As a hunter and conservationist, there is a need for some level of understanding of the necessity of rules and regulations for any species that is available to harvest on an annual basis. We have seen that unregulated harvest in the past has contributed to drastically low population numbers for some species. Waterfowl hunting is no different. Each year, the U.S. Fish and Wildlife Service (USFWS) proposes annual waterfowl regulation guidelines for all four major flyways in the United States so the states can set their hunting seasons accordingly. Through the years, their management strategies have shifted to address key factors for certain waterfowl species that fit into a different framework than others.

The USFWS developed an Adaptive Habitat Management (AHM) strategy for Northern Pintail in 2010. Before the AHM processes were developed, waterfowl regulations were based on a system of waterfowl monitoring (through aerial surveys and hunter questionnaires) to provide valuable information on harvest levels, populations, and habitat conditions. Over the years, changes have been made to address specific species and their habitats. For example, the Pintail limit for 2017-2018 has been decreased compared to the previous season.

The following regulations apply to the Balance of State Zone, which covers the majority of the United States.

### One Pintail Daily Bag Limit for 2017-2018: The Ins and Outs of Waterfowl Regulation Adoption

**By: Jeff Taylor, Suisun Resource Conservation District**

#### Waterfowl Season 2016-2017

**Balance of State Zone**

**Ducks:** October 21st, 2017 thru January 28th, 2018. 7 ducks in daily bag. 7 may be Mallards (2 hens), 1 Pintail, 2 Redheads, 2 Canvasback.

3 Scaup (Nov. 4th-January 28th)

Possession: Triple the daily bag limit.

**Geese:** Concurrent with duck season. 30 geese in daily bag. Bag may include up to 20 white geese or up to 10 dark geese (small Canada geese, large Canada geese, and whitefronts)

Possession: Triple the daily bag limit.

**Early Canada Goose Season:** September 30th thru October 4th, 2017.

Daily Bag is 10 large Canada geese.

**Late White-front and White Goose Season:** February 10th thru February 14th, 2018

Daily bag is 20 white geese or up to 10 white-front geese.

**Changes from 2016-2017 season:**

Decreased Pintail limit.

This is a summary of the general regulations for the Balance of State zone. Please see special management zone regulations for any specific area you may be hunting.
California Waterfowl Hunting Heritage programs hosts fun, outdoor events at our 2 properties in Suisun Marsh (Grizzly Ranch and Denverton). These Conservation Education Centers host camps, clinics, fun shoots and hunts for all ages and ability levels including youth, family, veterans, women and general public opportunities.

For youth, there are Level 1 and Level 2 youth hunter camps. The Level 1 camps include hunter certification along with a summer camp filled with duck banding, shooting and lots of other fun activities. Level 2 camps are for those with hunter certification and include more advanced fun including duck banding, game preparation, sporting clays and muzzleloader shooting.

Ladies events, Family Fun shoots, Family camp, Waterfowl hunting clinic, Fall mini-camp, Women’s Pheasant Hunt and a December Duck Camp are also offered to provide lots of different fun activities and formats to accommodate different folk’s interests and schedules. See list below of upcoming events and visit CWA’s web and Facebook pages for details and registration information. Questions about programs or interest in volunteering to help with these events call or email George Oberstadt 916-275-0961 goberstadt@calwaterfowl.org.

2017 Calendar – upcoming events
Fun Shoots -June 10th and August 27th
Youth Hunter Camps (Level 1) - June 11-15 and July 9-13
Youth Hunter Camps (Level 2) - June 18-22, July 16-20
Family Hunter Camp - August 4-6
DFW Waterfowl Hunters Clinic – August 26th
Youth Hunter Mini-Camp (Level 1) – September 16-17
Women’s Pheasant Hunt Weekend – September 30-October 1
Waterfowl hunting opportunities – Fall 2017
Duck Camp – December 1-3
California Waterfowl's Hunt Programs Seek to Engage All
By: Jeff Smith, California Waterfowl Hunt Program Coordinator

California Waterfowl's Hunt Program expands hunting opportunity in this state by giving the public a chance to score hunts at some of the most exclusive private clubs, and with some of the best guides in the state. Since 2009, the Hunt Program has provided hunting opportunities on private lands to over 6,600 hunters.

