

COMPATIBILITY DETERMINATION

Use:

Hunting

Refuge Name:

Sacramento, Delevan, Colusa, and Sutter National Wildlife Refuges, located in Glenn, Colusa, and Sutter Counties, California.

Establishing and Acquisition Authority(ies):

Sacramento National Wildlife Refuge (Refuge) was established in 1937. Legal authorities include: Executive Order 7562, February 27, 1937, Migratory Bird Conservation Act of 1929 (16 U.S.C. 715d), Refuge Recreation Act of 1962 (16 U.S.C. 460k-460k-4), as amended, the Endangered Species Act of 1973 as amended (16 U.S.C. 1531-1543: 87 Statute 884), and the Fish and Wildlife Act of 1956 (16 U.S.C. 742).

Delevan Refuge was established in 1962. Legal authority includes: Migratory Bird Conservation Act of 1929 (16 U.S.C. 715d).

Colusa Refuge was established in 1945. Legal authorities include: Migratory Bird Conservation Act of 1929 (16 U.S.C. 715d), Lea Act of 1948 (16 U.S.C. 695), the Endangered Species Act of 1973 as amended (16 U.S.C. 1531-1543: 87 Statute 884), and the Fish and Wildlife Act of 1956 (16 U.S.C. 742).

Sutter Refuge was established in 1945. Legal authorities include: Migratory Bird Conservation Act of 1929 (16 U.S.C. 715d), Lea Act of 1948 (16 U.S.C. 695), and the Endangered Species Act of 1973 as amended (16 U.S.C. 1531-1543: 87 Statute 884).

Refuge Purpose(s):

Sacramento Refuge purposes include:

“... as a refuge and breeding ground for migratory birds and other wildlife...”
Executive Order 7562, February 27, 1937.

“... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. 715d (Migratory Bird Conservation Act of 1929).

“... to conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants ...” 16 U.S.C. 1534 (Endangered Species Act of 1973).

“... suitable for (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” 16 U.S.C. 460k-1 “... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. 460k-2 (Refuge Recreation Act of 1962 (16 U.S.C. 460k-460k-4), as amended).

“... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956).

Delevan Refuge purposes include:

“... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. 715d (Migratory Bird Conservation Act of 1929).

Colusa Refuge purposes include:

“... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. 715d (Migratory Bird Conservation Act of 1929).

“... for the management and control of migratory waterfowl and other wildlife ...” 16 U.S.C. 695 (Lea Act of 1948).

“... to conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants ...” 16 U.S.C. 1534 (Endangered Species Act of 1973).

Sutter Refuge purposes include:

“... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. 715d (Migratory Bird Conservation Act of 1929).

“... for the management and control of migratory waterfowl and other wildlife ...” 16 U.S.C. 695 (Lea Act of 1948).

“... to conserve (A) fish or wildlife which are listed as endangered species or threatened species or (B) plants ...” 16 U.S.C. 1534 (Endangered Species Act of 1973).

National Wildlife Refuge System Mission:

“To administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.” (National Wildlife Refuge System Administration Act of 1966, as amended [16 U.S.C. 668dd-ee]).

Description of Use:

Hunting is identified in the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd-ee) as a priority use for refuges when it is compatible with the refuge purposes and mission of the Refuge System. As a result, the Service is proposing to allow waterfowl, coot, common moorhen, snipe, pheasant, and wild turkey hunting on approximately 9,395 acres of Sacramento, Delevan, Colusa, and Sutter Refuges. The Proposed Action (Alternative C) analyzed in the Final Comprehensive Conservation Plan (CCP) and Environmental Assessment (EA) (USFWS 2009a), Environmental Assessment: Wild Turkey Hunting on Sacramento, Delevan, Colusa, and Sutter National Wildlife Refuges (2019), and the Hunt Plan (USFWS 2019), which are incorporated by reference, contain maps and Refuge descriptions where hunting will be allowed. The hunting program will provide high quality, safe, and cost-effective hunting opportunities, and will be carried out consistent with State regulations. The guiding principles of the Refuge System’s hunting programs (Service Manual 605 FW 2) are to:

- Manage wildlife populations consistent with Refuge System-specific management plans approved after 1997 and, to the extent practicable, State fish and wildlife conservation plans;
- Promote visitor understanding of and increase visitor appreciation for America’s natural resources;
- Provide opportunities for quality recreational and educational experiences consistent with criteria describing quality found in 605 FW 1.6;
- Encourage participation in this tradition deeply rooted in America’s natural heritage and conservation history; and
- Minimize conflicts with visitors participating in other compatible wildlife dependent recreational activities.

