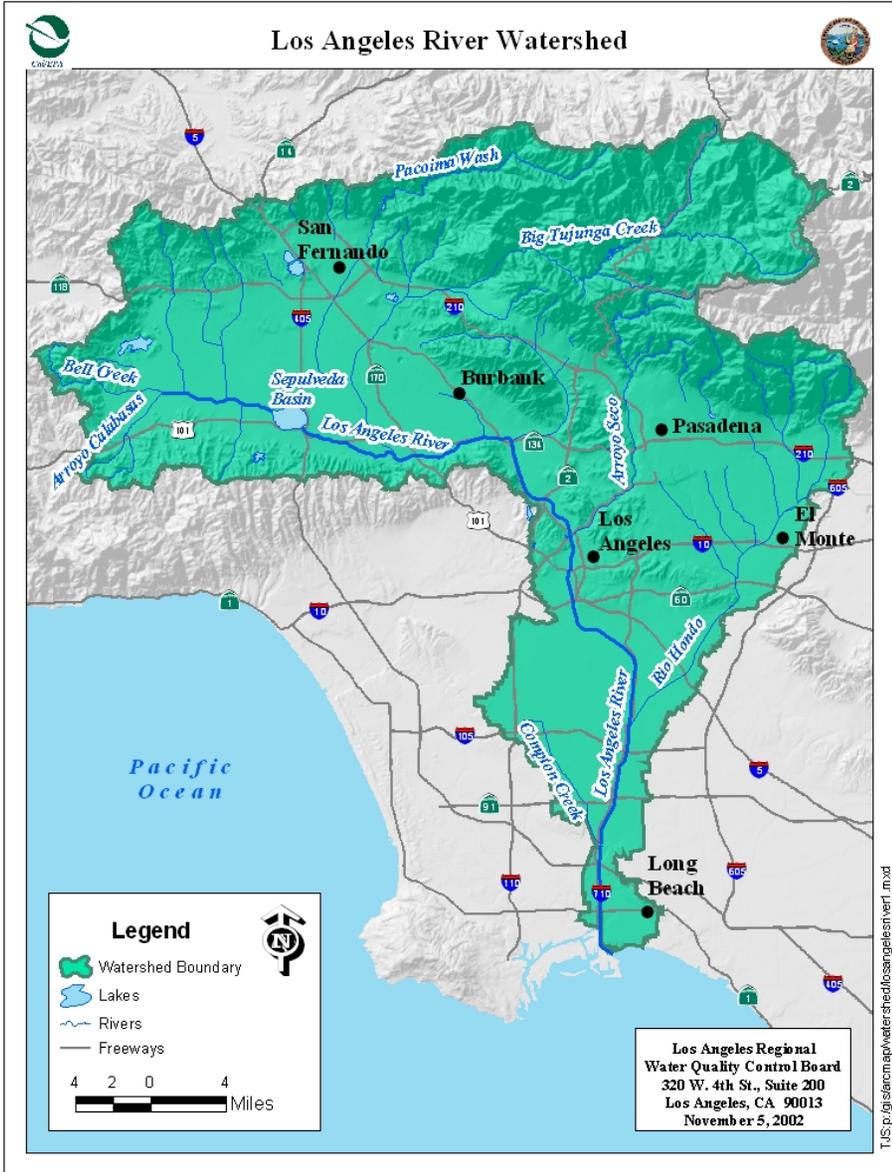
Water Quality Impacts....





Long Beach has a population of over 460,000 (2000 census). It is the 34th largest city in the nation, 5th in largest in California, and has one of the busiest ports in North America. That alone could significantly impact our surface waters. But Long Beach is downstream of the largest metropolitan area on the US west coast. When at the bottom of a watershed like this, everyone's water pollution issues become yours.





