

Compatibility Determination
Waterfowl Hunting on
5,500 Acres of Former Commercial Salt Ponds,
Don Edwards San Francisco Bay NWR
Alviso and Ravenswood Salt Ponds
October, 2004

Use: Waterfowl Hunting, Motorized and Non motorized Boating, Walking, Driving Motorized Vehicles to Ponds, Dogs

Station Name: Don Edwards San Francisco Bay National Wildlife Refuge, Alameda, Santa Clara and San Mateo Counties, California; see <http://desfbay.fws.gov/>, San Francisco Bay National Wildlife Refuge Complex

Date Established: June 30, 1972

Establishing and Acquisition Authorities:

86 Stat. 399, June 30, 1972, as amended by 102 Stat. 2779, October 28, 1988

Purposes for which Established:

“...for the preservation and enhancement of highly significant habitat...for the protection of migratory waterfowl and other wildlife, including species known to be threatened with extinction, and provide opportunity for wildlife oriented recreation and nature study...” 86 Stat 399, dated June 30, 1972.

National Wildlife Refuge System Mission: The mission of the National Wildlife Refuge System is “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-668ee]).

Description of Proposed Use: This Compatibility Determination concerns the proposed waterfowl (duck, goose, and coot) hunting program for the Alviso and Ravenswood Salt Ponds acquired in fee title by the United States Fish and Wildlife Service (Service) from Cargill, Inc. in March 2003 (Figure 1). The approximately 5,500 acres of salt ponds are located in Alameda, Santa Clara and San Mateo Counties in the South San Francisco Bay, California (Figure 1). These lands are part of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge).

This acquisition included ponds in the Refuge’s Alviso Unit, the Mowry Slough Unit and the Ravenswood Unit. Specifically, the following ponds were acquired in fee title and are included in this Compatibility Determination: Alviso Unit ponds A1, A2W, AB1, A2E, AB2, A3N, A3W, A5, A7, A8N and A8S; Mowry Slough Unit ponds A22 and A23 (eastern portions only); and Ravenswood Unit (West Bay) ponds SF-2, R3, R4, R5 and RS5. The lands covered in this

Compatibility Determination are former commercially operated salt ponds surrounded by upland levees that were operated and maintained by Cargill Salt Division. Thin strips of tidal marsh occur along the base of the levees and in the slough channels between some of the levees (Permanente Creek, Stevens Creek, Guadalupe Slough, and Alviso Slough). Areas outside the levees (salt marshes) are generally not part of the purchased lands and are not subject to this Compatibility Determination.

The Refuge purchased 5,500 acres of Cargill land in fee title. Approximately 5,000 acres are pond area and approximately 500 acres are upland areas such as pond levees and small pieces of adjacent mudflats and creeks that were artifacts of the land surveys and were not considered for inclusion in the Compatibility Determination.

A Hunt Plan with Compatibility Determination for the previously acquired portions of the Refuge, including salt ponds for which the Service recently acquired salt-making rights, was completed in 1982. This Compatibility Determination with Environmental Assessment and Hunt Plan Amendment amends the 1982 plan to include the new fee lands, but does not make additional changes. The existing 1982 Refuge Hunt Plan authorizes waterfowl hunting in many Refuge tidal marshes, tidal sloughs and certain commercial salt ponds in the Refuge's Mowry Slough Unit and Ravenswood Unit.

Under the Initial Stewardship Plan (ISP) (FWS 2004), the Refuge proposes to change the operation of the ponds from Cargill's past management. The ISP salinity reduction operations would continue during the development and implementation of the South Bay Salt Pond Restoration Plan (Plan), a long-term restoration plan for the salt ponds. Operations under the ISP are anticipated to last for 5 to 50 years, depending on the pond. Implementation of the Plan is expected to begin in 2008 and would continue in phases for 20 to 50 years. Under the ISP, decisions on hunting were deferred until this Amendment could be developed. No hunting has been allowed during the development of the Amendment. In the development of the ISP, it was decided to keep these ponds closed to all public access until the Plan was completed except continued trail access along Stevens Creek Trail on the west edge of Ponds A2E and AB1 which occurred under Cargill's ownership and docent-led tours. Once the Plan is completed, selected ponds would be converted to tidal marsh and all public use including waterfowl hunting would be reconsidered.

The Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) proposes to provide opportunities for waterfowl hunting that are compatible with the Refuge purposes. Detailed descriptions of the hunting program and predicted effects are given in the Amendment to the Refuge Hunting Plan and the Environmental Assessment (EA) that are incorporated by reference herein. Waterfowl hunting when compatible is a priority public use of the Refuge System, a "wildlife-dependent recreational use" (a Refuge purpose), and a traditional use of the former commercial salt ponds. It is supported by the California Department of Fish and Game. This wildlife-dependent recreational use is supported by other activities including boating, driving to the ponds, walking, and use of retrieval dogs. Because they are highly interrelated, this compatibility determination includes an assessment of these activities in conjunction with waterfowl hunting.

The hunting program is described in detail in Chapter V. of the “Amendment to Refuge Hunting Plan for Waterfowl on 5,500 acres of Former Commercial Salt Ponds” and Chapter 2, Alternative 2 of the Environmental Assessment.