The Hunt Plan (USFWS 2019, 2009b) was developed to provide safe hunting opportunities, while minimizing conflicts with other priority wildlife-dependent recreational uses. The Refuges’ hunting program will comply with the Code of Federal Regulations Title 50, 32.1 and be managed in accordance with Service Manual 605 FW2, Hunting.

Hunting will be permitted in accordance with State and Federal regulations and seasons (Table 1 gives an example of annual State hunt seasons for areas within the Refuges) to ensure that it will not interfere with the conservation of fish and wildlife and their habitats. Therefore, the sport hunting of migratory birds and upland game birds on the Refuges is in compliance with State regulations and seasons, the National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd-ee), and the Refuge Recreation Act of 1962 (16 U.S.C. 460k).

Table 1. Sacramento, Delevan, Colusa, and Sutter Refuges, Hunting Season Bag Limit Summary for 2019-2020

Species	Dates	Daily Bag Limits
Waterfowl – Ducks	Third Saturday in October extending for 100 consecutive days	Up to 7 ducks; see below; possession triple the bag limit*
Waterfowl – Geese	October - concurrent with duck season EXCEPT in Sacramento Valley (West) Special Management Area where the season will be open from the last Saturday in October through December 14	Up to 8 geese any species; possession triple the bag limit**

American Coot and Common Moorhen	October - concurrent with duck season	25/day, 25 in possession, either all of one species or a mixture of these species
Snipe	Third Saturday in October extending for 107 days	8/day; possession triple the bag limit
Pheasants – General	Second Saturday in November extending for 44 days	2 – males first two days; 3 males thereafter; possession triple the bag limit
Turkey	Fall Season - Second Saturday in November extending for 30 days Spring Season- The Last Saturday in March extending for 37 days	Fall Season - either sex; 2 per season Spring Season - 1 bearded turkey per day; 3 combined

*Duck Bag Limits: 7 ducks/ but not more than 2 hen mallards, 2 pintail, 2 redhead, 2 canvasback 3 scaup

**Goose Bag Limit: 30 geese/ but not more than 20 white geese, 10 dark geese. In the Sacramento Valley (West) Special Management Area, only 3 white-fronted geese may be taken.

The hunting program is administered by the Service in cooperation with the California Department of Fish and Wildlife (CDFW). The Service manages the Refuges' land, habitat and facilities; and the CDFW selects reservations and processes the Refuge hunters and operates the hunter check stations. A valid California hunting license, including appropriate stamps, is required for taking any bird. Entry permits are issued and collected at the check stations, which are used to track daily hunter quotas, hunter refill, and bird species harvest.

Hunting is permitted on designated portions of Sacramento, Delevan, Colusa and Sutter Refuges (Figures 11-14 in the CCP). Hunting of waterfowl, coot, common moorhen, snipe, pheasant, and wild turkey is permitted on Saturdays, Sundays, and Wednesdays during hunting seasons established by the California Fish and Game Commission. Pheasants may only be hunted in the free roam and pheasant only areas, except for the Special Monday Pheasant Hunt, which is held the first Monday after the opening day of pheasant season on Sacramento, Delevan and Colusa Refuges. On this day, the entire hunting area is opened to pheasant hunting, including the spaced blind and assigned pond areas. During the fall, wild turkey may only be hunted in the free roam areas. During the spring wild turkey season, wild turkey may only be hunted in designated areas of Sacramento and Delevan Refuges.

Hunting areas are divided into designated areas— free roam, spaced hunt blind, spaced hunt site (island), or assigned pond (Figures 11-14 in the CCP). The overall harvest success, as measured by the number of birds per hunter per day, has remained relatively constant (approximately 2.0 birds per hunter) since the hunting programs were established. This consistency has occurred despite rather significant fluctuations in total birds harvested annually for the Complex and trends on individual Refuges. Harvest data indicate that ducks make up 85 percent of the hunter bag. The top six species of ducks harvested are green-winged teal (24.4 percent), shoveler (18.6 percent), gadwall (16.5 percent), American wigeon (13.1 percent), northern pintail (10 percent), and mallard (9.2 percent). Geese harvested include snow (47.1 percent), white-fronted (33 percent), and Ross's (13.3 percent). The majority of the goose harvest occurs on Sacramento and Delevan Refuges.

