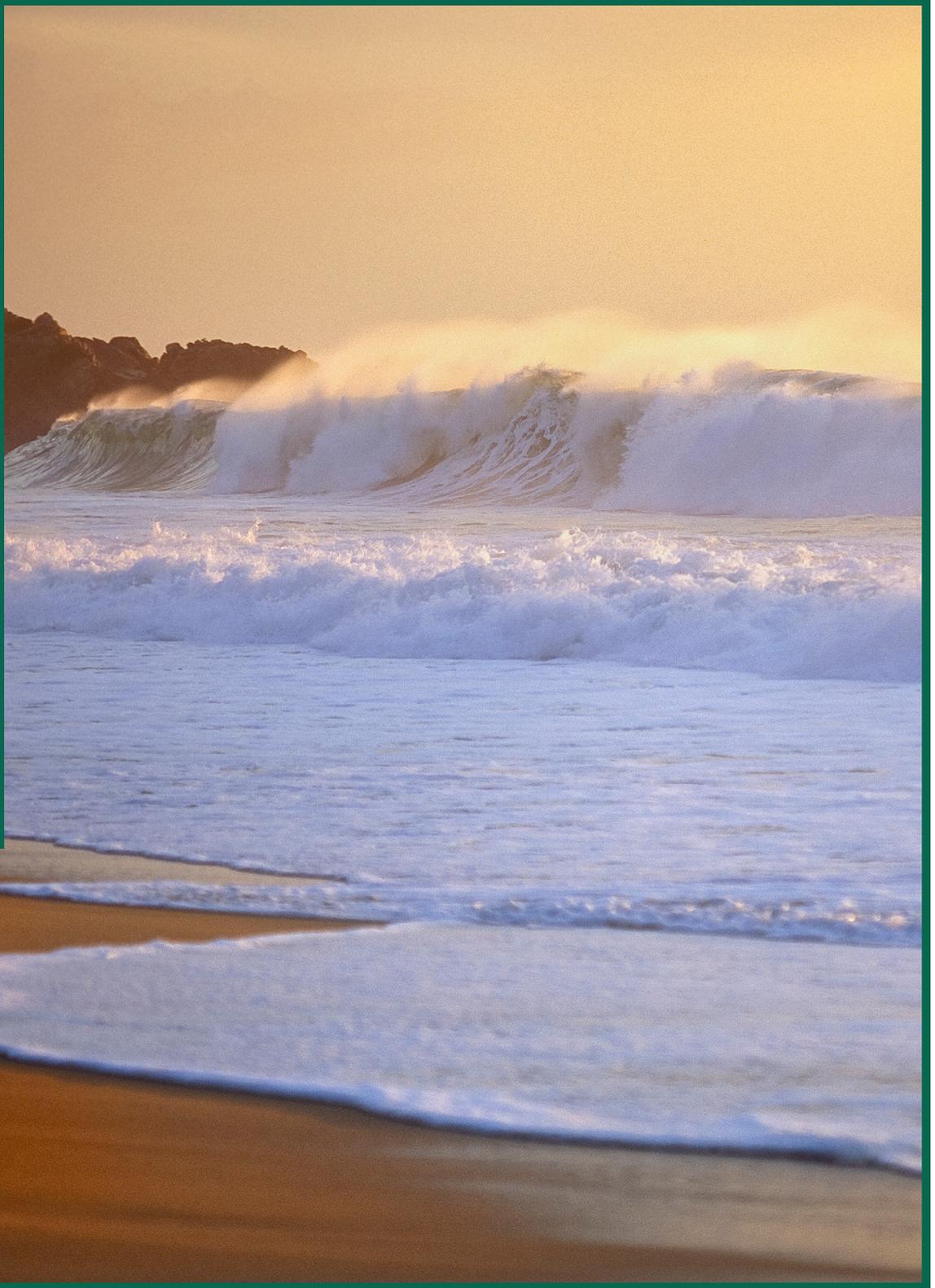


# Student Workbook

## California Education and the Environment Initiative

# 5

Science Standard  
5.3.a.



# Earth's Water

## California Education and the Environment Initiative

Approved by the California State Board of Education, 2010

### The Education and the Environment Curriculum is a cooperative endeavor of the following entities:

California Environmental Protection Agency  
California Natural Resources Agency  
Office of the Secretary of Education  
California State Board of Education  
California Department of Education  
California Integrated Waste Management Board

### Key Leadership for the Education and Environment Initiative:

**Linda Adams**, Secretary, California Environmental Protection Agency  
**Patty Zwarts**, Deputy Secretary for Policy and Legislation, California Environmental Protection Agency  
**Andrea Lewis**, Assistant Secretary for Education and Quality Programs, California Environmental Protection Agency  
**Mark Leary**, Executive Director, California Integrated Waste Management Board  
**Mindy Fox**, Director, Office of Education and the Environment, California Integrated Waste Management Board

### Key Partners:

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## Water for Life

### Lesson 1

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Name: \_\_\_\_\_

**Instructions:** Answer the following questions using what you know and have learned about water. (5 points each)

1. Why do people need water?

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2. Think about the story of the California city that needed water to “grow.” What decisions did people make about water in the story?

