California Rice
It's in our Nature

A GUIDE TO THE

Conservation Footprint for California Rice

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This Guide is based on "A Conservation Footprint for California Rice," a report to the California Rice Commission by Eadie et al. (2025). The Report represents an innovative effort to estimate how much rice is needed to provide habitat for multiple species of conservation concern that rely on ricelands in California's Central Valley, considering agronomics, economics, the conversion risk of ricelands in the Central Valley, as well as a range of scenarios, environmental conditions, and management practices. The Report provides extensive detail on the analyses underlying the estimated habitat needs of each species, including the uncertainties, assumptions, and future research needed to improve these estimates. To read the footprint report in its entirety, scan the QR code.

The purpose of this Guide is to provide a brief introduction to key concepts presented in the Report, including the need for a rice conservation footprint, the role of ricelands in providing habitat for wildlife throughout the year, and the initial estimates of the rice footprint needed to support these species. All of the content in this Guide is drawn from the Report and the many citations therein unless otherwise indicated. Direct quotes and any additional content from other sources are cited in the text and provided in the Literature Cited.

Read the full report

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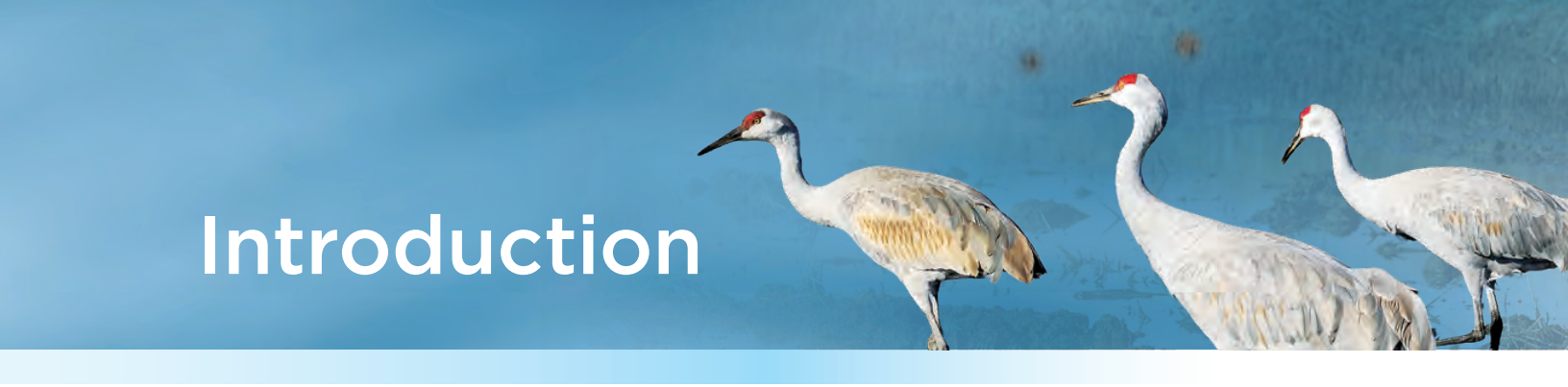
The Central Valley remains one of the most important sites for migrating and wintering shorebirds and waterfowl on the Pacific Flyway, hosting one of the highest concentrations of waterfowl on Earth.



Introduction

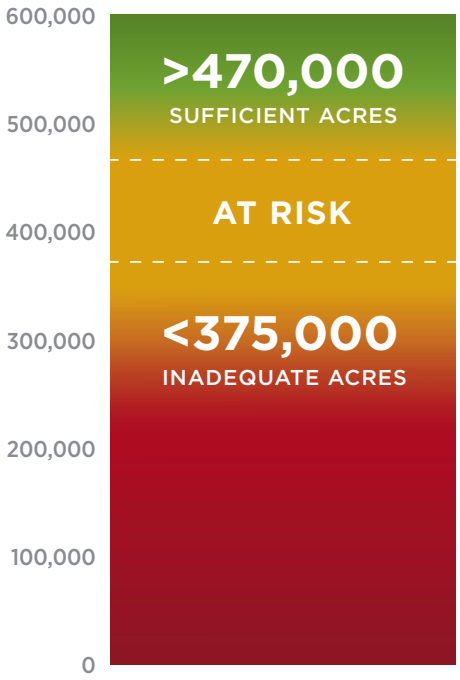
Ricelands are vital for both wildlife and people. California ricelands provide critical habitat for 230 species of wildlife. With the loss of 95 percent of the native wetland habitats in California's Central Valley, many wildlife species have adopted cultivated ricelands as "surrogate wetlands" year-round, and in some cases their populations now depend on ricelands for continued survival.

In large part due to the food and habitat provided by flooded ricelands, the Central Valley remains one of the most important sites for migrating and wintering shorebirds and waterfowl on the Pacific Flyway, hosting one of the highest concentrations of waterfowl on Earth. Several special-status species have successfully adapted to cultivated ricelands, including Sandhill Cranes, Black Terns, Giant Gartersnakes and native fishes such as salmon. Losing flooded ricelands would cause substantial harm to these wildlife populations. In 2017, it was estimated that restoring wetlands to replace the food and habitat ricelands currently provide could cost $2.8 billion (Petrie and Petrick 2017), a cost that will only increase over time.

People have grown rice in California for more than 100 years, providing healthy food to millions. Rice farming and processing provides 25 thousand jobs a year (CRC 2025), making it a vital industry for the rural economies of the Central Valley, especially the Sacramento Valley where most rice is grown. Rice is also important to the state's economy more broadly, generating $1 billion of added economic value per year. Birdwatchers, duck hunters, and outdoor enthusiasts benefit from the habitat provided by flooded ricelands year-round, and duck hunting clubs on ricelands provide valuable added revenue for rice farmers and rural farming communities.

FIGURE 1

Required Acres of Planted Rice for Species Habitat Needs



Green (>470,000 acres) means "Sufficient" habitat in ricelands, likely meeting the minimum habitat needs of Central Valley species of conservation concern.

Yellow (375,000—470,000 acres) means "At Risk", such that there is a risk of not meeting habitat needs for some species, especially when conditions are poor.

Red (<375,000 acres) means "Inadequate", and that the amount of rice habitat is inadequate for most species regardless of conditions.

Original data from Eadie et al. 2025.