The Refuges have approximately 18,000-22,000 annual hunting visits, including up to 400-500 annual visits by hunters with disabilities. Hunters must report take of waterfowl, pheasants and turkeys (during the fall season) to the check station located at Sacramento Refuge south of Road 68, at Delevan Refuge off of Four Mile Road, at Colusa Refuge south of Abel Road, and at Sutter Refuge south of Hughes Road (Figures 11-14 in the CCP). Field checks by refuge law enforcement officers will be planned, conducted, and coordinated with staff and other agencies to maintain compliance with regulations and assess species and number harvested. Dogs will be required to be kept on a leash, except for hunting dogs engaged in authorized hunting activities and under the immediate control of a licensed hunter.

The Refuge Hunting Program Working Group was established in 1991 to exchange ideas and information regarding the Complex's hunting program. The Disabled Access Working Group was established in 1999 to discuss disabled hunting access issues on the Complex. In 2006, we combined the groups to form the Complex Hunting Program Working Group. We reestablished the Hunters with Disabilities Working Group in 2017 to gain feedback on how the program could be improved. The State game wardens and Federal law enforcement officers also attend the Working Group meeting.

Although the number of waterfowl hunters have not been declining in recent years, waterfowl hunters make up an ever smaller part of the state population. In order to recruit, retain, and reactivate hunters, it is important to offer opportunities for new hunters to experience quality refuge hunting. In the early 1990s, the Service began hosting a one-day, in-season junior waterfowl hunt on Sacramento and Delevan Refuges. The spaced hunt site areas were reserved for junior hunters (age 16 and younger). These hunts resulted in up to 145 junior hunt visits annually. In the late 1990s, post season youth only hunts (age 15 and younger) began on Sacramento and Colusa Refuges and were later added to Delevan and Sutter Refuges. These hunts

have resulted in up to 372 annual junior hunter visits. The Complex continues to offer in-season Jr. Waterfowl hunts at Sacramento and Delevan Refuges and post season youth hunts on all four hunting areas. The age for Jr. hunters has changed to 18 years of age or younger and the youth hunter age is now 17 years of age or younger. A special one day veteran’s hunt was established at Colusa NWR in 2018. All of the assigned ponds are reserved for veterans for the day. Many local partners (i.e. California Waterfowl Association, Willows Rotary, Willows Kiwanis, and National Wild Turkey Federation) have also assisted by providing free morning beverages, barbecue lunches, raffles, and educational displays and activities.

Sacramento Refuge

Hunting is allowed on 3,586 acres south of Road 68 (Table 2).

Table 2. Hunt area acreage and hunter quotas for Sacramento Refuge

	Spaced Blind Area	Assigned Pond Area (# parties)	Free Roam Area	Pheasant Only
Acres dry	245	205	319	115
Acres flooded	954	807	819	
Total acres	1,191	1,012	1,138	126
Number of blinds	29			
Number of assigned ponds		21		
Maximum adult hunter quota	116	84	54	
Maximum hunter quota spring turkey season	5			
Wetland acres	32.8/blind	38.4/party	15.1/hunter	

Sacramento Refuge has spaced blinds, assigned ponds, free roam, and pheasant only areas that consist of managed wetland, watergrass, permanent pond, grassland, and vernal pool/alkali meadow habitats. Blinds are in-ground, concrete pits spaced 250-400 yards apart. Hunters must remain within 100 feet of their assigned blind. Free roam and assigned pond hunters move unrestricted within the signed hunting area boundary. Directional signs guide hunters to their respective hunting areas, while additional reflective stakes direct hunters to their assigned blind. The hunting areas are accessible by foot only from four parking areas.

Pheasant, wild turkey, and snipe may be hunted on waterfowl hunt days in the free roam and pheasant only areas. Pheasant may also be hunted on the first Monday of

the season in free roam, spaced blind, and assigned pond areas. Maximum quota for this day is 100 hunters. During the spring turkey season, Wild turkeys may be hunted every other Saturday and Sunday (alternating weekends between Sacramento and Delevan Refuges) on 803 acres in designated portions of the free roam, pheasant only, and spaced blind/assigned pond areas.

Hunter quotas are based on acres of available wetland habitat and are adjusted depending upon water conditions. Fully-flooded conditions provide up to 29 blinds (up to four people per blind), 21 assigned ponds (up to four people per pond), and up to 54 free roam hunters (15.1 wetland acres/hunter). In addition to quotas, hunter distribution is influenced by habitat management, pond size, daily weather conditions, and waterfowl flight patterns.

