



Piute Ponds Complex Management Plan November 2014

Piute Plan

A framework to guide the management, protection, and restoration of the wildlife habitat at the Piute Ponds Complex while integrating and supporting the priority operational mission of Edwards AFB (EAFB) and Los Angeles County Sanitation District 14.

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I. Introduction

A. Purpose of Management Plan

The purpose of this plan is to provide a framework to guide the management, protection, and restoration of the wildlife habitat at the Piute Ponds Complex (Piute Complex) while integrating and supporting the priority operational mission of Edwards AFB (EAFB) and Los Angeles County Sanitation District 14 (D14). This will serve as a component plan of the *Edwards AFB Integrated Natural Resources Management Plan* (INRMP, 2014).

To fulfill the Complex's mission and goals, this Management Plan will provide management parameters for the area that are easy to follow and adaptable. Appendices will be used to provide specificity to a management strategy and/or identify projects and track progress (i.e., develop annual action work plans). Annual Action Work Plans (Appendix A) will be used to further develop, implement, and document results of specific projects accomplished to execute the management of the area.

B. Planning Area

The Piute Complex, for planning consideration on EAFB, consists of lower Amargosa Creek, ponds, marshes, wetland meadows, low sand dunes, small clay pans, and Rosamond Dry Lake. The upland and wetland area (excluding Rosamond Dry Lake) of the Piute Complex encompasses approximately 5,614 acres. Of the 5,614 acres, approximately 1,410 acres of ponds, wetlands, wet meadows, and clay pans are in an area where the water flow/levels can be managed (Figure 1, Wetland Management Area) to some degree. Other seasonally flooded wetlands exist outside of this Water Management Area fed exclusively from natural surface water as it flows to the lakebed. The Rosamond Dry Lake portion of the Piute Complex is approximately 13,800 acres. Some of these areas within the existing boundary of the Piute Complex may be available for future expansion of the Water Management Area and D14 use. History of the planning area is included in Appendix B.

C. Mission and Goals

The mission of the Complex is to serve as an integral component of the Edwards AFB operational mission and the D14 mission by meeting the following goals:

- 1) Protect surface flow and supply water storage capability (this ensures flooding of Rosamond Dry Lake which sustains lakebed surface health, supporting the operational Air Force mission;
- 2) Supply additional capacity to Los Angeles County D14 to cost effectively discharge effluent now and in the future;
- 3) Enhance the Complex by providing a spatial and temporal distribution of different habitat types to meet breeding, feeding, nesting, and resting needs for wetland dependent species, with an emphasis on priority species, and protect sensitive plants and rare habitats, to include upland species from negative impacts (Appendix C);
- 4) Support recreational, educational, research pursuits for base and surrounding communities.

D. Scope and Rationale

This plan has been developed with input from military and civilian personnel at EAFB, D14, Lahontan Water Quality Control Board (LWQCB), California Department of Fish and Wildlife (CDFW), US Fish and Wildlife Services (USFWS), and other key partners and stakeholders (e.g., Ducks Unlimited (DU), Audubon Society, hunters, birders, photographers, educators, and researchers). The intent is to maintain a cohesive, beneficial working relationship with all interested stakeholders and to establish a cooperating mutual agreement through a Memorandum of Agreement document. This plan clarifies the Complex's role in contributing to the ongoing mission of EAFB and D14 while providing wetland habitat for wetland dependent species from the local and regional area. The plan provides a vehicle where goals, objectives, and future projects can be created and tracked for success over the next 25 year planning horizon (September 2039).

E. Primary Mandates

Federal and State

Clean Water Act (CWA): The ponds within the Piute Complex are not considered a federally regulated water under the Clean Water Act which protects "Waters of the US" and wetlands. This is based on the Army Corp of Engineers (ACOE) determination that Amargosa Creek was not considered jurisdictional. Amargosa Creek is the natural source of water that flows into Piute Ponds. Cottonwood Creek and Little Rock Creek flow into the Rosamond Lake portion of the Piute Complex.

Water Quality: The Water Quality Control Boards implement the State's requirements for discharge into Waters of the State and maintenance of the State's Basin Plan. The Piute Complex is mainly addressed in the following (Lahontan Regional Water Quality Control (LRWQC) Board Orders issued to D14:

Board Order No. R6V-2002-053 regulates the discharge of treated wastewater effluent to Amargosa Creek/Piute Ponds and states the beneficial uses considered to be present within the Piute Complex as defined in the Basin Plan and subsequent Basin Plan amendment, R6T-2007-0036.

Board Order No. R6V-2002-053A1 proposed a determination of a water quality site-specific objective (SSO) for ammonia for Piute Ponds and provided interim ammonia limits to be followed versus those in the original Board Order (R6V-2002-053).

Streambed Alteration: Waters of the State which will be substantially altered or material used from the waters requires notification and an agreement from the state under Section 1600 of the Fish and Game Code. However, California Department of Fish and Wildlife (CDFW) have determined the State does not extend jurisdiction over federal lands therefore anyone who accomplishes work in support of EAFB's management of the area is not required to enter into a streambed alteration agreement.

Sikes Act, Title 16, United States Code (U.S.C.), Sections 670a through 670o, summarized by 670a(3) and excerpted below. Appendix D contains the full Sikes Act.

(3) Purposes of program

(A) Consistent with the use of military installations and State- owned National Guard installations to ensure the preparedness of the Armed Forces, the Secretaries of the military departments shall carry out the program required by this subsection to provide for -

- (i) the conservation and rehabilitation of natural resources on such installations;
- (ii) the sustainable multipurpose use of the resources on such installations, which shall include hunting, fishing, trapping, and nonconsumptive uses; and
- (iii) subject to safety requirements and military security, public access to military installations to facilitate the use.

DoD Instruction 4715.03, states it is the policy of the Department of Defense (DoD), that all natural resources conservation program activities work to guarantee continued access to its land, air, and water resources for realistic military training and testing and to sustain the long-term ecological integrity of the resources base and the ecosystem services it provides in accordance with Sections 670a through 670o, of Title 16, United States Code (U.S.C.) (Sikes Act).

Air Force Instruction 32-7064, *Integrated Natural Resources Management* provides instructions on the incorporation of wildlife management, hunting, outdoor recreation programs, protection of migratory birds, threatened and endangered species management, and public access into the INRMP.

AFI 34-110, Air Force Outdoor Recreation Programs and Procedures, 2012, states in 1.4 “Core activities [of Outdoor Recreation] provide mission support by fostering family and individual well-being, unit and community cohesion, and physical fitness.... “. This AFI indicates that walking/hiking, and nature/wildlife appreciation are included as core activities. It is the Base Civil Engineer’s responsibility to develop the base’s natural resource plans, manage the base’s fish and wildlife, administer all funds collected from the sale of on-base hunting, and have the ability to use funds collected to develop outdoor recreational resources in accordance with AFI 32-7064, *Integrated Natural Resources Management*.

Executive Order 11988, Floodplain Management, requires the AF to restore and preserve the natural and beneficial values of floodplains when ...managing ...federal lands. (Note: This is not the same definition used for FEMA 100 year floodplains for construction.)

Executive Order 11990, Protection of Wetlands, indicates the importance for agencies to provide leadership to preserve and enhance natural and beneficial values of wetlands.

II. Operational Uses for the Piute Complex

A. Base operations

Base operational missions include:

- Jet aircraft flying at 200-5000 feet above ground level (AGL) along the eastern and northern shore of Rosamond Dry Lake.
- National Guard flights C-130 aircraft over and along the northern portion of Piute Ponds.
- Test Pilot School pilots and other organizations use the existing radar arrays on the lakebed for aircraft touch and go activities in the northern third of the lakebed
- Rosamond Dry Lake serves as an emergency runway for military and civilian aircraft. There are 2 operational runways on Rosamond Lake.

There are no verbal or documented reports of any bird airstrikes occurring in the Piute Complex.

B. Sanitation District 14 Operations

The Piute Complex is part of the effluent management for the Lancaster Water Reclamation Plant (LWRP). Tertiary water flows into various ponds and provides beneficial uses by replacing historical water flows. The Piute Complex supports wetland functions and values, supports the health and maintenance of Rosamond Dry Lake by allowing some water to flood over the surface of the lakebed; thereby, repairing the surface cracks and supporting the operational mission use of the lakebed. The maximum annual amount of water flow from D14 prior to 2012 was approximately 2,900 million gallons a year (mgy). The current water flow into the Complex is 1,925 mgy. The new water control structures (Figure 3) allow water to be moved from pond to pond varying the depth and allowing areas to dry out for certain periods of time; which increases the wetland health of the Piute Complex. The area is now structured to be more flexible to sustain the health of the ecosystem as water is moved through the Complex.

III. Hydrology

The Piute Complex is part of the Rosamond watershed (French, Miller, and Dettling, 2004). Several major ephemeral creeks (including Amargosa Creek, Little Rock Creek and Cottonwood Creek) flow into Rosamond Dry Lake. Rainfall, and storm water runoff typically occurs from October through April. Occasionally summer thunderstorms add surface flow to the system. Snow occurs on rare occasions and provides beneficial ground soaking if it stays and melts over several days. Currently, the quantity and whether flow even reaches the Piute Complex depends on how long the rainfall event occurs, amount of rainfall, rainfall pattern on the landscape, saturation points of the alluvial soils at the base of the originating mountains, and number of diversions up stream.

Large instantaneous storm flows can provide enough water to cover Rosamond Dry Lake; thereby, smoothing the lakebed surface and filling in the cracks after many months of flooding before slowly evaporating through the summer. These natural flows have the potential to provide additional water to the wetland system sufficient to sustain them through the summer. Historically, the major flow of water into the Complex occurred from surface flow runoff.

However, much of that flow has been diverted upstream by the surrounding cities; therefore, the Piute Complex and the lakebed is now sustained on an annual basis by recycled water from D14 and is supplemented periodically by surface flow during storm flow events.

The minimum District 14 flows into the Piute Complex is an average of 5.25 mgd. The 5.25 mgd occurs at different rates during the year with most of the flow occurring between August and February. D14 intends to sustain the Piute Complex based on the 2004 flow data to maintain the health of the ecosystem through flushing and circulation.

IV. Management Strategies

A. Overall Management

Management areas consist of “wet areas” (ponds, clay pans, lakebed, marshes, wet meadows, mud flats) and upland areas. Management strategies will be a mix of passive and active management techniques depending on the individual requirements of the resource.

The following ponds/marshes within the Water Management Area (Figure 2) will be actively managed both as an integrated system and individually to maintain health, diversity, and accomplish the previously stated missions:

1. Rosamond Dry Lake
2. DuckBill Lake (formerly North Pond/North Buffer Pond)
3. Big Piute
4. Little Piute (Marsh) incorporates several ponds
5. North DU (North Ducks Unlimited Impoundment)
6. McKee Slough (formerly South DU/South Ducks Unlimited Impoundment)
7. Coot Chute (formerly Inlet Canal)
8. Shuttle Pond
9. Mattquetty Marsh incorporates several ponds (includes Canal Pond)
10. Teal Pond – incorporates several ponds
11. Pintail Flats – incorporates several ponds
12. West Pond – incorporates west channel leading into Rosamond Lake
13. Clod Creek - central channel leading from Big Piute into Rosamond Lake
14. Goose Sluice - east channel leading from Big Piute into Rosamond Lake
15. Windy Waters Area (North Overflow Ponds) – incorporates several ponds
16. Thoreau Ponds incorporates several ponds
17. Friends Pond incorporates two areas – north and south
18. San Miguel Lagoon (large clay pan adjacent to Rosamond Dry Lake’s SE boundary)
19. Discovery Pond (area north of Coot Chute and west of Shuttle Road)

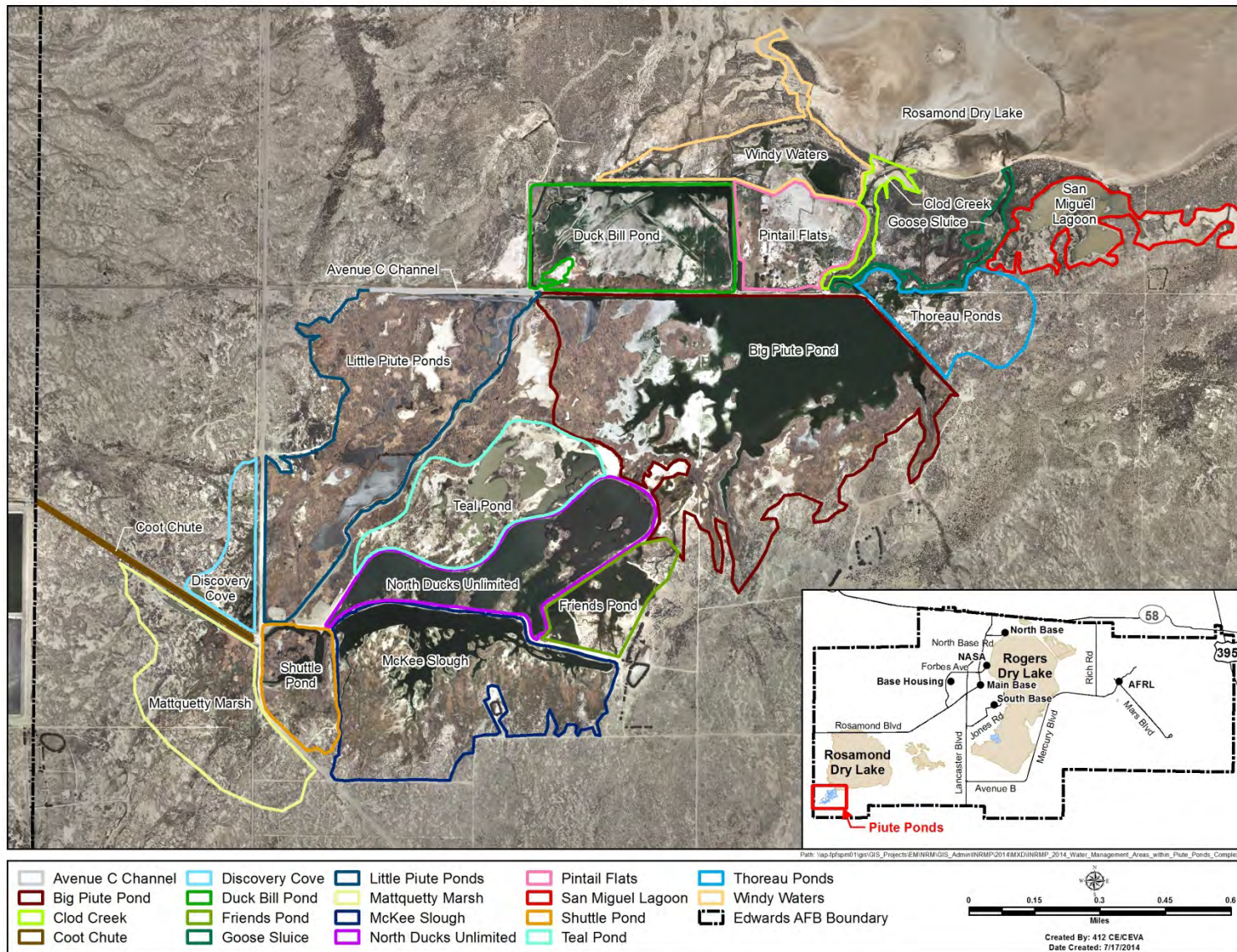


Figure 2. Ponds and Marshes within the Water Management Areas

The Piute Complex will be managed as an integrated system; however, each pond or marsh area within the system will have specific desired goals and management strategies unique to that area. The area will be managed to provide suitable habitat for migrating, breeding, and wintering waterfowl, water birds, shorebirds and land birds, mammals, amphibians, and invertebrates.

Water depths and drawdowns throughout the Piute Complex will be correlated to wildlife life history needs and plant germination times to either encourage or discourage growth. Individual wetland areas/ponds will be allowed to dry for 1 to 2 years on a rotating basis to allow for rejuvenation and maintenance operations. The specific water management strategy will be detailed in Appendix E and based on the species occurring at the Complex and for potential species which may be well suited to the available habitat.

The Piute Complex will always have, at a minimum, the same number of aerial acres as documented on aerial photography from the year 2004 and receive, as a minimum, 5.25 mgd to maintain the complex in a healthy sustainable condition. It is not planned or expected that these will always be the same areas or the same depths due to maintenance and wildlife considerations.

Upland areas are important to the Piute Complex and provide habitat which supports wetland and riparian dependent wildlife during either all or part of their life cycle, and rare plant communities. Upland areas will be passively managed unless future indicators dictate a requirement for more active management. Surveys will be conducted to:

1. Document a baseline of upland resources
2. Track the health of the upland areas

B. Water Quality

Currently, the predominant water flow supporting the Complex is tertiary treated recycled water. D14 monitors water quality parameters per Water Quality Board Orders issued by LRWQC (see Primary Mandates Section). The main parameters measured are ammonia, chlorine, nitrogen compounds, total dissolved solids, and dissolved oxygen. These parameters may change as they were developed prior to tertiary water (2012) when D14 was supplying only secondary treated water. It should be noted that historical levels of the previously stated constituents had, through time, proven themselves to be protective of the beneficial uses of the Complex. Invertebrate species typically sensitive to water quality levels which are present in the Complex were thriving (Miller and Payne 2000). It is not known, at this time, what mitigating circumstances were operating within the Complex for the species to thrive. Should D14 and LRWQC Board determine that tertiary treated water has a higher level of protection than what is needed; EAFB would not have any objections to returning to secondary treated water.

A study of aquatic habitats at Edwards AFB indicated that the Complex is inhabited by a relatively stable aquatic community and supports high densities of macroinvertebrates, with higher densities in the fall than in the spring or early summer (Miller and Payne 2000). The Complex is dominated by aquatic species (amphipods, leeches, and oligochaetes) that are not particularly tolerant of poor water quality indicating that the water quality within the Complex

has been reasonable (Miller and Payne 2000) even prior to the use of tertiary treated water.

The Piute Complex does require flushing to prevent the buildup of total dissolved solids (TDS) within the system. If the Complex is not flushed regularly it is expected TDS would eventually cause a negative impact to the vegetation and wildlife which occur in the area. Storm flows can be a significant source of water flow into the Complex when they occur and could provide natural flushing. However, continued diversion of storm flow and lack of rainfall impairs the ability for the natural system to move TDS through the system. It is recognized that flushing flows or a circulation system will be needed to prevent negative impacts to the habitat and wildlife within the Complex (EIR 2004). Flushing actions taken in partnership between D14 and EAFB from 2009 to 2012 suggest that overflow from the Big Piute spillway at a velocity of approximately 8mgd from August through January significantly lowered TDS levels. Since these flushing actions (2009 to 2012), the additional water control structures have made the spillway obsolete except during high natural flood events. New data will be obtained to determine the best flushing methodology. In addition to lowering levels of TDS, flushing water through the Piute Complex is necessary to assist with the resurfacing of Rosamond Dry Lake. Coordination with D14, Edwards AFB Environmental Management and Airfield Management will take place to develop acceptable parameters.

1. D14 will take water quality samples for TDS during flushing activities to determine trends.
2. The Piute Ponds Program Manager will evaluate the need and methods for flushing activities within the Complex based on data received from D14, wildlife and operational mission considerations.
3. The Piute Ponds Program Manager will coordinate efforts with Airfield Management to ensure there are no scheduled operational missions that would be impacted by flushing operations.
4. D14 will provide enough water flow to flush water through the Piute Complex to decrease TDS, or any other harmful constituents in the ponds. The amount of flushing time and the best months to flush will need to be established.
5. D14 will in subsequent years, but no later than 2017, sample each pond for TDS and establish a baseline. Depending on the levels obtained, a plan for flushing individual ponds will be accomplished and executed by EAFB and D14 to ensure health and sustainability of the area.

C. Water Flows and Depths

Water management will be accomplished in a manner to sustain and enhance the diversity of habitat. Currently approximately 1,200 acres are available to receive water. Wetland areas need both wet and dry periods to sustain a healthy ecosystem, therefore it is not expected that all areas will be inundated all the time. The topography of the area lends itself to a wide range of water depth for foraging by a variety of wetland dependent species. Foraging habitat of various depths will be provided for avian focal species; these are described below.

1. Small shorebirds (depth \leq 2 inches)
2. Large shorebirds (depth 2 to 4.5 inches)
3. Small waterfowl such as teal (depth 4 to 6 inches)
4. Large dabbling ducks (depth 8 to 12 inches)
5. Diving ducks (depth 2 to 10 feet) depending on the tribe (i.e. stifftails (ruddy duck), sea ducks (scoters, mergansers, buffleheads, goldeneyes), pochards (red head, scaup, ring necked)
6. Other water, land, desert bird species known to utilize various water depths described above: loons, grebes, pelicans, cormorants, bitterns, egrets, herons, ibis, rails, coots, gulls, terns, blackbirds, northern harriers, swallows, etc.

D14 will provide EAFB a projection of water availability in January each year to be used to adjust the Piute Complex specific water management strategies as necessary to meet the goals of this management plan. Using this information, other specific water management strategies will be developed, and incorporated as one of the Annual Action Plans.

D. Fire Management

Naturally occurring fires are not common at Piute Ponds but they have occurred and the potential for their occurrence continues to be a concern. Two fires, 1985 and 1988, were noted in the 1989 Environmental Assessment (EA) for the Piute Ponds Expansion Project, with the 1988 fire being the one of most concern. Fire consumed 5- to 10-acres in 1985 and 20-to 30-acres for the 1988 fire. In 1988 the night fire was intense and considered very difficult to suppress presenting a hazard to fire fighters and equipment.

The 1989 EA reported the lack of active management for fire prevention. It indicated there were large expanses of dried, dead emergent vegetation, and thick weeds in the road prism and the inward and outward dike faces. The EA also noted that subsequent attempts at controlled burns were unsuccessful due to excessive moisture levels in the vegetation and the inability to lower the water levels at the appropriate time to dry the vegetation sufficiently. This was due to the lack of water control structures. These were the main issues noted in the EA.

As noted in the 1989 EA, even though dead and seemingly dry, the moisture content within the vegetation can still be high and therefore hard to burn. This can occur when the dead vegetation is inundated with water. However, when this vegetation dries out, as noted in the EA, the high

oil content can cause a high fire danger when ignited. This could occur when the water in the ponds are lowered for maintenance, habitat management, or just because of a low water year which allows the vegetation and area around the vegetation to dry out. This may have been the case in 1988 versus 1985, which caused the intense fire, however there is no data to support this conjecture.

Since those issues were highlighted in the 1989 EA the following modifications have occurred. Dike maintenance is performed annually at the Complex and is sufficient to keep the roads clear. DU installed 29 new or replacement water control structures between 2012 and 2104. The new water control structures have greatly increased the ability to manage the water within the ponds.

The preference for spontaneous fires which start within the Complex will be to allow them to burn out on their own if at all possible. The base Fire Department has authority over this call and will determine whether this can occur safely and the level of control needed. It was noted in the 1989 EA the need to establish a fire management program for Piute Ponds. The Vegetation Control Section establishes a fire management program for the Complex.

E. Habitat

The following habitat types will be managed to provide suitable migrating, resting, foraging, and nesting for the various species that use or may be expected to use the Piute Complex:

1. Deep water habitat
2. Shallow water habitat
3. Tules/emergent vegetation
4. Willow cottonwood riparian
5. Salt cedar riparian (until it can be type converted to willow/cottonwood)
6. Wet meadow
7. Edge habitat
8. Uplands (dunes/alkali sink)
9. Shoreline
10. Mudflats
11. Drainages/washes
12. Riparian corridors

Habitat use by focal (species used to evaluate the health of the Complex) and rare species will be documented to measure the health of the habitat types. Criteria based on use of the area by various focal species will be developed to determine the suitability of each area for a specific species. A specific Habitat/Habitat Area Management Strategy (Appendix F) based on this criteria and Focal Species Management Strategies (Appendix G) will be developed. The following data will be collected and evaluated to determine habitat suitability:

1. Bird identification and count during the hunting season
2. Annual Christmas Audubon and ebird counts

3. Depth of flooded areas
4. Breeding and nesting behavior
5. Foraging behavior
6. Presence of offspring

F. Tree and Riparian Corridor Establishment

Black willows were planted in 2012 by DU using volunteers. Black willow saplings were harvested from the Prado Basin area and planted in Shuttle Pond, Mattquetty Marsh, North DU, and McKee Slough. In 2014 it was estimated that approximately 50 black willows from that effort were thriving in Mattquetty Marsh, North DU, and McKee Slough. Some riparian vegetation occurs along the Avenue C Canal (primarily willows) and Clod Creek (primarily tamarisk) between Big Piute and Rosamond Dry Lake. A goal to establish riparian corridors within the Complex would enhance habitat for Southwestern willow flycatcher (*Empidonax traillii extimus*) and least bell's vireo (*Vireo bellii pusillus*). This would be the same as comparable goals of the Partners in Flight and Sonoran Joint Venture Plans. Establishment of riparian corridors will be accomplished by:

1. Planting trees along the southern edge of DuckBill Lake, north of Big Piute down washes that flow towards Clod Creek and Goose Sluice, and along both sides of these channels to the lakebed
2. Vegetation planting will primarily include narrow leaf willow (*Salix exigua*), cottonwood (*Populus fremontii*), and native honey mesquite (*Prosopis glandulosa*)
3. Riparian corridors will be equal to or greater than 50-foot in width
4. Once the elements are in place, the area will be monitored and vegetation will be replaced as needed
5. Riparian corridors will receive water from existing water control structures and or from along dikes
6. After the initial establishment, species use will be periodically monitored and recorded
7. Species use will be documented by species type and time of use
8. Riparian corridor establishment will be considered successful if planted vegetation forms a minimum 50-foot wide corridor with closed or partially closed canopy and are used by wetland dependent avian species

G. Vegetation

Major vegetative components within the Piute Complex are:

1. Floating and emergent vegetation: exists within and alongside ponds and pans
2. Alkali meadow: exists next to some of the ponds and pans
3. Alkali sink: around the wetland areas extending towards Rosamond Dry Lake
4. Desert scrub with multiple distinct associations: around the alkali sink in drier desert areas
5. Riparian: along Clod Creek, Goose Sluice, Ave C channel

6. Sensitive plant species, specifically Alkali Mariposa Lily (*Calochortus striatus*): interspersed within the pan and dune system west and south of the ponds
7. Undesirable vegetation: along dike edges, on beach/island areas within the ponds, interspersed in alkali meadow areas

The vegetation management strategy below will be focused on areas within and immediately adjacent to the ponds and channels. The alkali sink and undisturbed pan and dune habitat will be managed for little to no impact which will protect important upland areas including the alkali mariposa lily populations.

1. Vegetation Control

Vegetation control will be necessary within the Piute Complex to ensure diversity of wetland types and appropriate vegetation density for wetland dependent wildlife species. Control methods will consist of:

- a. Manual methods: pulling vegetation out by hand or with hand tools
- b. Mechanical means: using heavy equipment such as excavators, disk attachments, bulldozers, backhoes, etc.
- c. Controlled burns: Controlled by the base Fire Department or other appropriate entities

All or some of the above methods can be expected to be accomplished within the Piute Complex within any given year and may be used together to bring about the desired outcome. Factors that will determine which method(s) and the extent of the control are:

- a. Impacts to the overall productivity of the pond or area based on its intended purpose
- b. Ability of water to flow unimpeded
- c. Likelihood of quick expansion of unwanted vegetative species.

A specific vegetation control strategy, based on the parameters stated in this plan will be developed. Appendix H currently details an annual bulrush/cattail control strategy. That strategy will be further refined in the Annual Action Plan for execution. The specific vegetation control strategy will address vegetation control issues over time. These will be added to Appendix H and then further refined in the Action Plans.

2. Vegetation Planting

Providing the right water regime, substrate, seeds and plants to encourage desirable vegetation growth within the Piute Complex is considered an important management aspect to enhance the value and diversity of the area for wildlife. Vegetation with high value to wetland dependent species will be planted to increase the productivity of the area and to outcompete undesirable vegetative species. High value vegetation will be chosen based on forage potential, nesting substrate, resting and roosting opportunities, and needs within the Piute Complex. Methods will include hand or mechanical planting of vegetation and or sowing seeds. Vegetation planting may

be used in conjunction with the water management strategy, moist-soil management, and vegetation removal efforts, to name a few.