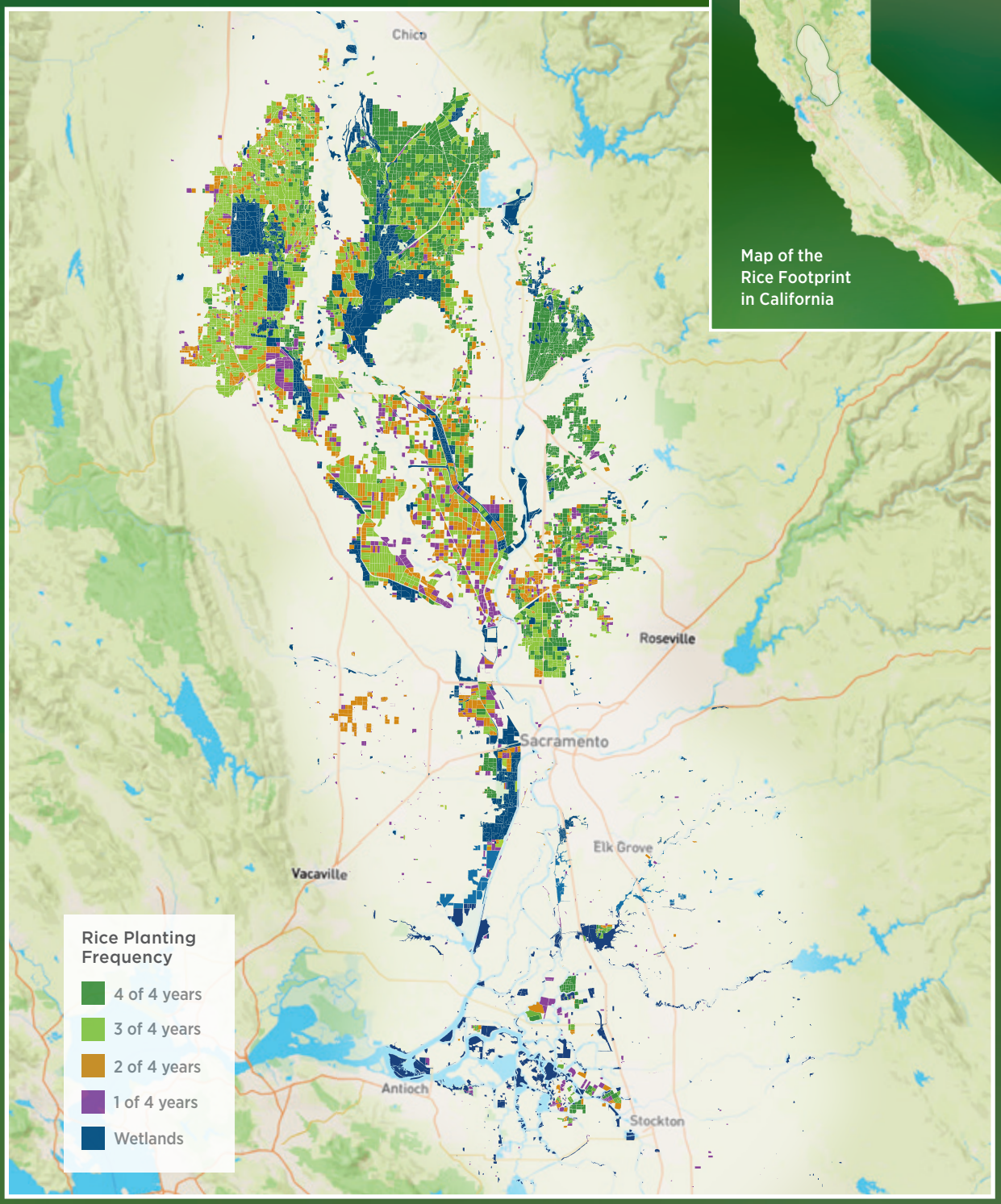
Fluctuations in rice planting and winter flooding each year can result in significant losses in all of these benefits. Each year, the acres of rice planted can vary, especially in response to drought and variable water supply; 2022 had the fewest acres planted since the 1960s, greatly reducing the footprint of surrogate wetland habitat during the spring and summer. Over the last decade, drought has contributed to a decreasing trend in winter-flooded rice, which provides winter wetland habitat that is critically important for waterfowl and many other species. To address this loss of habitat, scientists across several disciplines worked together to develop a "rice conservation footprint" for California's ricelands (Eadie et al. 2025), an innovative effort to estimate how much rice is needed to provide habitat for multiple species of conservation concern that rely on ricelands in California's Central Valley, which is the basis for this Guide.

Because so many species now depend on cultivated ricelands, and many already have small population sizes or declining population trends, any loss of rice would harm these populations. To meet the habitat needs of the many species that rely on cultivated ricelands, it is important to consistently maintain the entire rice footprint — an estimated 470,000 to 500,000 acres of planted rice — and consistent winter flooding every year. When the rice footprint drops below this threshold, the Central Valley loses a significant amount of this surrogate wetland habitat, harming biodiversity conservation goals. This Guide discusses priority wildlife groups — shorebirds, waterfowl, Sandhill Cranes, Giant Gartersnakes, and native fish — in regard to their season of use and water needs from flooded rice. Meeting these needs is critical if we are to sustain these irreplaceable wildlife populations into the future.

To meet the habitat needs of the many species that rely on cultivated ricelands, it is important to consistently maintain the entire rice footprint — an estimated 470,000 to 500,000 acres of planted rice — and consistent winter flooding every year.

FIGURE 2

Volatility of the Rice Footprint



This map shows where rice is planted in the Sacramento Valley, as well as the locations of wetlands. Dark blue areas indicate wetlands. Dark green areas contained planted rice in each of 4 recent water years examined (2020-21 through 2023-24), while the other areas were fallowed or rotated with other crops during 1 or more years. These are areas where there have been more fluctuations in the rice footprint recently, and where surrogate wetland habitat is more at-risk. Maintaining a consistent footprint of planted rice—470,000 to 500,000 acres each year—is crucial for wildlife populations that depend on ricelands. Original data from Eadie et al. 2025.

VOLATILITY FOR

Rice and Wildlife

Despite the many ecological benefits of rice agriculture, volatility in the rice footprint over the last decade threatens the ability of ricelands to sustain Central Valley wildlife populations into the future.

