

The Delta Ecosystem

Delta Visitors:

Every year, millions of ducks and geese come to visit the Sacramento-San Joaquin Delta and along the water. The Delta is a major nesting spot along the Pacific Flyway—the bird migration route running north to south along the western edge of North America. One of the largest of these frequent flyers is the **Sandhill Crane**. Perched for its critical courtship "dance," this shy bird signals the winter coming by foraging in the Delta wetlands. Connect the dots to draw a picture of the ornate Delta guest.



A Delta Monster?

All those water and mud monsters in the Delta, there are some really big critters lurking in the waters! This animal can grow up to 20 feet and weigh over 1,000 pounds! Its mouth can swallow about 500 small fish at a time! Connect the dots to draw a picture of the monster.



the WHITE NRUTGOS

What is an Ecosystem?

An ecosystem is a group of plants and animals in their surroundings interacting and working together as a unit. The Bay Delta ecosystem is the largest place on the west coast where the fresh water from the rivers meet with the salt water from the ocean. There are 54 different species of fish, 220 birds, 52 mammals, and 22 reptile and amphibian species living there, many of which are threatened or endangered.

Why Is the Delta Ecosystem Important to Us?

The Delta ecosystem and its surrounding wetland habitats provide multiple uses:

- **Ecology:**
- **Farm Land:** Crops
- **Water for household, drinking, agriculture, cities, and businesses:**
- **Water Storage:**
- **Water Filtration and Purification.**

Restoring the Delta Ecosystem

A healthy Bay Delta system is important to the wildlife that live there, and to the people that rely on the Delta for water. Now state laws say that restoring the Delta ecosystem and ensuring a reliable water supply **must be equal goals**. To meet these goals, water managers will work together to explore creative solutions based on input from scientists, engineers, farmers, and concerned citizens. The goal is a Delta that provides healthy habitat and water for people and wildlife for years to come.

What can YOU do to Help?

- The Delta is a special place to visit and see. Here are four things you can do to protect it:
1. Put away your proper place, don't litter.
 2. Take pictures of the plants and animals you see rather than removing or angling them.
 3. Leave the areas the way you found it. Don't dump plants or animals in the wetlands.
 4. Save water! The water we use affects the Delta's ability to function properly.
- Learn about the Delta. Restoring the Delta will take many years, so the more you know, you might be one of the scientists helping to find solutions!

Alien Invaders!

California's AMAZING Delta

What is the Delta?

The Sacramento-San Joaquin Delta is where the Sacramento River water flowing south meets the San Joaquin River flowing north. The two rivers merge with rivers of smaller waterways to form a 300-mile-long mass of rivers and sloughs surrounding over 50 islands, most of them agricultural. No other single area is quite as crucial to the state's overall water picture as the Delta—it is a hub of California's two largest water projects. Its existing channels are used to provide the water inside of the Delta and surrounding areas as well as to transport water to federal and state pumps in the southern Delta.

Why is the Delta Important to us?

The Delta delivers fresh water crucial to California's water supply. It provides drinking water for over 22 million people. It supports California's trillion-dollar economy, including 827 million agricultural, including the Delta's immense transport water south to California's two largest water delivery systems: the **Delta-Mendocino Canal** and the

Water Quality and the Delta

The Delta has historically been at the mercy of the river flood flows and tidal influences. Although

California Aqueduct, Delta levees protect farms, homes, and infrastructure. The Delta also supports important habitat for many species that rely on this unique area where fresh water meets salty ocean water called an **estuary**. To break down and the San Francisco Bay, allow the Delta to form the largest estuary on the west coast—home to 750 plant and animal species.

The Delta Dilemma

Restoring water quality is an critical habitat and serving water project needs. The Delta is in decline from decades of competing demands and struggles to function as a healthy ecosystem and as a reliable source of water.

Finding Solutions

Because so many people—other living things—depend upon the Delta, we need input and cooperation from many different groups to help find solutions to restore the Delta. Government agencies are authorized to improve the Delta. The Delta is also supported by water users, water companies, farmers, Delta residents, and other government agencies to come up with plans that will restore the Delta's ecological health and improve its ability to reliably supply clean water for drinking, agriculture, and other needs.