H. Moist Soil Strategy

Lane and Jensen (1999) stated, “vegetative composition and density of a moist-soil site are influenced by altering the timing and duration of drawdowns and stage of succession.” Fredrickson and Taylor (1982) stated, “to maximize habitat availability and utilization, depth and timing of flooding are manipulated according to the habitat requirements and migration or breeding phenology of wildlife species.” Through precise control of hydrology and manipulation of plant succession, wildlife managers can achieve desired plant communities and provide habitat requirements for a variety of wildlife species throughout their annual cycles (Lane, J. J., and Jensen, K. C. 1999). Manipulation of plant succession may be accomplished by methods such as removal of vegetation, disking, disrupting soil surfaces, prolonged flooding, etc. The water control structures within the Piute Complex can be used to establish a moist soil regime to enhance plant diversity and productivity when used together with a well planned and executed water management strategy. A moist soil management strategy for the Piute Complex will be used to enhance habitat for many species. This strategy will be developed in conjunction with the water management strategy (Appendix E) and added to this management plan in Appendix I or incorporated into Appendix E.

Using a moist soil management technique is expected to increase productivity for waterfowl but it has been shown in the Midwest that other water birds and wildlife have shown responses to moist soil management due to the increased seed and invertebrates provided by high value wetland vegetation (Lane, J. J., and Jensen, K. C. 1999). The encouragement of desirable wetland vegetation has other indirect value by outcompeting undesirable vegetation or holding it in check (Appendix I).

V. Cultural

The National Historic Preservation Act, as amended, directs EAFB to establish policies, priorities and programs for the conservation, protection and preservation of all lands under its control. Among the many resources on Edwards AFB, evidence suggests that the base has been occupied continually for thousands of years, and the vast accumulation of resulting cultural materials (also known as cultural resources) hold great significance in defining our collective heritage as a region and a nation.

The EAFB's Integrated Cultural Resources Management Plan (ICRMP), offers a vehicle for compliance with Federal, state, and local regulations. Together with the ICRMP, this plan helps ensure that EAFB protects resources for the good of the public. Some areas at the Complex have been evaluated for significance and others are in the process of being evaluated. The Complex is an area of great public enjoyment as well as cultural interest. Educational programs are expected to greatly enhance the public's understanding of the area and the importance of protecting these resources. However, old trash deposits and homestead remains which present hazards to both people and animals from old barb wire, broken glass, rusty nails, etc. are of concern. A detailed cultural resources management strategy which will address protecting the resources for the public good and protecting the public while accessing the Piute Ponds Complex will be developed and placed in Appendix J. In general, the spirit of the strategy will consist of the following categories:

1. Protection of the Public: Areas which may pose a risk will be evaluated and based on the risk factors the historical sites of concern will be protected from access through various methods such as fencing, covering, removal of material, or educational signage.

It is important to note that the successful implementation of this plan may take a long time to achieve. Because the steps are procedural in nature, many elements of the plan will not be immediately in place. Until then, EAFB's Historic Preservation Officer (BHPO) asks the public to cooperate by responsibly identifying, preserving and protecting cultural resources in the Piute Ponds Complex. If members of the public see artifacts from the ancient or recent past, please leave them in place and contact Environmental Management to report any find that seems unlikely to be known or may be a hazard to the public (does not include obviously recent trash, e.g. plastic shopping bags, helium balloons, etc.).

2. Identification and Evaluation: The identification of buildings, landscapes, and artifacts that were (and in some cases still are) used by people throughout time. The data will be analyzed and evaluated, and sites will be classified based on where they are located and how they were used.
3. Determination and Nomination: Specialists will determine—based on its classification—the relative importance of the site by comparing it to other resources found on base, in the region, and around the country. After a series of complex consultations, specialists weigh

the site's importance against predetermined criteria and the exemplary ones are nominated for the National Register of Historic Places (NRHP). The NRHP is the official list of the Nation's historic places that are worthy of preservation.

4. Preservation, Protection and Education: NRHP sites undergo additional study and examination, and the artifacts are removed, preserved in a special on-base curation facility. Aspects of the site that cannot be removed are stabilized and protected against natural and human disturbance. EAFB is responsible as a steward of the public, so whenever possible it educates the public about the resources and helps to define the historical development of the area.

VI. Public Use

The Piute Complex provides both non-consumptive and consumptive public use. This use includes hunting, birding, photography, hiking, natural resource studies, outdoor classroom, and research; it does not provide fishing. Public use is authorized by the Sikes Act and is implemented by AFI 32-7604, *Integrated Natural Resources Management*.

As noted in the Sikes Act, Title 16 U.S.C., Chapter 5C, Subchapter I, Section 670a(a)(3) (A) Consistent with the use of military installations and State-owned National Guard installations to ensure the preparedness of the Armed Forces, the Secretaries of the military departments shall carry out the program required by this subsection to provide for—

- (ii) The sustainable multipurpose use of the resources on such installations, which shall include hunting, fishing, trapping, and nonconsumptive uses; and
- (iii) Subject to safety requirements and military security, public access to military installations to facilitate the use.”

In addition in Section 670(b), “Required elements of plans, items (1), (F) and (G) include

(1) Shall, to the extent appropriate and applicable, provide for -

(F) Sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources;

(G) Public access to the installation that is necessary or appropriate for the use described in subparagraph (F), subject to requirements necessary to ensure safety and military security;”

A. Security

The 412 SFS and the AFOSI DET 111 has considered the security issues in and around the Piute Complex and determined that public access can be authorized. Access is permitted for the uses noted in this plan. This may change if mission operations are such that a security risk would occur. With 412 MSG approval, access to the Complex can close at any time, without notice, for mission or security reasons.

B. Non-Consumptive Use

1. Birding, Photography, Hiking, General Use

Environmental Management receives numerous base and non-base recreational requests to visit or use the Piute Complex. Birding and photography are the highest non-consumptive uses. Although non-consumptive use does not typically result in the demise of wildlife as it does in consumptive use, it can if uncontrolled, negatively impact both wildlife and vegetation. Therefore, oversight and management of non-consumptive use is imperative for the sustainability of the Piute Complex. One tool to oversee this use is to understand the level of non-consumptive

use which occurs over time. Currently this is accomplished through a letter approval process. Future processes which track not only the number but when and how long users are at the ponds would be valuable to assess impacts. Even though non-consumptive use can negatively impact the resources at the Piute Complex under certain circumstances they can also have valuable impacts by users developing an “ownership” mentality towards the area, a kinship with it which motivates users to respect the area and the species which use it. Use by the public for positive purposes has the effect of discouraging use of the area by portions of the public that would use this area for negative purposes such as dumping of trash, stolen vehicles, homeless camps, etc. Encouraging a kinship with the area can increase the desire for volunteerism which can provide low cost labor for projects such as cleanup details, plantings, etc. Non-consumptive users provide important data on species within the Piute Complex by submitting observational data which can be used to determine health trends of both the Piute Complex and individual species.

The current procedure for visiting by the non-base public is to request an annual access letter from 412 CEG/CEV, Piute Ponds Program Manager. An individual or group requests an access letter, typically via email or phone, and provides their name, organization or school name for group access, entry authorization list (EAL) type information and number of guests they would like to bring. The requestor’s EAL information is provided by the Piute Ponds Program Manager to the Air Force Security Forces Squadron for a background check of the individual who will hold the access letter. After Security Forces clears the individual, the Piute Ponds Program Manager creates a letter on behalf of the requestor for 412 Mission Support Group Commander (MSG) signature and provides it to 412 MSG/CC or their designee. The access letter, once signed, is then sent to the requestor via email or regular mail and electronically filed. The requestor may visit Piute Ponds directly by accessing it through the Ave C gate or off Shuttle Road. They must have a copy of the permit with them during their visit.

The procedure for allowing access to Piute Ponds to base personnel with existing base access is to obtain a letter of conditions prior to accessing the Piute Complex. The letter of conditions describes the requirements of visiting the area to include when visiting is permitted. The letter of conditions is obtained from the Piute Ponds Manager in Environmental Management. The requestor’s address, phone, and email are requested for a conditions letter. The conditions letter, once signed, is then sent to the requestor via email or regular mail and electronically filed. The requestor then visits Piute Ponds, accessing it through the Ave C gate or off Shuttle Road. They must have a copy of the permit with them during their visit.

2. Education

The Complex is a very popular outdoor classroom for teachers who use it for their students. It is used most often by the on-base elementary school; with consistent use since 2000. Ms Kristie Grubb’s classroom uses the Complex several times during a school year. Off-base classrooms typically use the Complex once a year. The Mojave Environmental Education Consortium (MEEC) in partnership with EAFB and support from Ms Grubb, developed wetland educational kits and curriculum to be used at the Complex. These kits can be checked out through the MEEC website at:

<http://www.meeconline.com/piute-pond-wetland-education-kits-available> .

A kit can also be checked out from Ms Grubb. Use of the Piute Complex can either be obtained by requesting an access letter or scheduling for an escort through Environmental Management.

3. Research

On occasion, requests by individuals from institutions of higher learning or natural history museums have been made either for the study of habitat communities, wildlife in general, or specific species. For example, these studies have included DNA research of voles in the Mojave Desert for comparison with DNA of voles in northern California, documentation for the LA Natural History Museum of local wildlife species, avian use of the area as compared to surrounding water areas by Antelope Valley College Biology Department, etc. Researchers typically provide a research outline or abstract, current permits as appropriate, and the data collected and/or report when completed. Future research requests and abstracts will be placed in Appendix L. The research data will be incorporated into the natural resource database for future management purposes.

C. Consumptive Recreation

Hunting has been a historical use of the Piute Complex before the City of Lancaster and Edwards AFB were established and continues today. Each year, about 150 individuals hunt at the Piute Complex. Several hunters of the Complex are “generational” hunters where parents hunted and brought their children who then grew up and brought their children. Authorization for the hunting program is provided in Title 16 U.S.C., Chapter 5C, Subchapter I, Section 670b. Under Sec. 670b. Migratory game birds; hunting permits, authorization is listed below.

(a) Integrated natural resources management plan - The Secretary of Defense in cooperation with the Secretary of the Interior and the appropriate State agency is authorized to carry out a program for the conservation, restoration and management of migratory game birds on military installations, including the issuance of special hunting permits and the collection of fees therefor, in accordance with an integrated natural resources management plan mutually agreed upon by the Secretary of Defense, the Secretary of the Interior and the appropriate State agency.

(b) Applicability of other laws - Possession of a special permit for hunting migratory game birds issued pursuant to this subchapter shall not relieve the permittee of the requirements of the Migratory Bird Hunting Stamp Act as amended [16 U.S.C. 718 et seq.] nor of the requirements pertaining to State law set forth in Public Law 85-337.

The program is refined by the California Department of Fish and Wildlife hunting regulations and further refined through the Air Force Flight Test Center Instruction 32-8, Management of Hunting, Fishing, and Volunteer Program (2003) (Appendix M). EAFB has the authority to regulate the hunter bag take as well as hours and days of hunting over and above the California State regulations. The hunting program is overseen by Environmental Management’s Natural Resource Manager (wildlife biologist) who works to ensure that the health of the natural resources is maintained or enhanced.

VII. Infrastructure Operations and Maintenance

The operations and maintenance of the infrastructure within the Piute Complex is primarily accomplished by D14. This includes repair and maintenance of the infrastructure, roads, dikes, operational vegetation control, and normal erosion to the Complex from storm events. In the event of a catastrophic failure D14 and EAFB will work together to repair the infrastructure to the Piute Complex and DU may be used to assist with this or other improvements. The D14 Operation and Maintenance responsibilities and schedule will be outlined in an EAFB/D14/DU Memorandum of Agreement (MOA).

The D14 mission is primarily for waste water management and to ensure water flow into the Piute Complex at a rate which does not impact the EAFB operational mission while supporting the natural resource values within the Piute Complex. D14 can accomplish this by operating the main WCS (screw gates). The internal WCS have been added to the Complex to provide the ability to adjust the elevation of the water within the ponds based on wildlife and plant needs in concert with recreational interests. Since this is dictated by wildlife and plant responses, the adjustment of the internal WCS will primarily be accomplished by the EAFB Piute Ponds Manager or the Natural Resources Manager (wildlife biologist) with the assistance of the EAFB wildlife conservation volunteers (as detailed in AFFTC Instruction 32-8). This will always be accomplished as a team effort with D14. If EAFB is unable to provide the manpower to operate the WCS then D14 will, at a minimum, operate the main WCS. D14 will annually inspect and maintain all WCS. If access to the weirs on Rosamond Lake (Clod Creek and Goose Sluice) is via the shoreline, it can be accomplished without coordination with EAFB. If access to the actual lakebed is needed, coordination with Environmental Management would be required.

Environmental Management would then coordinate between D14 and EAFB Airfield Management to maintain safety. However, EAFB will be responsible for operation of the lakebed WCS.

VIII. Annual Action Plans

Annual Action Plans (Appendix A) are intended to be used with this management plan to enable the following:

- Develop and track a volunteer project initiated either by a volunteer, volunteer group, other group, or Environmental Management
- Further refine and develop a planned project

The action plan is not intended to be onerous, especially for volunteers. The example in Appendix A is suggested but should be adapted based on the project type and be as simple as possible. Some things the action plan will be used for is:

1. Outline projected water management for the year
2. Planned project from the project list
3. Plantings or removal of unwanted vegetation
4. Species inventories
5. Mapping of vegetation/habitat

The result of these action plans can be used to adapt future management strategies, keep this plan up to date, and provide data to track measures of success.

Depending on the complexity of the planned project the action plan may:

1. Identify management strategy
2. Describe project methodology
3. Define personnel responsible for implementing a project
4. Provide schedule for completion
5. Identify measures of success
6. Monitor progress
7. Evaluate measures of success

IX. Measures of Success

Measures of success will developed and documented to determine whether management of the Piute Complex is meeting the stated mission goals. Specific methods used to measure success will provide usable data to determine which goals are being met. Other methods may be developed if needed. Specific methods used will be included in Appendix N.

X. Partnerships/Agreements

Partnerships and cooperative agreements are encouraged under the Sikes Act and in the DoDI 4715.03. It states in these documents that partnerships and agreements may be accomplished with governmental and nongovernmental entities to include state and local governments, nonprofit organizations, universities, individuals, etc. to “provide for the maintenance and improvement of natural resources or conservation research...” Partnerships and agreements will be developed and placed in Appendix O.

The 1981 Letter of Agreement (LOA) and the 1991 Memorandum of Understanding (MOU) between D14 and EAFB will be replaced by the new partnership developed in the Edwards/D14/DU MOA.

EAFB and Ducks Unlimited entered into a MOA in January 2011 and amended in May 2012 which establishes a partnership to conduct habitat enhancement projects within the Piute Complex. The MOA allows for transfer of funds, resources, etc. The first project accomplished under this MOA was implemented in 2 phases and funded by North American Wildlife Conservation Act (NAWCA) through the DU Sonoran Joint Venture project. This MOA contains an attached letter from D14 stating their willingness to participate.

The 2004, Environmental Impact Report (2004, Final LWRP 2020 EIR), although not a specific agreement between EAFB and D14, is an important document which provides the requirement to continue to support the Piute Complex as a mitigation measure for the newly developed waste water treatment plant expansion (Phase V). The information within the EIR noted the importance of the Piute Ponds Complex and the need to maintain the area at least at its 2004 size and to accomplish flushing flows or implement a circulation system within the ponds. The appropriate amount of water flow to sustain the ponds was determined to be 5.25 mgd based on the response of the ponds to several scenarios that were tried in 2011/2012 and 2012/2013. This may be enough to flush the individual ponds but needs to be tested to determine if it will be successful or if an increase is needed. It took 8 mgd to flush sufficiently during the 2011/2012 to 2012/2013 scenarios however that was accomplished over the Avenue C spillway. Now that each individual pond has the ability to be flushed it may not be the same. This will become part of the overall water management strategy (Appendix E).

A. Planned Partnerships

A Memorandum of Agreement (MOA) with D14 and Ducks Unlimited will be completed in 2014 (Appendix O).

A partnership with D14, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Lahontan Water Quality Control Board, Ducks Unlimited, and the Audubon Society is forecasted to be developed in 2015.

The Fregoso Outdoor Foundation, a nonprofit organization which supports wounded warriors and provides outdoor experiences (including hunting) to the wounded warriors sponsored a hunting event in concert with hunters at the Complex during the 2011/2012, 2012/2013, 2013/2014 hunting season. The Fregoso Outdoor Foundation has expressed interest in developing a partnership with EAFB to further develop a handicapped hunting program which would include handicap accessible areas/blinds, sponsoring and escorting handicap individuals, and maintaining handicap areas. This will be accomplished as authorized in Title 16 U.S.C., Chapter 5C, Subchapter I, Section 670c (b)(1)(2) and (3) excerpted below:

Sec. 670c. Program for public outdoor recreation

(b) Access for disabled veterans, military dependents with disabilities, and other persons with disabilities

(1) In developing facilities and conducting programs for public outdoor recreation at military installations, consistent with the primary military mission of the installations, the Secretary of Defense shall ensure, to the extent reasonably practicable, that outdoor recreation opportunities (including fishing, hunting, trapping, wildlife viewing, boating, and camping) made available to the public also provide access for persons described in paragraph (2) when topographic, vegetative, and water resources allow access for such persons without substantial modification to the natural environment.

(2) Persons referred to in paragraph (1) are the following:

(A) Disabled veterans.

(B) Military dependents with disabilities.

(C) Other persons with disabilities, when access to a military installation for such persons and other civilians is not otherwise restricted.

(3) The Secretary of Defense shall carry out this subsection in consultation with the Secretary of Veterans Affairs, national service, military, and veterans organizations, and sporting organizations in the private sector that participate in outdoor recreation projects for persons described in paragraph (2).

(c) Acceptance of donations

In connection with the facilities and programs for public outdoor recreation at military installations, in particular the requirement under subsection (b) of this section to provide access for persons described in paragraph (2) of such subsection, the Secretary of Defense may accept –

(1) The voluntary services of individuals and organizations; and

(2) Donations of property, whether real or personal.

A MOA between the Fregosa Outdoor Foundation and EAFB is forecasted to be explored and completed in 2015 to support the above program elements.

B. Potential Partnerships

Potential partnerships that will be explored to enhance the Complex include:

Partners in Flight: A DoD supported effort which works closely with other bird organizations. A partnership with them would be aimed at furthering the maintenance and improvement of natural resources within the Piute Complex.

Antelope Valley College: One of the professors is already accomplishing research in the area and a partnership could further and perhaps expand research.

The cities of Lancaster, Palmdale, and Rosamond: Partnerships with the surrounding communities would further community use and enjoyment of the Complex by the local public.

Audubon Society: The Piute Complex was designated an Important Bird Area (IBA) in 2004 by the National Audubon Society. The National Audubon Society is responsible for identifying IBAs based on vulnerability and responsibility criteria.

XI Funding Avenues

Several different funding avenues are available, each having their own parameters. Processes for using these avenues will be developed and placed in Appendix P. The main funding avenues are briefly discussed below.

1. Hunting and fishing funds

Hunting and fishing funds, also known as 57X funds, are earned at EAFB through hunting and fishing permits and hunting blind sales as provided for in the Sikes Act, specifically:

Title 16 Conservation, Chapter 5C, Conservation Programs on Government Lands, Subchapter I – Conservation Programs on Military Installations, section 670a, (b) (3).

These funds are required to be spent only at the installation they were collected and utilized for “protection, conservation, and management of fish and wildlife including habitat improvement and related activities in accordance with the integrated natural resources management plan.” This Piute Ponds Complex Management Plan is considered a component plan of the Integrated Natural Resources Management Plan (INRMP). This is again restated in Sec. 670b. Migratory game birds. These funds are not intended to be paid into the Treasury as indicated in Title 16 Conservation, Chapter 5C, Conservation Programs on Government Lands, Subchapter I – Conservation Programs on Military Installations, section 670d, “The Department of Defense is held free from any liability to pay into the Treasury of the United States upon the operation of the program or programs authorized by this subchapter, any funds which may have been or may hereafter be collected, received or expended pursuant to, and for the purposes of, this subchapter, and which collections, receipts and expenditures have been properly accounted for to the Comptroller General of the United States.

AFM 65-604, Financial Management, dated 1 October 2011, also provides specific information on use of these funds. As noted in this manual, 57X indicates a no-year appropriation, i.e. no time limits on availability of the funds. The manual further states “as authorized by 16 U.S.C. 670a, use funds to carry out the program of wildlife, fish, and game conservation, and rehabilitation.” and “This may include personnel services and related costs, temporary duty travel, purchase of chemicals, food, seeds, etc, establishment of fish ponds and such other expenses as may be necessary to carry out the purpose of the cited statutes.”

2. Class 1

Class 1 funds, as defined in DoD 4715.03, enclosure 4, is appropriated funding that can be obtained to provide protection for natural resources, particularly for threatened and endangered species and for wetlands, if the issues within the Complex may cause degradation and noncompliance issues. These funds are requested by submitting projects into ACES.

3. Agriculture program reimbursements

Unlike Hunting and Fishing funds agricultural reimbursements are not tied to an individual base. AFCEE controls these funds and takes requests for their use. These reimbursements are

earned from agricultural out grants and sales of agricultural products at bases which have these programs. Earnings above what is needed for the agricultural program can be used to finance natural resource management activities that implement and base's INRMP.

4. Forestry account funds

Unlike Hunting and Fishing funds, the funds from forestry accounts are not tied to an individual base. AFCEE controls these funds and takes requests for their use. These funds are earned from bases with forestry products. Earnings in excess of producing the products are saved in this fund and used to support natural resources management activities that implement any base's INRMP.

5. Grants and donations

Grants and donations can be a source of funding, service, or goods which can be used within the Complex. A MOA/partnership can be used to obtain funds through grants. This funding avenue was used by our DU partner to accomplish natural resource maintenance and enhancements to the Piute Complex through a NAWCA grant. Additionally developing a partnership with an organization that supports and assists disabled hunters is another avenue for receiving donations of goods and services that would enhance access for them. The planned MOA for a partnership between Edwards and the Fergosa Foundation could allow for donations of goods and services to enhance handicapped hunting opportunities at the Piute Complex.

XII. Wildlife Conservation Volunteers

Volunteer efforts through the EAFB Natural Resources Program should be accomplished using the guidance in AFFTC 32-8, *Management of Hunting, Fishing, and Volunteer Program* (2003) (Appendix N). Volunteers from various nonprofits/clubs not affiliated with the Edwards AFB volunteer program also provide conservation support. Examples of organizations that provide volunteers include DU, Audubon Society, and Friends of Piute Ponds. Volunteers operating from a nonprofit organization or club are coordinated with Environmental Management and will be evaluated for consistency with this plan. In some cases, conservation efforts may be accomplished under their organizations volunteer protocol. Projects proposed by volunteers or volunteer groups can be planned through use of a volunteer Annual Action Plan or if fairly simple via email or verbally. Some projects which are needed at the Piute Complex which can use volunteers will be listed in the Projects list. This volunteer list is intended to be dynamic and can be added to or subtracted from as deemed suitable. Projects currently seen as feasible for volunteers are pulling or placing boards in weirs to assist in moving water from pond to pond, planting or removing vegetation, surveying areas for better blind locations, removing trash, surveying and documenting conditions and or status (habitat, water, species), etc.

XIII. Projects

Appendix Q contains a list of projects, a table of completion once started, and as the projects are completed a synopsis of the results. These projects may be accomplished with:

1. In-house resources (government personnel)
2. Contracts using funding avenues discussed in the Funding Section
3. Volunteers
4. Partnership

XIV. References

- Air Force Flight Test Center Instruction (AFFTCI) 32-8, 2003. *Management of Hunting, Fishing and Volunteer Program*
- Air Force Instruction (AFI) 32-7064, 2004. *Integrated Natural Resources Management*
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- United States Air Force, 2011. *Memorandum of Agreement between Edwards Air Force Base and Ducks Unlimited*, January
- United States Air Force, 1991. *Memorandum of Agreement between Edwards Air Force Base and Los Angeles County Sanitation District 14*, March
- 16 USC. 670a-670o, *Sikes Act*, as amended 1997
- 16 USC. 718-718k, *Migratory Bird Hunting Stamp Act*, 2004

Appendices

Timelines

Projected Completion Date

| | |
|---|------------------------------|
| Appendix A: Annual Action Plans (includes sample) | Ongoing |
| Appendix B: Short history of planning area | Done |
| Appendix C: Piute Complex species list | Done |
| Appendix D: Sikes Act | Done |
| Appendix E: Water management strategy | 2015 |
| Appendix F: Habitat management strategy | 2015 |
| Appendix G: Focal species management strategies | Ongoing |
| Appendix H: Vegetation control strategy | Ongoing |
| Appendix I: Moist soil management strategy (may be incorporated into Appendix E) | 2015/ongoing |
| Appendix J: Cultural management strategy | 2015 |
| Appendix K: Sample access letters | Done |
| Appendix L: Research requests and abstracts | 2014/Ongoing |
| Appendix M: AFFTC 32-8 Management of Hunting, Fishing, and Volunteer Program, 2003 | Included/ but update 2015 |
| Appendix N: Methods for measures of success metrics | 2014 |
| Appendix O: Partnerships and agreements | 2014/ongoing |
| Appendix P: Funding processes | 2015 |
| Appendix Q: Project list, synopsis of results, table of completion | Ongoing |

Appendix A

Annual Action Plans

SAMPLE

Piute Ponds Complex 2012 Action Plan

Previous Actions

New water control structures were installed throughout most of the Complex. Several are waiting to be completed.

June 2012: Coot Chute began to flow on 19 June 2012 after being shut off since 24 Apr 2012.

Flow proceeded through 4 open culverts (no weirs are on these) from Coot Chute into Shuttle Puddle. All flow to ponds and marshes north of these are planned to be secured to prevent flow. This is being accomplished to ensure these areas are dry for 2012 summer construction activities. As water was returned to Coot Chute, a mobile flow meter was deployed to determine how many million gallons are required to reach optimum level and then how many to maximum capacity of Kee Slough.

The inlet weir on Mattquetty Marsh from Coot Chute was open and the outlet weir into Shuttle Puddle closed until Mattquetty Marsh has reached maximum capacity.

Actions to be Accomplished in 2012

(Include short synopsis/description to include resources (funds, labor), attach implementation plan if warranted, attach completion letter if warranted.)

1. Shuttle Pond, McKee Slough, and Mattquetty Marsh do not have dikes along their southern boundaries so there is no definitive boundary line. The areal extent (perimeter) of the water will be documented by gps at optimum depth and then maximum capacity on these ponds. As each of the other ponds is brought up an attempt to measure their capacities will be made. Re-establish flow to ponds
2. During the summer and fall of 2012 all ponds are planned to have flow re-established. Observations will be made to determine appropriate depth levels based on water availability and how water is flowing from pond to pond within the new configuration and flows adjusted accordingly. Attempts will be made to measure water flow to determine how many gallons it takes to reach optimum level and if possible maximum capacity of individual ponds.

Tentative Fill-up Strategy

The Ducks Unlimited Pond will receive water flow first from Shuttle Puddle and Kee Slough, both of which will be at capacity. Once the Ducks Unlimited Pond is at an adequate level then, Teal Pond and Friends Pond will be filled, once to an adequate level to allow overflow we will begin to fill Big Piute from Teal Pond and Ducks Unlimited Pond. Once Big Piute has a

sufficient flow, Little Piute will receive flow, then DuckBill Lake. After an evaluation of how the effort is progressing Windy Waters and Pintail Flats will begin to receive flow. Once there is sufficient water in each of these areas we will push flow through Big Piute at a level to overflow the spillway testing Clod Creek, Goose Sluice, Thoreau Ponds, and San Miguel Lagoon. The overflow is projected to continue until an adequate flush has occurred through all ponds. This will be the first year all ponds have had the ability to be fully flushed and will set the baseline for subsequent years.