Ponds AB1, A2E, AB2, A3N, A3W, A5, A7 and A8N would be open to waterfowl hunting three days a week for a total of approximately 2,622 acres. Ponds A1, A2W, A8S, A22, A23, R3, R4, R5, SF-2 and S5 would be closed to waterfowl hunting for a total of approximately 2,378 acres. 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. They would be in a vehicle or on a leash until they are on the ponds as a part of the hunt or on the levees (Ponds A5, 7 and 8N only) as a part of the hunt. A Refuge Special Use Permit would be required for hunting of the ponds in this Hunt Plan Amendment. An annual fee would be charged which would cover, hunting on the ponds, use of existing hunt blinds, and use of boats on the ponds. The Refuge would remain closed to all other forms of hunting, target shooting, or training of dogs.

Ponds A5, A7 & A8N:

Waterfowl hunting on Salt Ponds A5, A7 and A8N would be permitted on Saturdays, Sundays and Wednesdays on a walk in basis. Hunters would be allowed to enter the pond system from Gold Street in Alviso (Figure 6). The Gold Street gate would be opened one hour before the start of shoot time and closed one hour after end of shoot time. Parking would be at the designated parking lot and along Gold Street. Hunters would be able to hunt from the levees and use small private boats to reach blinds in the ponds. Under the provisions of the Special Use Permit, these private boats would be placed in the ponds before the hunting season, must be left in the ponds during the season and removed after the hunting season. The boats would be either non motorized or electric motors. The existing blinds could be maintained by private parties with Refuge Special Use Permits but must be open to all hunters on a first come, first use basis. No new blinds would be allowed.

Ponds AB1, A2E, AB2, A3N, and A3W:

Hunting in these ponds would be the same as described above for Ponds A5, A7, and A8N except access would be restricted to use of motor vehicles driven to the small private boats in the ponds and hunting would only be allowed from existing blinds in the ponds. Hunting would not be allowed from levees. Access to Ponds AB1 and A2E would be by motor vehicles from the end of Crittenden Lane in Mountain View (Figure 4), across the bridge over Stevens Creek and along the East Levee to the boats moored on the Refuge ponds. Access to Pond A3W would be from the end of Carl Road in Sunnyvale (Figure 5) to the Cargill levee road along the A3W/A4 channel to the boats moored on the Refuge pond. Access to Ponds AB2 and A3N would be by boat from AB1, A2E or A3W (Figure 3). Vehicle access would be restricted to those days that the levees are dry enough to be driven safely and prevent damage to the levees. If the access levees are too wet, the ponds would not be open to hunting.

The Hunting Program would be monitored by taking information on number of hunters and harvest information conducted by Refuge law enforcement staff. Enforcement staff would also

monitor for compliance with laws and regulations, and impacts to non-huntable wildlife. The Refuge managers would continue to be in contact with local governments adjacent to the proposed hunt areas to determine if there are any conflicts with existing users. The Refuge conducts snowy plover surveys and would close any ponds to hunting that contain this species. The Refuge would continue to inventory bird populations through USGS pond surveys and the mid-winter waterfowl surveys. This information would be compared to data from years with the Cargill hunt program and the recent years without hunting to determine if the implemented program is providing quality hunting opportunities for the public, causing conflict with other users and/or impacting bird populations or habitat. Adjustments to the hunt program would be made to correct unanticipated negative impacts.

Salt Ponds A1, A2W, A8S, A22, A23, R3, R4, R5, SF-2 and RS5:

The following ponds would be closed to public use: Salt Ponds A1, A2W, A8S, A22, A23, R3, R4, R5, SF-2 and RS5. Of these ponds, only A1 and A2W were open to hunting under Cargill ownership, (Figure 2).

The following Alviso Ponds had been hunted historically under Cargill's ownership: A1, A2W, AB1, A2E, AB2, A3N, A3W, A5, A7, and A8. Ponds A22 and A23, and the Ravenswood Ponds were not open to hunting under Cargill ownership (See Figure 2). A description of the Cargill hunt program is contained in detail in Chapter I. of the "Amendment to Refuge Hunting Plan for Waterfowl on 5,500 acres of Former Commercial Salt Ponds" and Chapter III, Affected Environment of the Environmental Assessment. Cargill's hunt program was operated through a system of private leases and subleases. Most ponds were open to hunting 7 days a week, though a few ponds were open only a few days a week.

In the 2002-2003 hunt season, 175 leaseholders and sublease holders used the 3,328 acres of salt ponds under the Cargill hunt program (personal communication. Chuck Taylor, Cargill). Some ponds had as many as 30 hunters while others had as few as 5 hunters, with an average of 17.5 hunters per pond. Although no formal surveys were taken, Cargill staff estimate their ponds supported approximately 1,000 hunter days each year.

It is anticipated that the proposed Hunt Plan Amendment would have approximately equal or fewer hunters as what existed under the Cargill program (See section on "potential for disturbance of salt pond-associated wildlife other than waterfowl" on Page 8 below). Because salinities of most of the ponds would be closer to Bay waters than they were under Cargill's ownership, it is expected that waterfowl would be more evenly distributed among the ponds (Chapter III Affected Environment of Environmental Assessment). With the waterfowl more evenly distributed, it is expected that hunter pressure would be more evenly distributed among the ponds than occurred under Cargill ownership. Because access would be more difficult than under Cargill ownership (Chapter II Alternative Description of Environmental Assessment), fewer of the hunters who used the ponds under Cargill ownership may be willing to use the ponds. However, the ponds would be open to the public instead of restricted to leaseholders as occurred under Cargill ownership so this could result in similar or fewer hunters than what existed under Cargill ownership.