Sacramento Refuge has four spaced blinds/assigned ponds (Blinds 5D, 9D, 23D, and 27D) designated for hunters with disabilities. These sites may be accessed by motor vehicle, all terrain-vehicle (ATV), or boat from the parking areas. Additionally, a parking area to access Blinds 23D and 27D and a designated accessible boat launch in the free roam area (Tract 38) is available. In 2018-19, there were 154 visits by 88 individual hunters with disabilities.

Delevan Refuge

Hunting of waterfowl, snipe, pheasant, and wild turkey (during the fall season) is allowed on 1,922 acres within the south half of Delevan Refuge; hunting of wild turkey is allowed on 771 acres within the north half and existing hunting area of Delevan Refuge during the spring season (Table 3).

Table 3. Hunt area acreage and hunter quotas for Delevan Refuge.

	Spaced Hunt Area	Assigned Pond Area (# parties)	Free Roam Area
Acres dry	41	13	223
Acres flooded	439	419	781
Total acres	480	549	1,004
Number of blinds	18		
Number of assigned ponds		11	
Maximum adult hunter quota	72	44	50

Maximum hunter quota spring turkey season	3		
Wetland acres	24.3/party	49.9/party	15.6/hunter

Delevan Refuge has spaced hunt sites, assigned pond, and free roam areas that consist of managed wetland, watergrass, permanent pond, grassland, and vernal pool/alkali meadow habitats. Hunt sites consist of a dirt island (approximately 10'x20') surrounded by cattail or bulrush, concrete pit blinds, and stand up blinds constructed out of tree branches. Hunters must remain within 100 feet of their assigned hunt site. Free roam and assigned pond hunters move unrestricted within the signed hunting area boundary. Directional signs guide hunters to their respective hunting areas, while additional reflective stakes direct hunters to their assigned hunt site. The hunting areas are accessible by foot only from three parking areas.

Pheasant, wild turkey, and snipe may be hunted on waterfowl hunt days in the free roam areas. Pheasant may also be hunted on the first Monday of the season in free roam, spaced hunt sites, and assigned pond areas. Maximum quota for this day is 50 hunters. During the spring turkey season, Wild turkeys may be hunted every other Saturday and Sunday (alternating weekends between Sacramento and Delevan Refuges) in wetland and upland areas of the north unit and the existing hunting area of the refuge.

Hunter quotas are based on acres of available wetland habitat and will be adjusted depending upon water conditions. Fully-flooded conditions provide up to 18 blind sites (up to four people per hunt site), 11 assigned ponds (up to four people per pond) and up to 50 free roam hunters (15.6 wetland acres/hunter). The free roam quotas at Delevan are split between east and west sides with each having a 25-hunter quota. In addition to quotas, hunter distribution is influenced by habitat management, pond size, daily weather conditions, and waterfowl flight patterns.

Delevan Refuge has three spaced blinds (Blinds 13D, 29D, and 30D) designated for disabled hunters. These blinds may be accessed by motor vehicle or ATV from the parking areas. . Additionally, there are designated accessible boat launches in the free roam area of Tract 33 and Tract 34.3. In 2018-19, there were 172 visits by 85 individual hunters with disabilities.

Colusa Refuge

Hunting is allowed on 2,000 acres south of Abel Road (Table 4).

Table 4. Hunt area acreage and hunter quotas for Colusa Refuge.

	Assigned Pond Area (# parties)	Free Roam Area - Westside	Free Roam Area - Eastside
Acres dry	0	466	119
Acres flooded	391	404	615
Total acres	391	870	734
Number of assigned ponds	13		
Maximum adult hunter quota	52	14	34
Wetland acres	30/party	28.8/hunter	18/hunter

Colusa Refuge has assigned pond and free roam areas that consist of managed wetland, watergrass, permanent pond, grassland, and vernal pool/alkali meadow habitats. Free roam and assigned pond hunters move unrestricted within the signed hunting area boundary. Directional signs guide hunters to their respective hunting areas. The hunting areas are accessible by foot only from four parking areas. Disabled hunters may access P2A and P2B from the disabled parking area via a boat ramp or access roads. In 2018-19, P2A and P2B had 120 visits by 60 individual hunters with disabilities.