3. Plant elements for Riparian Corridor: To be accomplished by Tetra Tech, under Piute Ponds Management Plan Contract. Already funded. Description noted in Piute Pond Complex Management Plan and modified contract Task 5 for Tetra Tech.
 - a. Accomplished _____
 - b. Re-evaluated and Delayed _____ until _____
 - c. Re-evaluated and Cancelled _____

4. Complete water control structure construction for:
 - Rosamond Lake
 - Windy Waters
 - Thoreau Pond
 - McKee Slough to Friends Pond

5. Remove berm along south edge of north Ave C dike which is cutting off flow between Little Piute and Big Piute

6. Little Piute Internal Stream Maintenance: Maintenance of the meandering streams north of the southern D14 channel in Little Piute will be accomplished through the DU and EAFB MOA. EAFB will provide \$50,000 from 57x account to DU to accomplish maintenance efforts to reconnect the existing streams to small internal ponds within Little Piute and remove overgrown and dead vegetation from the ponds.

7. Develop Flushing Plan with D14 and Airfield Management

Appendix B

Short History of the Planning Area

Short History of the Planning Area



1929 view of the Lower Amargosa Creek (pre-Piute) with the outline of the main portion of Piute Ponds Complex overlain

The Piute Complex originates from water flow moving from higher elevations and ends at the low point of the Rosamond Lake Watershed. The Amargosa Creek, originating in the San Gabriel Mountains, flowed through the Antelope Valley into Rosamond Dry Lake. One of the components of the Piute Complex, Little Piute, was originally the lower portion of Amargosa Creek. (Appendix A). Water presence in 1929 can be seen occurring in the area of Teal Pond, Friends Pond, Big Piute, DuckBill Lake, Pintail Flats, and the camp ground. The water table in the area around the southern portion of Rosamond Lake and Amargosa Creek was very shallow and many artesian springs are reported to be present. This area provided duck hunting opportunities as seen from the dike across Little Piute present on the 1929 aerial photo, old duck hunting blinds still present, and other historical remnants in the area.

During the development of the Antelope Valley, the Lancaster waste water treatment plant discharged effluent into Amargosa Creek. Over time, natural flows from Amargosa Creek were diverted through various dams, culverts, channels, and retention basins to control flooding in the towns of Lancaster, and Palmdale.

The military took control of the area around lower Amargosa Creek and Rosamond Dry Lake in the early 1940s. In order to prevent too much water and effluent from reaching Rosamond Dry Lake and facilitate the military's use of the lakebed's dry, smooth surface, District 14, the designated Los Angeles County Sanitation District agency for wastewater treatment, constructed a dike across the outflow in 1961 at Avenue C. This dike became known as the Avenue C dike; ponded water located south of this dike became known as Big Piute. As more waste water was produced in Lancaster and the need for disposal became greater, District 14 constructed a pond north of the Avenue C Dike in the 1970's. This became known as the North Buffer Pond (now DuckBill Lake). During the 1970's, some Ducks Unlimited (DU) members constructed small overflow ponds north of the North Buffer Pond (Windy Waters). In 1990, DU constructed three new ponds in the south to help provide more water storage capacity. These ponds became known as Shuttle Pond, North Ducks Unlimited Impoundment (North DU) and South Ducks Unlimited Impoundment (now North DU and McKee Slough). Over time the base recognized the need for water on the lakebed to maintain surface health and in 2012 under an existing Memorandum of Agreement between Edwards AFB and DU, new water control structures were constructed in all the ponds and established on the lakebed boundary. These control structures re-established water flow to the south of District 14's inlet canal (Mattquetty Marsh), to the ponds northwest (Teal Pond) and southeast of North DU (Friends Pond), and into an area east of the North Buffer Pond (aka DuckBill Lake) and north of Big Piute to be known as Pintail Flats. DU installed water control structures on two channels, Clod Creek, and Goose Sluice, from Big Piute to Rosamond Dry Lake to provide the ability to control the timing of water overflows onto Rosamond Dry Lake to allow for EAFB operational missions and capacity for D14.

Appendix C

Piute Complex Species Lists

Birds of the Piute Ponds Complex

SPECIES

SCIENTIFIC NAME

| | |
|-----------------------------|------------------------------------|
| Acorn woodpecker | <i>Melanerpes formicivorus</i> |
| American avocet | <i>Recurvirostra americana</i> |
| American bittern | <i>Botaurus lentiginosus</i> |
| American coot | <i>Fulica americana</i> |
| American crow | <i>Corvus brachyrhynchos</i> |
| American flamingo | <i>Phoenicopterus ruber</i> |
| American golden plover | <i>Pluvialis dominica</i> |
| American goldfinch | <i>Carduelis tristis</i> |
| American kestrel | <i>Falco sparverius</i> |
| American pipit | <i>Anthus rubescens</i> |
| American redstart | <i>Setophaga ruticilla</i> |
| American robin | <i>Turdus migratorius</i> |
| American white pelican | <i>Pelecanus erythrorhynchos</i> |
| American wigeon | <i>Anas americana</i> |
| Anna's hummingbird | <i>Calypte anna</i> |
| Arctic Tern | <i>Sterna paradisaea</i> |
| Ash-throated flycatcher | <i>Myiarchus cinerascens</i> |
| Audubon's warbler | <i>Dendroica coronata auduboni</i> |
| Baird's sandpiper | <i>Calidris bairdii</i> |
| Bald eagle | <i>Haliaeetus leucocephalus</i> |
| Bank Swallow | <i>Riparia riparia</i> |
| Barn owl | <i>Tyto alba</i> |
| Barn swallow | <i>Hirundo rustica</i> |
| Bell's vireo | <i>Vireo bellii</i> |
| Belted kingfisher | <i>Ceryle alcyon</i> |
| Bewick's wren | <i>Thryomanes bewickii</i> |
| Black phoebe | <i>Sayornis nigricans</i> |
| Black tern | <i>Chlidonias niger</i> |
| Black turnstone | <i>Arenaria melanocephala</i> |
| Black-and-white warbler | <i>Mniotilta varia</i> |
| Black-bellied plover | <i>Pluvialis squatarola</i> |
| Black-chinned hummingbird | <i>Archilochus alexandri</i> |
| Black-chinned sparrow | <i>Spizella atrogularis</i> |
| Black-crowned night heron | <i>Nycticorax nycticorax</i> |
| Black-headed grosbeak | <i>Pheucticus melanocephalus</i> |
| Black-necked stilt | <i>Himantopus mexicanus</i> |
| Black-shouldered kite | <i>Elanus axillaris</i> |
| Black-throated grey warbler | <i>Dendroica nigrescens</i> |
| Black-throated sparrow | <i>Amphispiza bilineata</i> |

| | |
|--------------------------|--|
| Blue grosbeak | <i>Guiraca caerulea</i> |
| Blue-gray gnatcatcher | <i>Poliptilla caerulea</i> |
| Blue-winged teal | <i>Anas discors</i> |
| Bobolink | <i>Dolichonyx oryzivorus</i> |
| Bonaparte's gull | <i>Larus philadelphia</i> |
| Brant | <i>Branta bernicla nigricans</i> |
| Brewer's blackbird | <i>Euphagus cyanocephalus</i> |
| Brewer's sparrow | <i>Spizella breweri</i> |
| Brown-headed cowbird | <i>Molothrus ater</i> |
| Buff-breasted sandpiper | <i>Tryngites subruficollis</i> |
| Bufflehead | <i>Bucephala albeola</i> |
| Bullock's oriole | <i>Icterus bullockii</i> |
| Burrowing owl | <i>Athene cunicularia</i> |
| Bushtit | <i>Psaltriparus minimus</i> |
| Cackling goose | <i>Branta hutchinsii</i> |
| Cactus wren | <i>Campylorhynchus brunneicapillus</i> |
| California gull | <i>Larus californicus</i> |
| California quail | <i>Callipepla californica</i> |
| California least tern | <i>Sterna antillarum browni</i> |
| California thrasher | <i>Toxostoma redivivum</i> |
| California towhee | <i>Melospiza crissalis</i> |
| Calliope hummingbird | <i>Stellula calliope</i> |
| Canada goose | <i>Branta canadensis</i> |
| Canvasback | <i>Aythya valisineria</i> |
| Caspian tern | <i>Sterna caspia</i> |
| Cassin's kingbird | <i>Tyrannus vociferans</i> |
| Cassin's vireo | <i>Vireo cassinii</i> |
| Cattle egret | <i>Bubulcus ibis</i> |
| Cedar waxwing | <i>Bombycilla cedrorum</i> |
| Chipping sparrow | <i>Spizella passerina</i> |
| Cinnamon teal | <i>Anas cyanoptera</i> |
| Clark's grebe | <i>Aechmophorus clarkii</i> |
| Cliff swallow | <i>Hirundo pyrrhonota</i> |
| Common goldeneye | <i>Bucephala clangula</i> |
| Common loon | <i>Gavia immer</i> |
| Common merganser | <i>Mergus merganser</i> |
| Common moorhen/gallinule | <i>Gallinula chloropus</i> |
| Common nighthawk | <i>Chordeiles minor</i> |
| Common raven | <i>Corvus corax</i> |
| Common snipe | <i>Gallinago gallinago</i> |
| Common tern | <i>Sterna hirundo</i> |
| Common yellowthroat | <i>Geothlypis trichas</i> |
| Cooper's hawk | <i>Accipiter cooperi</i> |

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|------------------------------------|-------------------------------------|
| Costa's hummingbird | <i>Calypte costae</i> |
| Curlew sandpiper | <i>Calidris ferruginea</i> |
| Dark-eyed junco | <i>Junco hyemalis</i> |
| Double-crested cormorant | <i>Phalacrocorax auritus</i> |
| Dunlin | <i>Calidris alpina</i> |
| Dusky flycatcher | <i>Empidonax oberholseri</i> |
| Eared grebe | <i>Podiceps nigricollis</i> |
| Eurasian collared-dove | <i>Streptopelia decaocto</i> |
| Eurasian wigeon | <i>Anas penelope</i> |
| European goldfinch | <i>Carduelis carduelis</i> |
| European starling | <i>Sturnus vulgaris</i> |
| Evening grosbeak | <i>Coccothraustes vespertinus</i> |
| Ferruginous hawk | <i>Buteo regalis</i> |
| Forster's tern | <i>Sterna forsteri</i> |
| Fox sparrow | <i>Passerella iliaca</i> |
| Franklin's gull | <i>Larus pipixcan</i> |
| Fulvous whistling duck | <i>Dendrocygna bicolor</i> |
| Gadwall | <i>Anas strepera</i> |
| Gambel's quail | <i>Callipepla gambelii</i> |
| Glaucous-winged gull | <i>Larus glaucescens</i> |
| Glossy x White-faced ibis (hybrid) | <i>Plegadis falcinellus x chihi</i> |
| Golden Eagle | <i>Aquila chrysaetos</i> |
| Golden-crowned kinglet | <i>Regulus satrapa</i> |
| Golden-crowned sparrow | <i>Zonotrichia atricapilla</i> |
| Great blue heron | <i>Ardea herodias</i> |
| Great egret | <i>Casmerodius albus</i> |
| Great horned owl | <i>Bubo virginianus</i> |
| Greater flamingo | <i>Phoenicopterus roseus</i> |
| Greater roadrunner | <i>Geococcyx californianus</i> |
| Greater scaup | <i>Aythya marila</i> |
| Greater white-fronted goose | <i>Anser albifrons</i> |
| Greater yellowlegs | <i>Tringa melanoleuca</i> |
| Great-tailed grackle | <i>Quiscalus mexicanus</i> |
| Green heron | <i>Butorides striatus</i> |
| Green-winged teal | <i>Anas crecca</i> |
| Grey flycatcher | <i>Empidonax wrightii</i> |
| Gull-billed tern | <i>Gelochelidon nilotica</i> |
| Hammond's flycatcher | <i>Empidonax hammondii</i> |
| Harris' hawk | <i>Parabuteo unicinctus</i> |
| Heermann's Gull | <i>Larus heermanni</i> |
| Hermit thrush | <i>Catharus guttatus</i> |
| Hermit warbler | <i>Dendroica occidentalis</i> |
| Herring gull | <i>Larus argentatus</i> |

| | |
|--------------------------|--------------------------------|
| Hooded merganser | <i>Lophodytes cucullatus</i> |
| Hooded oriole | <i>Icterus cucullatus</i> |
| Hooded warbler | <i>Setophaga citrina</i> |
| Horned grebe | <i>Podiceps auritus</i> |
| Horned lark | <i>Eremophila alpestris</i> |
| House finch | <i>Carpodacus mexicanus</i> |
| House sparrow | <i>Passer domesticus</i> |
| House wren | <i>Troglodytes aedon</i> |
| Hudsonian Godwit | <i>Limosa haemastica</i> |
| Hutton's vireo | <i>Vireo huttoni</i> |
| Killdeer | <i>Charadrius vociferus</i> |
| Ladder-backed woodpecker | <i>Picoides scalaris</i> |
| Lapland longspur | <i>Calcarius lapponicus</i> |
| Lark sparrow | <i>Chondestes grammacus</i> |
| Laughing gull | <i>Leucophaeus atricilla</i> |
| Lawrence's goldfinch | <i>Carduelis lawrencei</i> |
| Lazuli bunting | <i>Passerina amoena</i> |
| Le Conte's thrasher | <i>Toxostoma lecontei</i> |
| Least bittern | <i>Ixobrychus exilis</i> |
| Least sandpiper | <i>Calidris minutilla</i> |
| Least tern | <i>Sternula antillarum</i> |
| Lesser flamingo | <i>Phoeniconaias minor</i> |
| Lesser goldfinch | <i>Carduelis psaltria</i> |
| Lesser nighthawk | <i>Chordeiles acutipennis</i> |
| Lesser scaup | <i>Aythya affinis</i> |
| Lesser yellowlegs | <i>Tringa flavipes</i> |
| Lewis' woodpecker | <i>Melanerpes lewis</i> |
| Lincoln's sparrow | <i>Melospiza lincolnii</i> |
| Little stint | <i>Calidris minuta</i> |
| Little blue heron | <i>Egretta caerulea</i> |
| Loggerhead shrike | <i>Lanius ludovicianus</i> |
| Long-billed curlew | <i>Numenius americanus</i> |
| Long-billed dowitcher | <i>Limnodromus scolopaceus</i> |
| Long-eared owl | <i>Asio otus</i> |
| MacGillivray's warbler | <i>Oporornis tolmiei</i> |
| Mallard | <i>Anas platyrhynchos</i> |
| Marbled godwit | <i>Limosa fedoa</i> |
| Marsh wren | <i>Cistothorus palustris</i> |
| Merlin | <i>Falco columbarius</i> |
| Mountain bluebird | <i>Sialia currucoides</i> |
| Mountain chickadee | <i>Poecile gambeli</i> |
| Mountain plover | <i>Charadrius montanus</i> |
| Mourning dove | <i>Zenaida macroura</i> |

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|-------------------------------|-----------------------------------|
| Nashville warbler | <i>Vermivora ruficapilla</i> |
| Northern flicker | <i>Colaptes auratus</i> |
| Northern harrier | <i>Circus cyaneus</i> |
| Northern mockingbird | <i>Mimus polyglottos</i> |
| Northern oriole | <i>Icterus galbula</i> |
| Northern parula | <i>Setophaga americana</i> |
| Northern pintail | <i>Anas acuta</i> |
| Northern rough-winged swallow | <i>Stelgidopteryx serripennis</i> |
| Northern shoveler | <i>Anas clypeata</i> |
| Northern shrike | <i>Lanius excubitor</i> |
| Northern waterthrush | <i>Parkesia noveboracensis</i> |
| Nuttall's woodpecker | <i>Picoides nuttallii</i> |
| Oldsquaw/Long-tailed duck | <i>Clangula hyemalis</i> |
| Olive-sided flycatcher | <i>Contopus borealis</i> |
| Orange-crowned warbler | <i>Vermivora celata</i> |
| Orchard oriole | <i>Icterus spurius</i> |
| Osprey | <i>Pandion haliaetus</i> |
| Pacific golden-plover | <i>Pluvialis fulva</i> |
| Pacific-slope flycatcher | <i>Empidonax difficilis</i> |
| Parasitic jaeger | <i>Stercorarius parasiticus</i> |
| Pectoral sandpiper | <i>Calidris melanotos</i> |
| Peregrine falcon | <i>Falco peregrinus</i> |
| Phainopepla | <i>Phainopepla nitens</i> |
| Pied-billed grebe | <i>Podilymbus podiceps</i> |
| Pine siskin | <i>Carduelis pinus</i> |
| Prairie falcon | <i>Falco mexicanus</i> |
| Purple martin | <i>Progne subis</i> |
| Pygmy nuthatch | <i>Sitta pygmaea</i> |
| Red knot | <i>Calidris canutus</i> |
| Red phalarope | <i>Phalaropus fulicaria</i> |
| Red-breasted merganser | <i>Mergus serrator</i> |
| Red-breasted nuthatch | <i>Sitta canadensis</i> |
| Redhead | <i>Aythya americana</i> |
| Red-naped sapsucker | <i>Sphyrapicus nuchalis</i> |
| Red-necked duck | <i>Aythya collaris</i> |
| Red-necked grebe | <i>Podiceps grisegena</i> |
| Red-necked phalarope | <i>Phalaropus lobatus</i> |
| Red-necked stint | <i>Calidris ruficollis</i> |
| Red-shouldered hawk | <i>Buteo lineatus</i> |
| Red-tailed hawk | <i>Buteo jamaicensis</i> |
| Red-throated loon | <i>Gavia stellata</i> |
| Red-winged blackbird | <i>Agelaius phoeniceus</i> |
| Ring-billed gull | <i>Larus delavarensis</i> |

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|--------------------------------|-----------------------------------|
| Ring-necked duck | <i>Aythya collaris</i> |
| Ring-necked pheasant | <i>Phasianus colchicus</i> |
| Rock dove/pigeon | <i>Columbia livia</i> |
| Rock wren | <i>Salpinctes obsoletus</i> |
| Ross' Goose | <i>Chen rossii</i> |
| Rough-legged hawk | <i>Buteo lagopus</i> |
| Ruby-crowned kinglet | <i>Regulus calendula</i> |
| Ruddy duck | <i>Oxyura jamaicensis</i> |
| Ruddy turnstone | <i>Arenaria interpres</i> |
| Ruff | <i>Philomachus pugnax</i> |
| Rufous/Allen's Hummingbird | <i>Selasphorus rufus</i> |
| Rufous-necked sandpiper | <i>Pisobia ruficollis</i> |
| Rufous-sided towhee | <i>Pipilo erythrophthalmus</i> |
| Rusty blackbird | <i>Euphagus carolinus</i> |
| Sabine's gull | <i>Xema sabini</i> |
| Sage sparrow | <i>Amphispiza belli</i> |
| Sage thrasher | <i>Oreoscoptes montanus</i> |
| Sanderling | <i>Calidris alba</i> |
| Sandhill Crane | <i>Grus canadensis</i> |
| Savannah sparrow | <i>Passerculus sandwichensis</i> |
| Say's phoebe | <i>Sayornis saya</i> |
| Scott's oriole | <i>Icterus parisorum</i> |
| Scrub jay | <i>Aphelocoma coerulescens</i> |
| Semipalmated plover | <i>Charadrius semipalmatus</i> |
| Semipalmated sandpiper | <i>Calidris pusilla</i> |
| Sharp-shinned hawk | <i>Accipiter striatus</i> |
| Sharp-tailed sandpiper | <i>Calidris acuminata</i> |
| Short-billed dowitcher | <i>Limnodromus griseus</i> |
| Short-eared owl | <i>Asio flammeus</i> |
| Snow goose | <i>Chen caerulescens</i> |
| Snowy egret | <i>Egretta thula</i> |
| Snowy plover | <i>Charadrius alexandrinus</i> |
| Solitary sandpiper | <i>Tringa solitaria</i> |
| Solitary vireo | <i>Vireo solitarius</i> |
| Song sparrow | <i>Melospiza melodia</i> |
| Sora | <i>Porzana carolina</i> |
| Southwestern willow flycatcher | <i>Empidonax traillii extimus</i> |
| Spotted dove | <i>Spilopelia chinensis</i> |
| Spotted sandpiper | <i>Actitis macularia</i> |
| Spotted towhee | <i>Pipilo maculatus</i> |
| Stilt sandpiper | <i>Calidris himantopus</i> |
| Summer tanager | <i>Piranga rubra</i> |
| Surfbird | <i>Aphriza virgata</i> |

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|-------------------------|--|
| Swainson's hawk | <i>Buteo swainsoni</i> |
| Swainson's thrush | <i>Catharus ustulatus</i> |
| Swamp sparrow | <i>Melospiza georgiana</i> |
| Tennessee warbler | <i>Vermivora peregrina</i> |
| Townsend's warbler | <i>Dendroica townsendi</i> |
| Tree swallow | <i>Tachycineta bicolor</i> |
| Tricolored blackbird | <i>Agelaius tricolor</i> |
| Trumpeter Swan | <i>Cygnus buccinator</i> |
| Tundra swan | <i>Cygnus columbianus</i> |
| Turkey vulture | <i>Cathartes aura</i> |
| Varied thrush | <i>Ixoreus naevius</i> |
| Vaux's swift | <i>Chaetura vauxi</i> |
| Verdin | <i>Auriparus flaviceps</i> |
| Vermilion flycatcher | <i>Pyrocephalus rubinus</i> |
| Vesper sparrow | <i>Pooecetes gramineus</i> |
| Violet-green swallow | <i>Tachycineta thalassina</i> |
| Virginia Rail | <i>Rallus limicola</i> |
| Virginia's warbler | <i>Oreothlypis virginiae</i> |
| Wandering tattler | <i>Heterosclus incanus</i> |
| Warbling vireo | <i>Vireo gilvus</i> |
| Water pipit | <i>Anthus spinoletta</i> |
| Western bluebird | <i>Sialia mexicana</i> |
| Western grebe | <i>Aechmophorus occidentalis</i> |
| Western gull | <i>Larus occidentalis</i> |
| Western kingbird | <i>Tyrannus verticalis</i> |
| Western meadowlark | <i>Sturnella neglecta</i> |
| Western sandpiper | <i>Calidris mauri</i> |
| Western scrub-jay | <i>Aphelocoma californica</i> |
| Western snowy plover | <i>Charadrius alexandrinus nivosus</i> |
| Western tanager | <i>Piranga ludoviciana</i> |
| Western wood-pewee | <i>Contopus sordidulus</i> |
| Whimbrel | <i>Numenius phaeopus</i> |
| White-breasted nuthatch | <i>Sitta carolinensis</i> |
| White-crowned sparrow | <i>Zonotrichia leucophrys</i> |
| White-faced Ibis | <i>Plegadis chihi</i> |
| White-rumped sandpiper | <i>Calidris fuscicollis</i> |
| White-tailed kite | <i>Elanus leucurus</i> |
| White-throated swift | <i>Aeronautes saxatalis</i> |
| White-winged scoter | <i>Melanitta deglandi</i> |
| Willet | <i>Catoptrophorus semipalmatus</i> |
| Willow flycatcher | <i>Empidonax traillii</i> |
| Wilson's phalarope | <i>Phalaropus tricolor</i> |
| Wilson's snipe | <i>Gallinago delicata</i> |

Wilson's warbler

Wood duck

Yellow-breasted chat

Yellow warbler

Yellow-headed blackbird

Yellow-rumped warbler

Wilsonia pusilla

Aix sponsa

Icteria virens

Dendroica petechia

Xanthocephalus xanthocephalus

Dendroica coronata

Amphibians and Reptiles of the Piute Ponds Complex

| SPECIES | SCIENTIFIC NAME |
|------------------------------|--|
| African clawed frog | <i>Xenopus laevis</i> |
| Bullfrog | <i>Rana catesbeiana</i> |
| California king snake | <i>Lampropeltis getula californiae</i> |
| California toad | <i>Bufo boreas halophilus</i> |
| Common Side-blotched lizard | <i>Uta stansburiana</i> |
| Common snapping turtle | <i>Chelydra serpentina serpentina</i> |
| Desert night lizard | <i>Xantusia vigilis</i> |
| Desert spiny lizard | <i>Sceloporus magister</i> |
| Great basin gopher snake | <i>Pituophis catenifer deserticola</i> |
| Great basin whiptail | <i>Aspidoscelis tigris tigris</i> |
| Long-nosed leopard lizard | <i>Crotaphytus wislizenni wislizenni</i> |
| Northern desert iguana | <i>Dipsosaurus dorsalis dorsalis</i> |
| Northern mohave rattle snake | <i>Crotalus scutulatus scutulatus</i> |
| Pacific treefrog | <i>Hyla regilla</i> |
| Painted turtle | <i>Chrysemys picta</i> |
| Red coachwhip | <i>Masticophis flagellum piceus</i> |
| Red-spotted toad | <i>Bufo punctatus</i> |
| Western toad | <i>Bufo boreas</i> |
| Western whiptail lizard | <i>Cnemidophorus tigris</i> |

Mammals of the Piute Ponds Complex

| SPECIES | SCIENTIFIC NAME |
|---------------------------------------|----------------------------------|
| Black-tailed jackrabbit | <i>Lepus californicus</i> |
| Bobcat | <i>Lynx rufus</i> |
| Botta's pocket gopher | <i>Thomomys bottae</i> |
| Cactus mouse | <i>Peromyscus eremicus</i> |
| California ground squirrel | <i>Spermophilus beecheyi</i> |
| Coyote | <i>Canis latrans</i> |
| Desert cottontail | <i>Sylvilagus audubonii</i> |
| Deer mouse | <i>Peromyscus maniculatus</i> |
| Desert pocket mouse | <i>Chaetodipus penicillatus</i> |
| Desert shrew | <i>Notiosorex crawfordi</i> |
| Desert woodrat | <i>Neotoma lepida</i> |
| Gray fox | <i>Urocyon cinereoargenteus</i> |
| Kit fox | <i>vulpes macrotis arsipus</i> |
| Long-tailed pocket mouse | <i>Chaetodipus formosus</i> |
| Merriam's kangaroo rat | <i>Dipodomys merriami</i> |
| Mexican free-tailed bat | <i>Tadarida brasiliensis</i> |
| Muskrat | <i>Ondatra zibethicus</i> |
| Myotis (bat) | <i>Myotis Sp.</i> |
| Raccoon | <i>Procyon lotor</i> |
| White-tailed antelope ground squirrel | <i>Ammospermophilus leucurus</i> |

Vegetation of the Piute Ponds Complex

| SPECIES | SCIENTIFIC NAME |
|------------------------|--|
| Alkali dropseed | <i>Sporobolus airoides</i> |
| Alkali goldenbush | <i>Isocoma acradenia</i> var. <i>acradenia</i> |
| Alkali goldenrod | <i>Euthamia occidentalis</i> |
| Alkali heath | <i>Frankenia salina</i> |
| Alkali mariposa lily | <i>Calochortus striatus</i> |
| Alkali pineappleweed | <i>Chamomilla suaveolens</i> |
| Alkali pink | <i>Nitrophilia occidentalis</i> |
| Alkali weed | <i>Cressa truxillensis vallicola</i> |
| Allscale | <i>Atriplex polycarpa</i> |
| Angle-stem buckwheat | <i>Eriogonum angulosum</i> |
| Annual sunflower | <i>Helianthus annuus</i> |
| Arabian grass | <i>Schismus arabicus</i> |
| Arrowscale | <i>Atriplex phyllostegia</i> |
| Arroyo willow | <i>Salix laevigatum</i> |
| Athel | <i>Tamarix aphylla</i> |
| Autumn vinegarweed | <i>Lessingia lemmonii glanduliferum</i> |
| Bermuda grass | <i>Cynodon dactylon</i> |
| Biennial mustard | <i>Hirschfeldia incana</i> |
| Bigelow's tickseed | <i>Coreopsis bigelovii</i> |
| Black nightshade | <i>Solanum nigrum</i> |
| Black willow | <i>Salix gooddingii</i> |
| Blunt-leaf stinkweed | <i>Cleomella obtusifolia</i> |
| Broad-flowered gilia | <i>Gilia latiflora davyi</i> |
| Broad-leaf peppergrass | <i>Lepidium latifolium</i> |
| Bull thistle | <i>Cirsium vulgare</i> |
| Capped cryptantha | <i>Cryptantha circumcissa</i> |
| Cattail | <i>Typha angustifolia</i> |
| Cheatgrass | <i>Bromus tectorum</i> |
| Cheesebush | <i>Hymenoclea salsola</i> |
| Chilean chess | <i>Bromus trinii</i> |
| Chinese pusley | <i>Heliotropium curassavicum</i> |
| Common toad rush | <i>Juncus bufonius</i> var. <i>bufonius</i> |
| Cottonthorn | <i>Tetradymia longispina spinosa</i> |
| Coulter's horseweed | <i>Conyza coulteri</i> |