In the last decade, both the acres of rice planted in spring and the acres flooded after harvest have varied dramatically with a decreasing trend of winter-flooded rice in recent years, and as little as 256,000 acres planted in 2022. Drought and decreased water availability are the primary drivers of this decline.

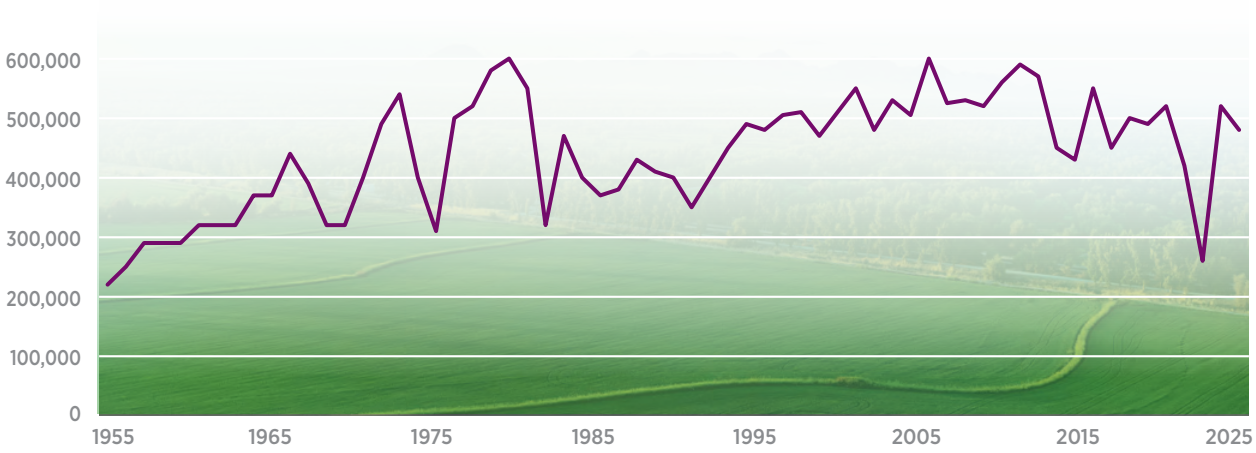
Farmers flood rice fields after planting in spring after which they stay flooded until just before harvest in the fall. In drought years with decreased water availability, farmers may not receive the water needed to plant rice, or they may transfer their water to other permanent crops instead. Fallow rice fields typically stay dry year-round, and while they can provide some habitat value if carefully managed (Iverson et al. 2024), extensive fallowing in a drought year represents substantial loss of wetland habitat for many species.

After harvest in the fall, standing rice straw must be decomposed or otherwise removed before the next growing season. While there are many methods for decomposing rice straw post-harvest, since the 1990s about half the acreage has been flooded, which creates considerable winter wetland habitat for waterfowl and many other species each year. However, due to water shortages and increased prices, more rice farmers are switching to dry methods of rice straw decomposition, resulting in a decrease in winter-flooded acreage for wildlife.

Winter flooding in rice fields is the only method of rice straw decomposition that provides significant benefits to wetland dependent wildlife, supplying more than half of the food supply for waterfowl and shorebirds in the Central Valley. The increasing unpredictability in water supply drives volatility in the annual rice footprint and the declining trends in winter flooding practices, which makes the extent of this surrogate wetland habitat available for wildlife each year much less reliable. This trend is concerning for wildlife conservation in California, especially given how much of the historical wetland footprint has already been lost and how dependent on rice many wetland species have become.

FIGURE 3

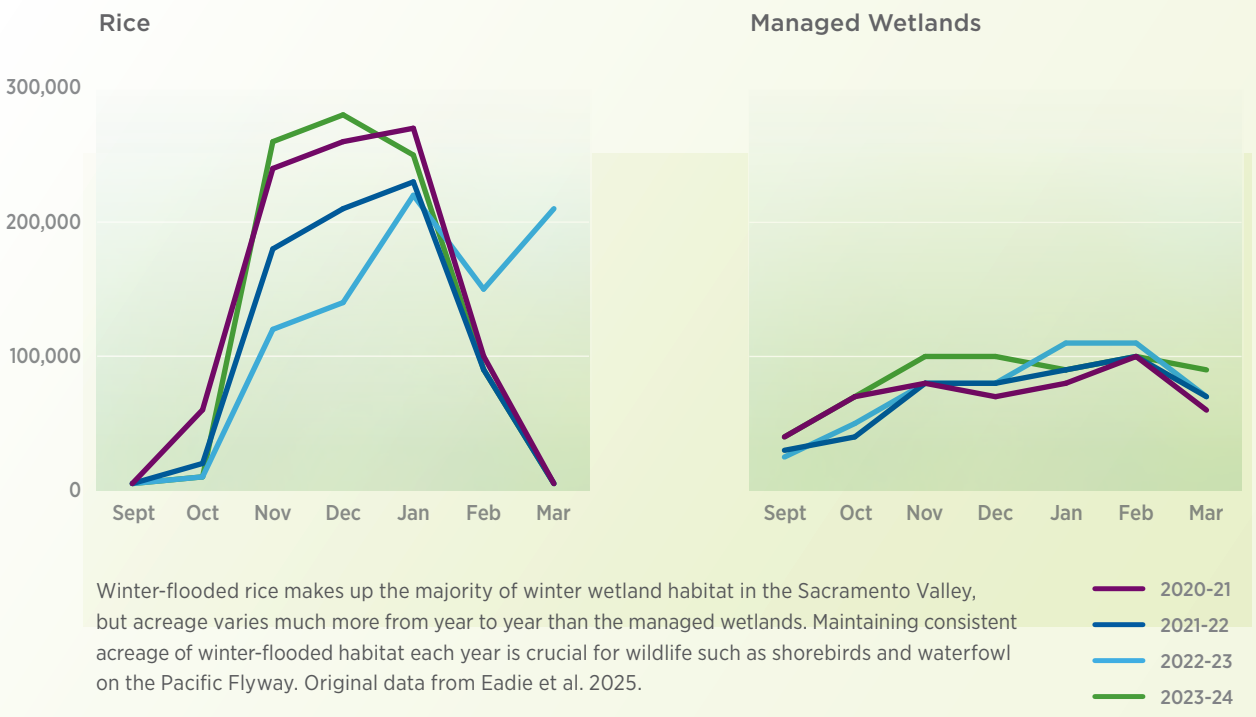
California Rice Acreage Over Time



While California rice has increased since 1955, in the last decade, planted rice has decreased overall and become more variable, with only half of the existing rice footprint planted in 2022 due to drought. For wildlife who depend on flooded rice, this habitat loss translates to population loss, especially during extremely low years. Original data from Eadie et al. 2025.

