Waterfowl

Natural History

Arizona's waterfowl can be grouped into two general classes—ducks, geese, and coots that nest in the state, and those that merely winter here or migrate through. The number of waterfowl raised in Arizona each summer, although few, is of great importance because these birds represent our state's breeding stock. The much more abundant migrants, though present only for limited periods of time between August and March, constitute most of Arizona's waterfowl harvest. Hunt regulations have been designed to accommodate both groups.

Arizona's principal waterfowl nesting grounds are the natural and modified marshes found above the Mogollon Rim and in the White Mountains. Most of these marshlands depend on winter precipitation and snow-melt rather than groundwater, are more or less seasonal, and are mostly located above 7,000 feet elevation. Examples include Mormon Lake and Marshall Lake on the Coconino Plateau, and Basin Lake and Nelson Reservoir in the White Mountains. Farm ponds and other small wetlands in the southeastern and southern parts of the state can also be expected to produce a few broods of Mexican ducks and black-bellied whistling ducks each year.

The principal duck species nesting in Arizona are mallards (especially in the White Mountains), pintails, cinnamon teal, redheads, and ruddy ducks. In addition to these "big five," smaller numbers of gadwall, green-winged teal, blue-winged teal, and ring-necked ducks are produced in northern Arizona marshes. Even less common are the occasional pair of canvasbacks, shovelers, and American widgeon. Most of the ducks that migrate through or winter in Arizona are from the Great Basin or "intermountain" states, with significant numbers of pintails and green-winged teal coming from the prairie states and provinces.

Arizona also hosts a few nesting Canada geese or honkers. These birds, which were introduced by the Arizona Game and Fish Department, are found primarily on shallow lakes east of the White Mountains between 6,000 and 7,500 feet elevation. Far more important to hunters are the more than 15,000 Canada geese that make their winter home in Arizona. The great majority of these birds are referred to as the Rocky Mountain Population of Canada goose, which nest in the intermountain states. A large goose, the males or ganders typically weigh about 9.75 pounds, the females about 8.25 pounds. The vast majority of these geese, along with several hundred snow geese, winter along the lower Colorado River on Cibola, Havasu, and Imperial National Wildlife Refuges, and in a few central Arizona locations such as Roosevelt Lake. A few white-fronted geese also pass through the state in September on their way to unknown wintering locales in Mexico.

The numbers of both nesting and wintering waterfowl in Arizona vary sporadically from year to year depending on the vagaries of winter precipitation in the Great Basin region. Wet years generally see an increase in waterfowl production, while drought years result in fewer ducks being produced. A serious problem facing both nesting and migrating

waterfowl is that our wetlands are increasingly difficult to manage for ducks and geese because of the limited occurrence of these habitats and the competing uses resulting from Arizona's human population boom. Nesting waterfowl require protection from disturbance, and many former nesting sites are no longer productive due to the introduction of predatory game fish and summer-long recreational use. One bright note of late has been the creation of wetlands using treated sewage effluent. These "municipal marshlands" are primarily managed as waterfowl nesting and resting areas. Working in conjunction with the Arizona Game and Fish Department and U.S. Forest Service, cities such as Pinetop-Lakeside, Show Low, and Sedona have developed a number of these nutrient-rich and highly productive wetlands that are heavily used by waterfowl, as well as a variety of other wetland dependent species.

Hunt History

When Anglo-Americans first arrived in Arizona, they found migrating and wintering waterfowl concentrated along the state's few major rivers. The lower Colorado and Gila rivers were especially noted as havens for waterfowl, with great clouds of the birds seen along the muddy banks by explorers, fur trappers, and steamboat passengers. Nor were nesting waterfowl in short supply; travelers across northern Arizona reported that they flushed a myriad of ducks in the shallow marshes on the San Francisco Plateau.

Unlike other states, early Arizona never experienced market hunting for waterfowl as a major enterprise. Prior to statehood, most duck shooting, when not for sport, was for personal subsistence. Settlers not only hunted waterfowl during spring, fall, and winter, they also gathered the ducks' eggs in spring. Gradually, with the development of the state's economies, this subsistence hunting gave way to sport-hunting, and irrigation ponds, canals and stock tanks became increasingly important waterfowl hunting locales. By the time that America entered World War I, waterfowling was one of the state's most popular outdoor pastimes—one that even attracted the attention of Arizona's often elected Governor George P. Hunt.