California Waterfowl (CWA) owns and manages two properties in the Suisun Marsh, Grizzly Ranch and Denverton. Through these two properties CWA offers public hunting opportunities via an application based lottery system. Other private duck clubs in the Suisun Marsh donate hunts to the program. These clubs consist of the Delta King, Family Club, and Mulberry.

CWA also offers first-come first-served specialty events for veterans, families and women at Grizzly Ranch and Denverton. These events typically include overnight lodging, an education session, in which participants learn essential waterfowl identification, waterfowl regulations, blind set-up, and firearm safety skills. Everyone enjoys the camaraderie of fellow waterfowl hunting enthusiasts in a non-intimidating environment, all while learning new skills, meeting new hunters, riding in boats, seeing quarry you are pursuing, and hunting at a well-managed, very low pressured location. Also, volunteer mentors teach inexperienced hunting parties, providing waterfowl identification, decoy placement, calling, firearm safety, and bird retrieval. All food and lodging is provided, and all gear including a gun, waders, jacket, etc. is available on a loaner basis.

CWA created its Veteran Hunt Program in 2013 with the goal of providing exceptional outdoor recreation opportunities to servicemen and women and their families. The program promotes wellness through outdoor healing and the camaraderie of fellow veterans. Since 2013, over 700 participants have enjoyed hunter education courses, fun shoots and hunts for waterfowl, dove and turkey from the Klamath Basin to the southern San Joaquin Valley.

These hunting opportunities would not be possible without the continual support of our volunteers and hunt donors. Their dedication and loyalty to CWA and the Hunt Program continues to further our mission of preserving our hunting and shooting heritage.

The Hunt Program is a part of California Waterfowl's award-winning Hunting Heritage Program, preserving our hunting heritage. We are always looking for new and exciting locations to provide hunting opportunities for youth, women, families, veterans, and the general hunting public. If you want to become a part of this nationally-recognized program by enrolling your club or property in the Hunt Program, please contact Jeff Smith, Hunt Program Coordinator, at (530) 305-9234 or jsmith@calwaterfowl.org.
35th Annual
Suisun Marsh Field Day
Saturday, June 3, 2017
Grizzly Island Wildlife Area Headquarters, Suisun, CA
FREE ADMISSION 9 A.M. TO 4 P.M.
*New this year: Gourmet Food Trucks so you can eat what you crave!

Join us for this great Family Fun Day
The Suisun Marsh Field Day has over 40 exhibitors featuring hunting guides, waterfowl artists, marsh contractors, waterfowl apparel, duck blinds, irrigation supplies and more. We have a wide variety of kids events but our favorite is the JUNIOR DUCK CALLING CONTEST.

- Renowned Waterfowl & Wildlife Artists
- Drawing for a free Lifetime Hunting License
- Latest in Waterfowl Gear
- Free Trap Shooting for Juniors
- Free Hunting License for qualifying Juniors
- Live Auction & Raffle
- BB Gun Range
- Gourmet Food Trucks
- Free Sprig Membership
- CWA Hot Dog Booth
- Wood Duck Program Display
- Duck Blind Exhibitors
- Junior Duck Calling Contest
- Free Door Prize Raffles
- Free Gun Stock Fittings for Juniors

Winner Takes All Raffle
Springfield 1911 9MM Target; Tikka T3 .270 WSM, Browning A5 12 Ga. Max5 and a quality Safe.
100 Tickets Available - $100 a Ticket - Need not be present to win

For more information or to make a donation contact Bart Bates at (510) 262-0109 or visit calwaterfowl.org; click the Events Calendar and select the Suisun Marsh Field Day page.
Waterfowl Nest Predators: Solving the “Whodunit Mystery” Using Spy Cameras

By: Rebecca Croston (USGS), Mike Casazza (USGS), Josh Ackerman (USGS), Cliff Feldheim (CDFW), and the Suisun Marsh Research Team

The Suisun Marsh is an important nesting area for breeding waterfowl in California. Waterfowl nesting densities in Suisun Marsh can be quite high, producing a significant number of mallard, gadwall and cinnamon teal offspring each year. Given the importance of Suisun Marsh as a waterfowl nesting area, our research team is investigating limitations to nesting success.