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|----------------------------|---|
| Curly dock | <i>Rumex crispus</i> |
| Duckweed | <i>Lemna sp.</i> |
| Fiddleneck | <i>Amsinckia tessellata var. tessellata</i> |
| Five-hook bassia | <i>Bassia hyssopifolia</i> |
| Foxtail barley | <i>Hordeum murinum</i> |
| Fremont's cottonwood | <i>Populus fremontii sp. Fremontii</i> |
| Giant reed | <i>Arundo donax</i> |
| Goldfields | <i>Lasthenia californica</i> |
| Gray molly | <i>Kochia californica</i> |
| Inkweed | <i>Suaeda moquinii</i> |
| Interior alkali birds beak | <i>Cordylanthus maritimus canescens</i> |
| Joshua Tree | <i>Yucca brevifolia</i> |
| Lambsquarter | <i>Chenopodium ssp.</i> |
| Mediterranean grass | <i>Schismus barbatus</i> |
| Mexican wiregrass | <i>Juncus mexicanus</i> |
| Mist grass | <i>Hordeum jubatum</i> |
| Mojave rabbitbrush | <i>Chrysothamnus nauseosus sp. Mohavensis</i> |
| Mojave spineflower | <i>Chorizanthe spinosa</i> |
| Mormon tea | <i>Ephedra nevadensis</i> |
| Narrow-leaf milkweed | <i>Asclepias fascicularis</i> |
| Parry saltbush | <i>Atriplex parryi</i> |
| Pineappleweed | <i>Matricaria sp.</i> |
| Prickly lettuce | <i>Lactuca serriola</i> |
| Rabbitsfoot grass | <i>Poly pogon monspeliensis</i> |
| Red brome | <i>Bromus madritensis sp. Rubens</i> |
| Red lambsquarter | <i>Chenopodium rubrum</i> |
| Red-root cryptantha | <i>Cryptantha micrantha</i> |
| Red-stem filaree | <i>Erodium cicutarium</i> |
| Russian knapweed | <i>Acroptilon repens</i> |
| Salt cedar | <i>Tamarix parviflora</i> |
| Saltgrass | <i>Distichlis spicata</i> |
| Sandbar willow | <i>Salix exigua</i> |
| Sapphire flower | <i>Eriastrum diffusum</i> |
| Sea purslane | <i>Sesuvium verrucosum</i> |
| Shadscale | <i>Atriplex confertifolia</i> |
| Shrubby alkali aster | <i>Machaeranthera carnosia</i> |
| Silver cholla | <i>Opuntia echinocarpa</i> |
| Smartweed | <i>Polygonum sp.</i> |
| Smooth peppergrass | <i>Lepidium nitidum</i> |
| Spikerush | <i>Scirpus sp.</i> |
| Spikeweed | <i>Hemizonia pungens</i> |

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|---------------------------|---|
| Spinescale | <i>Atriplex spinifera</i> |
| Spiny clotbur | <i>Xanthium spinosum</i> |
| Spotted skeletonweed | <i>Eriogonum maculatum</i> |
| Sprangletop | <i>Leptochloa fascicularis`</i> |
| Sticky matchweed | <i>Gutierrezia microcephala</i> |
| Stinging nettle | <i>Urtica holosericea</i> |
| Swamp timothy | <i>Crypsis schoenoides</i> |
| Tansy mustard | <i>Descaurainia sp.</i> |
| Thurber's spine flower | <i>Centrostegia thurberi</i> |
| Trisquare | <i>Scirpus pugens</i> |
| Tule | <i>Shoenoplectus acutus var. occidentalis</i> |
| Tule rush | <i>Scirpus acutus</i> |
| Tumbleweed | <i>Salsola tragus</i> |
| Water grass | <i>Echinochloa crus-galli</i> |
| Water smartweed | <i>Polygonum lapathifolium</i> |
| Western ragweed | <i>Ambrosia acanthicarpa</i> |
| White clover | <i>Melilotus albus</i> |
| White stem blazing star | <i>Mentzelia albicaulis</i> |
| Winged cryptantha | <i>Cryptantha pterostegia</i> |
| Wire lettuce | <i>Stephanomeria pauciflora</i> |
| Witchgrass | <i>Panicum capillare occidentale</i> |
| Xantu's pincushion flower | <i>Chaenactis xantiana</i> |
| Yellow spiny cape | <i>Goodmania luteola</i> |
| Yellow throats | <i>Phacelia fremontii</i> |
| | <i>Atriplex serenana</i> |

Invertebrates of the Piute Ponds Complex

SPIDERS

| FAMILY | SCIENTIFIC NAME |
|---------------|-------------------------------|
| Araneidae | <i>Metepeira foxi</i> |
| Araneidae | <i>Neoscoma oaxacensis</i> |
| Clubionidae | <i>Agroeca near omata</i> |
| Dictynidae | <i>Argenna sp.</i> |
| Dictynidae | <i>Tricholanthys monterea</i> |
| Gnaphosidae | <i>Drassyllus insularis</i> |
| Gnaphosidae | <i>Gnaphosa synthetica</i> |
| Lycosidae | <i>Pardosa sp.</i> |
| Lycosidae | <i>Schizocosa mccooki</i> |
| Mimetidae | <i>Mimetus hesperus</i> |
| Philodromidae | <i>Philodromus infuscatus</i> |
| Philodromidae | <i>Tibellus chamberlini</i> |
| Philodromidae | <i>Thanatus altimontis</i> |
| Pholcidae | <i>Psilochorus sp.</i> |
| Salticidae | <i>Pseudicius siticulosus</i> |
| Thomisidae | <i>Misumenops deserti</i> |
| Thomisidae | <i>Misumenops importunus</i> |

SOLPUGIDAE

Solpugidae
Sp. 1

TICKS

Dermacentor variabilis

INSECTS

| ORDER | FAMILY | SCIENTIFIC NAME |
|------------|-------------|-----------------------------|
| Coleoptera | Alleculidae | <i>Hymenorus montivagos</i> |
| Coleoptera | Anobiidae | <i>Sp. 3</i> |
| Coleoptera | Anthicidae | <i>A. punctulatus</i> |
| Coleoptera | Anthicidae | <i>N. robustus</i> |
| Coleoptera | Anthicidae | <i>Sp. 1</i> |
| Coleoptera | Anthicidae | <i>Sp. 2</i> |

| | | |
|------------|---------------|----------------------------------|
| Coleoptera | Anthicidae | <i>Vascusus confinus</i> |
| Coleoptera | Bruchidae | <i>Sp. 2</i> |
| Coleoptera | Buprestidae | <i>Acmaeodera lanata</i> |
| Coleoptera | Buprestidae | <i>Hippomelas near fulgida</i> |
| Coleoptera | Carabidae | <i>Agonum funebre</i> |
| Coleoptera | Carabidae | <i>Anisodactylus sp.</i> |
| Coleoptera | Carabidae | <i>Armaria insignis</i> |
| Coleoptera | Carabidae | <i>B. Insulatum</i> |
| Coleoptera | Carabidae | <i>B. variegatum</i> |
| Coleoptera | Carabidae | <i>Bembidion bifossulatum</i> |
| Coleoptera | Carabidae | <i>Bembidion variegatum</i> |
| Coleoptera | Carabidae | <i>Bradycellus nitidus</i> |
| Coleoptera | Carabidae | <i>Celia sp.</i> |
| Coleoptera | Carabidae | <i>Feronia isabellae</i> |
| Coleoptera | Carabidae | <i>Harpalus lascivus</i> |
| Coleoptera | Carabidae | <i>Lebia perita</i> |
| Coleoptera | Carabidae | <i>Sp. 1</i> |
| Coleoptera | Carabidae | <i>Sp. 2</i> |
| Coleoptera | Carabidae | <i>Sp. 3</i> |
| Coleoptera | Carabidae | <i>Stenolophus flavipes</i> |
| Coleoptera | Cerambycidae | <i>Amanus pectoralis</i> |
| Coleoptera | Cerambycidae | <i>Crossidius coralinus</i> |
| Coleoptera | Cerambycidae | <i>Crossidius suturalis</i> |
| Coleoptera | Chrysomelidae | <i>Chaetocnema ectypa</i> |
| Coleoptera | Chrysomelidae | <i>Dibolica undecimpunctata</i> |
| Coleoptera | Chrysomelidae | <i>Galerucella xanthomelaena</i> |
| Coleoptera | Chrysomelidae | <i>Sp. 1</i> |
| Coleoptera | Cicindelidae | <i>Cicindela haemorrhagica</i> |
| Coleoptera | Cicindelidae | <i>C. oregona</i> |
| Coleoptera | Cicindelidae | <i>C. tranqueberrica</i> |
| Coleoptera | Cicindelidae | <i>C. willistoni</i> |
| Coleoptera | Coccinellidae | <i>Coccinella novemnotata</i> |
| Coleoptera | Coccinellidae | <i>Hippodamia convergens</i> |
| Coleoptera | Coccinellidae | <i>Sp. 2</i> |
| Coleoptera | Coccinellidae | <i>Sp. 3</i> |
| Coleoptera | Curculionidae | <i>Apleurus angulans</i> |
| Coleoptera | Dermestidae | <i>Anthrenus lepidus</i> |
| Coleoptera | Dytiscidae | <i>Copelatus chevrolati</i> |
| Coleoptera | Elateridae | <i>Aeolus sp.</i> |
| Coleoptera | Helodidae | <i>Cyphon variabilis</i> |
| Coleoptera | Heteroceridae | <i>Heterocerus gnatho</i> |

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|-------------|----------------|---------------------------------|
| Coleoptera | Hydrophilidae | <i>Berosus punctulatus</i> |
| Coleoptera | Hydrophilidae | <i>Berosus sp.</i> |
| Coleoptera | Hydrophilidae | <i>Hydrophilus triangularis</i> |
| Coleoptera | Hydrophilidae | <i>Troposternus lateralis</i> |
| Coleoptera | Meloidae | <i>Epicauta corybantica</i> |
| Coleoptera | Meloidae | <i>Epicauta puncticollis</i> |
| Coleoptera | Meloidae | <i>Lytta vulnerata</i> |
| Coleoptera | Meloidae | <i>Pleurospasta mirabilis</i> |
| Coleoptera | Melyridae | <i>Attalus oregonensis</i> |
| Coleoptera | Melyridae | <i>Eutrichopleurus mucidus</i> |
| Coleoptera | Scarabaeidae | <i>Cyclocephala longula</i> |
| Coleoptera | Scarabaeidae | <i>Ligyris gibbosus</i> |
| Coleoptera | Staphylinidae | <i>Betonuchus sp.</i> |
| Coleoptera | Staphylinidae | <i>Philonthus cruentatus</i> |
| Coleoptera | Staphylinidae | <i>Sp. 2</i> |
| Coleoptera | Tenebrionidae | <i>Abolus verrucosus</i> |
| Coleoptera | Tenebrionidae | <i>Apsena rufipes</i> |
| Coleoptera | Tenebrionidae | <i>Araeoschizus andrewsi</i> |
| Coleoptera | Tenebrionidae | <i>Blapstinus pulverulentus</i> |
| Coleoptera | Tenebrionidae | <i>Coniontis ellyptica</i> |
| Coleoptera | Tenebrionidae | <i>Coniontis ellyptica</i> |
| Coleoptera | Tenebrionidae | <i>Eleodes armata</i> |
| Coleoptera | Tenebrionidae | <i>Eleodes Sp. 1</i> |
| Coleoptera | Tenebrionidae | <i>Sp. 1</i> |
| Collembola | Entomobryiidae | <i>Sp. 1</i> |
| Dictyoptera | Mantidae | <i>Iris orata</i> |
| Dictyoptera | Mantidae | <i>Litaneutra minor</i> |
| Diptera | Agromyzidae | <i>Sp. 1</i> |
| Diptera | Agromyzidae | <i>Sp. 2</i> |
| Diptera | Agromyzidae | <i>Sp. 3</i> |
| Diptera | Anthomyiidae | <i>D. platura</i> |
| Diptera | Anthomyiidae | <i>P. finita</i> |
| Diptera | Anthomyiidae | <i>Pegoya duplicata</i> |
| Diptera | Anthomyiidae | <i>Sp. 2</i> |
| Diptera | Anthomyzidae | <i>Anthomyza sp.</i> |
| Diptera | Anthomyzidae | <i>Sp. 1</i> |
| Diptera | Assilidae | <i>Asilus californicus</i> |
| Diptera | Assilidae | <i>E. cana</i> |
| Diptera | Assilidae | <i>Efferia albibarbis</i> |
| Diptera | Assilidae | <i>Saropogon luteus</i> |
| Diptera | Bombyliidae | <i>A. mus</i> |

| | | |
|---------|-----------------|-----------------------------------|
| Diptera | Bombylidae | <i>Apolysis druivas</i> |
| Diptera | Bombylidae | <i>Geron nigripes</i> |
| Diptera | Bombylidae | <i>Heterostylum robustum</i> |
| Diptera | Bombylidae | <i>L. striatus</i> |
| Diptera | Bombylidae | <i>Neodiplocampta sp.</i> |
| Diptera | Bombylidae | <i>P. willistoni</i> |
| Diptera | Bombylidae | <i>Poecilanthrax californicus</i> |
| Diptera | Bombylidae | <i>Toxophora virgata</i> |
| Diptera | Bombylidae | <i>Villa agrippina</i> |
| Diptera | Bombylidae | <i>Villa arenosa</i> |
| Diptera | Calliphoridae | <i>Bufo lucilia silvarum</i> |
| Diptera | Calliphoridae | <i>Calliphora terrae-novae</i> |
| Diptera | Calliphoridae | <i>Pollenia rudis</i> |
| Diptera | Calliphoridae | <i>Sp. 1</i> |
| Diptera | Calliphoridae | <i>Sp. 2</i> |
| Diptera | Cecidomyiidae | <i>Asphonkylia sp. 2</i> |
| Diptera | Cecidomyiidae | <i>Sp. 1</i> |
| Diptera | Ceratopoginidae | <i>Culicoides near copiosus</i> |
| Diptera | Ceratopoginidae | <i>Dasynelea sp.</i> |
| Diptera | Ceratopoginidae | <i>Forcipomyia brevipennis</i> |
| Diptera | Ceratopoginidae | <i>Leptoconopus sp. 1</i> |
| Diptera | Ceratopoginidae | <i>Rhynchohelea sp.</i> |
| Diptera | Chironomidae | <i>Sp. 1</i> |
| Diptera | Chironomidae | <i>Sp. 2</i> |
| Diptera | Chironomidae | <i>Sp. 3</i> |
| Diptera | Chironomidae | <i>Sp. 4</i> |
| Diptera | Chironomidae | <i>Sp. 5</i> |
| Diptera | Chironomidae | <i>Sp. 6</i> |
| Diptera | Chironomidae | <i>Sp. 7</i> |
| Diptera | Chironomidae | <i>Sp. 8</i> |
| Diptera | Chironomidae | <i>Sp. 9</i> |
| Diptera | Chloropidae | <i>Biorbitella hesperia</i> |
| Diptera | Chloropidae | <i>Diplotoxa unicolor</i> |
| Diptera | Chloropidae | <i>Hippelates sp.</i> |
| Diptera | Chloropidae | <i>Olcella punctifrons</i> |
| Diptera | Chloropidae | <i>Siphonella sp.</i> |
| Diptera | Chloropidae | <i>Sp. 1</i> |
| Diptera | Chloropidae | <i>Sp. 3</i> |
| Diptera | Chloropidae | <i>Sp. 4</i> |
| Diptera | Chloropidae | <i>Sp. 5</i> |
| Diptera | Chloropidae | <i>Sp. 6</i> |

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|---------|----------------|---------------------------------|
| Diptera | Conopidae | <i>Physocephala texana</i> |
| Diptera | Culicidae | <i>Aedes varipalpus</i> |
| Diptera | Culicidae | <i>Culex peus</i> |
| Diptera | Culicidae | <i>Culiseta inomata</i> |
| Diptera | Dolichopodidae | <i>Dolichopus consanguineus</i> |
| Diptera | Dolichopodidae | <i>Dolichopus sp.</i> |
| Diptera | Dolichopodidae | <i>H. innotatus</i> |
| Diptera | Dolichopodidae | <i>Hydrophorus eldoradensis</i> |
| Diptera | Dolichopodidae | <i>Medetera sp.</i> |
| Diptera | Empidae | <i>Platypalpus sp.</i> |
| Diptera | Empidae | <i>Sp. 1</i> |
| Diptera | Ephydriidae | <i>Ephydra halophila</i> |
| Diptera | Ephydriidae | <i>Mosillus tibialis</i> |
| Diptera | Ephydriidae | <i>Parydra sp.</i> |
| Diptera | Ephydriidae | <i>Psilo olga</i> |
| Diptera | Ephydriidae | <i>Psilopa olga</i> |
| Diptera | Ephydriidae | <i>Ptilomyia pleuriseta</i> |
| Diptera | Ephydriidae | <i>Scatella paludum</i> |
| Diptera | Ephydriidae | <i>Scatella stagnalis</i> |
| Diptera | Ephydriidae | <i>Sp. 1</i> |
| Diptera | Ephydriidae | <i>Sp. 3</i> |
| Diptera | Heleomyzidae | <i>Pseudoleria sp.</i> |
| Diptera | Milichiidae | <i>Hemeromyia sp.</i> |
| Diptera | Milichiidae | <i>Milichiella sp.</i> |
| Diptera | Milichiidae | <i>Milichiella sp. 2</i> |
| Diptera | Muscidae | <i>Limnophora narona</i> |
| Diptera | Muscidae | <i>Lispe sp.</i> |
| Diptera | Muscidae | <i>Sp. 3</i> |
| Diptera | Muscidae | <i>Sp. 4</i> |
| Diptera | Muscidae | <i>Sp. 5</i> |
| Diptera | Muscidae | <i>Sp. 6</i> |
| Diptera | Muscidae | <i>Sp. 7</i> |
| Diptera | Muscidae | <i>Sp. 8</i> |
| Diptera | Otitidae | <i>Euxesta sp. 1</i> |
| Diptera | Otitidae | <i>Euxesta sp. 2</i> |
| Diptera | Otitidae | <i>Euxesta sp. 3</i> |
| Diptera | Otitidae | <i>Euxesta sp. 4</i> |
| Diptera | Otitidae | <i>Meliera similis</i> |
| Diptera | Otitidae | <i>Physiphora demandata</i> |
| Diptera | Sarcophagidae | <i>Senotainia flvicornis</i> |
| Diptera | Sarcophagidae | <i>Sp. 1</i> |

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|-----------|-----------------|-------------------------------|
| Diptera | Scatopsidae | <i>Coboldia fuscipes</i> |
| Diptera | Scatopsidae | <i>Sp. 1</i> |
| Diptera | Scenopinidae | <i>Metatrichia bulbosa</i> |
| Diptera | Sciomyzidae | <i>Pherbella vitalis</i> |
| Diptera | Sepsidae | <i>Sepsis neocynipsea</i> |
| Diptera | Simulidae | <i>Simulium vittatum</i> |
| Diptera | Sphaeroceridae | <i>Leptocera formosa</i> |
| Diptera | Sphaeroceridae | <i>Leptocera limosa</i> |
| Diptera | Stratiomididae | <i>Nemotelus arator</i> |
| Diptera | Stratiomididae | <i>O. arcuata</i> |
| Diptera | Syrphidae | <i>Allograpta exotica</i> |
| Diptera | Syrphidae | <i>Ceriana sp.</i> |
| Diptera | Syrphidae | <i>Eristalis alhambra</i> |
| Diptera | Syrphidae | <i>Eristalis latifrons</i> |
| Diptera | Syrphidae | <i>Eristalis tenax</i> |
| Diptera | Syrphidae | <i>Eupeodes volucris</i> |
| Diptera | Syrphidae | <i>Helophilus bilineatis</i> |
| Diptera | Syrphidae | <i>Polydontomyia curvipes</i> |
| Diptera | Syrphidae | <i>Syritta pipiens</i> |
| Diptera | Tabanidae | <i>Chrysopa discalis</i> |
| Diptera | Tabanidae | <i>Silvius abdominalis</i> |
| Diptera | Tabanidae | <i>Tabanus punctuifer</i> |
| Diptera | Tachinidae | <i>Angiorhina robusta</i> |
| Diptera | Tachinidae | <i>Sp. 2</i> |
| Diptera | Tachinidae | <i>Sp. 4</i> |
| Diptera | Tachinidae | <i>Sp. 7</i> |
| Diptera | Tenthinidae | <i>Pelomyia sp.</i> |
| Diptera | Tenthinidae | <i>Pelohyiella sp.</i> |
| Diptera | Tephritidae | <i>Sp. 3</i> |
| Diptera | Therevidae | <i>Thereva sp. 1</i> |
| Diptera | Tipulidae | <i>Erioptera cana</i> |
| Diptera | Tipulidae | <i>Limnophila sp.</i> |
| Diptera | Tipulidae | <i>Limnophila sp. 1</i> |
| Diptera | Tipulidae | <i>Sp. 1</i> |
| Diptera | Trixoscelididae | <i>Trixoscelis frontalis</i> |
| Hemiptera | Alydidae | <i>Alydus pluto</i> |
| Hemiptera | Alydidae | <i>Tallius setosus</i> |
| Hemiptera | Anthocoridae | <i>Orius tristicolor</i> |
| Hemiptera | Corixidae | <i>Corisella decolor</i> |
| Hemiptera | Lygaeidae | <i>Geocoris pallens</i> |
| Hemiptera | Lygaeidae | <i>Lopidea confraterna</i> |

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|-------------|--------------|------------------------------------|
| Hemiptera | Lygaeidae | <i>Nysius tenellus</i> |
| Hemiptera | Lygaeidae | <i>Sp. 2</i> |
| Hemiptera | Lygaeidae | <i>Taylorilgus pallidulus</i> |
| Hemiptera | Lygaeidae | <i>Xyonysius californicus</i> |
| Hemiptera | Nabidae | <i>Nabis americanoferus</i> |
| Hemiptera | Pentatomidae | <i>Chlorochroa sayi</i> |
| Hemiptera | Pentatomidae | <i>Tepa brevis</i> |
| Hemiptera | Pentatomidae | <i>T. pallidovirens</i> |
| Hemiptera | Reduvidae | <i>Rasahus biguttatus</i> |
| Hemiptera | Reduvidae | <i>Sinea diadema</i> |
| Hemiptera | Reduvidae | <i>Zelus renardii</i> |
| Hemiptera | Rhopalidae | <i>Arhyssus lateralis</i> |
| Hemiptera | Rhopalidae | <i>Aufeius impressicollis</i> |
| Hemiptera | Rhopalidae | <i>Boisea rubrolineata</i> |
| Hemiptera | Rhopalidae | <i>Harmostes reflexus</i> |
| Hemiptera | Rhopalidae | <i>Sp. 1</i> |
| Hemiptera | Saldidae | <i>Saldula pallipea</i> |
| Hemiptera | Threocoridae | <i>Corimelaena lateralis</i> |
| Hemiptera | Tingidae | <i>Corythucha morrilla</i> |
| Homoptera | Aphididae | <i>Sp. 1</i> |
| Homoptera | Cicadellidae | <i>Aceratogallia californica</i> |
| Homoptera | Cicadellidae | <i>Deltocephalus fuscinervosus</i> |
| Homoptera | Cicadellidae | <i>Empoasca fabae</i> |
| Homoptera | Cicadellidae | <i>Opsius stactogalus</i> |
| Homoptera | Cicadellidae | <i>Opsus stactogalus</i> |
| Homoptera | Cicadellidae | <i>Sp. 1</i> |
| Homoptera | Cicadellidae | <i>Sp. 2</i> |
| Homoptera | Cicadellidae | <i>Sp. 3</i> |
| Homoptera | Cicadellidae | <i>Sp. 4</i> |
| Homoptera | Cicadellidae | <i>Sp. 7</i> |
| Homoptera | Cicadellidae | <i>Texananus oregonus</i> |
| Homoptera | Cicadellidae | <i>Xerophloea peltata</i> |
| Homoptera | Cixiidae | <i>Oecleus decens</i> |
| Homoptera | Cixiidae | <i>Oliarus zyxus</i> |
| Homoptera | Cixiidae | <i>Sp. 1</i> |
| Homoptera | Delphacidae | <i>Delphacodes sp.</i> |
| Homoptera | Delphacidae | <i>Sp. 1</i> |
| Homoptera | Issidae | <i>Sp. 1</i> |
| Homoptera | Membracidae | <i>Multareoides bifurcatus</i> |
| Homoptera | Pysllidae | <i>Sp. 1</i> |
| Hymenoptera | Andrenidae | <i>Andrena astragali</i> |

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| Hymenoptera | Andrenidae | <i>Nomadopsis scutellaris</i> |
| Hymenoptera | Andrenidae | <i>Perdita intersecta</i> |
| Hymenoptera | Andrenidae | <i>Perdita nigrella</i> |
| Hymenoptera | Andrenidae | <i>Sp. 2</i> |
| Hymenoptera | Andrenidae | <i>Sp. 4</i> |
| Hymenoptera | Andrenidae | <i>Sp. 14</i> |
| Hymenoptera | Andrenidae | <i>Sp. 15</i> |
| Hymenoptera | Andrenidae | <i>Sp. 16</i> |
| Hymenoptera | Anthophoridae | <i>Anthophora californica</i> |
| Hymenoptera | Anthophoridae | <i>Anthophora flavocincta</i> |
| Hymenoptera | Anthophoridae | <i>Diadasia australis</i> |
| Hymenoptera | Anthophoridae | <i>Diadasia laticauda</i> |
| Hymenoptera | Anthophoridae | <i>Melissodes Sp. 1</i> |
| Hymenoptera | Anthophoridae | <i>Melissodes Sp. 2</i> |
| Hymenoptera | Anthophoridae | <i>Melissodes tessellata</i> |
| Hymenoptera | Anthophoridae | <i>Sp. 8</i> |
| Hymenoptera | Bethylidae | <i>Epyris sp.</i> |
| Hymenoptera | Braconidae | <i>Agathis Sp. 1</i> |
| Hymenoptera | Braconidae | <i>Sp. 12</i> |
| Hymenoptera | Chalcididae | <i>Haltichella sp.</i> |
| Hymenoptera | Chalcididae | <i>Sp. 2</i> |
| Hymenoptera | Chrysididae | <i>Chrysis astralisa</i> |
| Hymenoptera | Chrysididae | <i>Chrysis fuscipennis</i> |
| Hymenoptera | Chrysididae | <i>Parnopes edwardsii</i> |
| Hymenoptera | Chrysididae | <i>Pseudomalus sp.</i> |
| Hymenoptera | Colletidae | <i>Hylaeus mesillae</i> |
| Hymenoptera | Cynipidae | <i>Sp. 2</i> |
| Hymenoptera | Eulophidae | <i>Sp. 1</i> |
| Hymenoptera | Eurytomidae | <i>Eurytoma complex</i> |
| Hymenoptera | Eurytomidae | <i>Rileyia cecidomyiae</i> |
| Hymenoptera | Formicidae | <i>Camponotus semitestaceus</i> |
| Hymenoptera | Formicidae | <i>Formica perpilosa</i> |
| Hymenoptera | Formicidae | <i>Formica pilicornis</i> |
| Hymenoptera | Formicidae | <i>Formica subpolita</i> |
| Hymenoptera | Formicidae | <i>Iridomyrmex pruinosus</i> |
| Hymenoptera | Formicidae | <i>Lasius neoniger</i> |
| Hymenoptera | Formicidae | <i>Liometopum occidentale</i> |
| Hymenoptera | Formicidae | <i>Pheidole desertorum</i> |
| Hymenoptera | Formicidae | <i>Pheidole hyatti</i> |
| Hymenoptera | Formicidae | <i>Pogonomyrmex californica</i> |
| Hymenoptera | Formicidae | <i>Pogonomyrmex rugosis</i> |