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3. Why did Los Angeles’s need for water continue to grow?

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4. Where do you think the water in your community comes from?

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## Earth's Water

Lesson 2 | page 1 of 2

Name: \_\_\_\_\_

### Part 1: A Taste Test

**Instructions:** Taste each of the water samples. In the “Taste” column, describe how the water tastes. (1 point each)

Sample	Taste	Type of Water	Ecosystem
A			
B			
C			

## Earth's Water

Lesson 2 | page 2 of 2

Name: \_\_\_\_\_

### Part 2: Where's the Water?

**Instructions:** Using the globe, estimate the amount in fractions of salt water and fresh water on Earth's surface. Work with the members of your group to figure out your estimate. (1 point each)

Type	Estimated Fraction	Real Fraction
Salt water	$\frac{1}{100}$	
Fresh water	$\frac{1}{100}$	

### Part 3: Surface Waters

**Instructions:** Working on your own, answer the following questions.

1. List the sources of fresh water on Earth. (5 points)

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2. List the sources of salt water on Earth. (3 points)

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3. Which of these sources are parts of California's environment? (2 points)

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4. How can people "run out of water"? What does that mean? (2 points)

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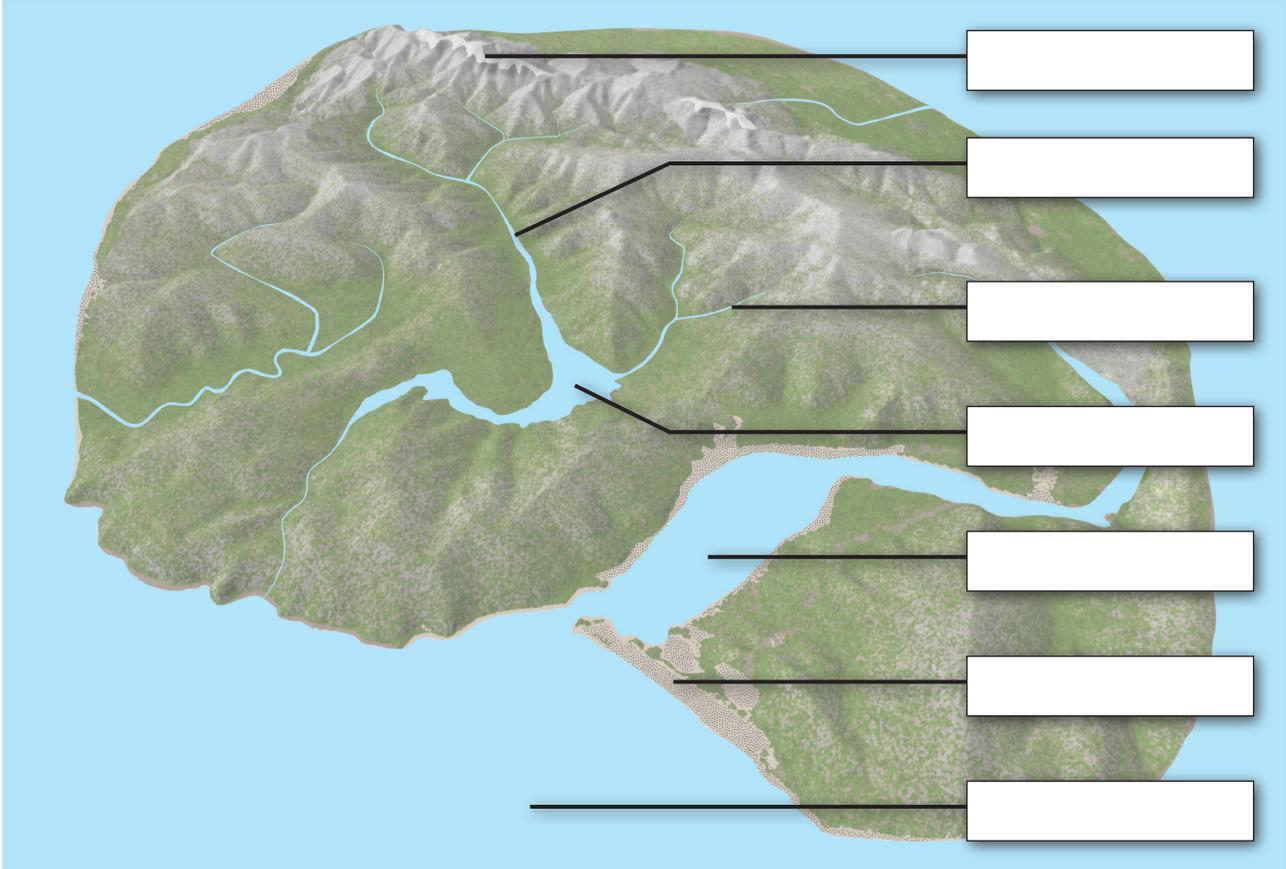
**From Fresh to Salt Water**