FIGURE 4

Winter-Flooded Habitat Acreage (2020-21 through 2023-24)



Winter-flooded rice makes up the majority of winter wetland habitat in the Sacramento Valley, but acreage varies much more from year to year than the managed wetlands. Maintaining consistent acreage of winter-flooded habitat each year is crucial for wildlife such as shorebirds and waterfowl on the Pacific Flyway. Original data from Eadie et al. 2025.

THE HISTORY OF

Wetlands, Rice, and Wildlife in the Central Valley

The floor of the Central Valley is about 50 miles wide and stretches more than 400 miles long down the center of California, totaling about 14 million acres and encompassing 14% of the state's land mass.

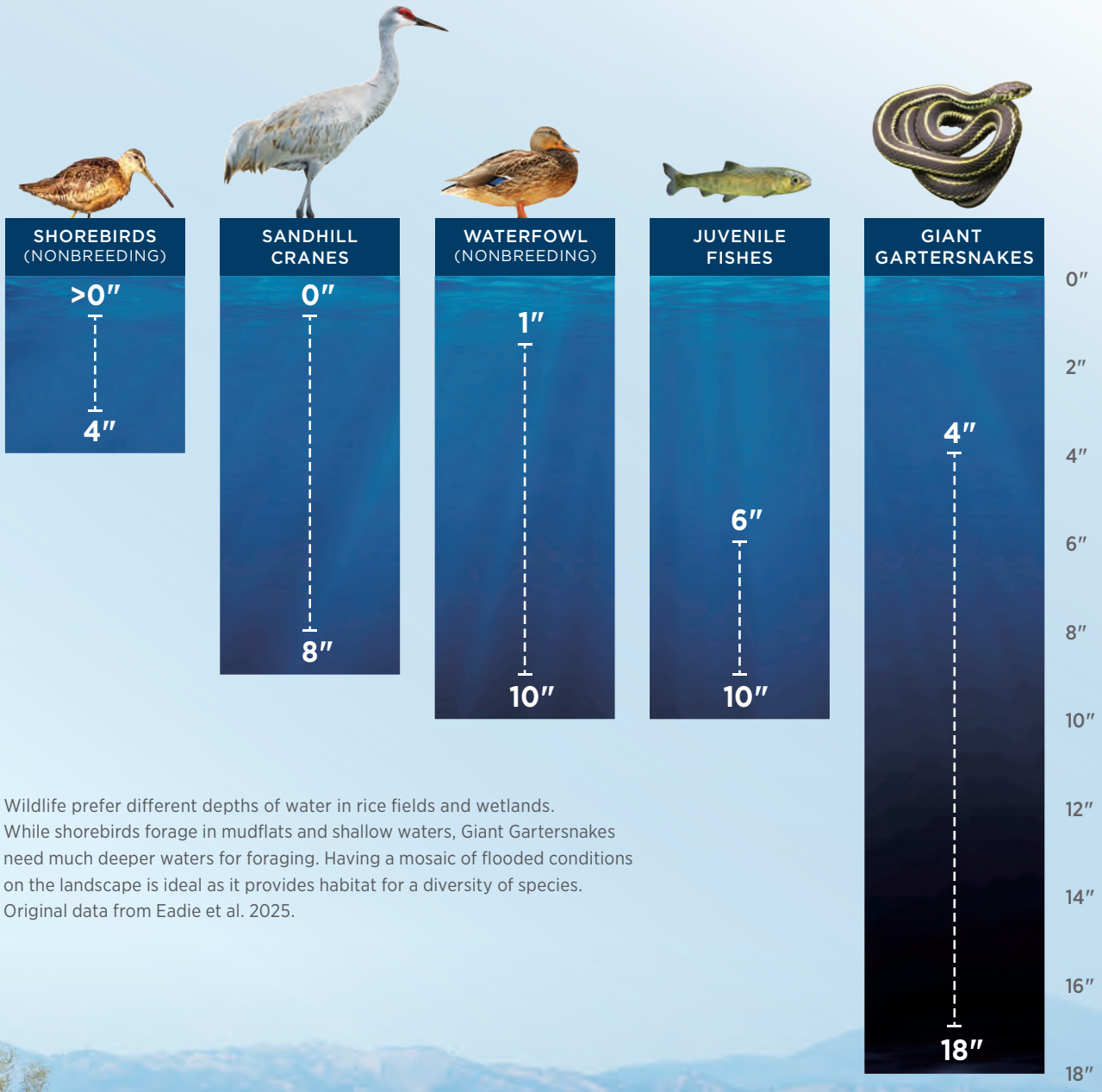
It is a "bathtub" ringed by foothills that form the base of large mountain ranges, particularly the Coast Range to the west and Sierra Nevada to the east.

Historically, the massive Sacramento and San Joaquin rivers, along with their tributaries and numerous smaller rivers and streams, flowed from their headwaters in these mountain ranges and filled this bathtub. Winter storms and spring snowmelt regularly caused these rivers to overflow their banks, creating extensive seasonal wetlands. River flows converged in a complex maze of channels, marshes, and islands in the Sacramento-San Joaquin Delta and flowed out through the San Francisco Bay and finally to the Pacific Ocean.

The historical wetland footprint occupied 4 million acres, almost a third of the Central Valley's total land area. Central Valley wetlands supported immense populations of wildlife and were a globally important stop for more than 20 million shorebirds and waterfowl on the Pacific Flyway, a migratory route that follows the West coast from breeding grounds in Alaska and Canada to wintering grounds in California, Mexico, Central and South America. Other types of wetland wildlife were prolific as well, including mammals such as river otter and beaver, several hundred species of birds, amphibians such as California red-legged frog, fish such as Chinook salmon, and reptiles such as Giant Gartersnakes. Each species had distinct preferences for habitat elements like water depth, food source, roosting location, breeding area, or burrow sites, and these habitat preferences also varied seasonally. In this extensive and dynamic wetland ecosystem, wildlife had ample amounts of their preferred habitat in the preferred seasons.