Being migratory birds, ducks and geese came under the protection of the federal government with the passage of the 1918 Migratory Bird Treaty Act. Arizona, unlike a number of other states, did not challenge the federal jurisdiction over migratory birds, and, prior to the Treaty's enactment, had even passed a number of protective measures for waterfowl. These included closing the hunting season during the spring months and prohibiting the gathering of eggs from nesting birds. All through the 1920s, and even into the drought years of the 1930s, waterfowl hunting was as popular a sport in Arizona as quail or dove hunting, if for no other reason than one got so much more game meat for the number of shells expended.

The drought years of the 1930s were hard on America's waterfowl populations, and it soon became apparent that nesting and other wetland habitats would have to be purchased and preserved if the public was to continue hunting ducks and geese. In 1934, a federal law was passed requiring persons 16 years of age and older to purchase a "duck stamp" if they wanted to hunt waterfowl. Soon after, a program was initiated to create a series of national wildlife refuges, many of which were primarily for waterfowl. From the 1940s through the 1950s Arizona saw the creation of two national waterfowl refuges on the

Colorado River—Imperial and Havasu—as well as the acquisition of state wildlife areas such as Mittry Lake on the Colorado River, and Arlington and Robbins Butte on the middle Gila River. A number of waterfowl studies also started at this time, and banding investigations showed the value of managing waterfowl by flyways, a concept that was formalized in the hunt regulations in 1948. As a result, Arizona is included in the Pacific Flyway, which includes the Great Basin states as well as those on the Pacific Coast.

Major hunting restrictions incurred during the past 50 years have included limiting the take of such species as canvasbacks and redheads, closing certain portions of refuges and management areas to provide undisturbed resting and feeding places, and imposing the use of nontoxic steel shot rather than lead shot for the taking of waterfowl. Recently, favorable habitat conditions and resulting waterfowl production throughout the United States and Canadian breeding grounds has led to liberal season lengths and bag limits; although, long term declines of pintail and scaup have resulted in those species having bag limit restrictions.

The federal government, in conjunction with participating states, coordinates three major waterfowl surveys each year. The first of these, which does not include Arizona, is the "Breeding Ground Survey," which attempts to measure the coming year's productivity by estimating the number of nesting ducks present on the continent's major nesting grounds in Alaska, Canada, and in the prairie states. The results of this survey are strongly linked to fall forecast flights of ducks and corresponding harvest frameworks. The "Winter Area Survey," which does include Arizona, is also conducted each year, and tallies the number of waterfowl using major wintering areas in the southern United States and Mexico. The number of birds counted on these surveys in Arizona has generally declined from the 1960s, when up to 42,000 ducks were observed in a given year, until the 1980s and '90s when counts often tallied less than 10,000. Conversely, the total number of Canada geese observed has increased from around 7,500 birds in 1960 to an average of 20,000 geese throughout the 1980s and '90s. The 1999 and 2000 survey revealed an increase in total ducks observed at about 35,000 with geese decreasing down to around 15,000 birds. The increase in ducks corresponds with the recent increase in the breeding ground surveys and the fall flight forecast.

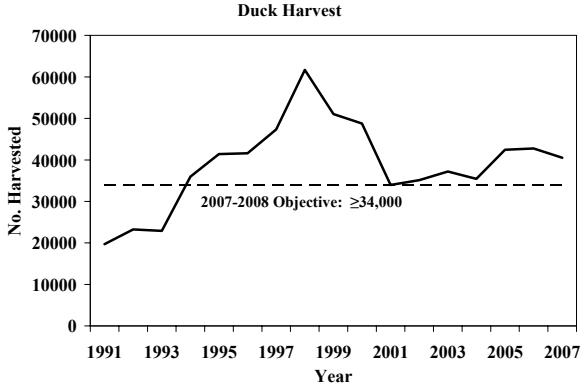
The third survey is the annual hunt questionnaires sent to duck stamp purchasers requesting information on the number of ducks and geese bagged. Since 1979, to better evaluate the data obtained from this survey, Arizona has tried to maintain a standardized waterfowl season of approximately 100 days with a seven-bird bag limit (certain species excepted). As a result, Arizona's waterfowl regulations do not greatly vary from year-to-year, and bag-limit regulations do not provide for bonus (or penalty) points for taking certain species of waterfowl. The sample size of the state's hunt questionnaire survey greatly improved in 1988 when waterfowl hunters were required to purchase an Arizona waterfowl stamp in addition to a federal stamp.

