



# MIDDLE SCHOOL

## LESSON 2

# Student Objective

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Today I will be able to...

Describe how pollution travels through the LA River watershed.



# LA River History Review

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The \_\_\_\_\_ were the first inhabitants of Los Angeles. They lived in harmony with nature, and relied on the LA River for food, shelter, and medicine.



# LA River History Review

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# LA River History Review

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Spanish colonists arrived in Southern California in the 1800s, seeking fertile land to produce crops.



# LA River History Review

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As the city of Los Angeles grew, people built homes closer and closer to the River's banks.





# LA River History Review

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The LA River was moody; one year it would overflow in a rage, and the next it would be desperately dry.



# LA River History Review

In March of 1938, heavy rain killed over 100 people, damaged over 6000 homes, and flooded 1/3 of Los Angeles.

2 THURSDAY MORNING.

Los Angeles Times

MARCH 3, 1938.—[PART I.]

## GOING! GOING! GONE! VALLEY EATING PLACE PUSHED OVER BRINK BY SURGING WATERS





# LA River History Review

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The city had to take action. There were two contrasting visions:

- The Olmstead Brother's "Emerald Necklace" park-filled plan required a lot of maintenance and funding
- The U.S. Army Corps of Engineers' idea of a concrete flood control channel would be maintained by them forever





# LA River History Review

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In March 1938, the U.S. Army Corps of Engineers began work to lower the riverbed, widen the channel, and cover the entire River in concrete.



# LA River History Review

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Paving over the River took about 20 years, 17,000 employees, three million barrels of concrete, and removed over 800,000 dump truck loads of soil.