Availability of Resources:

Approximately 80 staff days would be required to monitor and conduct the Hunt Plan Amendment for the newly acquired salt ponds. This would include opening and closing the access gate to Ponds A5, A7 and A8N on each of the three hunt days each week during the season as well as law enforcement patrol. This would also include opening all the ponds two weekends before the opening of hunt season and two weekends after the closing of the season to allow hunters to place and retrieve small boats in the ponds and maintain blinds under Refuge Special Use Permits. It would also include sign posting, responding to public inquiries and issuance of Special Use Permits. During the first year, the Refuge would establish locations to moor boats on the ponds. Small improvements may be made as necessary for access to the ponds for hunting. The California Waterfowl Association has agreed to partner with the Refuge to hold organized work parties to assist the Refuge in blind and boat dock maintenance at the ponds before each hunting season. The total cost of the program is expected to be \$28,000.00 per year. The initial setup in the first year for the hunt program is expected to cost an additional \$15,000.00. A Refuge Special Use Permit would be required for hunting of the ponds in this Hunt Plan Amendment. An annual fee would be charged for hunting on the ponds, use of existing hunt blinds and use of boats. Base funding is sufficient to cover costs beyond what would be collected for the permits.

Anticipated Impacts on Service Lands, Waters, or Interests: The potential impacts of the proposed Hunt Plan Amendment are evaluated in detail in Chapter VI. of the “Amendment to Refuge Hunting Plan for Waterfowl on 5,500 acres of Former Commercial Salt Ponds” and Chapter 4, Alternative 2 of the Environmental Assessment. The following discussion provides only a summary of the impacts on the Hunt Plan Amendment on the ability of the Refuge to achieve Refuge purposes and the mission of the Refuge System.

Effects on the Refuge’s Ability to Achieve Refuge Purposes:

“...for the preservation and enhancement of highly significant habitat...for the protection of migratory waterfowl and other wildlife, including species known to be threatened with extinction...” 86 Stat 399, dated June 30, 1972.

Under the proposed Hunt Plan Amendment, a small, temporary decline in the Refuge waterfowl population could occur because of the direct loss of individual birds shot by hunters. However, because the ponds would only be open to hunting three days a week, the ponds would serve as a sanctuary for waterfowl four days a week. Viable populations of waterfowl have been maintained in the South San Francisco Bay during the past decades under existing hunt programs on Refuge lands and on Cargill managed salt ponds under Cargill ownership. Hunting levels are expected to be similar or less under this alternative than under the Cargill management (See section on “potential for disturbance of salt pond-associated wildlife other than waterfowl on Page 8 below). Therefore, it is expected that the viable populations of waterfowl would continue to be maintained under this alternative.

An informal Section 7 of the Endangered Species Act consultation is being conducted on this proposed amendment of the Refuge Hunt Plan. The consultation would be included in the final Environmental Assessment.

The following federally listed species are known to use salt pond habitat or adjacent salt marsh habitat in the South San Francisco Bay:

Endangered Species:

California brown pelican (*Pelecanus occidentalis*): There are no roost sites or feeding areas for brown pelicans in the South Bay. Brown pelicans breed on the Channel Islands and south into Mexico. During the summer and fall there is a post-breeding dispersal up the Pacific Coast (Anderson and Gress 1983). Brown pelicans begin arriving in northern California in April or May, and numbers are highest in July through September following their breeding season. Pelicans roost in several sites in north and central San Francisco Bay, and on the Farallon Islands. They feed on small surface-schooling fish, primarily anchovy, in the Bay and coastal waters. Pelican numbers begin dropping in November, and the majority have retreated south by the end of December (Jaques-Strong 1994).

Brown pelicans are occasionally observed in South Bay salt ponds but they do not use salt ponds for any particular life history component, nor have they been documented to favor certain ponds over others. Brown pelicans have not been observed in salt ponds during the mid-winter waterfowl surveys that are conducted in early January or late December (Joelle Buffa, personal communication). United States Geological Survey (USGS) conducted waterfowl surveys of the newly acquired salt ponds during 2002 and 2003 (USGS Unpublished Data 2002-2203). The following table lists the USGS brown pelican observations during hunting season (late October through January) on the salt ponds proposed to be open to hunting under the Refuge Hunt Plan Amendment.

Table 1. Brown Pelican Observations on Ponds Proposed to be Open to Hunting under the Amendment

	AB1	A2E	AB2	A3N	A3W	A5	A7	A8N
2002	0	0	0	4 in Dec	1 in Oct 2 in Nov 5 in Dec	2 in Nov	0	0
2003	0	1 in Jan	1 in Jan	0	1 in Jan	0	0	0

Although sparse, these data demonstrate the intermittent manner in which brown pelicans use the salt ponds. While ponds A3N and A3W had a combined total of 12 observations in 2002, only 1 brown pelican was seen on these ponds in 2003. Additionally, during the 2002 observation period, the ponds were still open to hunting under Cargill’s more extensive hunt program. Although brown pelicans were observed on the ponds during hunt season that year, there are no reported cases of take of brown pelicans in these ponds under Cargill’s hunt program, nor on the Refuge’s ponds currently open to waterfowl hunting. Because of the pelicans obvious differences in size and shape, hunters are unlikely to confuse pelicans with legally hunted

waterfowl.