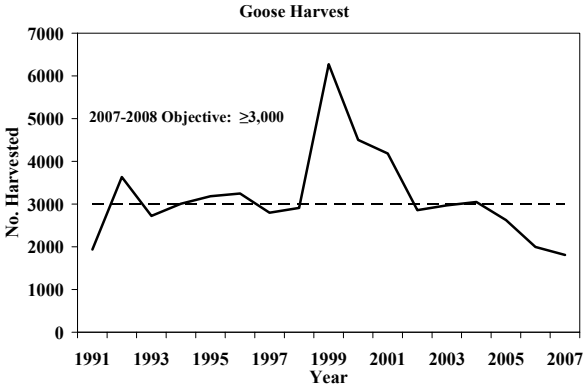
The number of waterfowl hunters has fluctuated over the years, as much in response to duck stamp price increases as to any change in waterfowl numbers. Hunter numbers have been in a general downward trend since the mid-1980s, when more than 12,500 hunters

took to the field, to the late 1990s when only about half that number participated. Recent estimates indicate that hunter numbers are again headed upward, and the long-term average of between 10,000 and 12,000 duck hunters a year may again be realized. Waterfowl hunting is nonetheless a resource-regulated sport, and Arizona's limited wetland areas will never accommodate high densities of hunters.

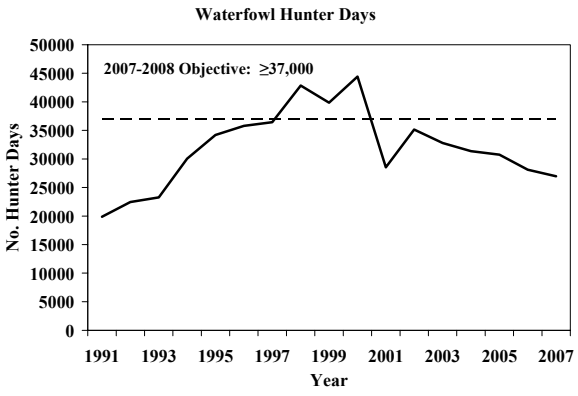
Annual waterfowl harvest figures are also sporadic. Estimates range from more than 150,000 ducks being harvested during the fall and winter of 1979-80, to less than 18,000 ducks being taken in 1990-91. The average annual take during the past three years has nonetheless been more than 50,000 birds. Goose harvests tend to be more predictable, with hunters usually claiming between 2,000 and 4,000 Canada geese and a few snows each year. Last year, however, survey estimates showed hunters taking 6,275 geese, the highest number since 1986-87.

Waterfowl Approaches





1. Maintain annual harvest at 34,000 ducks and 3,000 geese or more (1.B.1-3, 1.B.6-7).
2. Maintain hunter success rate at 1 waterfowl per day or greater (1.B.1-1.B.3).
3. Provide 37,000 hunter days per year or more (1.B.1-1.B.3).



4. Estimate population sizes and/or trends, species and subspecies composition, sex and age composition, and geographic distribution, through aerial surveys and mailed questionnaires (1.A.1-1.A.6).
5. Participate in development of migratory game bird hunt frameworks through the Pacific Flyway Study Committee, Council, and subcommittees; provide equitable hunting opportunity for residents of all areas of the State within those frameworks (1.A.1-1.A.6, 2.D.1-2.D.3).
6. Continue to partner with organizations to develop funding for wetland habitat projects; manage from a landscape perspective (2.D.1-2.D.3).
7. Pursue opportunities to enhance, protect, or acquire wetland habitat in Arizona (2.D.1-2.D.3).
8. Sample approximately 450 hunter-collected waterfowl for Avian Influenza sampling during fall waterfowl hunts. Locations for hunter check stations will be determined following consultation with Regions (1.A.1-1.A.6, 2.D.1-2.D.3).