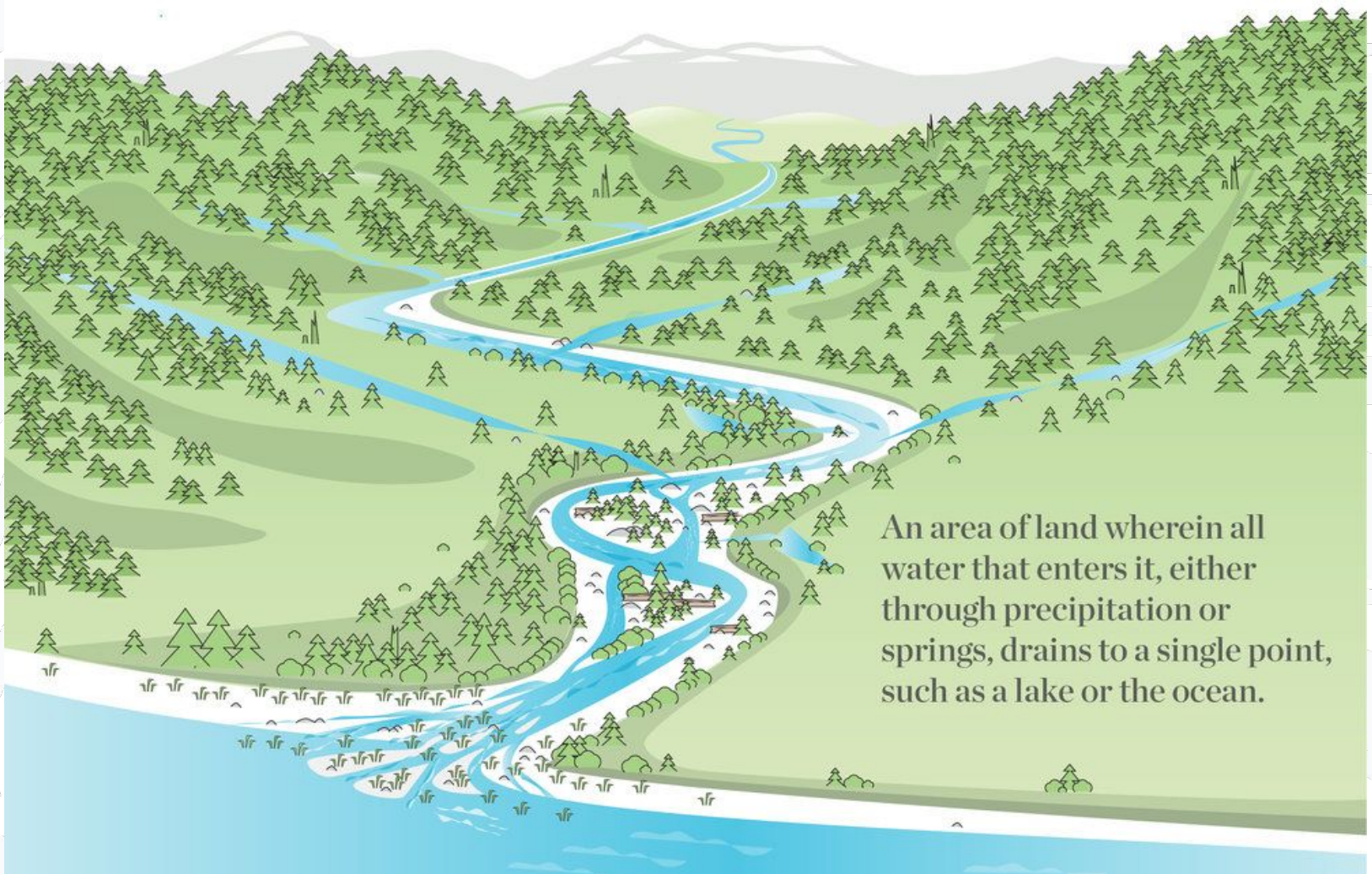


# LA River History Review

The channelization of the River had profound impacts on the landscape and wildlife of the entire Los Angeles watershed.



# What is a watershed?



Watch video on watersheds [HERE](#)



# What is a tributary?

A tributary is a smaller river or stream that connects to a larger river or lake.



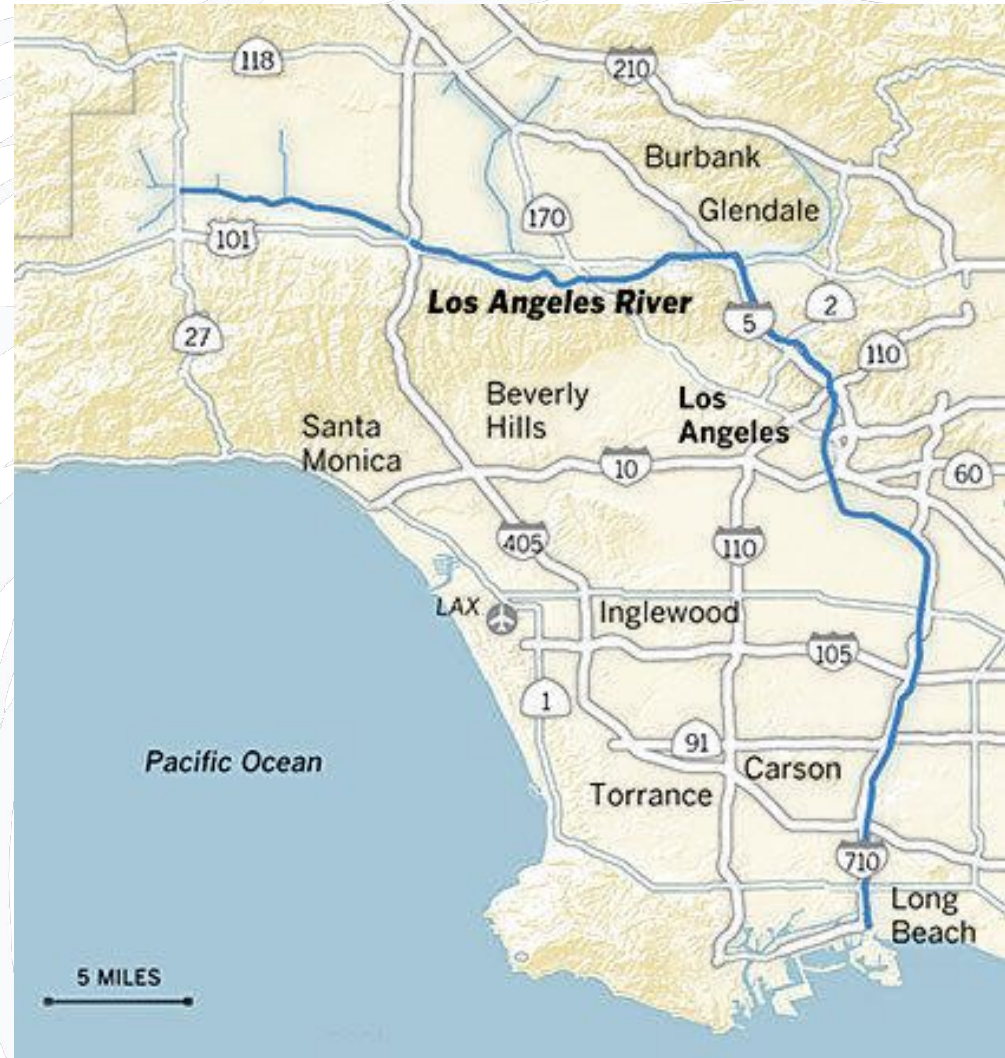






# How does the LA River get its water?

- Rain water
- Snow melt
- Storm drains
- Tributaries
- Water treatment plants



# How does trash enter the LA River?

Runoff from an 836 square mile watershed drains into the LA River.