FIGURE 5

Preferred Water Depths for Wildlife in Rice Fields



Wildlife prefer different depths of water in rice fields and wetlands. While shorebirds forage in mudflats and shallow waters, Giant Gartersnakes need much deeper waters for foraging. Having a mosaic of flooded conditions on the landscape is ideal as it provides habitat for a diversity of species. Original data from Eadie et al. 2025.

In the 19th and early 20th centuries, settlers drained 95% of the Central Valley's wetlands for agriculture, flood control, and urbanization. Its once free-flowing waters are now contained by reservoirs, levees, flood-control structures, canals, and aqueducts, with devastating consequences for wildlife. Today, California's largest cities and most abundant farming regions are located in the footprint of those original wetlands.

Most of the wetlands that remain in the Central Valley are heavily managed and depend on water deliveries through human-controlled infrastructure. Today, popular managed wetlands for outdoor enthusiasts, birdwatchers, and duck hunters include public areas like the Yolo Bypass Wildlife Area and the Sacramento National Wildlife Refuge Complex along with even more acres of privately owned and managed wetlands (duck clubs). While they provide extremely valuable

wildlife habitat, the 185,000 acres of managed wetlands in the Central Valley represent a small fraction of the land area that native wetlands once occupied (CVJV 2020), limiting the number and diversity of wildlife they can support.

The former floodplain wetlands of the Sacramento River are prime rice growing lands because rice is a semi-aquatic crop that thrives in hydric, heavy clay soils. While rice was first grown in Butte County in the early 1900s, the rice footprint increased significantly after World War II. In 1991, a new law was passed that severely limited the burning of rice straw remaining in the fields after harvest, which up until then had been the most common method of rice straw decomposition. This ultimately resulted in increased use of winter flooding as an alternative method to decompose rice straw, which attracted high densities of wintering waterfowl and shorebirds of the Pacific Flyway, all of which require wetland habitat for foraging or roosting. As flooded riceland habitat increased, these surrogate wetlands became an important complement to the remaining managed wetlands to provide wildlife habitat year-round. In many years the rice footprint is more than triple the extent of managed wetlands in the Central Valley (CVJV 2020).

Today, 230 species of wildlife persist and even thrive in flooded ricelands, and ricelands provide habitat for special-status species such as Black Tern, Chinook salmon and Giant Gartersnake.

While flooded ricelands provide wildlife habitat year-round, one of their most iconic and celebrated conservation successes is how they complement the remaining wetlands to enable the continuation of a strong Pacific Flyway.

While flooded ricelands provide wildlife habitat year-round, one of their most iconic and celebrated conservation successes is how they complement the remaining wetlands to enable the continuation of a strong Pacific Flyway. Even with diminished numbers today, the Central Valley remains one of the most important stops on the Pacific Flyway, hosting more than 7 million waterfowl and shorebirds in the fall and winter, one of the largest concentrations of migratory birds in the world.

Over the last decade, rice farmers have formed partnerships with many scientists and wildlife conservation groups with the goal of sustaining healthy populations of waterfowl and other wildlife on flooded ricelands. This includes collaborating on habitat incentive programs like BirdReturns, Bid4Birds, and other state- and federally-funded programs, as well as research on how flooded ricelands can be managed to help the recovery of endangered Chinook salmon populations. Rice farmers have embraced the value of wildlife and shown great interest in wildlife-friendly management practices that are in tune with the seasonal timing of rice production.

THE ROLE OF

Rice for Wildlife Through the Seasons

Because ricelands are flooded much of the year, they mimic natural wetland ecosystems and act as surrogate wetlands. In natural wetlands, the location and depth of water fluctuates throughout the seasons and with flood and drought cycles, creating a dynamic mosaic of conditions that support wildlife.

In ricelands, farmers control the timing, depth, and location of water to successfully cultivate rice, and they can also create wildlife habitat by mimicking natural cycles.

Wildlife require wetland habitat year-round, and each group has different preferences and seasons of use. For example, Black Terns breed in planted rice in the summer, migratory shorebirds forage for benthic invertebrates in shallow-flooded fields in the spring and fall, and ducks and geese feed on residual rice grains in winter-flooded fields. Here, we describe the seasonal use of ricelands by wildlife and how they are compatible with the seasonal timing of rice production.

Winter (November – February)

Rice from the previous growing season has been harvested, leaving residual rice grains in fields and standing straw that must be decomposed or removed before the next growing season. Decomposition can be accomplished by multiple methods, with winter flooding used for about half of the planted rice acres. Winter-flooded fields provide significant wildlife benefits, and maintaining consistency in winter flooding is crucial for supporting populations of several types of wildlife, including waterfowl, shorebirds, Sandhill Cranes, and native fish such as endangered Chinook salmon. However, decreases in planted rice and an increase in the adoption of dry decomposition methods in response to drought and variable water supply has resulted in fewer winter-flooded acres over the last decade (see Figures 3 and 4).

WINTERING WATERFOWL

Seven million ducks and geese, or 60% of waterfowl on the Pacific Flyway, migrate through or spend the winter in the Central Valley (CVJV 2020). These include many species of importance to both birdwatchers and duck hunters, such as Northern Pintail, American Wigeon, and Northern Shoveler.

Winter-flooded ricelands provide more than 50% of the food energy waterfowl need in winter, especially residual rice grains. This food supply is essential for building the fat reserves that allow them to survive the winter and complete spring migrations of 1,000 miles or more to breeding grounds as far north as the Arctic tundra.

The habitat needs of wintering ducks can vary annually depending on factors such as the timing of duck migration and the extent of competition with geese for food. Under the toughest conditions, an estimated 500,000 acres of planted rice, of which 258,000 acres are winter-flooded, is necessary to reliably provide enough food to support waterfowl populations in the winter. Below this threshold, they may run out of food in late winter and early spring, causing a rapid loss of fat reserves that greatly reduces their chances of surviving the winter, much less the strenuous migration back to their breeding grounds. In recent years, including 2021 and 2022, planted rice acres and the corresponding winter-flooded acres dropped below this critical threshold.