No adverse impacts to brown pelicans are expected under this Hunt Plan Amendment. Hunting season does not coincide with seasonal pelican distribution in northern California. The majority of pelicans have moved south to breeding areas by November and December. The closest Bay Area roost to the subject ponds is Breakwater Island in Alameda, over 20 miles north of the Dumbarton Bridge. Although the USGS data shows that some lingering brown pelicans from this roost may still be present during hunting season, there is ample comparable habitat in the south Bay for them to use, including tidal marsh, open bay, and adjacent non-disturbed ponds. Additionally, pelicans spend the night on their roosts and most hunting occurs in the early morning hours, which makes the chances of a pelican being in the vicinity of hunting activity even more unlikely. Therefore, the chance of a pelican landing in a pond during the period of time actually occupied by hunters is very small. The proposed hunting may affect individual pelicans but the brown pelican is not likely to be adversely effected.

Although no adverse impacts to brown pelicans are expected under this Hunt Plan Amendment, the slight chance that a brown pelican would be present or fly over one of the salt ponds proposed to be open to hunting does exist. In order to reduce to inconsequential any disturbance to brown pelican, and eliminate the potential for take on ponds open to hunting, law enforcement activity would be heightened during the waterfowl season. Additionally, the USGS surveys of the ponds will continue as part of the monitoring program for the ISP. These data will be assessed annually by the Refuge Manager. If brown pelican observations increase substantially on any of the ponds, the potential for disturbance will be re-evaluated and the hunting program modified to eliminate any negative impacts. USGS monitors will be put on "heightened awareness" during the hunting season and instructed to report any brown pelican disturbance to the Refuge Manager.

California clapper rail (*Rallus longirostris obsoletus*): The California clapper rail resides year round in tidally inundated pickleweed-dominated salt marsh habitat. The California clapper rail is generally found in the low- to mid- elevations of the marsh, and spends most of the time hiding within the vegetation (*Spartina* spp. and *Grindelia* spp.). Clapper rails are most sensitive to disturbance during their breeding season which is February 1 through August 31st. Since the hunting season does not overlap with clapper rail breeding season, no impacts to breeding rails are anticipated. Non-breeding rails will not be impacted either because no suitable salt marsh habitat is found within the salt ponds that are the subject of this alternative. Thin (< 5 feet wide) strips of salt marsh vegetation are found along the base of certain salt pond levees on the Refuge. Wider areas of salt marsh vegetation exist along the exterior side of levees that border the section of the following slough channels (Permanente Creek, Stevens Creek, Guadalupe Slough, and Alviso Slough) near the Bay. In order to avoid potential trampling of marsh habitat or disturbance by hunters or their dogs, hunters would not be allowed to hunt on foot along the levees of ponds that are bordered with salt marsh vegetation. The pond levees that have suitable salt marsh vegetation along their edges (AB1, AB2, and A3N) will be closed to walking hunters. Hunters would only be allowed to hunt from existing blinds on the interior of these ponds which would only be accessed via boats that are moored at designated places within the pond. There would be no effect on the rail.

California least tern (*Sterna antillarum browni*):

The California least tern does not currently breed on the Refuge. Individuals breeding at Alameda Point feed on open water areas of the Bay. The terns use the salt ponds on the Refuge during late summer and early fall prior to migration from their nesting grounds. The hunting season typically opens in mid-October and ends in late-January. Terns are not present during the hunting season and therefore would not be affected by the proposed action.

Salt marsh harvest mouse (*Reithrodontomys reventris reventris*): The salt marsh harvest mouse is a year round, breeding resident of tidally inundated, pickleweed-dominated salt marsh habitat on the Refuge. Salt marsh harvest mice can survive in pickleweed-dominated areas at all elevations, including the margins, of the marsh. No suitable salt marsh habitat is found within the salt ponds that are the subject of this alternative. However, the thin (< 5 feet wide) strips of salt marsh vegetation that line the base of certain salt pond levees are considered suitable habitat for the salt marsh harvest mouse. Therefore, hunters would only be allowed to hunt by foot along the levees of ponds that are not bordered with salt marsh vegetation. Wider areas of salt marsh vegetation exist along the exterior side of levees that border the section of the following slough channels (Permanente Creek, Stevens Creek, Guadalupe Slough, and Alviso Slough) near the Bay. In order to avoid potential trampling of marsh habitat by hunters or their dogs, hunters would only be allowed to hunt on foot along the levees of ponds that are not bordered with salt marsh vegetation. The pond levees that have suitable salt marsh vegetation along their edges (AB1, AB2, and A3N) will be closed to walking hunters. Hunters would only be allowed to hunt from existing blinds on the interior of these ponds which would only be accessed via boats that are moored at designated places within the pond. There would be no effect on the salt marsh harvest mouse.

Threatened species:

Western snowy plover (*Charadrius alexandrinus nivosus*): Western snowy plovers nest and winter on salt ponds which are dry or have limited water confined to the dredge channels along the inside edges of the levees. None of the ponds that would be open to hunting under the proposed action have been used by plovers during the hunting season for the past five years. Ponds A22, A23, SF-2, R3 and R4 have had nesting and wintering plovers at least one year out of the past five years. Although ducks do not normally use these dry ponds, these five ponds would be closed to hunting in order to avoid any impact to nesting or wintering plovers.

Ponds A8N and A3N are operated as seasonal ponds and fill with rain water. Under normal rainfall years, these ponds fill with sufficient water so as to not be considered suitable habitat for snowy plovers. However, if an extremely dry year is encountered such that these two ponds are dry enough to become suitable plover habitat, they will be closed to hunting. No impact on snowy plovers is expected under the proposed action.