During 2015 and 2016, our team used tiny spy cameras to monitor activity at duck nests. Our goals were to identify the predators that consume duck eggs and to determine the relative impact of each predator on duck nest success. Preliminary data from the small lipstick-sized cameras linked to mini-DVR units recorded activity at 149 mallard and gadwall nests. Of these, we observed predators at 65 nests. The most commonly seen predators were raccoons, which appeared at 31 nests. Skunks were the second most common predator appearing at 22 nests. Gopher snakes were evident at 15 nests and coyotes and ravens were less common, appearing at 3 nests each.

Raccoons were the top egg predator, taking 190 eggs from the 31 nests visited. Skunks had a smaller impact in terms of the number of eggs taken, consuming 96 eggs from the 22 nests visited. Coyotes ate 32 eggs and ravens ate 31 eggs. Thus, raccoons were the most important nest predator in recent years – a shift from what occurred in 2000 when most nest predation was caused by skunks. Skunks consumed fewer eggs in a single visit than did raccoons, coyotes, or ravens. When a raccoon, coyote, or raven find a duck nest, they generally removed the entire clutch of eggs. Skunks, on the other hand, consumed only 2-3 eggs per visit out of the typical 9-egg clutch. Ravens take the entire clutch as well and are known to cache eggs for later meals or provide carry-out for their own nestlings.

We also found that many duck nests were visited by gopher snakes (and one racer). Surprisingly, snakes were not able to consume mallard or gadwall eggs because the eggs are too large. Gopher snakes spent an average of 20 minutes trying to swallow eggs, but were never actually successful! Many past researchers had believed that gopher snakes were responsible for single missing duck eggs, but this appears not to be the case for duck species that lay larger eggs. Instead, snakes appear to be visiting nests repeatedly and attempting to eat eggs. However, gopher snakes were quite successful at eating ducklings after they hatched.

The results from this study will be used to help improve habitat management to improve duck nest success with a goal to increase waterfowl production in Suisun Marsh. For more information please visit our project website at: https://www.werc.usgs.gov/project.aspx?projectid=272.
Researchers in the ecology department at U.C. Davis and the Department of Fish and Wildlife (CDFW) are teaming up to study western pond turtles in the Suisun Marsh.

The western pond turtle (*Actinemys marmorata*) is one of California’s only native turtles and has been recognized as a species of special concern by the CDFW since 1994. Populations of western pond turtles have been declining throughout its range (along the West coast from northern Baja California to Washington), and in some places they have become endangered.

The largest threat to western pond turtles is habitat loss and degradation. These turtles live in a variety of aquatic habitats such as ponds, streams, and agricultural ditches but also require terrestrial habitat for nesting and overwintering. Within the Marsh, western pond turtles are frequently seen basking on the edges of sloughs and ditches as well as within managed ponds. Sometimes they are even spotted crossing Grizzly Island Road. While it seems that western pond turtles are abundant within Suisun, little research has been done to characterize their populations and habitat use.

To begin learning more about western pond turtles in the Marsh, U.C. Davis and CDFW have started trapping turtles at two diked areas, one site on the Hill Slough Wildlife Area and one site on Grizzly Island. Turtles are captured in hoop traps baited with sardines. When turtles are collected they are individually marked by filing scutes on their carapace.

After they are marked turtles are measured, weighed, and aged before being released. In the first three months of trapping, we have caught sixty individual turtles (mostly at Hill Slough). This may indicate that the western pond turtle population at Hill Slough is quite large, considering the amount of turtles found in the small area surveyed. Through this trapping effort, we are hoping to learn more about the size and health of the turtle populations throughout the Marsh.

In addition to trapping turtles, we will also begin tracking turtles using telemetry units equipped with GPS technology. Transmitters will be glued to the turtle’s shell, and location data will be collected every hour. Data will be sent to researchers through cell phone towers, so they can observe turtle locations in real time.

This information will be used to better understand how turtles are using and moving through both tidal and managed wetlands on a daily and seasonal basis. It will be especially important to track turtle movements at the Hill Slough Wildlife Area, where tidal restoration has been planned. Tidal restoration will occur at the western half of the Hill Slough Wildlife Area, on either side of Grizzly Island Road, between Suisun City and the bridge over Hill Slough. Six ponds will be breached, restoring approximately 580 acres to full tidal action. We have observed western pond turtles using many of these ponds, and we are interested to find out how they will be impacted by the planned tidal restoration.

