

Artificial Habitats for Freshwater Fish

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Q: Why does CDFW build artificial fish habitat in California lakes?

A: There are several reasons for CDFW to install artificial habitat in reservoirs around the state. Structures can be placed next to spawning areas to provide protective cover for juvenile fish. These constructions also attract larger fish, providing prime fishing opportunities for anglers.

Artificial fish habitat come in all shapes and sizes, whether orange trees, wood structures or other artificial man-made materials. Manzanita shrubs, Juniper trees and even used Christmas trees have been used for habitat purposes. Softwood like avocado trees are avoided because they deteriorate faster in the water.

Biologists might sink as many as 100 structures at different depths in just one reservoir. Crews also place different types of habitat structures along the shoreline when reservoir levels are low, providing a good area for fish habitat once the waters rise. About two dozen reservoirs contain artificial habitat, from Sutherland in San Diego County to Whiskeytown Lake in Shasta County.

One example is the use of large PVC piping in several Southern California lakes. CDFW places circular pipes, 12 inches in diameter and three feet long, in water hoping to attract catfish. Catfish are known as cavity-nesters and once the males have prepared the pipe for spawning by clearing out any debris, females follow and lay their eggs. The males then return to guard the nest and use their fins to fan the eggs to

oxygenate them. Biologists will return to the spots where they've placed habitat structures to determine their effectiveness.

With two strong rainy seasons in California, many of the state's reservoirs are filled to historic water levels, which lessens the need to install artificial habitat. Heavy rains raise reservoir water levels which in turn inundates natural habitat along the shoreline. Although this is beneficial for now, our biologists are planning future projects to continue to improve fisheries habitat in times of drought to ensure fish populations stay healthy.

Identifying Duck Species

Q: As a new waterfowl hunter, how do I learn the difference between duck species?

A: This is a common question among beginning waterfowl hunters mostly because they don't want to run afoul of the law, but some hunters with good identification skills also select preferred duck species to harvest, or they may try to harvest primarily males vs. females.

California hosts 39 species or subspecies of waterfowl, so it can be challenging to learn to identify them. Experience is the best teacher and February is a great time in California to learn duck identification by direct observation.

Our recommendation is to visit any of CDFW's wildlife areas or national wildlife refuges that are managed for waterfowl habitat, or perhaps wherever there is access to hunt waterfowl during the waterfowl season. Visit those places after the close of waterfowl season while the birds are still around. Bring a good pair of binoculars, a waterfowl identification book and maybe a knowledgeable friend who can help. Not only can you help learn to identify the birds from looking at them, but you'll also begin to learn to distinguish the birds by their flight patterns and sounds they make.

Fun fact, most waterfowl don't quack, they whistle or chirp in some form or another.

For more information, visit CDFW's waterfowl program page. It includes links to resources specific to waterfowl identification.

To find more information on CDFW Lands and their operating hours, please visit the CDFW Lands webpage. Also be sure visit the Emergency Closures page before visiting a CDFW office, facility or property.

Hibernation Adjustments

Q: Do bears adjust their hibernation location when heavy weather conditions arrive?

A: Researchers throughout North America have reported that black bears can awaken and travel to new locations when disturbed and the same can be said for black bears that inhabit California. Sows with cubs

can move the tiny young into an alternate den if the disturbance is at an unacceptable level or if there is some danger – like a flood or landslide.

Hibernation is an adaptation for some mammals and reptiles, which allows them to survive the winter season. In many areas, winter can be unforgiving. Food is hidden beneath the snow, water sources are frozen over and frigid temperatures can have deadly consequences. By hibernating, an animal's body temperature, heart rate, breathing and other metabolic activities slow down significantly to conserve energy.

In areas with mild winters, such as in Southern California, most bears do not hibernate, because they have adequate resources and the ambient temperature is survivable. Biologists have found that only pregnant sows (female bears) den up for the entire winter.

Black bears are thought to hibernate for about four months in other parts of California. They can hibernate for many months because their body temperature reduces to approximately 88 degrees Fahrenheit, which is within 12 degrees Fahrenheit of normal. By contrast, the body temperature of smaller animals such as marmots, chipmunks and ground squirrels may drop below 40 degrees Fahrenheit. Small mammals must awaken every few days and raise their body temperatures to normal levels so they can eat stored food, and pass waste. Bears can maintain their suspended state because their warm fur allows them to retain body heat.