This Hunt Plan Amendment would have the potential for disturbance of salt pond-associated wildlife other than waterfowl (e.g.; shorebirds, grebes, great blue heron, and egrets) but any disturbance would likely be minor and short-term. These birds might move when they see

hunters boating to the blinds, walking the levees (only allowed in Ponds A5, 7 and A8N), driving to the ponds (levees to Ponds A2E, AB1 and A3W), and when shotguns are fired. Because of the wide open nature of the levees, waterfowl would be able to see hunters and/or their vehicles on the levees and move off before the hunters come within shooting distance. Under the existing Refuge Hunt Plan, Ponds R1 and 2 (which are smaller than the subject ponds) are used by hunters on a walk in basis but blinds in the ponds have never been used.

While on patrol of these ponds during the waterfowl hunting season as a Refuge Law Enforcement Officer, I observed wildlife's (both waterfowl and non waterfowl) reaction to hunters walking, driving the law enforcement vehicle on pond levees, and attempting to hunt from the pond levees. The majority of these ponds had as high density of bird use in the areas of the ponds more than approximately 100 feet from the levees as the ponds that did not have hunting and were of similar salinity. Waterfowl and non huntable species (grebes, heron, egrets, shorebirds) that were approached by hunters on the levees would fly or swim to the unoccupied sections of the levees or beyond the 100 foot from the levees. It is expected that the ponds that are subject to hunting from levees in this Hunt Plan Amendment would have a similar impact to that observed on the Ravenswood Ponds. Similar to hunting on Ravenswood ponds, hunting from the Ponds A5, 7 and 8N would include hunting over tidal marsh and sloughs. None of the marsh around these ponds is endangered species habitat. The marshes and sloughs are California State Lands property which is open to hunting at this time. Therefore, allowing hunting of this area from the levees would not increase hunting opportunities beyond what exists currently nor would the impacts be different than currently exists. Because waterfowl move away from hunters on levees, this type of hunting is expected to be infrequent but is allowed to accommodate hunters without access to boats on the ponds. Hunting from the levees would be monitored by Refuge Law Enforcement Officers during the season and adjustments made if necessary.

Refuge's hunters would be restricted to using the same blinds that were established by Cargill (except for Ponds A5, 7 and 8N which also allows hunting from levees). Under Cargill's Hunt Program, California State Fish and Game Wardens reported that these ponds were so large compared to the number of blinds in the ponds, most of the waterfowl and non-huntable species did not react to hunters and their activities (personal communication with Fish and Game Wardens). Of the few that did react, some flew from the ponds but the majority swam away or flew a short distance to another part of the pond.

Though it would be monitored by Refuge Law Enforcement Officers during the hunt season so this information would be gathered in the future, it is not possible to know at this time what hunter density would be under this Hunt Plan Amendment. However, hunter density is expected to be similar or less than existed under Cargill ownership because the Refuge's hunters would be restricted to using the same blinds that were established by Cargill. Because salinities of most of the ponds would be closer to Bay waters than they were under Cargill's ownership, it is expected that waterfowl would be more evenly distributed among the ponds (Chapter III Affected Environment in the Environmental Assessment). With the waterfowl more evenly distributed, it is expected that hunter pressure would be more evenly distributed among the ponds than occurred under Cargill ownership. Because access would be more difficult on Ponds A5, 7 and A8 (walking access only under the Refuge plan while hunters drove to their boats in Cargill's

plan) than under Cargill ownership (Chapter II Alternative Description of the Environmental Assessment), fewer of the hunters who used the ponds under Cargill ownership may be willing to use the ponds.

Also there would be less impact on wildlife other than waterfowl because the ponds would be hunted for three days a week rather than seven days a week and two fewer ponds would be open to hunting. Refuge Law Enforcement Officers would be monitoring use of the ponds and adjustments could be made to the hunting programs to address any unanticipated negative impacts.

Accidental and illegal take of wildlife other than waterfowl (e.g.; shorebirds, grebes, great blue heron, and egrets) could occur but would be incidental and not measurable in the population of the species concerned. Illegal activity would likely not be more than what currently occurs on other parts of the Refuge that are already open to public hunting. There are no reported cases of wildlife take other than waterfowl in the areas of the Refuge that are currently open to waterfowl hunting (personal communication with Fish and Game Wardens and Refuge Law Enforcement Officers) and no reports of impact to wildlife other than waterfowl in these ponds under Cargill's more extensive hunt program (personal communication with Fish and Game Wardens). The potential for illegal take would be minimized with law enforcement during the waterfowl season.

Under this Amendment, hunters would use electric or non-motorized boats to access the established blinds in the ponds. The use of non-gas powered motors would eliminate water quality impacts from these boats. Boats could disturb some wildlife which would expend energy by moving to another part of the same pond or another area in the South San Francisco Bay. Hunters would also be encouraged to use dogs to retrieve downed waterfowl. They would keep the dog(s) under control at all times. These dogs would be in a vehicle or on a leash until they are on the ponds as a part of the hunt or on the levees (Ponds A5, 7 and 8N only) as a part of the hunt. Refuge Law Enforcement Officers and California Department of Fish and Game Wardens have reported that hunting dogs used in the South San Francisco Bay are kept under strict control at all times and rarely chase waterfowl or other wildlife. 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 and other hunters quickly encourage owners with uncontrolled dogs to leave (Personal communication with Refuge Law Enforcement Officers and California Department of Fish and Game Wardens as well as the author of this Environmental Assessment).