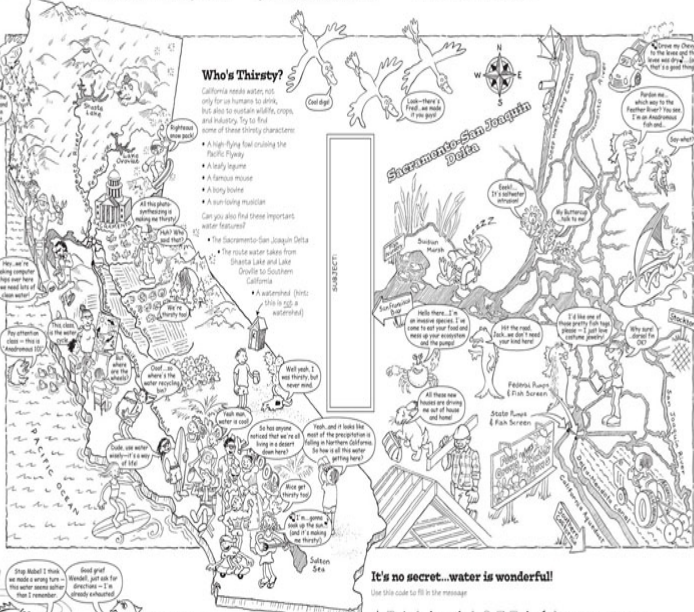
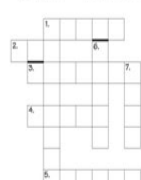
Water Crossword

ACROSS

1. A man-made waterway, like the Delta.
2. The scientific compound for water.
3. An estuary is a unique and rich habitat containing many different plants and animals.
4. A _____ prevents floodwaters from spilling over the banks of rivers or channels.
5. The sun is the _____ source that drives the water cycle.

DOWN

1. Water recycling is one way to _____ water.
2. An area defined by a system of rivers and their tributaries is called a _____.
3. Double-barreled, like the Sultana, form where fresh water mixes with _____ water from the ocean.



Who's Thirsty?

California needs water not only for us humans to drink, but also to sustain wildlife, crops, and industry. To do this, some of these thirsty characters:

- A high-flying bird circling the Delta Delta.
- A leafy legume.
- A famous mouse.
- A fishy house.
- A sun-loving musician.

Can you also find these important water features?

- The Sacramento-San Joaquin Delta.
- The rock water takes from Shasta Lake and Lake Oroville to Southern California.
- A waterwheel (hint: it's in 22nd century).

Delta Word Search

GRAQUEDUCTI
SANJOAQUINS
CSALMONGFSA
AMDEDTADLTC
LORESERVORZ
FLOODPLFTDA
LLMIGRATEAM
ESORJUIWALE
VRUNOFFONEN
EOSALINITYT
ECOSYSTEMCO

Find these words: ANADROMOUS, AQUEDUCT, DAM, DELTA, ECOSYSTEM, FLOOD, LEVEE, MIGRATE, SAN JOAQUIN, RESERVOIR, RIVER, SACRAMENTO, SALINITY, SALTWATER, SPRAIN, TIDAL.

Which Way Did They Go?

Salmon are a species of fish that are born in fresh water, but migrate to the salt water oceans where they spend most of their adult life. These fish are called **anadromous**. When salmon are ready to lay their eggs or spawn, the Delta provides a route for them as they travel back to the ocean. Central Valley streams where they were hatched, whether north or south of the Delta. As water flows in the Delta, flowing "down" can be any direction. The water in the Delta changes with storms, runoff, dam releases, and the tide. It is among the thousands and thousands of salmon that can navigate through this area successfully.

Understanding Salmon Migration

How long do salmon stay in the Delta before traveling to their spawning grounds? When are they ready? What are their obstacles? These are just some of the questions that scientists try to answer. When we know what salmon need, we can help them better.

Helping the Salmon

Because the salmon swim up their feet and use it while migrating. Anything along the stream, they may use up their fuel too soon—and not have enough to make home. These studies are important to better understand how fish get safely past obstacles and see how they interpret the change in water flow that we have created so they can make their journey home, spawn, and allow a new generation of salmon to flourish.

It's no secret...water is wonderful!

Use this code to fill in the message.



Use the symbols to fill in the message: _____ is a _____ of all the people of California and must be _____ for the _____ of all.