The rice footprint is not only likely essential for saving Central Valley Chinook salmon, but probably also many other native fishes.

NATIVE FISHES

Floodplain wetlands are essential winter nurseries for juvenile salmon and other native fishes, where their zooplankton food supply is abundant and they are protected from swift currents and larger predatory fishes. However, levees and flood control structures have confined many juvenile fish to deep river channels, where there is relatively little food and many predators, leading to low survival rates and severe population declines. Today, 87% of California's native fishes now face extinction.

"All four Chinook salmon runs are collapsing in the Central Valley, and time is of the essence. Based on the available evidence, the rice footprint is not only likely essential for saving Central Valley Chinook salmon, but probably also many other native fishes." (Eadie et al 2025, p.82). There are two primary ways ricelands can help save native fish populations during the winter: providing habitat and cultivating fish food.

Ricelands can directly provide as much as 30,000 acres of winter nursery habitat for juvenile salmon (and other native fish species) in the Yolo and Sutter bypasses, which are seasonally connected to the main stem of the river channel. In early spring, the rice fields are drained and many healthy juvenile fish are released back into the watershed to continue their lifecycle. If all of these fields were managed as nursery habitat, it could potentially double the population size.

Beyond the bypasses, winter-flooded ricelands can also indirectly support native fish populations by creating ideal growing conditions to cultivate zooplankton fish food, which can then be released into the main river channel for fish to access.

"Shoulder" Seasons

Spring (March – May) and Fall (July – October)

In spring, fields flooded during the previous winter have been drained and are drying in preparation for planting; in fall, fields flooded during the previous growing season are drained in preparation for harvest. These spring and fall "shoulder" seasons for rice production also occur during transition periods for wildlife, when half a million shorebirds and nearly 40,000 Sandhill Cranes are using flooded habitat during their migrations. In the spring, hungry Giant Gartersnakes are also emerging from their winter burrows.

Because ricelands are typically dry during these shoulder seasons, there are often shortages of wetland habitat for wildlife. To address this issue, several conservation agencies partnered with rice farmers to create successful habitat incentive programs such as BirdReturns, Bid4Birds, and other state- and federally-funded programs. These programs compensate producers for management costs to flood their fields during shoulder seasons, and this can include fallowed fields. A great example of collaborative conservation on working lands, these programs are crucial to maintaining shoulder season habitat for migratory shorebirds and cranes, and may also benefit waterfowl and other species.

The Central Valley is a globally significant stopover site on the Pacific Flyway, without which migratory shorebirds could not gain the energy resources needed for their impressive long-distance journeys.

MIGRATORY SHOREBIRDS

As many as 500,000 migratory shorebirds on the Pacific Flyway stopover for critical refueling in the Central Valley during spring and fall migration, including many species such as Western and Least Sandpiper and Dunlin. In spring, they arrive from wintering grounds as far south as the Chilean coast of South America, stocking up on benthic invertebrates which they extract by probing into the mud in shallow-flooded ricelands, managed wetlands, and mudflats. Once they have refueled, many shorebirds continue their journey to breeding grounds as far north as the Arctic tundra. In fall, shorebirds complete the reverse journey, coming in from Arctic breeding grounds and stopping in the Central Valley before heading south. The Central Valley is a globally significant stopover site on the Pacific Flyway, without which migratory shorebirds could not gain the energy resources needed for their impressive long-distance journeys.

Ricelands in the Central Valley are often dry during the shoulder seasons when migratory shorebirds need them most, meaning there is not enough flooded habitat to support their populations. While migratory shorebirds do benefit greatly from the extra water provided by the habitat incentive programs described above, constraints on funding and water availability mean habitat shortfalls still exist in the shoulder season.

SANDHILL CRANES

Each year, tens of thousands of Sandhill Cranes winter in California's Central Valley. "Their numbers pale in comparison to millions of ducks and geese, yet cranes command special attention. These large, loud, and gregarious birds are celebrated at an annual crane festival and sought out by wildlife photographers and birders." (Eadie et al 2025, p. 64) There are two main subspecies of Sandhill Cranes that winter in the Central Valley, both of which have special conservation status in California. The Greater Sandhill Crane is state-listed as Threatened and the Lesser Sandhill Crane is a California Bird Species of Special Concern.

Cranes arrive in the Central Valley from September to October and stay over winter until April, when they return to northern breeding grounds. Cranes use dry fields for foraging on rice and other cereal grains and roost together in winter-flooded fields. They are highly faithful to their roosting sites, sometimes returning to the same wintering sites for decades. Cranes are concentrated in the Delta, where maintaining the rice footprint and winter flooding would be particularly important. In addition, while cranes usually have enough flooded roosting sites in the peak of winter, there is often a shortfall of habitat when they first arrive in October and November.

GIANT GARTERSNAKES

Giant Gartersnakes, listed by both state and federal agencies as Threatened, are a semi-aquatic reptile endemic to Central Valley wetlands. They give birth to their young from July to September and spend the winters dormant in underground burrows. Giant Gartersnakes are rarely found farther than 60 feet from water and require permanent water during their active season (early spring through mid-fall) to maintain dense populations of their aquatic prey, such as fish and frogs. The loss of their native wetland habitat decimated Giant Gartersnake populations, but they persist in remnant wetlands, rice fields and irrigation canals. While they used to occur south to Kern county, Giant Gartersnakes today are primarily found in the Sacramento Valley.

Giant Gartersnakes need aquatic habitat immediately when they emerge from their burrows during the dry spring shoulder season. Although rice fields need to be dry for planting, one solution to this bottleneck in their survival is to provide flooded

habitat by filling the irrigation canals near rice fields early. Beyond this initial critical period in spring, Giant Gartersnakes also need a minimum of 80,000 acres of planted rice that is located near remaining wetlands and consistently flooded and planted. Ideally, these are acres that already support Giant Gartersnakes. More surveys are needed, but Giant Gartersnakes have been frequently documented in the areas south of the Sutter Buttes, including the Sutter, Colusa, American and Yolo basins, parts of which have been more frequently fallowed due to water limitations in recent years. A more consistent rice footprint would provide valuable conservation benefits for the species.