“... and provide opportunity for wildlife oriented recreation and nature study...” 86 Stat 399, dated June 30, 1972.

In the development of the ISP, it was decided to keep these ponds closed to all public access until the South Bay Salt Pond Restoration Plan (Plan) was completed except continued trail access along Stevens Creek Trail on the west edge of Ponds A2E and AB1 which occurred under Cargill's ownership and docent-led tours. Currently, these tours are only conducted off the Refuge on the Menlo Park Bayfront Park overlooking the Ravenswood Ponds (Figure 2). Since no hunting is proposed for these ponds, this plan would not impact the tours. Since over 2,000

acres of the recently purchased salt ponds would not be open to hunting and hunting is restricted to 3 days a week, the salt pond tours would have adequate locations and time to continue during the hunt season if the tours were expanded in the future. The hunting blinds on Ponds A2E and AB1 would be located a safe distance from the Stevens Creek Trail. Once the Plan is completed, selected ponds would be converted to tidal marsh and all public use including waterfowl hunting would be reconsidered and conflict minimized.

Allowing hunters to drive their private vehicles to the boats in the ponds will make hunting accessible to those who could not walk to the ponds. Selected blinds would be made accessible for those with special needs.

Waterfowl hunting is an historic and, for the most part, accepted recreational activity at Don Edwards San Francisco Bay NWR as it is on many units of the National Wildlife Refuge System. Currently, approximately 7,500 acres of the 30,000 acres on the Refuge are open to waterfowl hunting including salt ponds similar to those proposed for hunting under this amendment. Opportunities to hunt waterfowl in South San Francisco Bay outside the Refuge are limited. The nearest areas open to hunting have been the State and Federal lands (San Pablo Bay National Wildlife Refuges) in the North San Francisco Bay (1.5 hour drive) with more extensive hunting opportunities in the Sacramento – San Joaquin Delta and the Central Valley (2.5 to 5 hour drive). The California Department of Fish and Game is also considering opening a portion of the commercial salt ponds (Baumberg Area near the east side of the San Mateo Bridge in Alameda County) that they purchased from Cargill to waterfowl hunting. They opened a portion of their ponds in January 2004 to hunting for one day under a lottery basis. They may permit hunting in the future (personal communication, John Kraus, CDFG). Some of the open bay water and sloughs near the Refuge which are owned by State Lands are open to hunting though they can only be accessed by hunters with large enough boats that are suitable for the open bay waters. Like many of the former Cargill commercial salt ponds acquired by the Refuge, the CDFG ponds were hunted for many decades under Cargill ownership through the 2002-2003 hunt season.

Under Cargill's ownership, approximately 3,328 acres of the recently purchased ponds were open to waterfowl hunting through a system of private leases and subleases. The following Alviso Ponds were hunted historically under Cargill's ownership: A1, A2W, AB1, A2E, AB2, A3N, A3W, A5, A7, and A8. Ponds A22 and A23, and the Ravenswood Ponds were not open to hunting under Cargill ownership (Figure 2). Since the purchase of the ponds, waterfowl hunting has ceased pending the amendment of the Refuge Hunt Plan, this compatibility determination, an environmental assessment, concurrence from the State, Section 7 of the Endangered Species Act consultation and publication of regulations specific to waterfowl hunting of this area in the Federal Register. The Refuge has received numerous phone calls, letters and comment at public meetings requesting resumption of hunting on these ponds. The Refuge has also received comment that hunting should not be allowed on these ponds and should be stopped on all Refuge lands.

The environmental assessment analyzed the effects of three alternatives for hunting waterfowl on the Refuge. It analyzed the effects on the human environment including impacts to the Refuges biological resources as summarized in this compatibility determination and to adjacent

landowners and recreational users. The results of the analysis demonstrated that closing the subject ponds to hunting (Alternative 1: No Action) would have the least negative impact on the adjacent landowners and recreational users but would have a substantial negative impact on the hunting public. The alternative that would open all the recently acquired ponds to hunting (Alternative 3: Hunting On All Ponds) would have the greatest negative impact to the Refuge's resources and adjacent landowners but would offer the most hunting opportunities to the hunting public. The alternative based on the proposed Hunt Plan Amendment (Alternative 2: Waterfowl Hunting Confined to Certain Ponds) was demonstrated to offer a quality hunting opportunity for the hunting public consistent with the statutory guidance and minimize negative impacts to the Refuge's biological resources and the adjacent landowners and recreational users (Environmental Assessment).

With implementation of this Hunt Plan Amendment, hunting opportunities would be expanded on the Refuge in a manner that considers biological resources, local governments, and the public. The area that would be available for hunting would be less than what was available under the Cargill hunt program (Ponds A1 and A2W which were open to hunting would be closed under the proposed Hunt Plan Amendment). Instead of the 175 hunters who were allowed to hunt the ponds under Cargill's ownership, the ponds would be open to all licensed hunters. The portions of the Cargill hunt program that were most objectionable to adjacent landowners and the recreational users were hunting of Ponds A1 and A2W as well as hunters driving on publicly used hiking trails to reach the ponds. These issues have been eliminated under the proposed Hunt Plan Amendment with the closure of these ponds to hunting. However, hunting would still be adjacent to some adjacent landowners and within sight and hearing of some recreational users who may object to hunting.