Lesson 3

Name: \_\_\_\_\_

**Instructions:** Read the following statements and answer in the spaces provided.

1. This is a bird's-eye view of a watershed. Shade the higher elevations with a pencil. (2 points)



2. Now that you have seen how water flows over the land, use a blue pencil to mark the water pathways on the drawing above. (2 points)

3. Put the following labels on the drawing: (1 point each)

- |           |               |          |          |
|-----------|---------------|----------|----------|
| a. Stream | c. Lake       | e. Bay   | g. Ocean |
| b. River  | d. Headwaters | f. Beach |          |

4. Describe how water moves from the top of a mountain to the ocean or under the ground. (4 points)

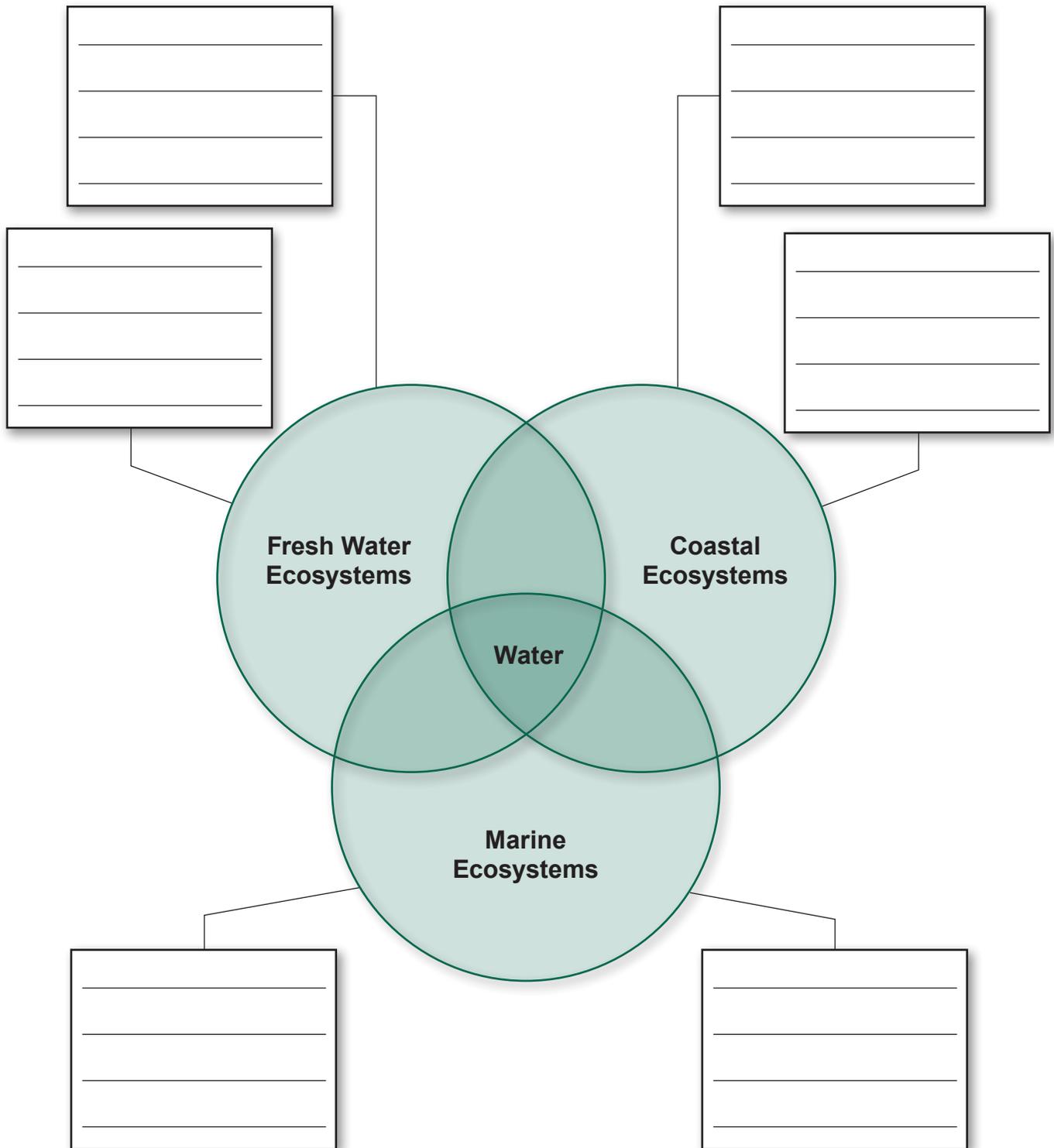
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Name: \_\_\_\_\_