Pheasant, wild turkey, and snipe may be hunted on waterfowl hunt days in the free roam areas only. Pheasant may also be hunted on the first Monday of the season in free roam and assigned pond areas. Maximum quota for this day is 15 hunters on the east side and 30 hunters on the westside.

Hunter quotas are based on acres of available wetland habitat and are adjusted depending upon water conditions. Fully-flooded conditions provide up to 13 assigned ponds and up to 48 free roam hunters. A hunting party includes a maximum of 4 individuals. Assigned ponds 3, 4, 5, 7, 8, 9, and 10, allow one party per pond, Pool 1 allows up to three parties per pond and has been divided using U channel posts and signs to designate pond locations. P2 allows up to three parties, two of which are designated for hunters with disabilities. In addition to quotas, hunter distribution is influenced by habitat management, pond size, daily weather conditions, and waterfowl flight patterns.

The westside free roam area has one hunter per 28.8 wetland acres at its maximum quota of 14. The westside free roam area is not in as strong a flight path and thus the hunter density allowed is lower. The eastside free roam area has one hunter per 18 wetland acres at its maximum quota of 34 hunters.

Sutter Refuge

Currently hunting is allowed on 1,116 acres on the south half of Sutter Refuge (Table 5).

Table 5. Hunt area acreage and hunter quotas for Sutter Refuge.

	Assigned Pond Area (# parties)	Free Roam Area	Pheasant Only Area
Acres dry	0	260	123
Acres flooded	405	367	
Total acres	406	396	123
Number of assigned ponds	12		
Maximum adult hunter quota	48	25	2 parties
Wetland acres	33.7/party	14.7/hunter	4
* T13 (199 acres) is not included in the total acres or acres flooded for the free roam area.			

Sutter Refuge has assigned pond and free roam areas that primarily consist of managed wetland, watergrass, and grassland habitats. Free roam and assigned pond hunters move unrestricted within the signed hunting area boundary. Directional signs guide hunters to their respective hunting areas. The hunting areas are accessible by foot only from two parking areas. In addition, there is a designated boat launch with a parking area available to hunters with disabilities in the northeast corner of assigned pond 6D.

Pheasant, wild turkey, and snipe can be hunted in the free roam and pheasant only areas on the Refuge on waterfowl hunt days.

Hunter quotas are based on acres of available wetland habitat and are adjusted depending upon water conditions. Fully-flooded conditions provide up to 12 assigned ponds and up to 25 free roam hunters. Assigned ponds 4 and 5 allow one party per pond; Assigned pond 6D is designated for hunters with disabilities. T15-17 allow up

to three parties per pond and has been split using U channel posts and signs to designate the pond boundaries. A hunting party includes a maximum of 4 individuals. A disabled hunting party must include at least one disabled hunter. In addition to quotas, hunter distribution is influenced by habitat management, pond size, daily weather conditions, and waterfowl flight patterns.

The free roam area has 1 hunter per 14.7 wetland acres at its maximum quota of 25 hunters. Tract 18 will remain as a pheasant hunting only area and will have a quota of 2 hunting parties.

Availability of Resources:

The following funding/annual costs (based on FY 2019 costs) would be required to administer and manage hunting activities as described above:

	Annual Costs
Printing (brochures, signs, posters, etc)	\$3,000
Law Enforcement (permit compliance, access control, protection)	\$22,000
Maintenance (check stations, blinds, disking, mowing, etc.)	\$36,000
Personnel Services (managerial, biological, clerical, etc.)	\$39,000
TOTAL	\$100,000

Funds are currently available to operate and maintain the hunt program. To defray expenses connected with the operation and maintenance of the hunting program, the CDFW is authorized to charge and retain a fee from each adult hunter. Hunter fees are determined annually in advance of the hunting season by the California Fish and Wildlife Commission. At present, the Refuge entry permit fees are: one-day \$21.60, two-day \$35.13, or a season pass with a one-time, base fee of \$163.90. These fees are adjusted annually, as required under Fish and Game Code Section 713. Holders of valid junior hunting licenses and non-shooters are exempt from these fees.