Effects on the Refuge's Ability to Contribute toward the National Wildlife Refuge System Mission:

Because each Refuge within the National Wildlife Refuge System contributes to the conservation of fish, wildlife, plants, and their habitat, the effects described previously affect the overall ability of the Service to achieve this fundamental mission. Providing high quality habitat, which includes protection from disturbance of endangered species and areas of refuge for resident and migratory wildlife, on the Don Edwards San Francisco Bay NWR is especially important given the high number of endangered species and limited wildlife habitat available outside the Refuge in South San Francisco Bay.

There would be no measurable effect on Flyway waterfowl populations. Because annual Pacific Flyway harvest regulations are designed to ensure that viable populations of waterfowl are sustained over the long term, this proposal would not have any measurable impact on viable populations of waterfowl species as long as regulations are enforced on the Refuge. Wildlife populations would continue to be monitored under this Hunt Plan Amendment.

Effect on the Refuge's Ability to Contribute toward the U.S. Fish and Wildlife Service's Policy on Biological Integrity, Diversity, and Environmental Health:

The Service's policy on Biological Integrity, Diversity, and Environmental Health (FWS 601 FW 3. 2001) states: "We will, first and foremost, maintain existing levels of biological integrity, diversity, and environmental health at the refuge scale. Secondly, we will restore lost or severely degraded elements of integrity, diversity, and environmental health at the refuge scale and other appropriate landscape scales where it is feasible and supports achievement of refuge purpose(s) and System mission." This Hunt Plan Amendment allows for waterfowl hunting on selected Refuge ponds under the Pacific Flyway harvest regulations which are designed to maintain the diversity and integrity of the flyway waterfowl population. It would not have a measurable impact on other species. Therefore, it would at least maintain existing levels as required in the policy. Through the South Bay Salt Pond Restoration Plan that is being developed to restore wildlife habitat on these ponds, the Refuge looks forward to restoring much of the lost biological integrity, diversity and environmental health of the ponds. Waterfowl hunting and other uses of the ponds would be evaluated during the preparation of the plan to assure that these uses do not conflict with this policy.

Public Review and Comment: Hunting is one of the issues that were brought up by the public during public meetings about both the South Bay Salt Pond Restoration Plan for the subject ponds and the Initial Stewardship Plan (ISP) (FWS 2003) for the ponds. The ISP Draft Environmental Impact Report/Statement (FWS 2004) did not include the hunting issues but several of the comments received on those documents addressed hunting. Comments varied from support of hunting to objecting to hunting of certain ponds or to hunting in general.

The Refuge Hunt Plan Amendment for Waterfowl on these ponds and the draft environmental assessment would be reviewed by the public and interested public agencies. This draft compatibility determination would be made available as a part of this review process. Comments received during this 30 day review process would be addressed in the final versions of these documents.

Determination: Waterfowl hunting, use of dogs and boats and/or walking has been found compatible on Ponds AB1, A2E, AB2, A3N, A3W, A5, A7 and A8N subject to the stipulations identified below.

The following stipulations are required to ensure compatibility:

Stipulations for Users

1. Hunting will be allowed three days a week (Wednesdays, Saturdays and Sundays) on the following ponds: AB1, A2E, AB2, A3N, A3W, A5, A7 and A8N. In addition to State Hunting Licenses, hunters of these ponds will need a Refuge Special Use Permit. Ponds A1, A2W, A8S, A22, A23, R3, R4, R5, SF-2 and S5 would be closed to waterfowl hunting to serve as wildlife sanctuaries, protect endangered species, and reduce conflict

with adjacent landowners.

2. Motor vehicle access to Ponds AB1 and A2E will be from the Crittenden Lane Trailhead in Mountain View. Motor vehicle access to Ponds A3W will be from the Carl Road Trailhead in Sunnyvale. Access to Ponds A3N and AB2 is by boat from the other ponds. No foot access is allowed to these ponds. Hunting is only allowed from existing hunting blinds for these 5 ponds. Access to Ponds A5, 7, 8N will be by foot from the Gold Street Gate in Alviso. In these three ponds hunting is restricted to existing hunting blinds and to walking pond levees.
3. During the two weekends before opening of the hunt season, hunters may bring a boat into Ponds AB1, A2E, AB2, A3N, A3W, A5, A7 and A8N and moor it at a designated site if they have a valid Refuge Special Use Permit. They must leave these boats in the ponds during the season and remove them within two weeks following close of the hunt season. The boats will be either non motorized or electric motors. No gas powered motors are allowed.
4. Hunters may maintain an existing blind if they have a valid Refuge Special Use Permit, but the blind will be open for general use on a first-come, first-served basis. We prohibit pit blinds or digging into the levees.
5. Hunters may enter closed areas of the refuge to retrieve downed birds, provided they leave all weapons in a legal hunting area. The Refuge encourages the use of retriever dogs. They must keep the dog(s) under control at all times. These dogs must be in a vehicle or on a leash until they are on the ponds as a part of the hunt or on the levees (Ponds A5, 7 and 8N only) as a part of the hunt.

Stipulations for Refuge

A monitoring program would be implemented to determine hunter density and wildlife use of the subject ponds. If hunter density grows to negatively impact the quality of the hunt as based on Refuge Manger judgment, the Refuge would institute a lottery system to reduce the number of hunters using the ponds. If this does not address the issue, this plan would be reassessed.