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| Hymenoptera | Formicidae | <i>Solenopsis xyloni</i> |
| Hymenoptera | Halictidae | <i>Agapostemon melliventris</i> |
| Hymenoptera | Halictidae | <i>Augochlora sp.</i> |
| Hymenoptera | Halictidae | <i>Dialictus sp.</i> |
| Hymenoptera | Halictidae | <i>Dufourea mulleri</i> |
| Hymenoptera | Halictidae | <i>Sp. 1</i> |
| Hymenoptera | Halictidae | <i>Sp. 2</i> |
| Hymenoptera | Ichneumonidae | <i>Netelia Sp. 2</i> |
| Hymenoptera | Ichneumonidae | <i>Pterocormus inurbanus gp</i> |
| Hymenoptera | Megachilidae | <i>Ashmeadiella aridula</i> |
| Hymenoptera | Megachilidae | <i>Megachile brevis</i> |
| Hymenoptera | Megachilidae | <i>Megachile nevadensis</i> |
| Hymenoptera | Megachilidae | <i>Sp. 1</i> |
| Hymenoptera | Megachilidae | <i>Sp. 2</i> |
| Hymenoptera | Mutillidae | <i>Chyphotes mickeli</i> |
| Hymenoptera | Mutillidae | <i>Chyphotes nubeculus</i> |
| Hymenoptera | Mutillidae | <i>Dasymutilla californica</i> |
| Hymenoptera | Mutillidae | <i>Dasymutilla sp.</i> |
| Hymenoptera | Mutillidae | <i>Sphaerophthalma blankei</i> |
| Hymenoptera | Mutillidae | <i>Sphaerophthalma sp. 1</i> |
| Hymenoptera | Mutillidae | <i>Sphaerophthalma Sp. 2</i> |
| Hymenoptera | Mutillidae | <i>Sphaerophthalma Sp. 4</i> |
| Hymenoptera | Mutillidae | <i>Sphaerophthalma Sp. 5</i> |
| Hymenoptera | Operilampidae | <i>Sp. 1</i> |
| Hymenoptera | Perilampidae | <i>Sp. 1</i> |
| Hymenoptera | Pompilidae | <i>Ageniella blaisdelli</i> |
| Hymenoptera | Pompilidae | <i>Anoplius deora</i> |
| Hymenoptera | Pompilidae | <i>Anoplius dreisbachi</i> |
| Hymenoptera | Pompilidae | <i>Anoplius imbellis</i> |
| Hymenoptera | Pompilidae | <i>Anoplius toluca</i> |
| Hymenoptera | Pompilidae | <i>Anoplius yucatanensis</i> |
| Hymenoptera | Pompilidae | <i>Pepsis chrysothemia</i> |
| Hymenoptera | Pteromalidae | <i>Scutellista sp.</i> |
| Hymenoptera | Pteromalidae | <i>Sp. 1</i> |
| Hymenoptera | Pteromalidae | <i>Sp. 2</i> |
| Hymenoptera | Pteromalidae | <i>Sp. 3</i> |
| Hymenoptera | Scelionidae | <i>Sp. 1</i> |
| Hymenoptera | Scoliidae | <i>Campsomeris plumipes</i> |
| Hymenoptera | Scoliidae | <i>Scolia sp.</i> |
| Hymenoptera | Sphecidae | <i>Ammophila aberti</i> |
| Hymenoptera | Sphecidae | <i>Ammophila pruinosa</i> |

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| Hymenoptera | Sphecidae | <i>Bembix americana</i> |
| Hymenoptera | Sphecidae | <i>Bicyrtes capnoptera</i> |
| Hymenoptera | Sphecidae | <i>Cerceris sextoides</i> |
| Hymenoptera | Sphecidae | <i>Chalybion californicum</i> |
| Hymenoptera | Sphecidae | <i>Diondontus sp.</i> |
| Hymenoptera | Sphecidae | <i>Entomognathus sp. 1</i> |
| Hymenoptera | Sphecidae | <i>Entomognathus sp. 2</i> |
| Hymenoptera | Sphecidae | <i>Glenosticta argentata</i> |
| Hymenoptera | Sphecidae | <i>Liris sp.</i> |
| Hymenoptera | Sphecidae | <i>Oxybelus argenteopilos</i> |
| Hymenoptera | Sphecidae | <i>Oxybelus argenteopilosus</i> |
| Hymenoptera | Sphecidae | <i>Palmodes sp.</i> |
| Hymenoptera | Sphecidae | <i>Philanthus levini</i> |
| Hymenoptera | Sphecidae | <i>Philanthus multimaculatus</i> |
| Hymenoptera | Sphecidae | <i>Philanthus ventilabris</i> |
| Hymenoptera | Sphecidae | <i>Podalonia deserticola</i> |
| Hymenoptera | Sphecidae | <i>Podalonia luctuosa</i> |
| Hymenoptera | Sphecidae | <i>Prionyx parkeri</i> |
| Hymenoptera | Sphecidae | <i>Sceliphron caementarium</i> |
| Hymenoptera | Sphecidae | <i>Sp. 1</i> |
| Hymenoptera | Sphecidae | <i>Sp. 2</i> |
| Hymenoptera | Sphecidae | <i>Sphecius convallis</i> |
| Hymenoptera | Sphecidae | <i>Sphex ichneumoneus</i> |
| Hymenoptera | Sphecidae | <i>Steniolia duplicata</i> |
| Hymenoptera | Sphecidae | <i>Tachysphex coquilletti</i> |
| Hymenoptera | Sphecidae | <i>Tachytes sp.</i> |
| Hymenoptera | Sphecidae | <i>Trypoxylon californicum</i> |
| Hymenoptera | Sulophidae | <i>Aprostocetus Sp. 2</i> |
| Hymenoptera | Sulophidae | <i>Cirrospilus sp.</i> |
| Hymenoptera | Sulophidae | <i>Diglyphusia sp.</i> |
| Hymenoptera | Tiphiidae | <i>Brachycistis carinata</i> |
| Hymenoptera | Tiphiidae | <i>Brachycistis inaequalis</i> |
| Hymenoptera | Tiphiidae | <i>Brachycistis ioachinensis</i> |
| Hymenoptera | Tiphiidae | <i>Brachycistis lacustris</i> |
| Hymenoptera | Tiphiidae | <i>Sp. 1</i> |
| Hymenoptera | Tiphiidae | <i>Sp. 2</i> |
| Hymenoptera | Tiphiidae | <i>Sp. 6</i> |
| Hymenoptera | Tiphiidae | <i>Sp. 8</i> |
| Hymenoptera | Torymidae | <i>Sp. 3</i> |
| Hymenoptera | Vespidae | <i>Ancistrocerus crucifera</i> |
| Hymenoptera | Vespidae | <i>Eucdynerus sp. 1</i> |

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| Hymenoptera | Vespidae | <i>Euclyptus sp. 2</i> |
| Hymenoptera | Vespidae | <i>Euodynerus exoglyphus</i> |
| Hymenoptera | Vespidae | <i>Euodynerus nidalgo</i> |
| Hymenoptera | Vespidae | <i>Parancistrocersu mcclayi</i> |
| Hymenoptera | Vespidae | <i>Polistes fuscatus</i> |
| Hymenoptera | Vespidae | <i>Stenodynerus pulviventis</i> |
| Isoptera | Rhinotermitidae | <i>Heterotermes sp.</i> |
| Lepidoptera | Arctiidae | <i>Apantesis proxima</i> |
| Lepidoptera | Cossidae | <i>Hypopta palmata</i> |
| Lepidoptera | Gelechiidae | <i>Chionodes abdominella</i> |
| Lepidoptera | Geometridae | <i>Hesperumia sulphuria</i> |
| Lepidoptera | Geometridae | <i>Synchlora aerata</i> |
| Lepidoptera | Hesperiidae | <i>Atalopedes campestris</i> |
| Lepidoptera | Hesperiidae | <i>Hylephleus phyleus</i> |
| Lepidoptera | Hesperiidae | <i>Polites sabuleti</i> |
| Lepidoptera | Hesperiidae | <i>Pseudocopaeodes eunis</i> |
| Lepidoptera | Hesperiidae | <i>Pyrgus communis</i> |
| Lepidoptera | Lasiocampidae | <i>Malacosoma incurvum</i> |
| Lepidoptera | Lycaenidae | <i>Brephidium exilis</i> |
| Lepidoptera | Lycaenidae | <i>Icaricia acmon</i> |
| Lepidoptera | Microlepidoptera | <i>Sp. 2</i> |
| Lepidoptera | Microlepidoptera | <i>Sp. 7</i> |
| Lepidoptera | Noctuidae | <i>Agrotis ipsilon</i> |
| Lepidoptera | Noctuidae | <i>E. messoria</i> |
| Lepidoptera | Noctuidae | <i>E. olivia</i> |
| Lepidoptera | Noctuidae | <i>Euxoa atomaris</i> |
| Lepidoptera | Noctuidae | <i>Euxoa olivia</i> |
| Lepidoptera | Noctuidae | <i>Euxoa selenis</i> |
| Lepidoptera | Noctuidae | <i>Heliothis obsoleta</i> |
| Lepidoptera | Noctuidae | <i>Heliothis zea</i> |
| Lepidoptera | Noctuidae | <i>Helotropha reniformis</i> |
| Lepidoptera | Noctuidae | <i>Nonagria sp.</i> |
| Lepidoptera | Noctuidae | <i>Peridroma saucia</i> |
| Lepidoptera | Noctuidae | <i>Perotorthodes alfkeni</i> |
| Lepidoptera | Noctuidae | <i>Proxenus mindara</i> |
| Lepidoptera | Noctuidae | <i>Pseudaletia farcta</i> |
| Lepidoptera | Noctuidae | <i>Pseudanarta singula</i> |
| Lepidoptera | Noctuidae | <i>Pseudorthosia variabilis</i> |
| Lepidoptera | Noctuidae | <i>Rhynchagrotis anchocelioides</i> |
| Lepidoptera | Noctuidae | <i>Rhynchagrotis exsertistigma</i> |
| Lepidoptera | Noctuidae | <i>S. separata</i> |

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| Lepidoptera | Noctuidae | <i>Sp. 5</i> |
| Lepidoptera | Noctuidae | <i>Sp. 6</i> |
| Lepidoptera | Noctuidae | <i>Sp. 7</i> |
| Lepidoptera | Noctuidae | <i>Spodoptera exigua</i> |
| Lepidoptera | Noctuidae | <i>Tridepia nova</i> |
| Lepidoptera | Noctuidae | <i>Trudestra arida</i> |
| Lepidoptera | Noctuidae | <i>Ulosyneda sp.</i> |
| Lepidoptera | Nymphalidae | <i>Danaus plexippus</i> |
| Lepidoptera | Nymphalidae | <i>Nymphalis antiopa</i> |
| Lepidoptera | Nymphalidae | <i>Vanessa annabella</i> |
| Lepidoptera | Nymphalidae | <i>Polygonia satyrus</i> |
| Lepidoptera | Nymphalidae | <i>Vanessa atlanta</i> |
| Lepidoptera | Nymphalidae | <i>V. cardui</i> |
| Lepidoptera | Pieridae | <i>Anthocharis cethura</i> |
| Lepidoptera | Pieridae | <i>Artogeia rapae</i> |
| Lepidoptera | Pieridae | <i>Euchloae hyantis</i> |
| Lepidoptera | Pieridae | <i>Pontia protodice</i> |
| Lepidoptera | Pyralidae | <i>Achyra sp. 1</i> |
| Lepidoptera | Pyralidae | <i>Amydria sp. 1</i> |
| Lepidoptera | Pyralidae | <i>Euchromius ocellus</i> |
| Lepidoptera | Pyralidae | <i>Eumysia sp.</i> |
| Lepidoptera | Pyralidae | <i>Hymenia sp.</i> |
| Lepidoptera | Sphingidae | <i>Euproserpinus phaeton</i> |
| Lepidoptera | Tineidae | <i>Acrolophus sp. 1</i> |
| Lepidoptera | Tortricidae | <i>Bactra macopiana</i> |
| Neuroptera | Chrysopidae | <i>Chrysopa carnea</i> |
| Neuroptera | Chrysopidae | <i>Chrysoperla plorabunda</i> |
| Neuroptera | Chrysopidae | <i>Eremochrysopa punctinuris</i> |
| Neuroptera | Hemerobiidae | <i>Micromus subanticus</i> |
| Neuroptera | Inocellidae | <i>Inocella inflata</i> |
| Neuroptera | Myrmeleontidae | <i>B. coquilletti</i> |
| Neuroptera | Myrmeleontidae | <i>B. longipalpis</i> |
| Neuroptera | Myrmeleontidae | <i>Brachynemurus carrizonus</i> |
| Neuroptera | Myrmeleontidae | <i>Scotoleon fidelitus</i> |
| Odonata | Aeshnidae | <i>Aeshna multicolor</i> |
| Odonata | Aeshnidae | <i>Anax junius</i> |
| Odonata | Coenagrionidae | <i>Enallagma carunculatum</i> |
| Odonata | Coenagrionidae | <i>I. denticollis</i> |
| Odonata | Coenagrionidae | <i>Ischnura cervula</i> |
| Odonata | Libellulidae | <i>Pachydiplax longipennis</i> |
| Odonata | Libellulidae | <i>Sympetrum corruptum</i> |

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| Odonata | Libellulidae | <i>T. onusta (rare)</i> |
| Odonata | Libellulidae | <i>Tramera lacerata</i> |
| Orthoptera | Acrididae | <i>Aeoloplides tenuipennis</i> |
| Orthoptera | Acrididae | <i>Amphilitornus coloradus</i> |
| Orthoptera | Acrididae | <i>Anconia integra</i> |
| Orthoptera | Acrididae | <i>Chimarocephala californica</i> |
| Orthoptera | Acrididae | <i>Chimarocephala californica</i> |
| Orthoptera | Acrididae | <i>Eremiacris pallida</i> |
| Orthoptera | Acrididae | <i>Hesperotettix viridis</i> |
| Orthoptera | Acrididae | <i>M. yarrowii</i> |
| Orthoptera | Acrididae | <i>Opeia obscura</i> |
| Orthoptera | Acrididae | <i>Psoloessa delicatula</i> |
| Orthoptera | Acrididae | <i>Trimerotropis californica</i> |
| Orthoptera | Acrididae | <i>Trimerotropis pallidipennis</i> |
| Orthoptera | Acrididae | <i>Trimerotropis pseudofasciata</i> |
| Orthoptera | Gryllidae | <i>Gryllus assimilis</i> |
| Orthoptera | Gryllidae | <i>Oecanthus californicus</i> |
| Psocoptera | Trogiidae | <i>Sp. 1</i> |
| Thysanoptera | Thripidae | <i>Sp. 1</i> |
| Thysanoptera | Thripidae | <i>Sp. 2</i> |

Appendix D

Sikes Act

Appendix D Sikes Act

SIKES ACT

[As Amended Through Public Law 106–580, Dec. 31, 2000]

Excerpted from "Conserving Biodiversity on Military Lands" Appendix Q

December 31, 2000

SIKES ACT

AN ACT To promote effectual planning, development, maintenance, and coordination of wildlife, fish, and game conservation and rehabilitation in military reservations.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Sikes Act”.

TITLE I—CONSERVATION PROGRAMS ON MILITARY INSTALLATIONS

SEC. 100. [16 U.S.C. 670] DEFINITIONS.

In this title:

(1) **MILITARY INSTALLATION.**—The term “military installation”—

(A) means any land or interest in land owned by the United States and administered by the Secretary of Defense or the Secretary of a military department, except land under the jurisdiction of the Assistant Secretary of the Army having responsibility for civil works;

(B) includes all public lands withdrawn from all forms of appropriation under public land laws and reserved for use by the Secretary of Defense or the Secretary of a military department; and

(C) does not include any land described in subparagraph (A) or (B) that is subject to an approved recommendation for closure under the Defense Base Closure and Realignment Act of 1990 (part A of title XXIX of Public Law 101–510; 10 U.S.C. 2687 note).

(2) **STATE FISH AND WILDLIFE AGENCY.**—The term “State fish and wildlife agency” means the one or more agencies of State government that are responsible under State law for managing fish or wildlife resources.

(3) **UNITED STATES.**—The term “United States” means the States, the District of Columbia, and the territories and possessions of the United States.

SEC. 101. [16 U.S.C. 670a] (a) AUTHORITY OF SECRETARY OF DEFENSE.—

(1) **PROGRAM.**—

(A) **IN GENERAL.**—The Secretary of Defense shall carry out a program to provide for the conservation and rehabilitation of natural resources on military installations.

(B) **INTEGRATED NATURAL RESOURCES MANAGEMENT PLAN.**—To facilitate the program, the Secretary of each military department shall prepare and implement an inte-

grated natural resources management plan¹ for each military installation in the United States under the jurisdiction of the Secretary, unless the Secretary determines that the absence of significant natural resources on a particular installation makes preparation of such a plan inappropriate.

(2) COOPERATIVE PREPARATION.—The Secretary of a military department shall prepare each integrated natural resources management plan for which the Secretary is responsible in cooperation with the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service, and the head of each appropriate State fish and wildlife agency for the State in which the military installation concerned is located. Consistent with paragraph (4), the resulting plan for the military installation shall reflect the mutual agreement of the parties concerning conservation, protection, and management of fish and wildlife resources.

(3) PURPOSES OF PROGRAM.—Consistent with the use of military installations to ensure the preparedness of the Armed Forces, the Secretaries of the military departments shall carry out the program required by this subsection to provide for—

(A) the conservation and rehabilitation of natural resources on military installations;

¹Section 2905 of the National Defense Authorization Act for Fiscal Year 1998 (P.L. 105–85; 111 Stat. 2019), provides:

SEC. 2905. REVIEW FOR PREPARATION OF INTEGRATED NATURAL RESOURCES MANAGEMENT PLANS.

(a) DEFINITIONS.—In this section, the terms “military installation” and “United States” have the meanings provided in section 100 of the Sikes Act (as added by section 2911).

(b) REVIEW OF MILITARY INSTALLATIONS.—

(1) REVIEW.—Not later than 270 days after the date of enactment of this Act, the Secretary of each military department shall—

(A) review each military installation in the United States that is under the jurisdiction of that Secretary to determine the military installations for which the preparation of an integrated natural resources management plan under section 101 of the Sikes Act (as amended by this title) is appropriate; and

(B) submit to the Secretary of Defense a report on the determinations.

(2) REPORT TO CONGRESS.—Not later than one year after the date of enactment of this Act, the Secretary of Defense shall submit to Congress a report on the reviews conducted under paragraph (1). The report shall include—

(A) a list of the military installations reviewed under paragraph (1) for which the Secretary of the appropriate military department determines that the preparation of an integrated natural resources management plan is not appropriate; and

(B) for each of the military installations listed under subparagraph (A), an explanation of each reason such a plan is not appropriate.

(c) DEADLINE FOR INTEGRATED NATURAL RESOURCES MANAGEMENT PLANS.—Not later than three years after the date of the submission of the report required under subsection (b)(2), the Secretary of each military department shall, for each military installation with respect to which the Secretary has not determined under subsection (b)(2)(A) that preparation of an integrated natural resources management plan is not appropriate—

(1) prepare and begin implementing such a plan in accordance with section 101(a) of the Sikes Act (as amended by this title); or

(2) in the case of a military installation for which there is in effect a cooperative plan under section 101(a) of the Sikes Act on the day before the date of enactment of this Act, complete negotiations with the Secretary of the Interior and the heads of the appropriate State agencies regarding changes to the plan that are necessary for the plan to constitute an integrated natural resources management plan that complies with that section, as amended by this title.

(d) PUBLIC COMMENT.—The Secretary of each military department shall provide an opportunity for the submission of public comments on—

(1) integrated natural resources management plans proposed under subsection (c)(1); and

(2) changes to cooperative plans proposed under subsection (c)(2).

(B) the sustainable multipurpose use of the resources, which shall include hunting, fishing, trapping, and non-consumptive uses; and

(C) subject to safety requirements and military security, public access to military installations to facilitate the use.

(4) EFFECT ON OTHER LAW.—Nothing in this title—

(A)(i) affects any provision of a Federal law governing the conservation or protection of fish and wildlife resources; or

(ii) enlarges or diminishes the responsibility and authority of any State for the protection and management of fish and resident wildlife; or

(B) except as specifically provided in the other provisions of this section and in section 102, authorizes the Secretary of a military department to require a Federal license or permit to hunt, fish, or trap on a military installation.

(b) REQUIRED ELEMENTS OF PLANS.—Consistent with the use of military installations to ensure the preparedness of the Armed Forces, each integrated natural resources management plan prepared under subsection (a)—

(1) shall, to the extent appropriate and applicable, provide for—

(A) fish and wildlife management, land management, forest management, and fish- and wildlife-oriented recreation;

(B) fish and wildlife habitat enhancement or modifications;

(C) wetland protection, enhancement, and restoration, where necessary for support of fish, wildlife, or plants;

(D) integration of, and consistency among, the various activities conducted under the plan;

(E) establishment of specific natural resource management goals and objectives and time frames for proposed action;

(F) sustainable use by the public of natural resources to the extent that the use is not inconsistent with the needs of fish and wildlife resources;

(G) public access to the military installation that is necessary or appropriate for the use described in subparagraph (F), subject to requirements necessary to ensure safety and military security;

(H) enforcement of applicable natural resource laws (including regulations);

(I) no net loss in the capability of military installation lands to support the military mission of the installation; and

(J) such other activities as the Secretary of the military department determines appropriate;

(2) must be reviewed as to operation and effect by the parties thereto on a regular basis, but not less often than every 5 years; and

(3) may stipulate the issuance of special State hunting and fishing permits to individuals and require payment of nominal fees therefor, which fees shall be utilized for the protection, conservation, and management of fish and wildlife, including habitat improvement and related activities in accordance with the integrated natural resources management plan; except that—

(A) the Commanding Officer of the installation or persons designated by that Officer are authorized to enforce such special hunting and fishing permits and to collect, spend, administer, and account for fees for the permits, acting as agent or agents for the State if the integrated natural resources management plan so provides, and

(B) the fees collected under this paragraph may not be expended with respect to other than the military installation on which collected, unless the military installation is subsequently closed, in which case the fees may be transferred to another military installation to be used for the same purposes.

(c) After an integrated natural resources management plan is agreed to under subsection (a)—

(1) no sale of land, or forest products from land, that is within a military installation covered by that plan may be made under section 2665 (a) or (b) of title 10, United States Code; and

(2) no leasing of land that is within the installation may be made under section 2667 of such title 10; unless the effects of that sale or leasing are compatible with the purposes of the plan.

(d) With regard to the implementation and enforcement of integrated natural resources management plans agreed to under subsection (a)—

(1) neither Office of Management and Budget Circular A-76 nor any successor circular thereto applies to the procurement of services that are necessary for that implementation and enforcement; and

(2) priority shall be given to the entering into of contracts for the procurement of such implementation and enforcement services with Federal and State agencies having responsibility for the conservation or management of fish or wildlife.

(e) Integrated natural resources management plans agreed to under the authority of this section and section 102 shall not be deemed to be, nor treated as, cooperative agreements to which chapter 63 of title 31, United States Code¹ applies.

(f) **REVIEWS AND REPORTS.**—

(1) **SECRETARY OF DEFENSE.**—Not later than March 1 of each year, the Secretary of Defense shall review the extent to which integrated natural resources management plans were prepared or were in effect and implemented in accordance with this title in the preceding year, and submit a report on the findings of the review to the committees. Each report shall include—

¹ In subsection (e), a comma should be inserted after “United States Code”.

(A) the number of integrated natural resources management plans in effect in the year covered by the report, including the date on which each plan was issued in final form or most recently revised;

(B) the amounts expended on conservation activities conducted pursuant to the plans in the year covered by the report; and

(C) an assessment of the extent to which the plans comply with this title.

(2) SECRETARY OF THE INTERIOR.—Not later than March 1 of each year and in consultation with the heads of State fish and wildlife agencies, the Secretary of the Interior shall submit a report to the committees on the amounts expended by the Department of the Interior and the State fish and wildlife agencies in the year covered by the report on conservation activities conducted pursuant to integrated natural resources management plans.

(3) DEFINITION OF COMMITTEES.—In this subsection, the term “committees” means—

(A) the Committee on Resources and the Committee on Armed Services of the House of Representatives; and

(B) the Committee on Armed Services and the Committee on Environment and Public Works of the Senate.

SEC. 102. [16 U.S.C. 670b] The Secretary of Defense in cooperation with the Secretary of Interior and the appropriate State agency is authorized to carry out a program for the conservation, restoration and management of migratory game birds on military installations, including the issuance of special hunting permits and the collection of fees therefor, in accordance with an integrated natural resources management plan mutually agreed upon by the Secretary of Defense, the Secretary of the Interior and the appropriate State agency: *Provided*, That possession of a special permit for hunting migratory game birds issued pursuant to this title shall not relieve the permittee of the requirements of the Migratory Bird Hunting Stamp Act as amended nor of the requirements pertaining to State law set forth in Public Law 85–337.

SEC. 103. [16 U.S.C. 670c] PROGRAM FOR PUBLIC OUTDOOR RECREATION.

(a) PROGRAM AUTHORIZED.—The Secretary of Defense is also authorized to carry out a program for the development, enhancement, operation, and maintenance of public outdoor recreation resources at military installations in accordance with an integrated natural resources management plan mutually agreed upon by the Secretary of Defense and the Secretary of the Interior, in consultation with the appropriate State agency designated by the State in which the installations are located.

(b) ACCESS FOR DISABLED VETERANS, MILITARY DEPENDENTS WITH DISABILITIES, AND OTHER PERSONS WITH DISABILITIES.—(1) In developing facilities and conducting programs for public outdoor recreation at military installations, consistent with the primary military mission of the installations, the Secretary of Defense shall ensure, to the extent reasonably practicable, that outdoor recreation opportunities (including fishing, hunting, trapping, wildlife

viewing, boating, and camping) made available to the public also provide access for persons described in paragraph (2) when topographic, vegetative, and water resources allow access for such persons without substantial modification to the natural environment.

(2) Persons referred to in paragraph (1) are the following:

(A) Disabled veterans.

(B) Military dependents with disabilities.

(C) Other persons with disabilities, when access to a military installation for such persons and other civilians is not otherwise restricted.

(3) The Secretary of Defense shall carry out this subsection in consultation with the Secretary of Veterans Affairs, national service, military, and veterans organizations, and sporting organizations in the private sector that participate in outdoor recreation projects for persons described in paragraph (2).

(c) ACCEPTANCE OF DONATIONS.—In connection with the facilities and programs for public outdoor recreation at military installations, in particular the requirement under subsection (b) to provide access for persons described in paragraph (2) of such subsection, the Secretary of Defense may accept—

(1) the voluntary services of individuals and organizations;

and

(2) donations of property, whether real or personal.

(d) TREATMENT OF VOLUNTEERS.—A volunteer under subsection (c) shall not be considered to be a Federal employee and shall not be subject to the provisions of law relating to Federal employment, including those relating to hours of work, rates of compensation, leave, unemployment compensation, and Federal employee benefits, except that—

(1) for the purposes of the tort claims provisions of chapter 171 of title 28, United States Code, the volunteer shall be considered to be a Federal employee; and

(2) for the purposes of subchapter I of chapter 81 of title 5, United States Code, relating to compensation to Federal employees for work injuries, the volunteer shall be considered to be an employee, as defined in section 8101(1)(B) of title 5, United States Code, and the provisions of such subchapter shall apply.