**Instructions:** List at least two ways that each ecosystem below is important to people and our communities. Write your ideas in the boxes provided. You can add more boxes if you have more ideas. (2 points per box)



## Human Communities and Water

Lesson 4 | page 1 of 3

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Name: \_\_\_\_\_

**Instructions:** Use these two pages to take notes on the presentation about **Managing California's Water**.

### Channels and Levees (10 points)

**What:** \_\_\_\_\_

**Where:** \_\_\_\_\_

**Why:** \_\_\_\_\_

**How:** \_\_\_\_\_

### Dams and Reservoirs (10 points)

**What:** \_\_\_\_\_

**Where:** \_\_\_\_\_

**Why:** \_\_\_\_\_

## Human Communities and Water

Lesson 4 | page 2 of 3

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Name: \_\_\_\_\_

How: \_\_\_\_\_

### Collecting and Treating Water (10 points)

What: \_\_\_\_\_

Where: \_\_\_\_\_

Why: \_\_\_\_\_

How: \_\_\_\_\_

Name: \_\_\_\_\_

**Instructions:** Draw the following structures on the diagram. Answer the questions on the lines provided. (10 points each)

1. Draw two levees on the diagram at the right, one on each side of the river, to straighten the curves in the river near Town "A."

How will these levees change the river?

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2. Draw a dam on the diagram between Town "A" and Town "B." Fill in the reservoir that will form behind the dam.

How will this dam and reservoir change the river and land?

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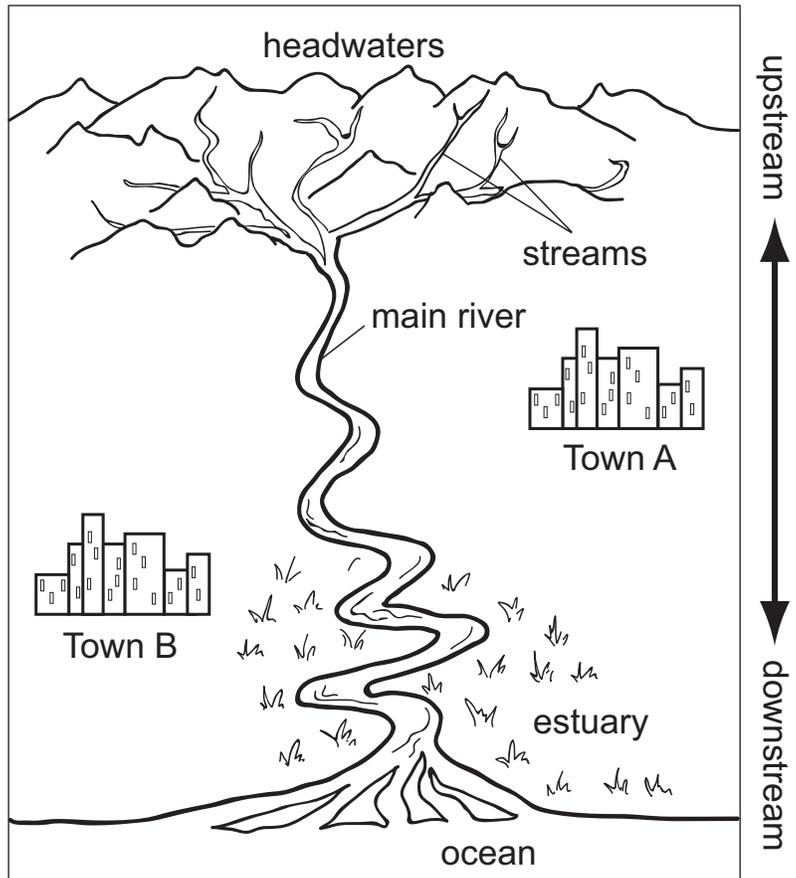
3. In the above diagram, draw a wastewater treatment plant on the coast below Town "B" and draw an arrow to show where the wastewater goes after being treated.

How will the wastewater change the river?

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