1. Trash washes through our city streets and into storm drains when it rains
2. Those storm drains empty into the Los Angeles River
3. Trash becomes entangled or trapped in the River's vegetation
4. Or it flows downstream to Long Beach and into the Ocean



The River is connected to...



... the Ocean!



# Trash Path

Arrange these pictures to show the path of a piece of trash in Los Angeles





# What about wildlife?



# What about wildlife?

Many species that once called the River their home are now endangered (at risk of extinction) or threatened (at risk of becoming endangered), due to habitat loss.



**California red-legged frog:**  
federally threatened



**Yellow-billed cuckoo:**  
state-endangered



# Trivia Time!

**TRUE or FALSE:**

The founding of the organization Friends of the Los Angeles River began with a harmless, yet illegal, act of civil disobedience.



# Trivia Time!

**TRUE or FALSE:**

The founding of the organization Friends of the Los Angeles River began with a harmless, yet illegal, act of civil disobedience.

**TRUE**

FoLAR's founders cut their way through a chain-link fence separating the River from the people of LA.



Image: Lewis MacAdams, the “founding father” of the River.



# Trivia Time!

**TRUE or FALSE:**

The LA River's strangest-looking fish is native to South America.



# Trivia Time!

**TRUE or FALSE:**

The LA River's strangest-looking fish is native to South America.

**TRUE**

The exotic Amazon sailfin catfish was most likely released into the River by fish hobbyists.



Image: the Amazon sailfin catfish



# Trivia Time!

**TRUE or FALSE:**

Today, only a small section of the River is dry. Water reclamation plants release a constant water source.



# Trivia Time!

**TRUE or FALSE:**

Today, only a small section of the River is dry. Water reclamation plants release a constant water source.

**TRUE**

Only a few miles upstream are not fed by water treatment plants that release a constant source of water.



Image: the Los Angeles- Glendale Water Reclamation plant, one of three plants that release water into the River.



# Trivia Time!

**TRUE or FALSE:**

Most fish living in the LA River are native species that have always lived there.



# Trivia Time!

**TRUE or FALSE:**

Most fish living in the LA River are native species that have always lived there.

**FALSE**

Most of the fish now living in the LA River are non-natives. One of FoLAR's goal is to bring back **native** fishes!



Image: the beautiful Steelhead Trout, a native fish which can no longer be found in the River



# Trivia Time!

**TRUE or FALSE:**

Plastic trash that washes into the River is dangerous to animals.



# Trivia Time!

**TRUE or FALSE:**

Plastic trash that washes into the River is dangerous to animals.

**TRUE**

Swallowed plastic makes wildlife feel full, causing them to suffer from malnutrition.



Image: the effects of plastic on wildlife



# Trivia Time!

**TRUE or FALSE:**

The most common form of trash found in the River is high-energy drink containers.



# Trivia Time!

**TRUE or FALSE:**

The most common form of trash found in the River is high-energy drink containers.

**FALSE**

The most common form of trash found in the River are plastic grocery bags and snack food wrappers.



Image: FoLAR staff sorting and counting trash found at our Annual CleanUp



# Trivia Time!

**TRUE or FALSE:**

The “concrete canyon” now containing much of the LA River was built to accommodate shooting locations for motion pictures studios.



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**TRUE or FALSE:**

The “concrete canyon” now containing much of the LA River was built to accommodate shooting locations for motion pictures studios.

**FALSE**

Although the “concrete canyon” has been used as a movie set since Hitchcock’s 1942 film *Saboteur*, the structure was built to control floods.



Image: the LA River in 1978 *Grease*





# Your turn!

With a partner, answer the questions on your worksheet.





# Help the River today!

With a partner, discuss what you can do to help the River.

You can pick up trash, plant a garden, use less water... What will you do?