Summer (May – August)

Rice grows in flooded fields in the summer, and the planted acres provide valuable wildlife habitat. Several kinds of wildlife breed in or adjacent to ricelands in the summer, including reptiles such as Giant Gartersnakes and many birds including Black Terns, shorebirds, and waterfowl. Reductions in planted acres can have negative impacts on successful reproduction and wildlife population sizes. Even temporary draining of planted fields, such as programs designed to limit methane emissions, can have negative impacts on wildlife. Further, the extent of planted rice during the summer directly impacts the amount of residual rice grains available as food to support wintering waterfowl.

BLACK TERNS

Nearly 100% of the Central Valley breeding population of Black Terns nest in rice fields in the Sacramento Valley. A California Bird Species of Special Concern, Black Terns nest in loose colonies and build floating nests made of plant material directly in cultivated rice fields. These nests are vulnerable to changes in water levels, which can either flood the nests when water rises or expose them to predators when water drops. Black Terns need an estimated 473,000 acres of planted rice to sustain a healthy breeding population in the Sacramento Valley. Given that the planted rice footprint has fallen well below this threshold in recent years (see Figure 3), this species is a compelling example of the need for a reliable annual rice footprint of 470,000 to 500,000 acres.

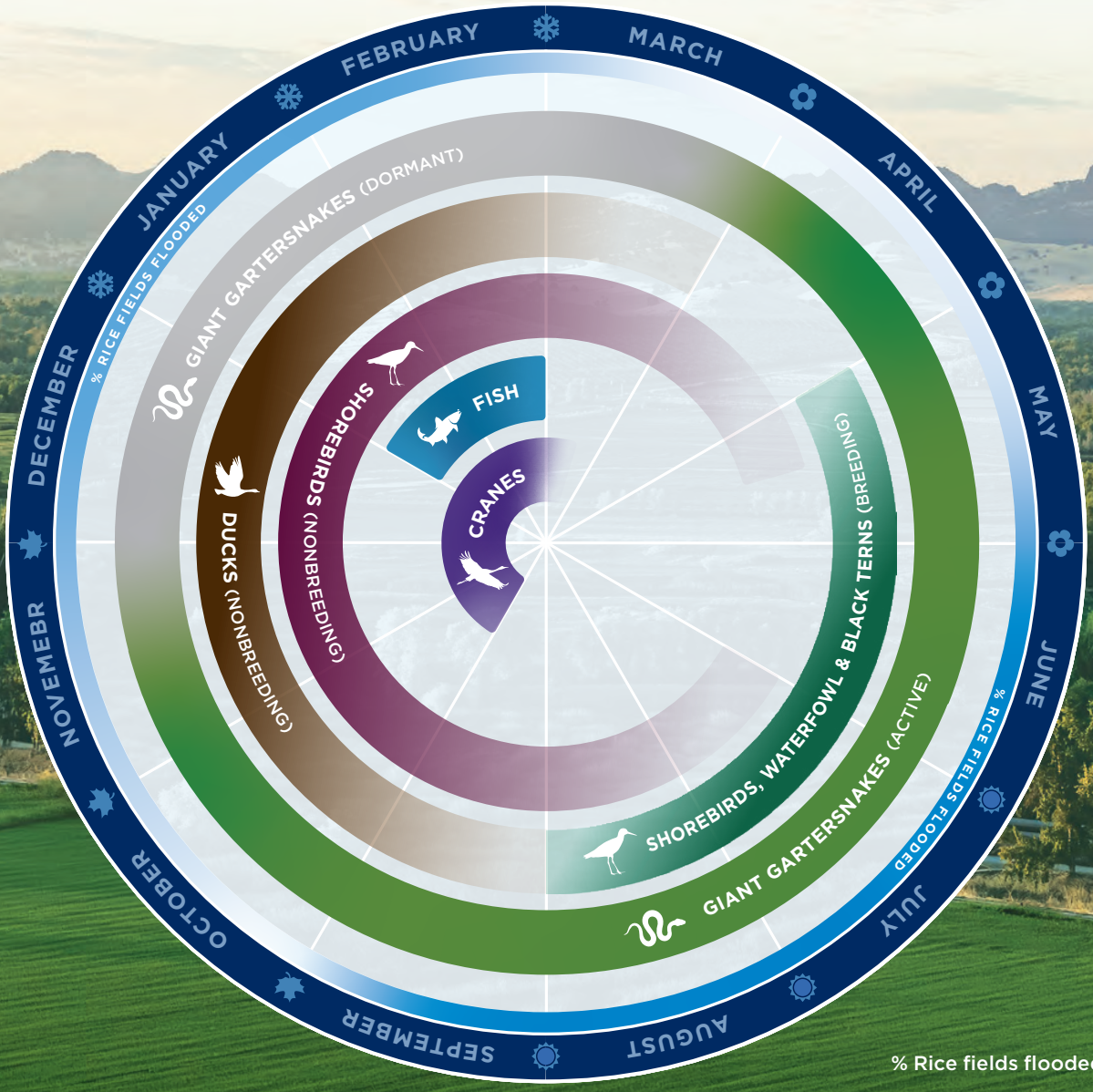
BREEDING SHOREBIRDS AND WATERFOWL

In addition to Black Terns, thousands of other shorebirds and waterfowl breed in or near rice fields in the summer, including American Avocet, Black-necked Stilt, Killdeer, Mallard, Gadwall, and Cinnamon Teal. Like Black Terns, Stilts nest in the rice fields themselves, while Avocets and Killdeer nest on the ground on nearby levees. Ducks nest in upland habitat, including fallowed rice fields, but will relocate to nearby planted rice fields to raise their ducklings (CVJV 2020). A decrease in the rice footprint limits available nesting and brood-rearing habitat and can negatively affect all of these breeding birds.

Black Terns need an estimated 473,000 acres of planted rice to sustain a healthy breeding population in the Sacramento Valley.

FIGURE 6

Seasonal Cycle of Rice & Wildlife



% Rice fields flooded

0% 100%

Wildlife use the rice footprint year-round, but different types of wildlife use it at different times of year. The circle above shows the cycle of wildlife and rice farming throughout the year. Original data from Eadie et al. 2025.

THE FOOTPRINT OF

Wildlife Conservation in California Ricelands

For decades, California ricelands and managed wetlands have worked together to provide critical wildlife habitat year-round. With the loss of historical wetlands and the rise of cultivated rice in the historic wetland footprint, hundreds of species, comprising millions of individuals, now depend on rice as surrogate wetlands.