SEC. 103a. [16 U.S.C. 670c–1] (a) The Secretary of a military department may enter into cooperative agreements with States, local governments, nongovernmental organizations, and individuals to provide for the maintenance and improvement of natural resources on, or to benefit natural and historic research on, Department of Defense installations.

(b) MULTIYEAR AGREEMENTS.—Funds appropriated to the Department of Defense for a fiscal year may be obligated to cover the cost of goods and services provided under a cooperative agreement entered into under subsection (a) or through an agency agreement under section 1535 of title 31, United States Code, during any 18-month period beginning in that fiscal year, without regard to whether the agreement crosses fiscal years.

(c) Cooperative agreements entered into under this section shall be subject to the availability of funds and shall not be consid-

ered, nor be treated as, cooperative agreements to which chapter 63 of title 31, United States Code, applies.

SEC. 104. [16 U.S.C. 670d] The Department of Defense is held free from any liability to pay into the Treasury of the United States upon the operation of the program or programs authorized by this title any funds which may have been or may hereafter be collected, received or expended pursuant to, and for the purposes of, this title, and which collections, receipts and expenditures have been properly accounted for to the Comptroller General of the United States.

SEC. 105. [16 U.S.C. 670e] Nothing herein contained shall be construed to modify, amend or repeal any provision of Public Law 85-337, nor as applying to national forest lands administered pursuant to the provisions of section 9 of the Act of June 7, 1924 (43 Stat. 655), nor section 15 of the Taylor Grazing Act.

SEC. 106. [16 U.S.C. 670e-1] FEDERAL ENFORCEMENT OF OTHER LAWS.

All Federal laws relating to the management of natural resources on Federal land may be enforced by the Secretary of Defense with respect to violations of the laws that occur on military installations within the United States.

SEC. 107. [16 U.S.C. 670e-2] NATURAL RESOURCES MANAGEMENT SERVICES.

To the extent practicable using available resources, the Secretary of each military department shall ensure that sufficient numbers of professionally trained natural resources management personnel and natural resources law enforcement personnel are available and assigned responsibility to perform tasks necessary to carry out this title, including the preparation and implementation of integrated natural resources management plans.

SEC. 108. [16 U.S.C. 670f] (a) The Secretary of Defense shall expend such funds as may be collected in accordance with the integrated natural resources management plans agreed to under sections 101 and 102 and cooperative agreements agreed to under section 103a of this title, and for no other purpose. All funds that are so collected shall remain available until expended.

(b) There are authorized to be appropriated to the Secretary of Defense not to exceed \$1,500,000 for each of the fiscal years 1998 through 2003, to carry out this title, including the enhancement of fish and wildlife habitat and the development of public recreation and other facilities, and to carry out such functions and responsibilities as the Secretary may have under cooperative agreements entered into under section 103a. The Secretary of Defense shall, to the greatest extent practicable, enter into agreements to utilize the services, personnel, equipment, and facilities, with or without reimbursement, of the Secretary of the Interior in carrying out the provisions of this section.

(c) There are authorized to be appropriated to the Secretary of the Interior not to exceed \$3,000,000 for each of the fiscal years 1998 through 2003, to carry out such functions and responsibilities as the Secretary may have under integrated natural resources

management plans to which such Secretary is a party under this section, including those for the enhancement of fish and wildlife habitat and the development of public recreation and other facilities.

(d) The Secretary of Defense and the Secretary of the Interior may each use any authority available to him under other laws relating to fish, wildlife, or plant conservation or rehabilitation for purposes of carrying out the provisions of this title.

TITLE II—CONSERVATION PROGRAMS ON CERTAIN PUBLIC LAND

SEC. 201. [16 U.S.C. 670g] (a) The Secretary of the Interior and the secretary of Agriculture shall each, in cooperation with the State agencies and in accordance with comprehensive plans developed pursuant to section 202 of this title, plan, develop, maintain, and coordinate programs for the conservation and rehabilitation of wildlife, fish, and game. Such conservation and rehabilitation programs shall include, but not be limited to specific habitat improvement projects and related activities and adequate protection for species of fish, wildlife, and plants considered threatened or endangered.

(b) The Secretary of the Interior shall implement the conservation and rehabilitation programs required under subsection (a) of this section on public land under his jurisdiction. The Secretary of the Interior shall adopt, modify, and implement the conservation and rehabilitation programs required under such subsection (a) on public land under the jurisdiction of the Chairman, but only with the prior written approval of the Atomic Energy Commission, and on public land under the jurisdiction of the Administrator, but only with the prior written approval of the Administrator. The Secretary of Agriculture shall implement such conservation and rehabilitation programs on public land under his jurisdiction.

SEC. 202. [16 U.S.C. 670h] (a)(1) The Secretary of the Interior shall develop, in consultation with the State agencies, a comprehensive plan for conservation and rehabilitation programs to be implemented on public land under his jurisdiction and the Secretary of Agriculture shall do the same in connection with public land under his jurisdiction.

(2) The Secretary of the Interior shall develop, with the prior written approval of the Atomic Energy Commission, a comprehensive plan for conservation and rehabilitation programs to be implemented on public land under the jurisdiction of the Chairman and develop, with the prior written approval of the Administrator, a comprehensive plan for such programs to be implemented on public land under the jurisdiction of the Administrator. Each such plan shall be developed after the Secretary of the Interior makes, with the prior written approval of the Chairman or the Administrator, as the case may be, and in consultation with the State agencies, necessary studies and surveys of the land concerned to determine where conservation and rehabilitation programs are most needed.

(b) Each comprehensive plan developed pursuant to this section shall be consistent with any overall land use and management plans for the lands involved. In any case in which hunting, trapping, or fishing (or any combination thereof) of resident fish and wildlife is to be permitted on public land under a comprehensive plan, such hunting, trapping, and fishing shall be conducted in accordance with applicable laws and regulations of the State in which such land is located.

(c)(1) Each State agency may enter into a cooperative agreement with—

(A) the Secretary of the Interior with respect to those conservation and rehabilitation programs to be implemented under this title within the State on public land which is under his jurisdiction;

(B) the Secretary of Agriculture with respect to those conservation and rehabilitation programs to be implemented under this title within the State on public land which is under his jurisdiction; and

(C) the Secretary of the Interior and the Chairman or the Administrator, as the case may be, with respect to those conservation and rehabilitation programs to be implemented under this title within the State on public land under the jurisdiction of the Chairman or the Administrator; except that before entering into any cooperative agreement which affects public land under the jurisdiction of the Chairman, the Secretary of the Interior shall obtain the prior written approval of the Atomic Energy Commission and before entering into any cooperative agreement which affects public lands under the jurisdiction of the Administrator, the Secretary of the Interior shall obtain the prior written approval of the Administrator.

Conservation and rehabilitation programs developed and implemented pursuant to this title shall be deemed as supplemental to wildlife, fish, and game-related programs conducted by the Secretary of the Interior and the Secretary of Agriculture pursuant to other provisions of law. Nothing in this title shall be construed as limiting the authority of the Secretary of the Interior or the Secretary of Agriculture, as the case may be, to manage the national forests or other public lands for wildlife and fish and other purposes in accordance with the Multiple-Use Sustained-Yield Act of 1960 (74 Stat. 215; 16 U.S.C. 528–531) or other applicable authority.

(2) Any conservation and rehabilitation program included within a cooperative agreement entered into under this subsection may be modified in a manner mutually agreeable to the State agency and the Secretary concerned (and the Chairman or the Administrator, as the case may be, if public land under his jurisdiction is involved). Before modifying any cooperative agreement which affects public land under the jurisdiction of the Chairman, the Secretary of the Interior shall obtain the prior written approval of the Atomic Energy Commission and before modifying any cooperative agreement which affects public land under the jurisdiction of the Administrator, the Secretary of the Interior shall obtain the prior written approval of the Administrator.

(3) Each cooperative agreement entered into under this subsection shall—

(A) specify those areas of public land within the State on which conservation and rehabilitation programs will be implemented;

(B) provide for fish and wildlife habitat improvements or modifications, or both;

(C) provide for range rehabilitation where necessary for support of wildlife;

(D) provide adequate protection for fish and wildlife officially classified as threatened or endangered pursuant to section 4 of the Endangered Species Act of 1973 (16 U.S.C. 1533) or considered to be threatened, rare, or endangered by the State agency;

(E) require the control of off-road vehicle traffic;

(F) if the issuance of public land area management stamps is agreed to pursuant to section 203(a) of this title—

(i) contain such terms and conditions as are required under section 203(b) of this title;

(ii) require the maintenance of accurate records and the filing of annual reports by the State agency to the Secretary of the Interior or the Secretary of Agriculture, or both, as the case may be, setting forth the amount and disposition of the fees collected for such stamps; and

(iii) authorize the Secretary concerned and the Comptroller General of the United States, or their authorized representatives, to have access to such records for purposes of audit and examination; and

(G) contain such other terms and conditions as the Secretary concerned and the State agency deem necessary and appropriate to carry out the purposes of this title.

A cooperative agreement may also provide for arrangements under which the Secretary concerned may authorize officers and employees of the State agency to enforce, or to assist in the enforcement of, section 204(a) of this title.

(4) Except where limited under a comprehensive plan or pursuant to cooperative agreement, hunting, fishing, and trapping shall be permitted with respect to resident fish and wildlife in accordance with applicable laws and regulations of the State in which such land is located on public land which is the subject of a conservation and rehabilitation program implemented under this title.

(5) The Secretary of the Interior and the Secretary of Agriculture, as the case may be, shall prescribe such regulations as are deemed necessary to control, in a manner consistent with the applicable comprehensive plan and cooperative agreement, the public use of public land which is the subject of any conservation and rehabilitation program implemented by him under this title.

(d) Agreements entered into by State agencies under the authority of this section shall not be deemed to be, or treated as, cooperative agreements to which the Federal Grant and Cooperative Agreement Act of 1977 (41 U.S.C. 501 et seq.) applies.

SEC. 203. [16 U.S.C. 670i] (a) Any State agency may agree with the Secretary of the Interior and the Secretary of Agriculture

(or with the Secretary of the Interior or the Secretary of Agriculture, as the case may be, if within the State concerned all conservation and rehabilitation programs under this title will be implemented by him) that no individual will be permitted to hunt, trap, or fish on any public land within the State which is subject to a conservation and rehabilitation program implemented under this title unless at the time such individual is engaged in such activity he has on his person a valid public land management area stamp issued pursuant to this section.

(b) Any agreement made pursuant to subsection (a) of this section to require the issuance of public land management area stamps shall be subject to the following conditions:

(1) Such stamps shall be issued, sold, and the fees therefor collected, by the State agency or by the authorized agents of such agency.

(2) Notice of the requirement to possess such stamps shall be displayed prominently in all places where State hunting, trapping, or fishing licenses are sold. To the maximum extent practicable, the sale of such stamps shall be combined with the sale of such State hunting, trapping, and fishing licenses.

(3)¹ Except for expenses incurred in the printing, issuing, or selling of such stamps, the fees collected for such stamps by the State agency shall be utilized in carrying out conservation and rehabilitation programs implemented under this title in the State concerned. Such fees may be used by the State agency to acquire lands or interests therein from willing sellers or donors to provide public access to program lands that have no existing public access for enhancement of outdoor recreation and wildlife conservation: *Provided*, That the Secretary of Agriculture and the Secretary of the Interior maintain such access, or ensure that maintenance is provided for such access, through or to lands within their respective jurisdiction.

(4) The purchase of any such stamp shall entitle the purchaser thereof to hunt, trap, and fish on any public land within such State which is the subject of a conservation or rehabilitation program implemented under this title except to the extent that the public use of such land is limited pursuant to a comprehensive plan or cooperative agreement; but the purchase of any such stamp shall not be construed as (A) eliminating the requirement for the purchase of a migratory bird hunting stamp as set forth in the first section of the Act of March 16, 1934, commonly referred to as the Migratory Bird Hunting Stamp Act (16 U.S.C. 718a), or (B) relieving the purchaser from compliance with any applicable State game and fish laws and regulations.

(5) The amount of the fee to be charged for such stamps, the age at which the individual is required to acquire such a stamp, and the expiration date for such stamps shall be mutually agreed upon by the State agency and the Secretary or Secretaries concerned; except that each such stamp shall be void not later than one year after the date of issuance.

¹ Margin so in law. See section 201 of Public Law 100-653 (102 Stat. 3826).

(6) Each such stamp must be validated by the purchaser thereof by signing his name across the face of the stamp.

(7) Any individual to whom a stamp is sold pursuant to this section shall upon request exhibit such stamp for inspection to any officer or employee of the Department of the Interior or the Department of Agriculture, or to any other person who is authorized to enforce section 204(a) of this title.

SEC. 204. [16 U.S.C. 670j] (a)(1) Any person who hunts, traps, or fishes on any public land which is subject to a conservation and rehabilitation program implemented under this title without having on his person a valid public land management area stamp, if the possession of such a stamp is required, shall be fined not more than \$1,000, or imprisoned for not more than six months, or both.

(2) Any person who knowingly violates or fails to comply with any regulations prescribed under section 202(c)(5) of this title shall be fined not more than \$500, or imprisoned not more than six months, or both.

(b)(1) For the purpose of enforcing subsection (a) of this section, the Secretary of the Interior and the Secretary of Agriculture may designate any employee of their respective departments, and any State officer or employee authorized under a cooperative agreement to enforce such subsection (a), to (i) carry firearms; (ii) execute and serve any warrant or other process issued by a court or officer of competent jurisdiction; (iii) make arrests without warrant or process for a misdemeanor he has reasonable grounds to believe is being committed in his presence or view; (iv) search without warrant or process any person, place, or conveyance as provided by law; and (v) seize without warrant or process any evidentiary item as provided by law.

(2) Upon the sworn information by a competent person, any United States magistrate or court of competent jurisdiction may issue process for the arrest of any person charged with committing any offense under subsection (a) of this section.

(3) Any person charged with committing any offense under subsection (a) of this section may be tried and sentenced by any United States magistrate designated for that purpose by the court by which he was appointed, in the same manner and subject to the same conditions as provided for in section 3401 of title 18, United States Code.

(c) All guns, traps, nets, and other equipment, vessels, vehicles, and other means of transportation used by any person when engaged in committing an offense under subsection (a) of this section shall be subject to forfeiture to the United States and may be seized and held pending the prosecution of any person arrested for committing such offense. Upon conviction for such offense, such forfeiture may be adjudicated as a penalty in addition to any other provided for committing such offense.

(d) All provisions of law relating to the seizure, forfeiture, and condemnation of a vessel for violation of the customs laws, the disposition of such vessel or the proceeds from the sale thereof, and the remission or mitigation of such forfeitures, shall apply to the seizures and forfeitures incurred, or alleged to have been incurred, under the provisions of this section, insofar as such provisions of

law are applicable and not inconsistent with the provisions of this section; except that all powers, rights, and duties conferred or imposed by the customs laws upon any officer or employee of the Department of the Treasury shall, for the purposes of this section, be exercised or performed by the Secretary of the Interior or the Secretary of Agriculture, as the case may be, or by such persons as he may designate.

SEC. 205. [16 U.S.C. 670k] As used in this title—

(1) The term “Administrator” means the Administrator of the National Aeronautics and Space Administration.

(2) The term “Chairman” means the Chairman of the Atomic Energy Commission.

(3) The term “off-road vehicle” means any motorized vehicle designed for, or capable of, cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain; but such term does not include—

(A) any registered motorboat at the option of each State;

(B) any military, fire, emergency, or law enforcement vehicle when used for emergency purposes; and

(C) any vehicle the use of which is expressly authorized by the Secretary of the Interior or the Secretary of Agriculture under a permit, lease, license, or contract.

(4) The term “public land” means all lands under the respective jurisdiction of the Secretary of the Interior, the Secretary of Agriculture, the Chairman, and the Administrator, except land which is, or hereafter may be, within or designated as—

(A) a military reservation;

(B) a unit of the National Park System;

(C) an area within the national wildlife refuge system;

(D) an Indian reservation; or

(E) an area within an Indian reservation or land held in trust by the United States for an Indian or Indian tribe.

(5) The term “State agency” means the agency or agencies of a State responsible for the administration of the fish and game laws of the State.

(6) The term “conservation and rehabilitation programs” means to utilize those methods and procedures which are necessary to protect, conserve, and enhance wildlife, fish, and game resources to the maximum extent practicable on public lands subject to this title consistent with any overall land use and management plans for the lands involved. Such methods and procedures shall include, but shall not be limited to, all activities associated with scientific resources management such as protection, research, census, law enforcement, habitat management, propagation, live trapping and transplantation, and regulated taking in conformance with the provisions of this title. Nothing in this term shall be construed as diminishing the authority or jurisdiction of the States with respect to the management of resident species of fish, wildlife, or game, except as otherwise provided by law.

SEC. 206. [16 U.S.C. 670l] Notwithstanding any other provision in this title, section 203 of this title shall not apply to land which is, or hereafter may be, within or designated as Forest Service land or as Bureau of Land Management land of any State in which all Federal lands therein comprise 60 percent or more of the total area of such State; except that in any such State, any appropriate State agency may agree with the Secretary of Agriculture or the Secretary of the Interior, or both, as the case may be, to collect a fee as specified in such agreement at the point of sale of regular licenses to hunt, trap, or fish in such State, the proceeds of which shall be utilized in carrying out conservation and rehabilitation programs implemented under this title in the State concerned and for no other purpose.

SEC. 207. [16 U.S.C. 670m] Nothing in this title shall enlarge or diminish or in any way affect (1) the rights of Indians or Indian tribes to the use of water or natural resources or their rights to fish, trap, or hunt wildlife as secured by statute, agreement, treaty, Executive order, or court decree; or (2) existing State or Federal jurisdiction to regulate those rights either on or off reservations.

SEC. 208. Nothing in this Act shall in any way affect the jurisdiction, authority, duties, or activities of the Joint Federal-State Land Use Planning Commission established pursuant to section 17 of the Alaska Native Claims Settlement Act (85 Stat. 688). During the development of any cooperative plan for Alaska which may be agreed to under title I after the effective date of this section and of any comprehensive program for Alaska under title II, such Commission shall be given an opportunity to submit its comments on such plan or program.

SEC. 209. [16 U.S.C. 670o] (a) There are authorized to be appropriated \$4,000,000 for each of fiscal years 1998 through 2003, to enable the Secretary of the Interior to carry out his functions and responsibilities under this title, including data collection, research, planning, and conservation and rehabilitation programs on public lands. Such funds shall be in addition to those authorized for wildlife, range, soil, and water management pursuant to section 318 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1748), or other provisions of law.

(b) There are authorized to be appropriated \$5,000,000 for each of fiscal years 1998 through 2003, to enable the Secretary of Agriculture to carry out his functions and responsibilities under this title. Such funds shall be in addition to those provided under other provisions of law. In requesting funds under this subsection the Secretary shall take into account fish and wildlife program needs, including those for projects, identified in the State comprehensive plans as contained in the program developed pursuant to the Forest and Rangeland Renewable Resources Planning Act of 1974, as amended (16 U.S.C. 1601–1610).

(c) The Secretary of the Interior and the Secretary of Agriculture may each use any authority available to him under other laws relating to fish, wildlife, or plant conservation or rehabilitation for purposes of carrying out the provisions of this title.

(d) The Secretary of the Interior and the Secretary of Agriculture may each make purchases and contracts for property and services from, or provide assistance to, the State agencies concerned, if such property, services or assistance is required to implement those projects and programs carried out on, or of benefit to, Federal lands and identified in the comprehensive plans or cooperative agreements developed under section 202, without regard to title III (other than section 304) of the Federal Property and Administrative Services Act of 1949 (41 U.S.C. 251–260). Contract authority provided in this section is effective only to such extent or in such amounts as are provided in appropriation Acts.

Appendix E

Water Management Strategy

Estimated Completion Date 2015

Appendix F

Habitat/Habitat Area Management Strategy

Estimated Completion Date 2015

Appendix G

Focal Species Management Strategy

- 1. Tricolored blackbirds**
- 2. To be determined**
- 3. To be determined**

Focal Species: Tricolored Blackbird

Goal: Promote Tricolored Blackbird use at Piute Ponds.

Objective 1: Survey existing Piute Ponds Complex for potential enhancement opportunities to increase tricolored blackbird use, documenting both vegetation and any existing use of tricolored blackbirds as well as level of avian predator use in the area.

Task 1: Environmental Management biologists and volunteers will accomplish a survey of each pond within the Piute Ponds Complex documenting type and ratio of emergent vegetation. Observations of avian species using the area and type of use, if discernable will be documented. Survey will be accomplished during the April timeframe to correlate with prime breeding period of tricolored blackbirds. This will be executed during breeding season for tricolored blackbirds, April 2015.

Estimated resource allocation for task 1: Prepare for survey - 5 government hours, 10 volunteer hours. Accomplish survey - 10 government hours, 40 volunteer.

Task 2: Based on results from task 1 a decision will be made on where it is most feasible to enhance habitat for tricolored blackbirds at the Piute Pond Complex. Results from task 1 will be entered in the Tricolored Blackbird Portal (<http://tricolor.ice.ucdavis.edu>) by volunteers and inputted by in house GIS personnel into the base GIS natural resource database.

Objective 2: Develop specific enhancement parameters for tricolored blackbird area and incorporate into the Piute Ponds Management Plan. This may include water management strategy (timing, amount) that encourages the growth of large (6000sqft) cattail patches and maintains a 60:40 or 50:50 ratio of cattails to open water.

Task 1: Environmental Management biologists and volunteers will evaluate and write specific parameters and execute these parameters by Dec 2015.

Objective 3: If the target number of 10,000 breeding tricolored blackbirds is not reached by 2018 or increasing numbers of tricolored blackbirds are not observed during annual April surveys the habitat will be re-evaluated along with water management of that specific habitat to determine if adjustments are required. If those are not an issue, evaluation of the avian predator base will be accomplished. Should it be determined that the area established has in fact become a “sink” for tricolored blackbirds and cannot be corrected without lethal control of predators the habitat will be adjusted to become undesirable for tricolored blackbirds to eliminate a “sink” to the population.

Measurement to determine success:

1. Participate in banded tricolored bird effort noted on the Tricolored Bird Portal. Note from portal: Tricolored blackbirds have been banded each year since 2007. As of the beginning of 2012, a total of just under 48,000 tricolors have been banded. From 2007-2009, most of the banded birds (nearly all adults) received both USGS aluminum bands as well as two color bands, one color indicating year, and the other indicating site of banding. Sightings of these color-

banded birds are especially important, and the Tricolored Blackbird Portal enables you to enter records of observations ("resightings") of color-banded birds. <http://tricolor.ice.ucdavis.edu/> Resightings of color-banded tricolored blackbirds enable investigators to document spatial and temporal patterns of tricolor movements and have been extremely helpful in identifying new colonies from previously unknown locations. We urge you to record your observations of color-banded tricolors here: [Report a Color-banded Tricolor](#)

2. Accomplish surveys of tricolored blackbird areas at Piute Ponds during April breeding season each year with a mix of government biologists and volunteer birders. Document results on the Tricolored Blackbird Portal (note above website) prepared for this effort. An increasing upward trend will indicate that the habitat on base is being managed to attract Tricolored Blackbirds and potentially resulting in an increase in reproductive success; an increasing tricolor population at the Piute Ponds would be a measure of success. The target number of breeding tricolored blackbirds at Piute Ponds will be 10,000 in 5 years based on the success observed at the 60 acre Hemet Treatment Plant in 1997.

Significance of the Antelope Valley, Keiller Kyle:

Determined by the results of the last three triennial statewide surveys, the Antelope Valley is one of the last remaining nesting strongholds for Tricolored Blackbirds in southern California. Most likely due to the native grassland and desert scrub vegetation that provides high quality foraging habitat and the few remaining spring flooded wetland and pond systems needed for nesting, Tricolor colonies in the Antelope Valley are consistent, are relatively large, and are reproductively successful. The Piute Pond Complex has supported colonies as recently as 2010 and has the potential to attractive several thousand birds given the acreage available and the foraging grounds nearby. Along with the Fairmont Reservoir and Holiday Lake, these three nesting locations will form the backbone of Tricolored Blackbird recovery in the Antelope Valley and southern California. (Note: Since this was written by Mr. Kyle in 2012, the Fairmont Reservoir colony has been eliminated.)

Background (extracted from "Recent History and Current Status of the Tricolored Blackbird in Southern California" Western Riverside County, Multiple Species Habitat Conservation Plan, Biological Monitoring Program, 4500 Glenwood Drive, Bldg C, Riverside, California 92501, July 20, 2010):

Tricolored blackbirds are not covered under the State or Federal Endangered Species Acts, but are classified on the IUCN Red Data List as Globally Endangered (Birdlife International 2008) and are currently considered a California Species of Special Concern (Shuford and Gardali 2008), a federal Species of Conservation Concern (U. S. Fish and Wildlife Service 2002), and a Partners in Flight Watchlist species (Rich et al. 2004). The southern California population, widely considered to be the most at risk and rapidly declining (Tricolored Blackbird Working Group 2007) is also covered by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (DUDEK & Associates 2003).

The majority (over 70%) of breeding colonies in every county over the study period were located in emergent freshwater vegetation including pure and mixed stands of cattails (*Typha* spp.) and

bulrush (*Scirpus* spp.) (Table 2). One colony in one year at the San Jacinto Wildlife Area in Riverside County utilized willows (*Salix* spp.). Twenty one percent of colonies in San Diego nested in Himalayan blackberry (*Rubus discolor*), but this species was not used by tricolors for nesting in any other counties. Nesting in silage (triticale wheat grown for dairy cattle) was only reported at one site (and in one year) in Riverside County. Nesting occurred to a limited extent in other upland habitats which included patches of cheeseweed (*Malva parviflora*), prickly lettuce (*Lactuca viminea*), nettles (*Urtica* sp.), and mustard (*Brassica* spp.). Increased predation, ultimately due also to habitat loss, may have played an important role in recent years. Seventy percent of Riverside colonies have utilized emergent freshwater plants (mostly cattails and bulrush) as nesting substrate, mainly at two sites, the Hemet treatment plant and the Davis Unit of the San Jacinto Wildlife Area. Although this kind of habitat offers protection from mammals such as coyotes and raccoons when water is present, it provides no refuge from birds that prey on tricolor nestlings, one of the most significant of which is the Black-crowned night heron (*Nycticorax nycticorax*). Wetland habitats that also contain nest and roost sites for avian predators have become population sinks for tricolors where complete nest failure is typical (Cook and Toft 2005).

The unfortunate history of the tricolor colony at the Hemet treatment plant underscores the problem. This 60-acre wetland had originally been planted in 1994 with bulrush (*Scirpus* spp.) for a target marsh-to-open water ratio of 80%. Tricolors colonized the site that year and by 1997 the colony had grown to 35,000 birds, one of the largest in the state (Hamilton 2000). Reproductive success was not determined that year although the site was described as “high quality tricolor habitat” by Hamilton and Meese (2005). However, changes in management to increase species diversity shortly afterward resulted not only in large reductions of bulrush habitat, but occupation by several species of heron, including Black-crowned night herons. In 2000, 10,000 birds nested at the wetland but reproductive success was only 4% due to predation (Hamilton 2000). T. Paulek reported no birds nesting at this site in 2005 (Hamilton and Meese 2005). Small flocks of about 100 – 200 birds have been observed at the site during the winter and early spring in the last few years, though it is unclear if they attempt to nest there. The wetlands are closed to visitors after April 1.

The drought of 2007 appears to have had a significantly negative impact on the southern California tricolor population. Paulek (2007) reports finding no tricolors in Riverside County that year. No colonies have been found in the San Jacinto Valley area in succeeding years, despite above-average rainfall in 2010 and extensive searches. There is no evidence to suggest that these birds have moved to other parts of the county or elsewhere in southern California.

In addition to restoration, it is critically important to protect all colonies no matter how small, including their nesting and foraging habitat. The value of small colonies should not be overlooked. Colonies at sites large enough to support only one or a few thousand birds may be at lower risk from predators like herons if they lack sufficient roost or nest sites for these species. Further, multiple small colonies can be more widely distributed throughout the landscape, helping to buffer the population as a whole from localized stochastic events such as variation in rainfall and insect production.

