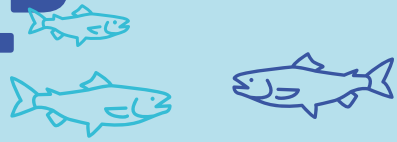


# FISH FOOD PROJECT

 River Garden Farms



RECONNECTING FLOODPLAIN-DERIVED FISH FOOD TO ENDANGERED SALMON POPULATIONS.

## PROBLEM

The winter-run chinook salmon population continues to hover around historic lows in the Sacramento River.

1970s

25k

TODAY

2k 

FISH MAKING THE JOURNEY EACH WINTER TO THE PACIFIC OCEAN FROM THE UPPER REACHES OF THE SACRAMENTO RIVER.

These salmon could go extinct without efforts to recover the species.

## CAUSE

The historic floodplains once served as a feasting ground for juvenile salmon. As California's Sacramento Valley was developed into cities, roads and farms, the food supply was cut off by levees and other local flood protection projects. Today, with only 5% of the historical floodplain wetlands remaining, the aquatic ecosystems no longer provide sufficient food to support fish populations.

## SOLUTION

Growing food for fish! How? Reconnect managed farm floodplains (rice fields) where food is produced and deliver the nutrients to the fish in the river.

## PROJECT IMPACT

15,000 percent more food (zooplankton and invertebrates) for fish is produced on the flood plains (rice fields) versus canals or the river. This project aims to get more of the food back into the river system.

15k

PERCENT MORE FISH FOOD

So far 12 farmers are growing bugs on about 50,000 acres in the Sacramento area. That's roughly 70 pounds of dry carbon per 100 acre-foot.

FARMERS

12

ACRES (IN THOUSANDS)

50k

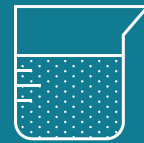
POUNDS OF BUGS PER ACRE (FISH FOOD)

70

THE FOOD IS ON THE FLOODPLAIN



149x  
FLOODPLAIN SAMPLE



6x  
CANAL SAMPLE



X  
SACRAMENTO RIVER SAMPLE

FLOODPLAIN FATTIES

RIVER



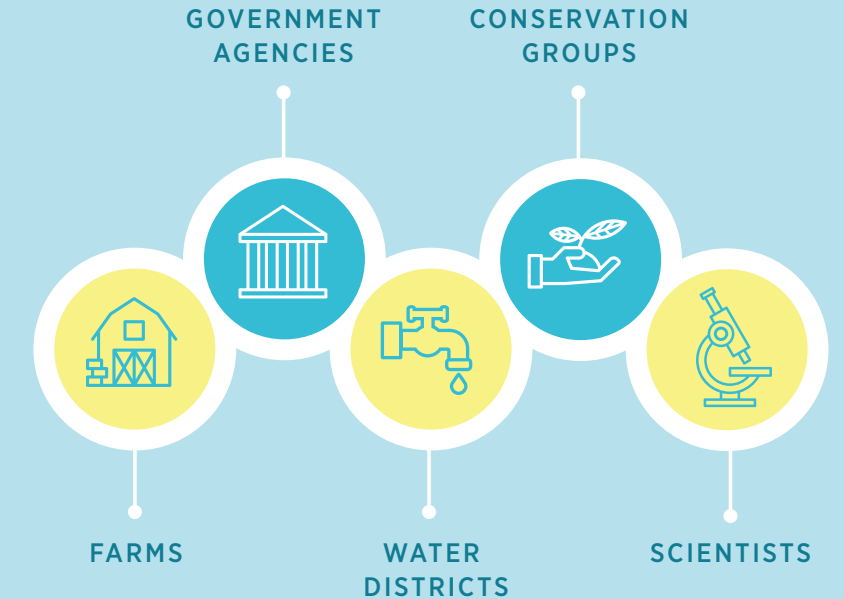
FLOODPLAIN



IN. 1 2 3

## COLLABORATION

The Fish Food Project demonstrates what is possible when historically warring factions come together to help the salmon population in California. By uniting to help feed more fish, we can have a direct impact on improving population numbers and restore one of California's heritage species.



## PARTNERS

UC DAVIS  
CAL TROUT  
NORTHERN CALIFORNIA  
WATER ASSOCIATION  
SACRAMENTO VALLEY  
FARMERS

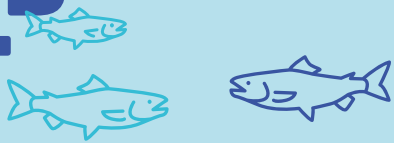
## EFFORTS

50  
PROJECTS

The Fish Food Project is one of 50 efforts in the Sacramento Valley Salmon Recovery Program.

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The pilot project is a partnership between UC Davis Center for Watershed Sciences, Cal Trout, Northern California Water Association and California rice farmers. The group is using existing rice fields to produce an abundance of bugs that endangered salmon like to eat.