Size of watershed: 824 square miles

Length of river: 55 miles

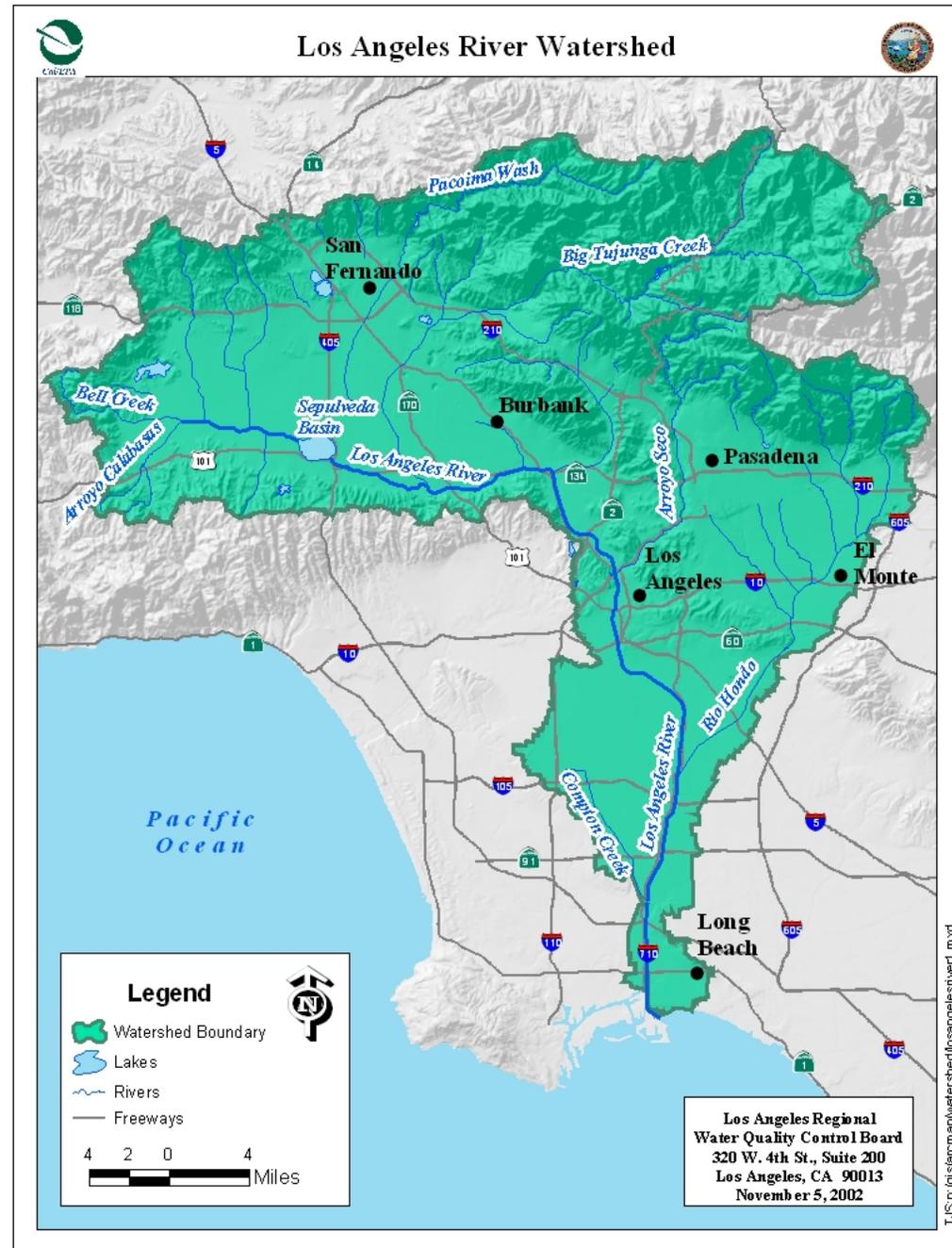
Beneficial Uses in watershed:

Estuary

Industrial service supply
Contact & noncontact water recreation
Navigation
Commercial & sportfishing
Protection
of rare & endangered species
Wildlife habitat
Marine habitat
Migration of aquatic organisms
Spawning
Estuarine habitat

Above estuary

Groundwater recharge
Contact & noncontact water
recreation
Warmwater habitat
Wetlands Habitat
Protection
of rare & endangered species
Wildlife habitat