Extracted from the Tricolored Blackbird Portal (<http://tricolor.ice.ucdavis.edu/>): “At the

October, 2006 meeting, Kimball Garrett from the Los Angeles Natural History Museum indicated the stronghold for tricolor populations in Los Angeles County was the Antelope Valley (Lancaster/Palmdale area).” “2007 Nest Colony Monitoring Of Tricolored Blackbirds in Southern California,” By Tom Paulek and Susan Nash.

Appendix H

Vegetation Control Strategy

- 1. Annual Bulrush/Cattail Control Strategy**
- 2. To be determined**

Annual Bulrush/Cattail Control Strategy

Vegetation, primarily bulrush and cattails will be burned or mechanically removed/manipulated (i.e. disked, excavated, etc) as required to maintain a healthy wetland system. Amount to be manipulated at any one time will be determined on an annual basis and based on assessment of each area as to its productivity, what areas were manipulated previously, the type of previous manipulation, amount of undesirable vegetation, etc. Areas to be accomplished may change from list below based on those factors:

2013: Zones 1 and 2 (both to be burned, Zone 1 to be disked after the burn and new channels and ponds established) UPDATED: Zone 1 was cut, 2014

2014: Zones 3 and 4 UPDATED: Zone 3 was cut, 2014

2015: Zone 5

2016: Zone 12

2017: Zone 9

2018: Zone 6

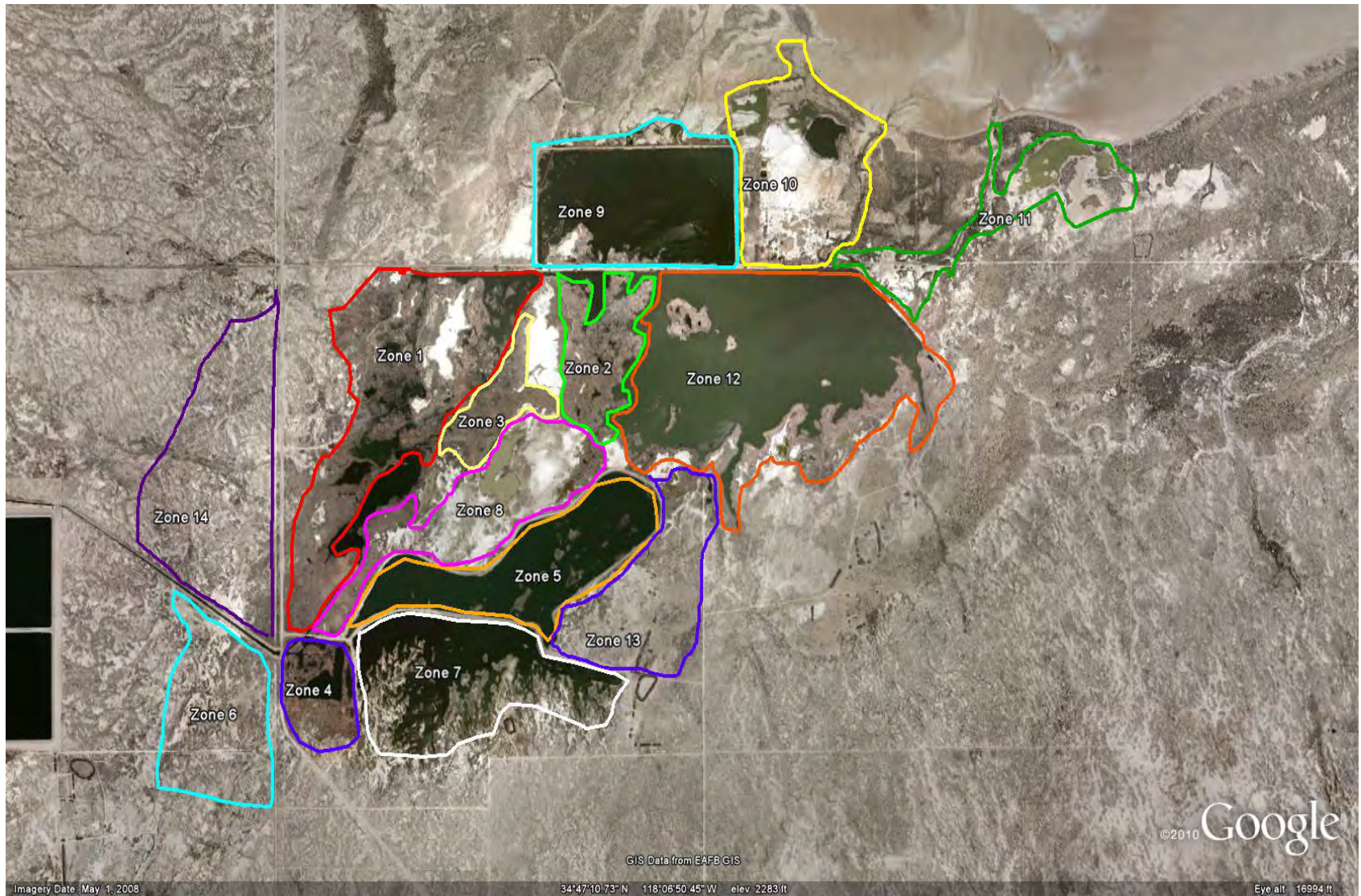
2019: Zone 1

2020: Zone 7

Zones 8, 10, 11, 13, 14, 15 will be accomplished as needed. These areas are not projected to need vegetation control in the near future if at all.

Zone 15 - not marked on attached map - includes all areas within the Piute Ponds Complex that are not included within Zones 1-14.

Type of manipulation, i.e. fire, mechanical, spraying herbicides will be based on the best method given the location and issues occurring (biotic/abiotic).



Vegetation Zone Map

Appendix I

Moist Soil Management Strategy

Estimated Completion Date 2015 then ongoing

Appendix J

Cultural Management Strategy

Estimated Completion Date 2015

Appendix K

Sample Conditions Letter

Sample Letter for visits by individual who does not have base access

412th Mission Support Group
5 North Seller Avenue
Edwards AFB, CA 93524

Name/Address

Dear Name

Your request to visit Piute Ponds is hereby approved. Your grant of access is valid for yourself and # guests during daylight hours (evenings by special request via email) from XX XX XXXX to XX XX XXXX. This letter does not provide access to any other locations within Edwards Air Force Base (AFB). There is no access allowed at Piute Ponds on designated hunting days during hunting season (mid-October to late January). Designated hunting days during these months are Sundays, Wednesdays, federal holidays, and Saturday on the opening weekend only. You may visit any of the other days during that timeframe. Please be sure to retain this letter, or a copy, in your possession while conducting your activities and present it to the Security Police upon their request. We also ask that you abide by the following conditions:

- This letter shall not be used to attempt gaining access to any other locations within Edwards AFB.
- Do not provide the combination lock to the gate to anyone.
- Be aware water in Piute Ponds is tertiary effluent and take appropriate hygiene measures.
- Photography of aircraft is prohibited.
- All vehicles must stay on existing roads.
 - Special military operations may require that Edwards AFB temporarily rescind this authorization.
 - Permit holder must keep accountability for all vehicles and individuals accompanying the permit holder to the ponds. Inability to keep accountability of guests at all times may result in loss of permit privileges.
 - Notification must be made to Ms. Deal or Mr. Hagan prior to any visit which may include foreign national guest(s).

A copy of your field notes, species list with approximate numbers observed, or an eBird report would be greatly appreciated. Any special or unusual sightings or behavior, such as rare birds or evidence of species breeding, would be especially helpful. Please submit your data to Ms. Wanda Deal or Mr. Mark Hagan at 412 TW/CEV, 12 Laboratory Road, Edwards AFB, CA 93524 or email it to wanda.deal@us.af.mil or william.hagan.1@us.af.mil.

This courtesy is being extended to you and your party for the enjoyment of wildlife and wetland habitats at the Piute Ponds Complex. For additional information or assistance, please contact Ms. Deal, 661.810.9622 or Mr. Hagan at 661.277.1418. I hope your time at the ponds is both productive and enjoyable.

Sincerely

XXXXXXXXXXXXXXXX
Commander, 412th Mission Support Group

Sample Conditions Letter for visits by individual who already has base access

This is needed to ensure users know the constraints of the area, such as, when they can and can not visit, i.e. hunting season.

Place on appropriate letter head

412 CE/CEVA
12 Laboratory Road
Edwards Air Force Base, California 93524

xx xxxxx 20xx

Ms. xxxx
xxxx N. Palmetto Drive
Edwards AFB, California 93523

Dear Ms. xxxx

As you already have base access this letter is intended to provide you the conditions you are required to follow during visits to Piute Ponds to hike, observe, photograph, and study birds and other wildlife. This letter in and of its self does not grant access. Conditions to follow during Piute Pond visits:

- Guests must be with you at all times
- Foot travel is restricted to dry ground surfaces, body contact with water in Piute Ponds is prohibited
- Photography of aircraft is prohibited
- All vehicles must stay on existing roads
- Keep accountability for all vehicles and individuals accompanying you to the ponds. Inability to keep accountability of guests at all times may result in loss of privileges.
- Notification must be made to xxxxx or xxxxx prior to any visit which may include foreign national guest(s)

There is typically no passive recreational activities allowed at Piute Ponds on designated hunting days (Sundays, Wednesdays, federal holidays, and the Saturday of opening weekend) during hunting season (mid-October to late January). Please notify xxxxxx or me, if you wish to visit Piute Ponds within that time frame for consideration of your request. Please be sure to retain this letter or a copy, in your possession while conducting your activities and present it to the Security Police upon their request.

A copy of your field notes or a species list with approximate numbers observed would be greatly appreciated. Any special or unusual sightings or behavior, such as rare birds or evidence of species breeding, would be especially helpful. Please submit your data to xxxxxx or me at 412 CE/CEVA, 12 Laboratory Road, Edwards AFB, California 93524, or at xxxxxxx , or xxxxxxxxxx, for inclusion into the Edwards AFB bird database.

For additional information or assistance, please contact xxxxx or me at the above numbers. I hope your observation and study efforts prove both productive and enjoyable.

Sincerely

Piute Ponds Complex Manager
412 CEG/CEVA
Environmental Assets Branch

Appendix L

Research Requests/Abstracts

Estimated Completion Date 2014/Ongoing

Appendix M

AFFTC 32-8 Management of Hunting, Fishing, and Volunteer Program, 2003

To be replaced by EAFB Instruction 32-8, currently being revised. ECD Dec 2014

16 May 2003



Civil Engineering

MANAGEMENT OF HUNTING, FISHING AND VOLUNTEER PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

OPR: AFFTC/EMXC (Mark Hagan, DSN 527-1418)
Supersedes AFFTC 32-8, 1 December 1995

Approved By: AFFTC/CC (Gen D. Pearson)

Pages: 42

Distribution: F; X

HQ AFMC/CEV 1

AFFTC/EM 500

95 SPTG/SVS 1,000

95 SFS/SFOW 100

95 SFS/SFOL 1

95 SFS/SFRT 1

This instruction sets up policies and explains procedures for the control of hunting and fishing on Edwards Air Force Base (EAFB). It applies to all persons who hunt and fish on EAFB. This instruction also sets up policies and explains procedures for the Wildlife Conservation Program. The purpose is to assign organizational responsibilities, direct actions, and prescribe procedures for management, supervision, and operation of the Air Force Flight Test Center (AFFTC) Fish and Wildlife Conservation Program. The hunting and fishing program is conducted in compliance with the California State Regulations.

SUMMARY OF REVISIONS

This revision reorganizes this instruction placing hunting and fishing into separate sections, consolidates and further defines individual and organizational responsibilities, updates organizational names throughout the regulation, authorizes an archery hunting area (para 5.1.4), provides a process for handicap persons during duck blind selection, requires State hunting licenses be shown at the duck blind drawing, requires signed statements by persons in Priorities 1 through 3, authorizes waterfowl hunting all day on Wednesdays, authorizes upland game hunting in accordance with State hunting regulations, increases hunting permit fees to \$25 for active duty enlisted military (E1 through E9) and \$50 for all others, provides for collection of a \$2 Services use-fee for each permit sold,; establishes a daily fishing permit, revises the boundary for Hunting Area 2, and eliminates the need for boat permits at Branch Pond, but establishes a limit of two boats at any given time.

1. RESPONSIBILITIES

1.1. The Air Base Wing Vice Commander

1.1.1. Controls hunting and fishing activities.

1.1.2. Designates individuals to serve as Volunteer Wildlife Conservationists.

1.1.3. Recognizes the outstanding accomplishments of Volunteer Wildlife Conservationists.

1.1.4. Rescinds Volunteer Wildlife Conservationist status.

1.1.5. Authorizes special events and requests falling under these regulations.

1.1.6. Authorizes temporary waivers and/or added restrictions to this regulation when such action is not inconsistent with applicable Federal, State, and/or Air Force regulations.

1.1.7. Suspends or revokes Base hunting and/or fishing privileges of personnel found violating Federal, State, or Base wildlife laws or regulations.

1.1.8. Delegates, if appropriate, these responsibilities to the Support Group Commander.

1.2. The Director, Environmental Management

1.2.1. Confers with the U.S. Fish and Wildlife Service and the California Department of Fish and Game to ensure compliance with applicable Federal and State laws.

1.2.2. Assigns Chief Wildlife Conservationist from the Directorate staff.

1.2.3. Manages the use of funds received from the purchase of hunting and fishing permits and duck blind reservations.

1.2.4. Prepares a fish and wildlife management program and integrates it with the overall natural resource program and other Base programs.

1.2.5. Issues AFFTC Form 5373, *Edwards AFB Wildlife Conservationist Identification Card*, to Wildlife Conservationists upon designation by the Air Base Wing Vice Commander.

1.3. The Chief Wildlife Conservationist

1.3.1. Manages the Volunteer Wildlife Conservation Program.

1.3.2. Prepares, organizes coordinates, evaluates, and documents training sessions held for Volunteer Wildlife Conservationists directly related to fish and wildlife and the Wildlife Conservation Program to include an appropriate amount of training. Such training will include a briefing on safety aspects and procedures associated with Volunteer Wildlife Conservationists duties. The Chief Wildlife Conservationist will fully coordinate training session topics with Security Forces and Judge Advocate.

1.3.3. Schedules, monitors, tracks, and accounts for the duties of all Volunteer Wildlife Conservationists.

1.3.4. Receives applications from, reviews the qualifications of, and screens applicants for assignment to Volunteer Wildlife Conservationist positions.

1.3.5. Coordinates with Security Forces on Wildlife Conservationist applicant recommendations prior to applicants being designated as Volunteer Wildlife Conservationists.

1.3.6. Prepares recommendations for the Air Base Wing Vice Commander approval, for recognition or award, of individual Wildlife Conservationists who demonstrate outstanding accomplishments with respect to the overall Wildlife Conservation Program.

1.3.7. Arranges for Environmental Management government vehicle use by Volunteer Wildlife Conservationists upon the request of those who will be engaged in scheduled duties and ensures that such individuals are eligible to use government vehicles and are properly trained in the use of a four-wheel drive vehicle.

1.3.8. Provides memoranda to Wildlife Conservationists to acknowledge a Covenant Not To Sue and Hold Harmless Agreement for participation in the Volunteer Wildlife Conservation Program and maintains the completed memoranda in Environmental Management files.

1.3.9. Prepares special Base hunting and fishing rules in coordination with Security Forces, Services, and Judge Advocate, for Air Base Wing Commander approval.

1.3.10. Assigns staff to contact Resource Operations Center at ext. 7-3940 at 1600 the working day before scheduled waterfowl hunting days to determine if low level aircraft missions are scheduled and hunting can be permitted or restricted. Maintains the Hunter Hotline for the waterfowl hunters. Hunting activities will not be scheduled during low altitude aircraft flight missions.

1.3.11. Conducts annual duck blind drawing.

1.4. The Wildlife and Animal Control Section, Security Forces

1.4.1. Enforces applicable Federal, State, Air Force, and Base instructions specific to fish and wildlife, routine law enforcement, and public safety.

1.4.2. Reviews the names of prospective applicants for Wildlife Conservationist positions and makes recommendations to the Chief Wildlife Conservationist as to their suitability for appointment.

1.4.3. Coordinates fish and wildlife law enforcement program efforts and wildlife animal and predator control actions with the Chief Wildlife Conservationist. Works with county, State, and Federal enforcement personnel on concurrent jurisdiction issues and mutual assistance.

1.4.4. Provides overall supervision of the law enforcement supporting functions of the Wildlife Conservation Program.

1.4.5. Provides appropriate amount of training on law enforcement related matters to Volunteer Wildlife Conservationists as required each year. Such training will include a discussion of the hazards Wildlife Conservationists may encounter in association with their duties and a session on proper radio use and procedures. This training will be coordinated with the Chief Wildlife Conservationist.

1.4.6. Ensures that radio communications equipment is made available to Volunteer Wildlife Conservationists while they are performing their assigned duties.

1.4.7. Develops and distributes to Volunteer Wildlife Conservationists a fact sheet on radio use.

1.4.8. Ensures (on call) Security Forces respond to incident reports by Volunteer Wildlife Conservationists.

1.4.9. Maintains files of all reported fish and game violations, Volunteer Wildlife Conservationists incident reports and the Security Forces or Base actions taken with respect to the reported incidents.

1.4.10. Keeps the Chief Wildlife Conservationist apprised of criminal activities that may adversely impact the assigned responsibilities of Volunteer Wildlife Conservationists in the conduct of their scheduled duties.

1.4.11. Recommends to the Air Base Wing Vice Commander suspension or revocation of Base hunting and/or fishing privileges of personnel found violating Base, State, or Federal Fish and Game laws.

1.4.12. Supports Chief Wildlife Conservationist and Volunteer Wildlife Conservationists at the hunter bag checks during waterfowl hunting season on opening weekend and then periodically throughout the season.

1.5. Volunteer Wildlife Conservationists

1.5.1. Maintain an adequate knowledge of the applicable sections of the California Department of Fish and Game laws, Federal migratory bird laws, rules for firearm safety, and first aid procedures.

1.5.2. Maintain hunting, fishing and other areas through wildlife conservation projects.

1.5.3. Report observed violations on incident reports to Wildlife Control. Once a hunter or angler has been observed or suspected of any wildlife violation, the Volunteer Wildlife Conservationist will not further confront or engage in any activity which could place him or her at risk from the suspected violator. The Volunteer Wildlife Conservationist will withdraw and report his or her observation to the proper authority.

1.5.4. Immediately report violations that require urgent action to the Law Enforcement Desk for action by the Security Forces. If available, first request the assistance of the on duty Wildlife Patrol. If not available, then request a Security Forces patrol.

1.5.5. Sign in and out at the Security Forces Armory when picking up a radio. Obtain and use a Security Forces radio for incident reporting purposes while on duty as a Volunteer Wildlife Conservationist and check in with the Security Forces Control Center at least once every hour by radio.

1.5.6. Are accompanied by at least one other Volunteer Wildlife Conservationist when actively serving in the capacity of a Volunteer Wildlife Conservationist. Volunteer Wildlife Conservationists must end their scheduled duties should they find themselves without the required backup support of another Volunteer Wildlife Conservationist.

1.5.7. Have a valid motor vehicle license when driving motor vehicles.

1.5.8. Have in their possession a valid AFFTC Form 5373, *Volunteer Wildlife Conservationist Identification Card*, while on duty as a Wildlife Conservationist. The AFFTC Form 5373 must be displayed when approaching hunters or anglers.

1.5.9. Apply or reapply to the Chief Wildlife Conservationist for the year that they wish to be considered as a Volunteer Wildlife Conservationist. Applications should include: name, organization, duty phone, work phone, experience in first aid, the hours and times the individual expects to be available, a description of what the applicant expects to contribute to the Wildlife Conservation Program, and a description of their interest and experience in fish and wildlife.

1.5.10. Sign a Covenant Not To Sue and Hold Harmless Agreement to exempt the Air Force from damages resulting from injuries incurred while serving scheduled duties as a Volunteer Wildlife Conservationist.

1.5.11. Schedule their duties with the Chief Wildlife Conservationist in advance.

1.5.12. Attend a mandatory training session, which will cover all aspects of the Wildlife Conservation Program.

1.5.13. Strive to perform an average of 8 hours per month to Volunteer Wildlife Conservationist duties.

1.5.14. Record areas patrolled and hours worked to the Chief Wildlife Conservationist using the Record of Volunteer Service, and submit the Record of Volunteer Service to the Chief Wildlife Conservationist by the fifth workday of each month, for the prior month's work.

1.5.15. Call the Hunter's Hotline, 277-1449 after 1600 on scheduled duty days to inquire about the status of hunting within Base hunting areas and assist in the notification of hunters within their local calling area of hunting day closures.

1.5.16. Assist in Wildlife Conservation Program efforts to check hunters for proper permits and regulation compliance at designated hunter check stations.

1.5.17. Conduct random checks for required fishing permits and for the number and species of the fish caught.

1.5.18. Are not permitted to carry firearms, either exposed or concealed, while conducting their duties as a Volunteer Wildlife Conservationist.

1.5.19. Are not engaged in hunting during scheduled Volunteer Wildlife Conservationist duties.

1.5.20. Are authorized to travel on roads outside ORV areas while performing duties.

1.6. The Services Resource Management Flight

1.6.1. Deposits and accounts for the hunting and fishing permit and reservation receipt monies with the Comptroller to the Wildlife Conservation Fund, 57X5095, Services administrative/use fee charged for permit sales will be retained by Services.

1.7. Outdoor Recreation and Rod and Gun Club (Services)

1.7.1. Sells EAFB hunting and fishing permits (AFFTC Forms 5317, *Hunting Permit*, and 5149, *Fishing Permit*).

1.7.2. Sells guest hunting and fishing permits.

1.7.3. Verifies eligibility for purchase of permits (AFFTC Forms 5149 and 5317) by ensuring that each individual possesses a valid military identification (ID) card, or other ID that would make them eligible to hunt or fish on Edwards AFB.

1.7.4. Orders forms, permits, and cards required by this regulation and supplies these to the anglers and hunters as appropriate.

1.7.5. Supplies this regulation and AFFTC Forms 5303 and 5823 to hunters and anglers upon purchase of a hunting or fishing permit.

1.7.6. Stocks fish in the Branch Memorial Pond when associated with a Services sponsored special event.

1.7.7. Coordinates all fish stockings with Environmental Management.

1.7.8. Consults with Environmental Management on accounting and expenditure of fish and wildlife (57X5095) funds.

1.7.9. Provides a written memorandum to Environmental Management that details the number by type of permits sold, and the number of duck blind reservations sold by Services, and the amount of money collected and deposited into the fish and wildlife account by Services for the past fiscal year. This memorandum is due by the close of business of the fifth workday in October.

1.7.10. Transports live game when associated with a Services sponsored field dog training activity. Such use shall be in compliance with State game laws, must be assessed for environmental impacts by Environmental Management, and 50 percent or more of the participants must possess an Edwards AFB hunting permit. Guest participants must possess an Edwards AFB daily guest hunting permit for each day of use and have an authorized Base hunting permit holder (nonguest) as a sponsor.

1.7.11. Provides the location for and assists with the annual duck blind drawing.

1.7.12. Collects funds from the sale of duck blind reservations sold at the annual duck blind drawing. Notifies Environmental Management at 277-1401 each time any available duck blind is sold after the duck blind drawing.

1.7.13. Provides a list of duck blind reservation holders to Wildlife and Animal Control and Chief Wildlife Conservationist, within two weeks following the annual duck blind drawing. Provides the duck blind reservation list if requested by hunters. The duck blind reservation list will include assigned blind number, full name, address, work and home phone of reservation holders. Provides any hunter survey reports and hunt day reports, submitted by the hunters, to the Chief Wildlife Conservationist.

1.7.14. Sells any available duck blind not sold at the annual duck blind drawing.

1.7.15. Designates grandfathered members of the rod and gun activity, maintaining a list of such members, and supplying this list to Environmental Management and Wildlife and Animal Control by 30 September of each year.

1.7.16. Notifies hunters when their blinds are not up to acceptable standards.

1.8. Resource Operations Section responds to telephone requests from Volunteer Wildlife Conservationists for information on potential conflicts between hunting activities and low altitude aircraft flight missions. Hunting activities will not be scheduled during low altitude aircraft flight missions.

2. GENERAL PERMIT PROVISIONS

2.1. Fishing permits (AFFTC Form 5149) and hunting permits (AFFTC Form 5317) are required to hunt and fish on Edwards AFB. Permit fees are subject to change by the Air Base Wing Vice Commander without notice. Permits may be purchased at Outdoor Recreation, Bldg. 7211, and at the Rod and Gun Club, Bldg. 210.

2.1.1. Fishing permits:

2.1.1.1. General fishing permits – \$10. Valid for 1 year from date purchased.

2.1.1.2. Daily fishing permit – \$5. Valid for 1 day.

2.2. Hunting permits:

2.2.1. Hunting permit – \$25. Active Duty Enlisted Military (E1 through E9). Valid for 1 year from the date purchased.

2.2.2. Hunting permit – \$50. Not Active Duty Enlisted Military. Valid for 1 year from the date purchased.

2.2.3. Seasonal guest hunting permit – \$50. Valid for waterfowl and upland game hunting seasons.

2.2.4. Daily guest hunting permit – \$10. Valid for 1 day.

2.3. Services use fee:

2.3.1. A \$2 use fee to be added to all permit sales.

3. GENERAL HUNTING PROVISIONS

3.1. Base law enforcement personnel on Edwards AFB will apply California Department of Fish and Game laws and special Base hunting rules.

3.2. Special Base hunting rules about seasons, bag limits, size, area closure, and conservation measures will be published periodically in the AFFTC Bulletin, the Desert Wings, or can be provided by contacting the Hunters Hotline, 277-1449, or Wildlife Control, 277-7138.

3.3. All people who hunt on Edwards AFB must carry valid picture ID. Hunters, 16 years of age or older, must carry an AFFTC Form 5317, *Edwards AFB Hunting Permit*, and a California State hunting license. If hunting waterfowl, a Federal and a California State duck stamp are also required. Hunters under the age of 16 do not need the Form 5317 and must be accompanied by an adult sponsor with the appropriate licenses, and must comply with applicable California laws.

3.4. Persons authorized to hunt on Edwards AFB are:

3.4.1. Active duty and retired military members, and their dependents.

3.4.2. Employees of the Department of Defense, tenant organizations, and contractor employees assigned to Edwards AFB, and their dependents.

3.4.3. Dependents, covered under paragraphs 3.4.1. and 3.4.2., under 16 years of age who are accompanied by a sponsor who has the proper permits. The sponsor is responsible for the conduct of the dependent.

3.4.4. Grandfathered Members of the Rod and Gun Activity, whose name is on the list of Grandfathered Members at the time of purchasing the permit.

3.4.5. Guests of persons covered under paragraphs 3.4.1., 3.4.2. and 3.4.4.

3.5. Edwards AFB hunting permit holders may sponsor a guest provided that:

3.5.1. The guest has all the Federal, State, and Base permits and stamps.

3.5.2. The sponsor assumes full responsibility for conduct of the guest.

3.5.3. The sponsor and/or guest purchase one or both of the following:

3.5.3.1. A daily guest permit will be made available to all authorized Base hunters. The daily guest permit is a regular Base hunting permit with the words “Daily” and “Guest” stamped across the face of it. The date of use will be stamped on the Base permit by Services along with the “Daily” and “Guest” notation at the time the permit is sold. Daily guest permits will be made out in the name of the guest. The guest must always be in the sponsor’s presence while hunting on Edwards AFB.

3.5.3.2. A seasonal guest permit will be made available to hunters only. The words “Seasonal” and “Guest” will be stamped across the face of a regular hunting permit. The seasonal guest permit will be made out in the name of the Edwards AFB hunter sponsor who must be present while the guest is hunting on Edwards AFB.

3.6. Duck Blind Sales and Finances

3.6.1. Duck blind reservations are sold at the annual duck blind drawing for \$50 per person at \$100 per blind, and are good throughout the waterfowl-hunting season. Reservation fees are subject to change by the Air Base Wing Vice Commander without notice.