## PROCESS

### 1 RICE FIELDS ARE FLOODED WITH WATER FROM THE SACRAMENTO RIVER

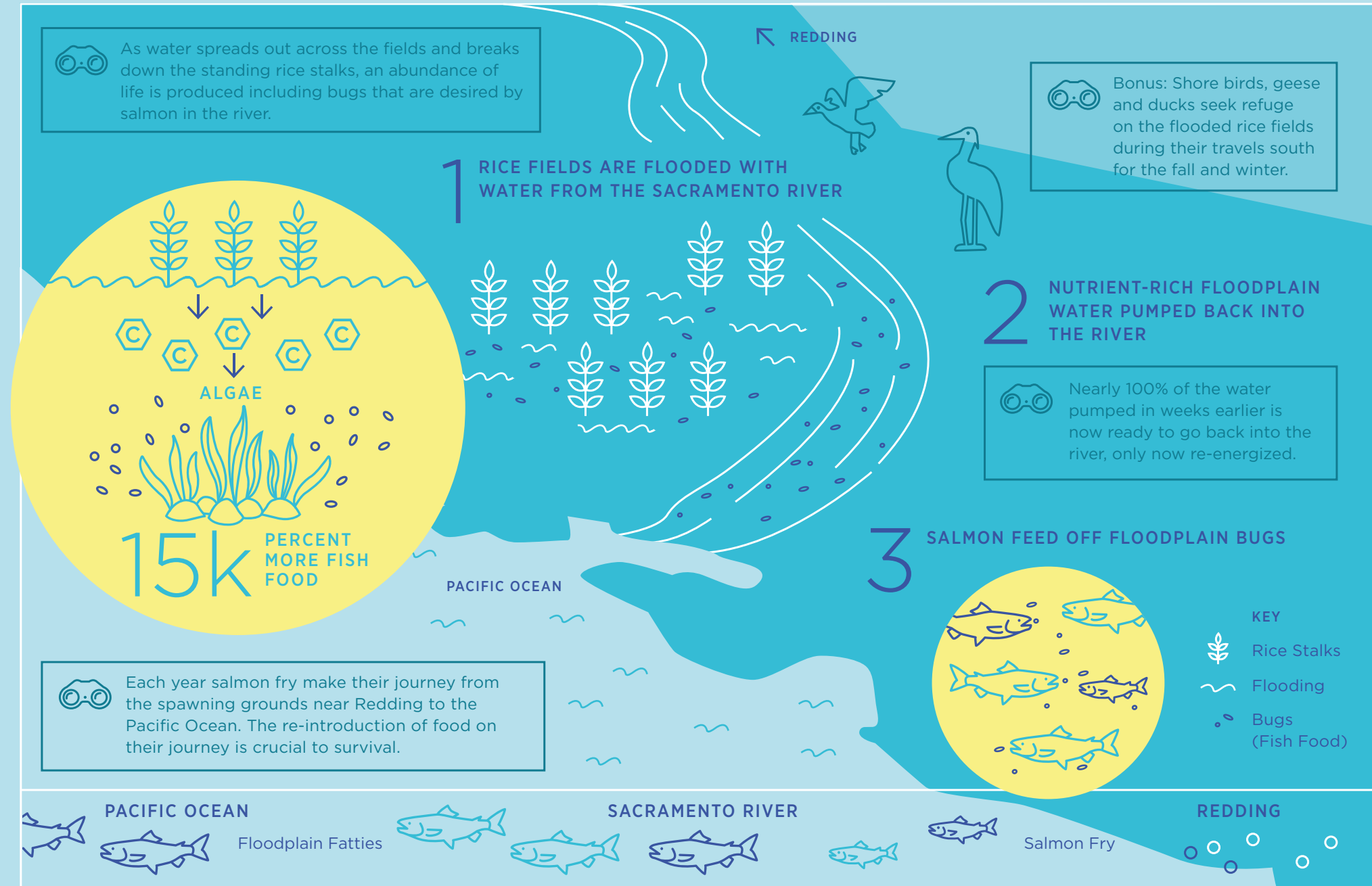
River water is pumped onto harvested rice fields to slow down the water, let it spread out across the fields, and breakdown the standing rice stalks. How does that create fish food? Plant energy stored in the rice stalks breaks down into food for bugs. The bug populations grow fast, and bugs feed the fish. This nutrient-rich diet ("floating fillets") helps increase the odds that young salmon will reach the ocean.

### 2 NUTRIENT-RICH FLOODPLAIN WATER PUMPED BACK INTO THE RIVER

This process occurs two to three times during the winter months when young salmon are making their journey to the Pacific Ocean.

### 3 SALMON FEED OFF FLOODPLAIN BUGS

This process reconnects floodplain-derived bugs (zooplankton and invertebrates) with fish confined to the river.



LEARN MORE AT [RIVERGARDENFARMS.COM](http://RIVERGARDENFARMS.COM)

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