The Refuge would maintain an active law enforcement presence by using Refuge Officers and California Department of Fish and Game Wardens to ensure public compliance with the hunting regulations and the stipulations presented herein. The Refuge would increase law enforcement patrols especially during the opening weeks of the season to document hunter use and ensure compliance with Refuge regulations. Refuge Officers would also record harvest information and impacts to non-hunttable wildlife. In addition to law enforcement activity, the Refuge would continue Mid-winter waterfowl surveys, snowy plover surveys and USGS pond surveys to provide additional information to the Refuge Manager. The Manager would continue to be in contact with local governments adjacent to the proposed hunt areas to determine if there are any conflicts with existing users.

Justification: This Hunt Plan Amendment was determined to be compatible, in view of the potential impacts that hunting and supporting activities (i.e. motorized and non-motorized boating, driving vehicles and walking on pond levees, and use of dogs) can have on the Service's ability to achieve Refuge purposes and the mission of the National Wildlife Refuge System, because: 1) sufficient restrictions have been placed on hunting, driving, boating and use of dogs to ensure that (a) an adequate amount of sanctuary would be available to accommodate the needs of waterfowl and other wetland birds using Don Edwards San Francisco Bay NWR, and (b) hunting would not detract from other existing wildlife-dependent uses such as wildlife observation and docent-led tours of the salt ponds, 2) hunting would be at a density similar to that found under Cargill's former hunt program which, based on mid-winter waterfowl surveys, demonstrated continued use of the hunted ponds during the hunt season by substantial numbers of waterfowl, and 3) the Refuge would monitor hunter use, compliance with rules and regulations and impacts to waterfowl and other wildlife using this information to adjust the hunt program as necessary.

Although boating, driving to the ponds, use of dogs, and walking the levees are not forms of wildlife-dependent recreation; they do in this case support a wildlife dependent use. Implementing the prescribed restrictions on boating, dogs and walking outlined in the Stipulations section should alleviate any substantial impacts. Allowing use of private vehicles to access the ponds will increase their accessibility for those hunters with physical limitations.

Mid-winter waterfowl surveys have been conducted during the hunt season of the ponds that were open to hunting under Cargill seven days a week and those that were closed to hunting (Table 3). From 2000 to 2003, the hunted ponds averaged 3.5 waterfowl/acre compared to 4.3 waterfowl/acre for ponds that were not open to hunting. Since the proposed hunt program would limit hunters to the same number of blinds that were in existence under the Cargill hunt program it is estimated that the density of hunting would be similar. Therefore, it is estimated that substantial waterfowl would continue to use the ponds even though they are open to hunting and perhaps more would use the ponds since they would only be open to hunting 3 days a week.

An adequate amount of waterfowl sanctuary would be available to waterfowl and other water dependent wildlife. Of the 5,000 acres of former commercial ponds that were considered for hunting under this amendment, 2,622 acres would be open to waterfowl hunting. This would be in addition to the 7,663 acres that are open to hunting under the existing hunt plan. This would bring the total acreage of the Refuge which would be open to hunting to 10,285 acres. On this 30,000-acre Refuge, 19,715 acres would be sanctuary (66%) including 11,900 acres of salt ponds which have similar habitat value as those that are proposed for hunting. Thus it is anticipated that birds would find sufficient food resources and resting places such that their distribution and use of the Refuge would not be substantially changed from present conditions.

Hunting is identified as a priority public use of the National Wildlife Refuge System (System) under the National Wildlife Refuge System Improvement Act of 1997 and the Refuge System Administrative Act requires that refuge managers find ways to provide opportunities for this use while ensuring compatibility with refuge purposes. No other public uses are currently allowed on the subject ponds during the development of the South Bay Salt Pond Restoration Plan except

use of the Stevens Creek Trail and docent led tours. The Stevens Creek Trail is lightly used by the public compared to the Bay Trail in Shoreline Park at Mountain View along Ponds A1 and A2W. These two ponds would be closed to hunting to provide ample opportunities for wildlife dependent activities (wildlife observation, photography, environmental education and interpretation) next to and connected to the Stevens Creek Trail on Mountain View property that overlooks the Refuge's ponds. Since over 2,000 acres of the recently purchased salt ponds would not be open to hunting and hunting is restricted to 3 days a week, the salt pond tours would have adequate locations and time to continue during the hunt season. As a part of the South Bay Salt Pond Restoration Plan, other public uses would be evaluated for these ponds. The proposed Hunt Plan Amendment would be reevaluated to determine if changes need to be made to assure continued compatibility of hunting in these areas in light of newly restored habitats, other recreational activities which are found to be compatible and/or the Refuge's Comprehensive Conservation Plan development.

The Service's policy on Biological Integrity, Diversity, and Environmental Health requires that Refuge actions at least maintain existing levels of biological integrity, diversity and environmental health. This Hunt Plan Amendment allows for waterfowl hunting on selected Refuge ponds under the Pacific Flyway harvest regulations which are designed to maintain the diversity and integrity of the flyway waterfowl population. It would not have a measurable impact on other species. Therefore, it would at least maintain existing levels as required in the policy.

Mandatory Reevaluation Date (provide month and year):

- Mandatory 15-Year Reevaluation Date (for priority public uses)
- Mandatory 10-Year Reevaluation Date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision (check one below):

- Conducted with Comprehensive Conservation Plan
- 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/Concurrence/Approval:

Prepared by: _____ Date _____
Clyde Morris, Manager
Don Edwards San Francisco Bay NWR

Project Leader: _____ Date _____
Margaret T. Kolar, Manager
San Francisco Bay NWR Complex

Concurrence: _____ Date _____
Refuge Supervisor

Approval: _____ Date: _____
Assistant Manager CNO, Refuges and Wildlife