Anticipated Impacts of Use:

Direct effects of hunting include mortality, wounding, and disturbance (De Long 2002). Hunting can alter behavior (i.e. foraging time), population structure, and distribution patterns of wildlife (Owens 1977, Raveling 1979, White-Robinson 1982, Thomas 1983, Bartelt 1987, Madsen 1985, and Cole and Knight 1990). There also appears to be an inverse relationship between the numbers of birds using an area and hunting intensity (DeLong 2002). In Connecticut, lesser scaup were observed to forage less in areas that were heavily hunted (Cronan 1957). In California, the numbers of northern pintails on Sacramento Refuge non-hunt areas increased after the first week of hunting and remained high until the season was over in early January (Heitmeyer and Raveling 1988). Following the close of the hunting season, ducks generally increased their use of the hunt area; however, use was lower than before the hunting season began. Human disturbance associated with hunting includes loud noises and rapid movements, such as those produced by shotguns and boats powered by outboard motors. This disturbance, especially when repeated over a period of time, compels waterfowl to change food habits, feed only at night, lose weight, or desert feeding areas (Madsen 1995, Wolder 1993).

These impacts can be reduced by the presence of adjacent sanctuary areas where hunting does not occur, and birds can feed and rest relatively undisturbed. Sanctuaries or nonhunt areas have been identified as the most common solution to disturbance problems caused from hunting (Havera et. al 1992). Prolonged and extensive disturbances may cause large numbers of waterfowl to leave disturbed areas and migrate elsewhere (Madsen 1995, Paulus 1984). In Denmark, hunting disturbance effects were experimentally tested by establishing two sanctuaries (Madsen 1995). Over a 5-year period, these sanctuaries became two of the most important staging areas for coastal waterfowl. Numbers of dabbling ducks and geese increased 4 to 20 fold within the sanctuary (Madsen 1995). Thus, sanctuary and non-hunt areas are very important to minimize disturbance to waterfowl populations to ensure their continued use of the Refuges.

Intermittent hunting can be a means of minimizing disturbance, especially if rest periods in between hunting events are weeks rather than days (Fox and Madsen 1997). It is common for Refuges to manage hunt programs with non-hunt days. At Sacramento Refuge, 3-16 percent of pintails were located on hunted units during non-hunt days, but were almost entirely absent in those same units on hunt days (Wolder 1993). In addition, northern pintails, American wigeon, and northern shovelers decreased time spent feeding on days when hunting occurred on public shooting areas, as compared to non-hunt days (Heitmeyer and Raveling 1988). The intermittent hunting program of three hunt days per week at Sacramento Refuge resulted in lower pintail densities on hunt areas during nonhunt days than non-

hunt areas (Wolder 1993). However, intermittent hunting may not always greatly reduce hunting impacts.

The impacts addressed here are discussed in detail in the EA (Appendix A) for the Final CCP (USFWS 2009a) and the Environmental Assessment (2019) which is incorporated by reference. Biological conflicts will be minimized by following proper zoning and regulations. Refuge seasons will be designated to minimize negative impacts to wildlife.

Hunting is a highly regulated activity, and generally takes place at specific times and seasons (fall and winter) when the game animals are less vulnerable, reducing the magnitude of disturbance to the Refuges' wildlife. Managed and regulated hunting will not reduce species populations to levels where other wildlife-dependent uses will be affected.

The use of retrieving dogs would be permitted and encouraged in all areas open to waterfowl hunting. These dogs would be required to be under control at all times. Any hunter who allows his/her dog to disturb wildlife is not well received by other hunters who do not want waterfowl disturbed on the ponds that they are hunting. Law enforcement officers will enforce regulations requiring owners to maintain control over their dogs while on the Refuges. Although the use of dogs is not a form of wildlife-dependent recreation; they do in this case support a wildlife dependent use and reduce crippling loss. Implementing the prescribed restrictions outlined in the Stipulations section should alleviate any substantial impacts.

Hunting is an appropriate wildlife management tool that can be used to manage wildlife populations. Some wildlife disturbance will occur during the hunting seasons. Proper zoning, regulations, and Refuge seasons will be designated to minimize any negative impacts to wildlife populations using the Refuges. Harvesting these species, or any other hunted species, would not result in a substantial decrease in biological diversity on the Refuges.

Conflicts between hunting and other public uses will be minimized by the following:

- Physically separate non-hunting and hunting acres to spatially divide the activities.
- Hunting will be limited to occur only on Wednesdays, Saturdays, and Sundays during hunting seasons established by the California Fish and Wildlife Commission.
- Boundary and hunting area signs will be maintained to clearly define the designated hunting areas.
- Allow vehicle traffic only on designated roads and parking areas.
- Parking areas will be signed and gated to allow only pedestrian access.