CURRENT LAR IMPACTS

Potential Sources of Pollution:

- POTWs
- Industrial discharges
- Septic systems
- Landfills
- Nonpoint sources (horse stables, golf courses)
- Illegal trash dumping
- Cross-contamination between surface and groundwater

Permitted discharges:

144 NPDES discharges including: seven major NPDES dischargers (four POTWs); 23 minor individual permits; 114 dischargers covered by general permits

- Minor permits cover miscellaneous wastes such as ground water dewatering, recreational lake overflow, swimming pool wastes, and ground water seepage. Other permits are for discharge of treated contaminated ground water, noncontact cooling water, and storm water
- Two municipal storm water permits
- 1,336 dischargers covered under an industrial storm water permit
- 456 dischargers covered under a construction storm water permit

Los Angeles River Watershed 303(d)-listed Waters

303(d) Listed Waters/Reaches	Impairments
Aliso Canyon Wash	Selenium
Arroyo Seco Rch 1 (d/s Devil's Gate Dam)	Coliform, nutrients (algae), trash
Arroyo Seco Rch 2 (W. Holly Ave. to Devil's Gate)	Coliform, nutrients (algae), trash
Bell Creek	coliform
Burbank Western Channel	Algae, ammonia, cadmium, odors, scum/foam-unnatural, trash
Compton Creek	Coliform, copper, lead, pH
Dry Canyon Creek	Coliform, Selenium
Echo Park Lake	Algae, ammonia, copper, eutrophic, lead, odors, PCBs (tissue), pH
Calabasas Lake	Ammonia, DDT (tissue), eutrophic, low DO/organic enrichment, odors, pH
Lincoln Park Lake	Ammonia, eutrophic, lead, low, DO/organic enrichment, odors
Los Angeles River Estuary (Queensway Bay)	chlordan (sediment), DDT (sediment), Lead (sed.), PCBs (sed.), Zinc (sed.)
Los Angeles River Reach 1(u/s Carson St. to estuary)	Aluminum, total, ammonia, cadmium (dissolved), coliform, copper (dissolved), Lead, nutrients (algae), pH, scum/foam-unnatural, zinc, dissolved

303(d) Listed Waters/Reaches	Impairments
Los Angeles River Reach 2 (Figueroa St. to u/s Carson St.)	Ammonia, coliform, lead, nutrients (algae), odors, oil, scum/foam-unnatural
Los Angeles River Reach 3 (Riverside Dr. to Figueroa St.)	Ammonia, nutrients (algae), odors, scum/foam-unnatural
Los Angeles River Reach 4 (Sepulveda Dam to Riverside Dr.)	Ammonia, coliform, lead, nutrients (algae), odors, scum/foam-unnatural
Los Angeles River Reach 5 (within Sepulveda Basin)	Ammonia, nutrients (algae), odors, oil, scum/foam-unnatural
Los Angeles River Reach 6 (u/s of Sepulveda Basin)	Coliform, Dichloroethylene/1,1-DCE, Tetrachloroethylene/PCE, Trichloroethylene/TCE
McCoy Canyon Creek	Coliform, nitrate (NO ₃), nitrate as nitrogen selenium
Monrovia Cyn Creek	Lead
Peck Rd Lake	chlordan (tissue), DDT (tissue), lead, low DO/organic enrichment, odors
Rio Hondo Reach 1 (Santa Ana Fwy to Los Angeles River)	Coliform, copper, lead, pH, trash, zinc
Rio Hondo Reach 2 (Whittier Narrows Flood Control Basin to Spreading Grounds)	coliform
Tujunga Wash (d/s Hansen Dam to Los Angeles River)	Ammonia, coliform, copper, odors, scum/foam-unnatural, trash
Verdugo Wash Reach 1 (LA River to Verdugo Rd)	Algae, coliform, trash
Verdugo Wash Reach 2 (above Verdugo Road)	Algae, coliform, trash

Size of watershed: 689 sq. mi.