This information will be important to understand how western pond turtles adapt to changes in their environment, and can be applied to future restoration projects. A better understanding of turtle population size and habitat use within Suisun Marsh will help with the future management and conservation of the species.
the USFWS had to modify their management strategy for providing regulations. This has included modifications to the management framework and changes to timing of season regulation release.

The adaptive management framework looks at a series of factors that have led to the one pintail limit for the 2017-2018 season. The disparate parts come together like this:

First, “an explicit harvest management objective”: The goal of this objective is to “maximize long-term cumulative harvest.” The USFWS looks at waterfowl breeding populations to assure that pintail populations are above 1.75 million birds. The lowest recorded pintail population was 1.79 million in 2002. The 2016 breeding population survey estimated 2.62 million pintails, which is 34 percent below the long-term average, a 14 percent drop from 2015, and the fifth straight survey in which pintails have declined.

Secondly, “regulatory alternatives that do not admit partial season”: These alternatives include “considerations of a closed season, 1 bird daily limit, and 2 bird daily limit. The maximum pintail season length is dependent on the general duck season framework specified by mallard AHM”. With liberal regulations for all flyways, the season length and bag limit must account for estimated harvest.

Lastly, “current population models and model weights”: There are two population models that help determine regulations. One is an additive harvest model that incorporates harvested pintail and natural mortality (illness, starvation, and predation) and makes the assumption that birds harvested contribute to the reduction of the surviving population. The other is a compensatory model that assumes harvest does not add a significant reduction to the overall population that would survive to the next breeding season. Each models’ equation is run to determine the estimated carrying capacity, maximum sustained yield, an equilibrium population size, and an annual harvest rate. These numbers are then run against the historic data records and observed population sizes. Each model is weighted based on its level of accuracy and whichever one fits the historic data best gets more consideration when making annual waterfowl regulations.

The AHM strategies are constantly being modified with the aim to provide sound regulatory objectives. In 2013, the US Department of Interior issued their Final Supplemental Environmental Impact Statement. This document established a revised timeline for meetings and adoption of regulatory recommendations. The shift in the decision-making process was accepted, which created a lag in the AHM process and the models being run using the previous year’s monitoring data. This change went into effect in 2015 to ensure adequate time for public comment and release of proposed waterfowl season regulations.

Before the regulation change in 2015, California would have faced this one pintail limit during the 2016/17 season rather than the 2017/18 season. California Waterfowl Association, CA Department of Fish and Wildlife, and other organizations are working with USFWS to revise pintail management strategies. Through pintail banding efforts and data gathering, they are trying to provide more data for the USFWS to make these potential changes. It will not be a fast process because there is also the constraint of other states cooperation to allow these changes to take effect. California winters more pintail than the rest of them and change won’t come easy.

How can you make a difference?

You can contribute to the California Waterfowl Legislative Action Fund which supports the organization’s advocacy efforts with lawmakers and regulators.

More information can be obtained by calling (916) 648-1406 or online at: www.calwaterfowlactionfund.org
NOTICE OF PUBLIC WORKSHOP &
CALIFORNIA ENVIRONMENTAL QUALITY ACT
SCOPING MEETING

WATER QUALITY OBJECTIVES FOR DISSOLVED OXYGEN AND MERCURY
AND TOTAL MAXIMUM DAILY LOAD (TMDL) FOR LOW DISSOLVED OXYGEN/ORGANIC
ENRICHMENT AND MERCURY
FOR SUISUN MARSH

Friday, May 12, 2017
10:00 AM – 12:00 PM

Rush Ranch
3521 Grizzly Island Road
Suisun City, CA 94585

NOTICE IS HEREBY GIVEN that San Francisco Bay Regional Water Quality Control Board (Water Board) staff will hold a public workshop and California Environmental Quality Act (CEQA) scoping meeting to seek public input regarding the scope, content, and potential impacts of the Basin Plan amendment at the time and location provided above. The amendment would establish water quality objectives for dissolved oxygen and mercury in Suisun Marsh sloughs, a Total Maximum Daily Load (TMDL) designed to achieve these objectives, and an Implementation Plan.

Additional information on the Suisun Marsh TMDL project can be found at
http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/suisunmarsh.html