- The hunting program will be highly regulated and managed in strict accordance with all applicable Federal laws (Code of Federal Regulations, Title 50 subchapter C) and to the extent practicable, consistent with applicable State laws.
- Field checks by refuge law enforcement officers will be planned and coordinated with staff and other agencies to maintain compliance with regulations and assess species and number harvested.
- Provide information about the Refuges' hunting program through signs, kiosks, brochures, and Complex's website (<http://sacramentovalleyrefuges.fws.gov>).
- No camping or tents are allowed on the Refuges.

Wildlife populations on the Refuges are able to sustain hunting and support other wildlife dependent priority uses. To manage the populations to support hunting, the Refuges adopt harvest regulations set by the State within Federal framework guidelines.

By its very nature, hunting has very few positive effects on the target species while the activity is occurring. However, in our opinion, hunting has given many people a deeper appreciation of wildlife and a better understanding of the importance of conserving their habitat, which has ultimately contributed to the Refuge System mission. Furthermore, despite the potential impacts of hunting, a goal of the Sacramento, Delevan, Colusa, and Sutter Refuges is to provide visitors of all ages an opportunity to enjoy wildlife-dependent recreation. Of key concern is to offer a safe and quality program and to ensure adverse impacts remain at an acceptable level.

Recreational hunting will remove individual animals, but does not negatively affect wildlife populations. To assure that populations are sustainable, the California Fish and Game Commission, in consultation with the CDFG, annually review the population censuses to establish season lengths and harvest levels. Each year the refuge staff conducts habitat management reviews of each unit on the Complex to evaluate wildlife population levels, habitat conditions and public use activities. The areas closed to various hunting activities provide adequate sanctuaries for wildlife.

The Service believes that there will be minimal conflicts between hunters and the other wildlife-dependent recreational uses. The uses are not occurring on the same area at the same time.

The hunting program has been designed to avoid or minimize impacts anticipated to Refuge resources and Refuge visitors. Section 7 consultations were completed with the Service (2008) and NOAA-Fisheries (2008) on the Draft CCP/EA for the following species: palmate-bracted bird's beak, hairy Orcutt grass, Greene's

tuctoria, Hoover's spurge, Conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, giant garter snake, winter-run Chinook salmon, spring-run Chinook salmon, Central Valley steelhead, fall-run Chinook salmon, and late fall-run Chinook salmon. Since the CCP was issued in 2009, the Service designated the western yellow-billed cuckoo as a threatened species under the Federal Endangered Species Act. The western yellow-billed cuckoo requires dense, large tracts of riparian woodlands with well-developed understories for breeding. Comprehensive surveys conducted between 1999 and 2000, located cuckoos at Sutter Refuge (Isola 2000), but not in the hunt area. Accordingly, we determined that hunting would have no effect on the western yellow-billed cuckoo.

Public Review and Comment:

Public review of this compatibility determination was concurrent with the Environmental Assessment. No public comments were received.

Determination:

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations necessary to ensure compatibility:

Refuge Specific Regulations. Hunting of Migratory Game Birds: We allow the hunting of geese, ducks, coots, moorhens, and snipe on designated areas of the refuge subject to the following conditions [for Sacramento Refuge (see regulations 1-13 below), Delevan Refuge (see regulations 1-13 below), Colusa Refuge (see regulations 4-13 below), and Sutter Refuge (see regulations 4-13 below)]:

1. You must unload firearms while transporting them between parking areas and spaced blind areas.
2. We do not allow snipe hunting in the spaced blind area.
3. We restrict hunters to the spaced blind unit to within 100 feet (30 m) of their assigned hunt site except for retrieving downed birds, placing decoys, or traveling to and from the parking area.
4. You may possess only approved nontoxic shot while in the field.
5. You may possess no more than 25 shells while in the field.
6. Access to the hunt area is by foot traffic only. We do not allow bicycles and other conveyances. Mobility-impaired hunters should consult the refuge manager for allowed conveyances.

7. No person may build or maintain fires, except in portable gas stoves.
8. You may enter or exit only at designated locations.
9. Vehicles may stop only at designated parking areas. We prohibit the dropping of passengers or equipment or stopping between designated parking areas.
10. We require dogs to be kept on a leash, except for hunting dogs engaged in authorized hunting activities and under the immediate control of a licensed hunter (see 50 CFR 26.21(b)).
11. We allow only electric motors on boats used by hunters with disabilities.
12. Consumption or possession of an open container of alcohol within public areas on the Refuges is prohibited.

