Winter arrives early in the North. Temperatures drop and waterfowl take flight—heading for California. While summer temperatures continue to bake the Central Valley and interior deserts of California, the first waterfowl begin arriving from their breeding grounds far to the north. Pintails are the first to arrive in August, ending with canvasbacks and buffleheads in December. Over this five-month period, 36 species of ducks, geese and swans arrive in California to over-winter—well over 4 million birds in all. Waterfowl concentrations generally remain high until late February or early March.

Each species follows a migration pattern along the coast, through the Central Valley or along the eastern Sierra Nevada. All of the migration routes are collectively referred to as the Pacific Flyway. Many species follow centuries-old routes tied to waterways and aquatic habitats where the birds can rest and feed on their way south. Some populations of waterfowl over-winter in California while others continue south to destinations in Mexico and Central America.

Waterfowl, as well as hundreds of other species of birds, migrate to California because of its mild climate and rich diversity of habitats. While California’s climate has remained relatively constant, natural habitats have declined at an alarming rate over the last century as marshes and estuaries have been replaced by farms and cities. In the early 1930s, the Division of Fish and Game, the precursor to today’s Department of Fish and Game (DFG), purchased the first state-owned wildlife areas specifically for waterfowl. Over the years, these wildlife areas have become increasingly important to waterfowl and other wildlife species as urban and certain agricultural developments continue to expand. Today, over 95 percent of the states coastal estuaries and interior wetlands have been destroyed, forcing waterfowl and other native wildlife into smaller and smaller remaining habitats. Fortunately, most waterfowl have adapted to some agricultural practices (especially rice and corn farming), and rely heavily on these...
lands for seeds and other foods after the crops are harvested.

Waterfowl live in two basic types of aquatic environments, fresh water and salt water. Each type requires different management practices to maintain healthy waterfowl populations. In coastal areas, the key is protecting existing shallow tidal marshes, bays, and other shallow water habitats, and restoring tidal flows or flooding to lands that have been previously diked and drained. Once the tidal flows have been restored, little ongoing management is necessary except to monitor and manage non-point source pollution and sediments washing in from the surrounding watershed. Marine invertebrates, fish and plants quickly recolonize newly flooded areas, providing a rich food source for many species of shorebirds and some waterfowl.

In fresh water marshes, wildlife habitat managers are faced with the daunting task of supplying diverse foods, water and shelter for growing numbers of waterfowl seeking refuge as habitats disappear elsewhere. Today, buying or pumping water is DFG’s biggest ongoing wetlands management expense as the demand for limited water supplies drives up the cost. Existing wildlife areas are being expanded and new areas are being purchased when possible, but most of the new land requires extensive restoration and intensive management to support populations of waterfowl. In addition, federal refuges and cooperative wetland conservation agreements with private land owners also help to protect valuable wetlands throughout California. Most importantly, over 65 percent of California’s freshwater seasonal wetlands are privately-owned and maintained as habitat for waterfowl and other wetland-dependent wildlife by duck hunting clubs.

When you visit a wildlife area, you are visiting a carefully managed and highly manipulated landscape, but if DFG has done its job well, you won’t notice. In the spring and summer, wildlife managers grow fields of swamp timothy and other
grasses in preparation for the fall migration. These fields are then flooded starting in July and August in preparation for the first arriving migrants. Water levels are carefully controlled in each pond to provide the proper depth for dabbling ducks, those species that tip forward in shallow water to pluck grass seeds and insects from the bottom, as well as for diving ducks that require deeper water. Most goose species that use the areas rest in shallow water during the night, then fly out at dawn to feed in nearby agricultural fields throughout the day. Many ducks take the night shift—spending the day in sanctuaries and feeding in the harvested grain fields at night. Closed zones are set aside to allow the waterfowl to rest and sleep without disturbance from people. With such large number of birds sharing limited space, even small disturbances can affect hundreds of animals.

Many DFG wildlife areas and ecological reserves are well within a day's drive of many urban centers. A few on the north coast and in the north east corner of the state require a two or three day trip. DFG manages lands for wildlife first and people second. Expect limited amenities such as portable toilets and informational signs, but if you've come for the wildlife, you won't be disappointed. Each area is open from sunrise to sunset, and all levee roads are open for walking unless otherwise posted. Expect closed zones to vary from season to season based on the needs of the wildlife. Most areas have a visitor staging area to check in, as well as exhibits on the types of wildlife you can expect to see on the area. A few areas have day use fees ($2.50 per person) to help support area management, but most of the funding comes from the sale of hunting licenses, duck stamps, and taxes on hunting equipment. Finally, many sites are multiple use areas, providing opportunities for hunters, anglers and wildlife viewers. Hunting areas are separated from viewing areas to ensure safe and quality experiences for all.

Bob Garrison is the DFG's interpretive services coordinator.

**Year-round opportunities to watch and photograph waterfowl and other types of wildlife abound at Department of Fish and Game wildlife areas and ecological reserves.**

*Common goldeneye. Photo © Gary Kramer*

*Wildlife photographer. DFG photo by Robert Waldron*

*Bellow. avocet with chicks along the central coast. Photo © Don Moore, Outdoor California Photography Award Program, 1995*
Tips on waterfowl viewing

If you are new to birding, waterfowl are a great group of birds to get started with. They are large, relatively easy to approach, and the males have distinct markings that separate one species from the next. Follow these tips on your next trip to watch waterfowl:

- Bring binoculars – if possible, have a pair for each viewer. They don’t have to be expensive, but you should practice at home to make sure you know how to use them before the trip. If you are having problems focusing, ask advice from a friend or take them to a store specializing in wild bird viewing and ask for help.

- Bring a bird guide – a favorite is the Field Guide to the Birds of North America by the National Geographic Society; however, there are a number of good field guides available. Look for one that combines a written description, range map and illustration/photograph on the same page for easy use in the field.

- Dress in layers and prepare for rain – late fall and winter can be cold and wet. The ducks don’t mind, but you will be standing in one location for extended periods and can easily get cold and discouraged. Avoid umbrellas.

- Use your car as a temporary blind. Stay in the car to view if you can to avoid disturbing the birds. If you need to get out to see, keep the car between you and the birds. The car makes a convenient blind and comfortable place to rest against as you view.

- Stay out of closed zones and watch the birds for signs of disturbance. If the birds are obviously flying away from you, you are too close. Back away and use your binoculars for a close view.

Along with waterfowl, a variety of other birds can also be seen at wildlife areas and ecological reserves. Some include long-billed curlews along the shores (above left), and red-winged blackbirds (above right). Below, hooded mergansers make for wonderful viewing with their unique plumage.

Hunting and viewing on the same area?

Hunting and viewing can and do occur on the same areas, but not the same locations. In fact, some of the best waterfowl viewing occurs during the hunting season when hunting in the surrounding ponds concentrate the birds in the viewing areas. Hunting programs are carefully managed to protect both game populations as well as the hunters and other area users. In most cases, waterfowl hunting is restricted to Wednesdays, Saturdays and Sundays from mid-October to early January. Follow area signs to designated viewing locations and both you and the hunters can enjoy the area.