To maintain wildlife populations at their current levels, it is crucial to maintain a reliable rice footprint of 470,000–500,000 acres each year. This estimate represents the results of the first efforts to integrate the habitat needs of multiple species of conservation concern in the Central Valley, considering a range of scenarios, environmental conditions, and management practices, and could be refined with additional research.

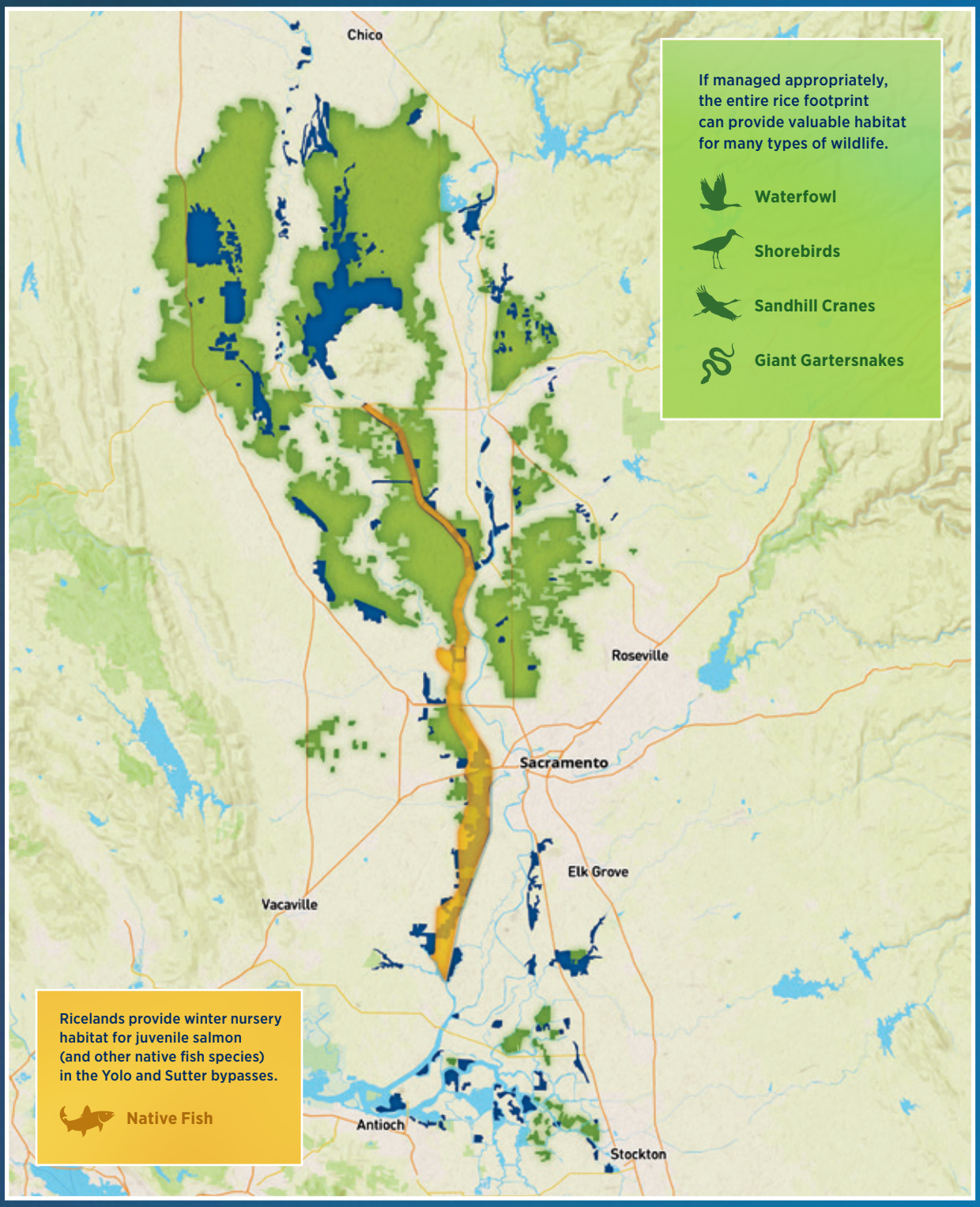
Crucially, the rice footprint must be reliable each year and also managed appropriately to support wildlife. In recent years, the rice footprint has become much less reliable for wildlife. In 2022, for example, water scarcity resulted in a drastic reduction in the rice footprint to levels not seen since the 1960s. There has also been a declining trend in winter flooding, the only method of rice straw decomposition that provides significant benefits to wildlife. Increasing the reliability of rice planting and winter flooding is vital to protect the diverse suite of species that depend on ricelands.

When the rice footprint drops below the target of 470,000–500,000 acres, the loss of habitat may affect some species more than others, depending on where the losses in habitat take place. While the entire rice footprint is used by wildlife year-round, some species only occur in certain parts of the footprint, so fallowing or a lack of winter flooding in these areas is particularly important. In recent years, reductions in the rice footprint were not evenly distributed. Between 2020 and 2024, fallowing disproportionately impacted the west side of the rice footprint, including areas most important to Giant Gartersnakes (Figure 2). Other special location requirements include roost sites for Sandhill Cranes, to which they will faithfully try to return each year. Rice fields connected to river channels, which are primarily limited to the Yolo and Sutter bypasses, can provide habitat to native fishes even if they are not planted. These special locations are particularly important to wildlife conservation efforts because there are so few suitable areas for these species, but for other species such as Black Terns, shorebirds, and waterfowl, the entire rice footprint can contribute valuable habitat if managed appropriately. Thus, management recommendations vary seasonally and spatially, but the entire rice footprint is a priority for wildlife conservation.

To maintain wildlife populations at their current levels, it is crucial to maintain a reliable rice footprint of 470,000–500,000 acres each year.

FIGURE 7

The Entire Rice Footprint is a Priority for Wildlife Conservation



Original data from Eadie et al. 2025.

Ricelands | Wetlands | Bypasses

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The rice footprint must be reliable each year and also managed appropriately to support wildlife.

California Rice

It's in our Nature

CALIFORNIA RICE COMMISSION

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