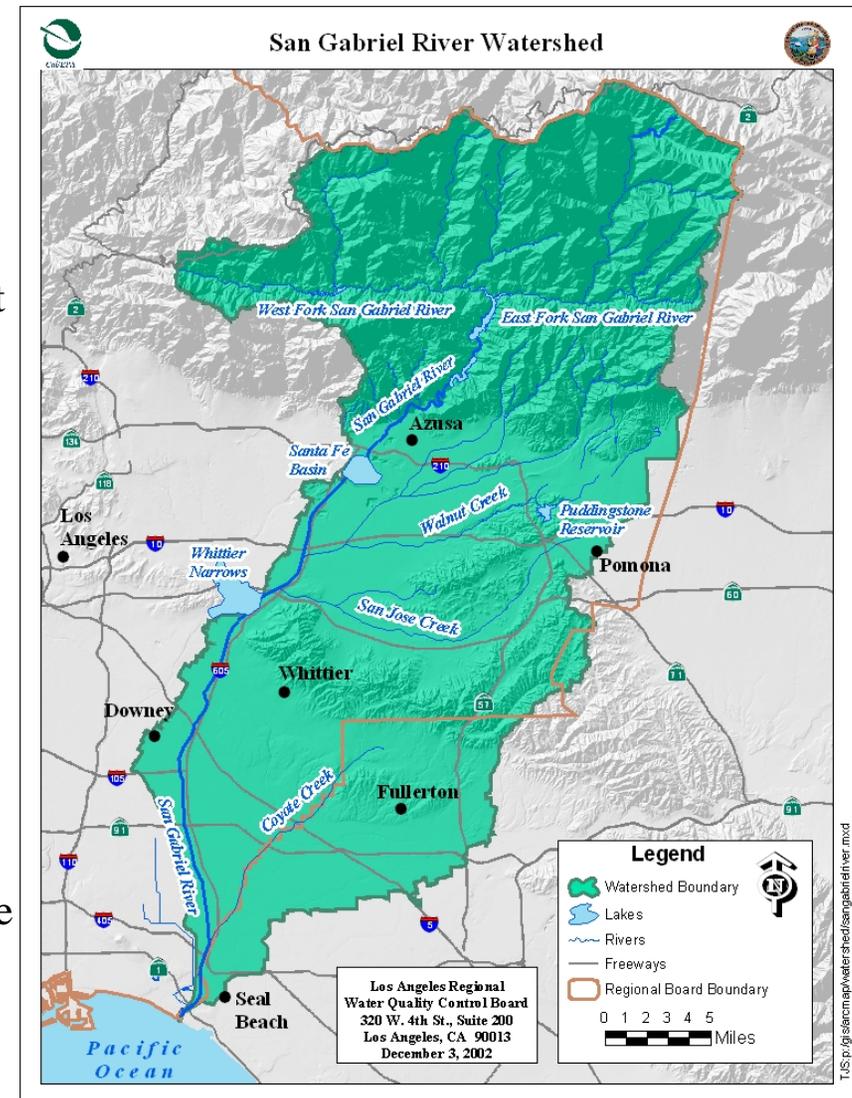
Beneficial Uses designated in the watershed:

Estuary

Contact & noncontact
water recreation
Industrial service supply
Protection of rare &
endangered species
Wildlife habitat
Spawning
Marine habitat
Estuarine habitat
Navigation
Commercial & sportfishing
Migratory

Above Estuary

Contact & noncontact
water recreation
Industrial service
supply
Protection of rare &
endangered species
Wildlife habitat
Spawning
Warm- & coldwater
habitat
Municipal water
supply
Groundwater recharge
Industrial process
supply
Agricultural supply



CURRENT SGR IMPACTS

Significant Issues:

- Protection of groundwater recharge areas
- Sluicing of reservoirs
- Trash in upper watershed
- Mining/stream, modifications
- Ambient toxicity
- Urban and storm water runoff quality
- Nonpoint source loadings from nurseries and horse stables
- Estuary dynamics

Permitted discharges:

- 79 NPDES discharges including: six major NPDES dischargers (four POTWs)
- 18 minor permits, 55 discharges covered under general permits
- 2 municipal storm water permits
- 606 dischargers covered under an industrial storm water permit
- 247 dischargers covered under a construction storm water permit

303(d) Listed Waters/Reaches	Impairments
Coyote Creek	abnormal fish histology, algae, ammonia, Coliform, copper (dissolved), lead (dissolved), Selenium (total), toxicity zinc, (dissolved)
Crystal Lake	low DO/organic enrichment
El Dorado Lakes	Algae, ammonia, copper, eutrophic, lead, mercury (tissue), pH
Legg Lake	Ammonia, copper, lead, odors, pH, trash
Puddingstone Reservoir	chlordan (tissue), DDT (tissue), low DO/organic enrichment, Mercury (tissue) PCBs (tissue)
San Gabriel River Estuary	abnormal fish histology
San Gabriel River Reach 1 (Estuary to Firestone)	abnormal fish histology, algae, coliform, toxicity
San Gabriel River Reach 2 (Firestone to Whittier Narrows Dam)	Coliform, copper (dissolved), lead, Zinc (dissolved)
San Gabriel River Reach 3 (Whittier Narrows to Ramona)	toxicity
San Jose Creek Reach 1 (SG confluence to Temple St.)	Algae, coliform
San Jose Creek Reach 2 (Temple to I-10 at White Ave)	Algae, coliform
Santa Fe Dam Park Lake	Copper, lead, pH
Walnut Creek Wash (drains from Puddingstone Res.)	pH, toxicity

WARNING!

OCEAN WATER CONTACT MAY
CAUSE ILLNESS

BACTERIA LEVELS HAVE EXCEEDED
HEALTH STANDARDS



¡AVISO!

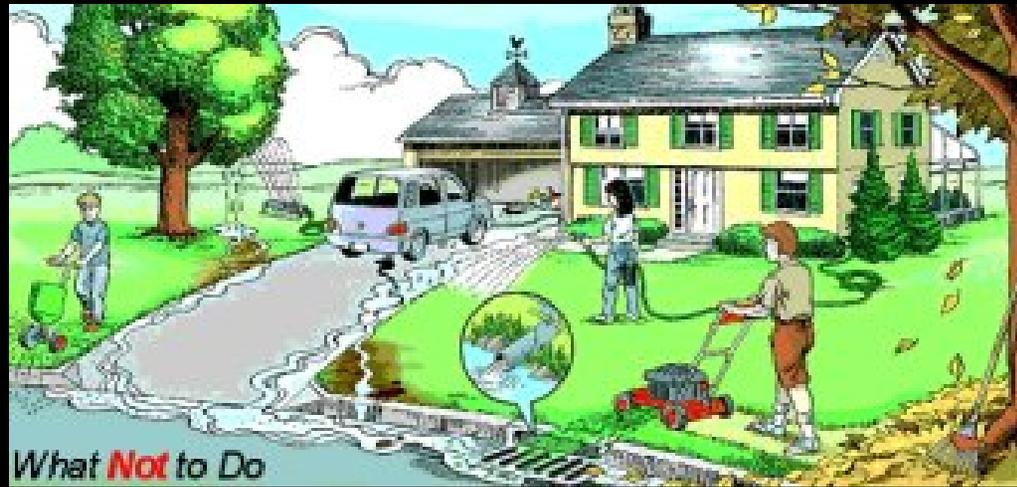
EL CONTACTO CON AGUA DEL OCEANO
PUEDE CAUSAR EFERMEDADES

LOS NIVELES DE BACTERIAS EXCEDEN
LOS ESTANDARES DESALUD



Preventable Sources of Pollution:





What **Not** to Do



Close with Thanks and an
Invitation to Participate in Your
Organizations Watershed
Stewardship Activities



“Our mission is to preserve and enhance the quality of California’s water resources and ensure their proper allocation and efficient use for present and future generations”

S W R C B

If you would like to pursue Citizen Monitoring as a part of your Watershed Stewardship activities please contact the Clean Water Team.

<http://www.swrcb.ca.gov/nps/volunteer.html>