Upland Game Hunting: We allow hunting of pheasant and wild turkey on designated areas of the refuge subject to the following conditions [for Sacramento Refuge (see regulations 1-9 below), Delevan Refuge (see regulations 1-9 below), Colusa Refuge (see regulations 2-9 below), and Sutter Refuge (see regulations 2-9 below)]:

1. We do not allow pheasant in the spaced blind and assigned pond areas except during a special 1 day only pheasant hunt on the first Monday after the opening of the State pheasant hunting season.
2. We do not allow wild turkey hunting in the space blind and assigned pond areas.
3. You may possess only approved nontoxic shot while in the field.
4. Access to the hunt area is by foot traffic only. We do not allow bicycles and other conveyances. Mobility-impaired hunters should consult the refuge manager for allowed conveyances.
5. You may possess no more than 25 shells while in the field.
6. No person may build or maintain fires, except in portable gas stoves.
7. You may enter or exit only at designated locations.
8. Vehicles may stop only at designated parking areas. We prohibit the dropping of passengers or equipment or stopping between designated parking areas.
9. We require dogs to be kept on a leash, except for hunting dogs engaged in authorized hunting activities and under the immediate control of a licensed hunter.
10. Consumption or possession of an open container of alcohol within public areas is prohibited.

- All hunting activities and operations will be reviewed annually to ensure compliance with all applicable laws, regulations, and policies.
- Population censuses will be reviewed annually with the CDFW to ensure that harvest from hunting is not unacceptably impacting the targeted populations. The program will be modified accordingly.
- Each year the Refuge staff will conduct habitat management reviews of each unit to evaluate wildlife use, habitat conditions and public use activities.
- Refuge specific hunting information will be available via signs, information panels, brochures and the website (<http://sacramentovalleyrefuges.fws.gov>).
- Refuge law enforcement officers will patrol, monitor, and collect data on hunting activities in the field to assure that it does not interfere with wildlife resources and other wildlife dependent uses on a weekly basis. The program will be modified accordingly.
- Dog training on the Refuges will not be allowed.
- Harvest will be recorded at each of the Refuges' check stations.

Justification:

Hunting is a wildlife-dependent recreational use listed in the National Wildlife Refuge System Improvement Act. Providing a quality hunting program contributes to achieving one of the Refuges' goals (Goal 3, Objective 3.1, Chapter 4 of the CCP). By facilitating this use on the Refuges, we will increase the visitors' knowledge and appreciation of fish and wildlife, which may lead to increased public stewardship of wildlife and their habitats on the Refuges. Increased public stewardship will support and complement the Service's actions in achieving the Refuges' purposes and the mission of the National Wildlife Refuge System. Approximately 15,448 acres will be closed to hunting and 11,152 acres will be closed to all public use to ensure an adequate amount of high-quality feeding and resting habitat (USFWS 2008a).

Based upon impacts described in the 2019 Wild Turkey Hunt Plan and Environmental Assessment (USFWS 2019), the Hunt Plan and the Final Comprehensive Conservation Plan and Environmental Assessment (USFWS 2009a, b), it is determined that hunting within the Sacramento, Delevan, Colusa, and Sutter National Wildlife Refuges, as described herein, will not materially interfere with or detract from the purposes for which the Refuges were established or the mission of the Refuge System. In our opinion, hunting as described above will not

conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the Refuges.

Mandatory Re-Evaluation Date:

Mandatory 15-year Re-Evaluation

Mandatory 10-year Re-Evaluation (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

Categorical Exclusion without Environmental Action Statement

Categorical Exclusion and Environmental Action Statement

Environmental Assessment and Finding of No Significant Impact

Environmental Impact Statement and Record of Decision

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Refuge Determination

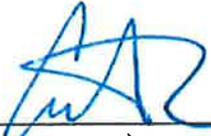
Prepared by:



(Signature)

8/29/2019
(Date)

Refuge Manager/
Project Leader
Approval:

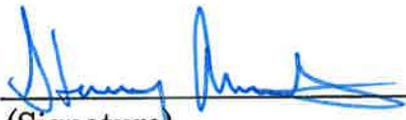


(Signature)

8/29/2019
(Date)

Concurrence

Refuge Supervisor:



(Signature)

8/29/19
(Date)

Assistant Regional
Director, Refuges:



(Signature)

8.29.19
(Date)