3.6.2. All wildlife permit money collected by Services is accounted for by Services and deposited with the Comptroller to the Wildlife Conservation Fund, 57X5095. The Services administrative/use fee collected from the sale of permits will be retained by Services. Environmental Management manages the expenditure of funds collected for the Fish and Wildlife Program.

3.7. Miscellaneous

3.7.1. The use of a nonmotorized watercraft on Piute Pond is allowed only during waterfowl-hunting season to access duck blinds and retrieve fallen ducks or geese harvested. All persons using watercraft must wear a life vest that is approved by the U.S. Coast Guard.

3.7.2. Only personnel authorized by Environmental Management and Services will transport live game for stocking purposes on Edwards AFB.

3.7.3. It is mandatory that a full report be made immediately by hunters to the Security Police of any incident resulting in personal safety violations, or damage to property, signs, vehicles, etc.

4. AUTHORIZED HUNTING AREAS

4.1. Authorized hunting areas are provided in this regulation (see maps, Attachments 2-5). Hunting and fishing on Edwards AFB is allowed only in these areas. Hunters may have access to all hunting areas for legitimate hunting activities, such as, scouting out hunting opportunities, bird movements, or duck blind construction/repair. Due to possible nonchlorination, contact with water at Piute Ponds is not allowed prior to 30 days before the opening of the hunting season or after 30 days from the close of the hunting season. No hunting is allowed in the Quail Conservation Area.

4.2. Hunting areas are off limits to all personnel not specifically authorized except the Security Forces, State and Federal wildlife officers, Environmental Management personnel, Wildlife Conservationists, Emergency Response Teams, Outdoor Recreation personnel, and personnel engaged in legal hunting activities, and such other persons designated by or acting under the direction of the AFFTC/CC or his/her command staff.

5. SPECIAL HUNTING RULES AND RESTRICTIONS FOR EDWARDS AFB

5.1. Hunting Days and Hours Authorized:

5.1.1. Waterfowl hunting is permitted only at the Piute Ponds area. Waterfowl hunting is authorized at the times listed in the State regulations—on Sundays, Wednesdays, Federal holidays, and on the first Saturday of the duck-hunting season. When there is a split season for ducks, and the second split opens on a Saturday, hunting will be authorized on the opening Saturday. If it is a split season for ducks and either the first or second split ends on a Saturday, hunting will be authorized for that Saturday. Waterfowl hunting will not be authorized on Base prior to the first (opening) weekend for ducks as established by the California Department of Fish and Game.

5.1.2. Dove hunting is permitted during the days and hours posted in the State regulations. Dove hunting is permitted in the 5 square mile area in the Graham Ranch vicinity (Area 2), Mesquite woodlands (Area 3), and in the 28 square mile area in the Bissell Hills vicinity (Area 1) and Red Barn Marsh, during the early and late season should they both be authorized. Dove hunting in the Piute Ponds area (Area 7) is allowed during the early season only.

5.1.3. Quail and chukar hunting in authorized areas is permitted on the days and times published in the State regulations. Quail and chukar hunting is permitted in Bissell Hills (Area 1), Graham Ranch (Area 2), and Mesquite woodlands (Area 3).

5.1.4. Rabbit hunting (black-tailed jackrabbit and cottontail) in Areas 1, 2, and 3, is permitted only during the times posted in the State regulations. Archery hunting is allowed for rabbit only in the Graham Ranch (Area 2). Rabbit hunting is not allowed in the Piute Ponds area.

5.1.5. Military missions may require further limitation. To avoid inconvenience, hunters must call the Hunters Hotline (661) 277-1449 prior to leaving for hunting areas to make sure the hunting areas are open for use. For authorized hunting days falling on Tuesday through Saturday, hunters should call the Hunters Hotline after 1630 on the day before a scheduled hunting day. For hunting days falling on Sunday or Monday, hunters may call the Hunter Hotline after 1630 on the Friday immediately preceding the authorized Sunday or Monday hunting day.

5.1.6. The California Department of Fish and Game publishes hunting season dates, starting times for shooting, and daily bag limits and possession limits for waterfowl, upland game, and rabbits.

5.2. Waterfowl Hunting Rules

5.2.1. Duck Blind Sales (see Attachment 1 for specifics)

5.2.1.1. A duck blind reservation is required of waterfowl hunters who want to control the use of an occupied blind for which they are the assigned reservation holders. On authorized hunting days, the primary duck blind reservation holder and his or her chosen blind partner, who must also be a blind reservation holder, control the use of their blind when either occupies the blind.

5.2.1.2. One blind will be designated as a handicap blind for use by mobility impaired individuals (individuals with a condition which severely impairs their ability to access a duck blind, such as a wheel chair, walker, artificial limb, cane, etc.).

5.2.1.3. Environmental Management will conduct the annual duck blind drawing.

5.2.1.4. Drawings for the duck blinds will be held at the Rod and Gun Activity in August, on a date and time specified by Services, or at such other location as Services shall designate. The time of the drawing will be advertised by Services in the AFFTC Bulletin and the Desert Wings. An announcement will be made a minimum of three weeks before the drawing with a reminder in the Desert Wings just before the blind drawing.

5.2.1.5. Purchase of a duck blind reservation and location is no guarantee by the AFFTC that there will be water at that location during the waterfowl-hunting season. After the day of the duck blind drawing, no refunds for blind reservation fees are authorized. At the time of the duck blind drawing, the hunter is required to sign a form authorizing the Air Force to release the hunters home telephone and address to prospective users of duck blinds.

5.2.2. In controlled waterfowl hunting areas, all shooting must be from permanent numbered blinds or blind locations, with the exception of jump shooting during authorized days and at authorized times. The use of temporary blinds will not be permitted. The hunters will not move permanent blinds, or designated locations. The hunters will not erect additional blinds not authorized in the designated locations drawn during the duck blind drawing.

5.2.3. Jump shooting from outside of a blind will be permitted only after 0900 on authorized hunting days. Jump shooting is not allowed in areas occupied by blind holders.

5.2.4. No more than four hunters are allowed in a blind at any one time.

5.2.5. Any Base hunting permit holder with proper State and Federal licenses and stamps may use unoccupied blinds; however, individuals should secure the duck blind reservation holder's permission before the morning of the hunt. Duty and home telephone numbers of reservation holders will be available for individuals making use of a blind. Individuals making use of a blind, who have not secured permission to do so, must leave at the request of the reservation holder.

5.2.6. When making use of another individual's duck blind, the blind and any decoys must be left as they were found.

5.2.7. All persons, when hunting waterfowl on Edwards AFB, will have a means of retrieval. Hunters must leave at least one wing on each bird harvested for proper identification by law enforcement officials, Fish and Game wardens, and by the Volunteer Wildlife Conservationists.

5.2.7.1. Hunters are required to stop at hunter check stations when present and in use and will not need to fill out the Hunter Survey Form 5303. If the check station is not available, hunters are required to fill out the Hunter Survey Form 5303. The hunter check stations are usually located at the Avenue C entry to Piute Ponds.

5.2.8. Hunters must be in their blind a minimum of 30 minutes before the starting time for shooting. Late arrivals may disrupt hunting, and place the individual in the line of fire from the next blind. Therefore, late arrivals will be turned away for that day.

5.2.9. Indiscriminate walking and loud talking in controlled hunting areas is not permitted.

5.2.10. Only authorized personnel are allowed to control the flow of water in controlled use waterfowl hunting areas. Unauthorized tampering with water flow control devices may result in hunting closures.

5.2.11. Guest hunters must hunt from the same blind as their sponsor and the sponsor's authorized duck blind partner must concur with the guest being in the blind.

5.2.12. Hunters will make every reasonable effort to retrieve wounded game.

5.2.13. Hunters will retrieve downed birds as soon as possible with as little interference to other hunters as possible. Hunters are encouraged to use dogs; however, they must be kept under control at all times.

5.2.14. Duck Blind Maintenance, Construction, and Inspection:

5.2.14.1. Duck blind reservation holders are responsible for constructing and maintaining a blind in the permanent numbered location they purchased. All debris removed from the duck blind location during construction and maintenance must be removed the same day from the Piute Ponds area and disposed of properly. Purchasing a blind reservation is a commitment to do the necessary work to construct and/or maintain the blind in an acceptable condition. Relocating the blinds without approval from the Chief Wildlife Conservationist is prohibited.

5.2.14.1.1. Duck blinds should blend as much as possible into the surrounding area.

5.2.14.1.2. Duck blind reservation holders are responsible for cutting pond frontage (cattails and bushes).

5.2.14.1.3. Reservation holders may not clear frontage by burning vegetation.

5.2.14.1.4. Duck blinds must be ready for preliminary inspection three weeks before opening day. The Volunteer Wildlife Conservationists will conduct the duck blind inspections. The Volunteer Wildlife Conservationists will notify blind reservation holders if a blind is unacceptable, and if repairs need to be made. All repairs will be completed and final inspection will be made two weeks before opening day. Any blind failing to pass final inspection will be grounds to revoke an individual's blind reservation.

5.2.14.2. All decoys must be removed from the waterfowl hunting area within two weeks after the close of waterfowl season. Thereafter, there is no guarantee that the water will be safe for human contact. The duck blinds must be cleared of all garbage and shell casings after the waterfowl season. The primary and secondary blind holders are responsible for the clean up. There will be an inspection two weeks after the hunting season. Failure to pass inspection may result in revoking privileges of owning a blind for the next waterfowl season.

5.2.15. Duck blind reservation holders who have their blind revoked will forfeit their \$50 blind fee and no refund will be made. The blind will then be issued to the first individual on a waiting list developed from names drawn at the blind drawing for which no blinds were available.

5.3. Edwards AFB Firearm Use Restrictions

5.3.1. The only firearm authorized for use and possession while hunting is a shotgun. Hunters must follow the California State regulations for the size and type of shot to be used.

5.3.2. No one will carry a loaded firearm in a vehicle, or shoot from within or upon any vehicle, whether moving or stationary (loaded firearm meaning an unexpended cartridge in a chamber or in a magazine, which is attached to the firearm).

5.3.3. No one will shoot any firearm towards or within 150 yards of any occupied building, dwelling, fenced developed area, or road, or across a public or Base road or highway.

5.3.4. Waterfowl hunters may not shoot directly at adjacent blinds.

5.3.5. Hunters within 500 yards of the Piute Ponds waterfowl camping area are prohibited from shooting in that direction when individuals, campers or vehicles are present. It is the hunter's responsibility to determine whether campers or vehicles are present.

5.3.6. While hunting on Base, the use or possession of alcoholic beverages is prohibited.

5.3.7. Hunting or trapping of predators, such as coyotes, bobcats, badgers, etc., is prohibited.

5.3.8. Target practice is only authorized at the Small Arms Range, or at the Rod and Gun Activity with the proper authorization.

5.3.9. Falconry hunting is prohibited.

5.3.10. Archery equipment used will be in accordance with the State regulations. Crossbows are prohibited.

5.4. Required Forms and Reporting

5.4.1. Each hunting party must complete AFFTC Form 5303, *EAFB Hunter Survey*, after each day of hunting. The completed AFFTC Form 5303 will be turned in to Environmental Management within 2 weeks of the hunting day. Failure to turn in the completed Hunting Survey Forms as required by this regulation may result in the revocation of an individual's hunting privileges. Copies of AFFTC Form 5303 may be obtained at Outdoor Recreation, Bldg. 7211, the Rod and Gun Activity, Bldg. 210. An AFFTC Form 5303 is needed for monitoring recreation use and harvest levels.

5.4.2. In addition, all motor vehicles used by hunters while hunting on EAFB will display AFFTC Form 5823, *Hunter's Vehicle Identification*. An AFFTC Form 5823 will be issued by Outdoor Recreation, or the Rod and Gun Activity, to EAFB hunting permit holders only at the time their hunting permit is purchased. The AFFTC Form 5823 is needed for hunter safety and installation security.

5.5. Vehicle Use Restrictions

5.5.1. Vehicles must remain on existing roads. Off road travel is prohibited.

5.5.2. Dry lake areas are off limits to hunters and vehicle traffic.

5.5.3. All waterfowl hunters using Hunting Area 6 (see Attachment 5) must park their cars in authorized areas. To prevent disturbing waterfowl, hunters will refrain from slamming vehicle doors.

5.5.4. On authorized hunting days in waterfowl hunting areas, driving on impoundment dikes with motor vehicles is prohibited from 1 hour prior to the start time listed in the State waterfowl hunting regulation until 9:00 a.m.

5.6. Camping:

5.6.1. Camping in Hunting Area 6, Piute Ponds, will be allowed only within the area designated in this instruction (see Attachment 5), and only on Friday and Saturday nights of the first (opening) weekend for the duck hunting season.

5.6.2. No open fires will be permitted except while camping and then only the use of charcoal grills is permitted.

5.6.3. Camping area must be kept free of trash.

6. GENERAL FISHING PROVISIONS

6.1. California Department of Fish and Game laws will be applied on Edwards AFB, except where further limited by special Base fishing rules.

6.2. Special rules about seasons, size limits, and conservation measures will be published periodically in the AFFTC Bulletin, the Desert Wings, or provided by contacting Environmental Management, 277-1401; Wildlife and Animal Control, 277-7138; or Services, 277-3546.

6.3. All people who fish on Edwards AFB must carry valid ID, and all individuals 16 and older must carry AFFTC Form 5149, *EAFB Fishing Permit*. A California State Fishing License is not required.

6.4. Persons authorized to fish on Edwards AFB are:

6.4.1. Active duty and retired military members, and their dependents.

6.4.2. Department of Defense, tenant organizations, and contractor employees assigned to Edwards AFB, and their dependents.

6.4.3. Dependents covered under paragraphs 6.4.1. and 6.4.2. under 16 years of age who are accompanied by a sponsor who has the proper permits. The sponsor is responsible for the conduct of the dependent.

6.4.4. Guests of persons covered under paragraphs 6.4.1. and 6.4.2.

6.5. Edwards AFB fishing permit holders may sponsor a guest provided that:

6.5.1. The sponsor assumes full responsibility for conduct of the guest.

6.5.2. The sponsor and/or guest purchase a daily guest permit, which will be made available to all authorized Base anglers. The daily guest permit is a regular Base fishing permit with the words "Daily" and "Guest" stamped across the face of it. The date of use will be stamped on the Base permit by Services along with the "Daily" and "Guest" notation at the time the permit is sold. Daily guest permits will be made out in the name of the guest. The guest must always be in the sponsor's presence while fishing on Edwards AFB.

6.6. All fish permit money collected by Services is accounted for by Services and deposited with the Comptroller to the Wildlife Conservation Fund, 57X5095. Environmental Management manages the expenditure of funds collected for the Fish and Wildlife Program.

6.7. Watercraft use is permitted on Branch Memorial Pond. All persons using watercraft must wear a life vest that is approved by the U.S. Coast Guard. A limit of two boats on the pond at any one time is allowed for a maximum of two hours if other anglers are waiting to use their boats. There is no limit on the number of persons using individual floating waders.

6.8. Only personnel authorized by Environmental Management will transport live fish for stocking purposes on Edwards AFB.

6.9. Anglers will report immediately to the Security Police any incident resulting in risk to personal safety, or damage to property, signs, vehicles, etc.

7. FISHING RESTRICTIONS FOR EDWARDS AFB

7.1. People who are authorized to fish on Base are limited to the use of one rod and reel, one pole and line, or one hand-held line that must be under the immediate control of the person fishing. There is a limit of one hook per line.

7.2. No fish hatchery feed is permitted except when used by Environmental Management or Services.

7.3. The daily limit per person is 3 fish per day, with no limit on carp or bluegill. Anglers catching catfish less than 10 inches in length and bass less than 12 inches in length will release these back into the pond.

7.4. Fishing in the authorized area (Branch Memorial Pond) will be allowed all year, 24 hours per day except when the pond is temporarily closed for stocking. Environmental Management will announce pond closures in the Desert Wings and signs will be posted around the pond.

7.5. Swimming, by humans or animals, in Branch Memorial Pond is prohibited.

7.6. An adult sponsor must accompany persons under 18 years of age fishing after sunset.

7.7. The use of spotlights for fishing is prohibited.

7.8. Lead-sinkers are not authorized for use at Branch Memorial Pond.

7.9. Each angler is required to complete one AFFTC Form 5875, *Fish Survey*, for each day of fishing. The completed AFFTC Form 5875 can be turned into Environmental Management, Bldg. 2650A, or deposited in the box at Branch Memorial Pond. Copies of the surveys may be obtained at the informative sign at Branch Pond or at Outdoor Recreation, Equipment Issue, Bldg 7211, and the Rod and Gun Activity, Bldg 210. An AFFTC Form 5875 is required for monitoring recreation use and ensuring proper stocking rates.

8. APPENDIX

8.1. It is unlawful to sell, purchase, harm, harass, take, possess, transport or shoot a projectile at a desert tortoise or at any other Federal endangered or threatened species.

8.2. Anyone finding munitions, unexploded shells or similar objects must report such findings to the Base Security Police. Such objects will not be touched or disturbed except by Explosive Ordnance Disposal (EOD) personnel.

8.3. All historic ruins and prehistoric sites are protected under the Archaeological Resources Protection Act and Air Force Instruction 32-7065. Persons responsible for removal of artifacts and/or vandalism to historic or prehistoric sites are subject to prosecution.

8.4. With the exception of charcoal broilers or grills, the use of an open fire is prohibited on Base. Use of a charcoal grill within 15 feet of any building is prohibited.

9. APPLICATION

9.1. Anyone, who violates any provisions of this instruction or commits an act inconsistent with safe practices resulting in the injury or damage to persons or property, may have their hunting or fishing privileges withdrawn.

9.2. Military members who violate this directive may be subject to punitive action under the Uniform Code of Military Justice (UCMJ) and/or the fish and game laws for the State of California.

9.3. Civilian personnel who violate this directive may be subject to punitive action by the U.S. Magistrates Court or the State of California, whichever is applicable.

10. FORMS PRESCRIBED

- 10.1. AFFTC Form 5149, *Fishing Permit*.
- 10.2. AFFTC Form 5303, *EAFB Hunter Survey*.
- 10.3. AFFTC Form 5317, *Hunting Permit*.
- 10.4. AFFTC Form 5373, *EAFB Wildlife Conservationist Identification Card*.
- 10.5. AFFTC Form 5823, *EAFB Hunter's Vehicle Identification*.
- 10.6. AFFTC Form 5875, *Fish Survey*.

WILBERT D. PEARSON, JR., Major General, USAF
Commander

13 Attachments:

- 1. Edwards AFB Duck Blind Reservation Drawing Rules and Procedures
- 2. Hunting and Fishing Areas
- 3. Hunting Area 1, Rabbit, Dove, Chukar and Quail
- 4. Hunting Areas 2 & 5, Waterfowl, Dove, Chukar, Quail, and Rabbit
 - 4a. Enlargement of Hunting Area 5
- 5. Waterfowl and Dove Hunting Areas
- 6. Sample AFFTC Form 5149, *Fishing Permit*
- 7. Sample AFFTC Form 5303, *EAFB Hunter Survey*
- 8. Sample AFFTC Form 5317, *Hunting Permit*
- 9. Sample AFFTC Form 5373, *EAFB Wildlife Conservationist Identification Card*
- 10. Sample AFFTC Form 5823, *EAFB Hunter's Vehicle Identification*
- 11. Sample AFFTC Form 5875, *Fish Survey*
- 12. Sample Wildlife Conservation Program – Covenant Not To Sue and Hold Harmless Agreement
- 13. Sample Letter Certifying Intent to Hunt From Selected Duck Blind

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Attachment 1

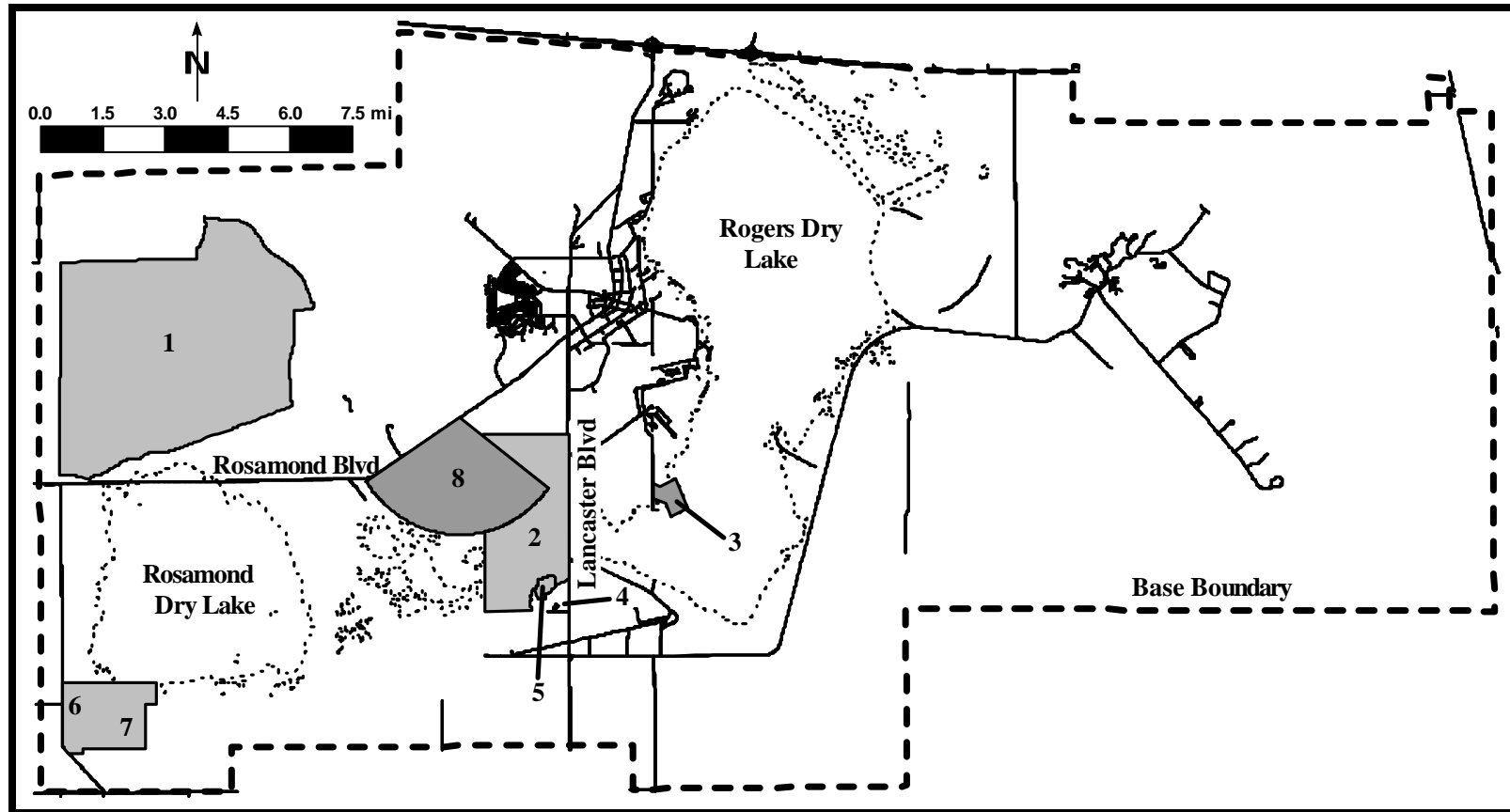
EDWARDS AFB DUCK BLIND RESERVATION DRAWING RULES AND PROCEDURES

1. To be eligible to draw or be selected as a blind partner, Base hunters must have a current Edwards Air Force Base (AFB) hunting permit at the time of the drawing. The permit itself will be drawn. **To be eligible to draw or be selected as a blind partner, Base hunters must also show a current State hunting license to drawing officials. All persons in Priority 1-3 must sign a letter certifying they intend to hunt from the duck blind they select.**
2. Guest hunting permit holders are not eligible to participate in the blind drawing or be selected as a blind partner.
3. Hunting permit holders must be 18 years of age to participate in the blind drawing or be selected as a blind partner.
4. Duck blinds will be reserved for one year. Drawings will be held each year for all blinds.
5. When on-Base hunting facilities are limited, priorities for use will be drawn. For the purposes of this instruction, and this instruction only, duck blinds are considered to be an on-base facility. In general summary, these priorities are:
 - 5.1. Priority 1 - Active duty and their families assigned to Edwards AFB.
 - 5.2. Priority 2 - Active duty and their families assigned to another military installation.
 - 5.3. Priority 3 - Military retired and their dependents.
 - 5.4. Priority 4 - 100% disabled veterans, Medal of Honor recipients, and their dependents.
 - 5.5. Priority 5 - Members of Reserve components while on orders at the time of the drawing.
 - 5.6. Priority 6 - Unmarried spouses of military personnel who died while on active duty or while in a retired status and their dependents.
 - 5.7. Priority 7 - Military personnel of foreign nations and their dependents who are authorized exchange privileges.
 - 5.8. Priority 8 - Others who support the Department of Defense (DoD) mission as authorized by the Air Force Flight Test Center Commander (those authorized by this instruction to purchase a non-guest Edwards AFB hunting permit).
6. Prior to the duck blind draw anyone requiring a handicapped blind will make this known to the duck blind operators in order for the following procedures to apply.
 - 6.1. Handicap hunters will draw with the rest of the hunters for a blind priority number to ensure they are eligible to obtain a duck blind. Upon winning the opportunity to chose a blind, mobility impaired hunters will be given the option of taking the handicap access blind or participating in the general blind selection using their priority number previously drawn. If the handicapped hunter chooses to participate in the general blind selection, the option of using the designated handicap blind will be forfeited for this year, and the handicapped blind will revert to the general blind category.
 - 6.2. Once everyone has been assigned a blind priority number and handicapped issues have been addressed; hunters will then choose their preferred blinds by order of the numbers previously assigned.
7. Permits modified in any way such as by lamination or other physical alteration will be excluded from the drawing.
8. To participate in the blind drawing, a person must be present or must be represented at the drawing.
9. Blind reservation holders must supply Services with the full name, mailing address, and both work and home phone numbers of the primary blind holder and his or her selected blind partner. This must be provided at the time of the drawing or the blind will not be assigned. Services sends one copy to the duck blind reservation holder's list to Environmental Management, and one to Wildlife Control within 2 weeks following the annual duck blind drawing.

10. For those being represented at the drawing and falling into priorities 1 through 3, they must have entered their name on a list compiled by Environmental Management prior to the drawing and they must have verified their priority status through the display of their military ID. **They must also show a current State hunting license and sign a letter certifying their intent to hunt from the selected duck blind.**
11. For those being represented at the drawing and falling into priorities 4 through 8, they must provide their representative with proof of their status and current State hunting license.
12. An individual representing another at the blind drawing must be able to provide drawing officials the following: hunting permit of the person being represented, the permit of his or her selected partner, **their current State hunting licenses, signed letters certifying their intent to hunt from the selected duck blind**, proof of their priority status (if not on the priority list for those with military ID), their blind reservation fees, their mailing address, and both their work and home phone numbers.
13. Hunting permits will be placed in 1 of 8 boxes based on the priority of the permit holder.
14. An official from Environmental Management will ensure that all hunting permits are placed in the proper box prior to the drawing. Hunters will provide proof of their eligibility for a specific priority to this official.
15. Permits will be drawn in order of priority.
16. Individuals who have their permit drawn and have not selected, or who did not immediately select, an eligible blind partner, will have one selected for them by the drawing officials from Environmental Management.
17. Environmental Management will continue to draw additional permits after all available blinds have been selected. This will be accomplished to create a backup waiting list for use if and when a blind reservation is revoked due to inadequate blind construction or renovation.
18. An individual may not draw for more than one blind reservation.
19. A blind reservation may not be transferred without authorization from Environmental Management and may not be sold except by Services.
20. Authorized duck blinds not sold at the drawing, if any, may be purchased from the Rod and Gun Activity during normal operating hours.
21. Only one family member within a household may participate in the annual duck blind reservation drawing unless there is more than one active duty member in a household.

Attachment 2

HUNTING AND FISHING AREAS

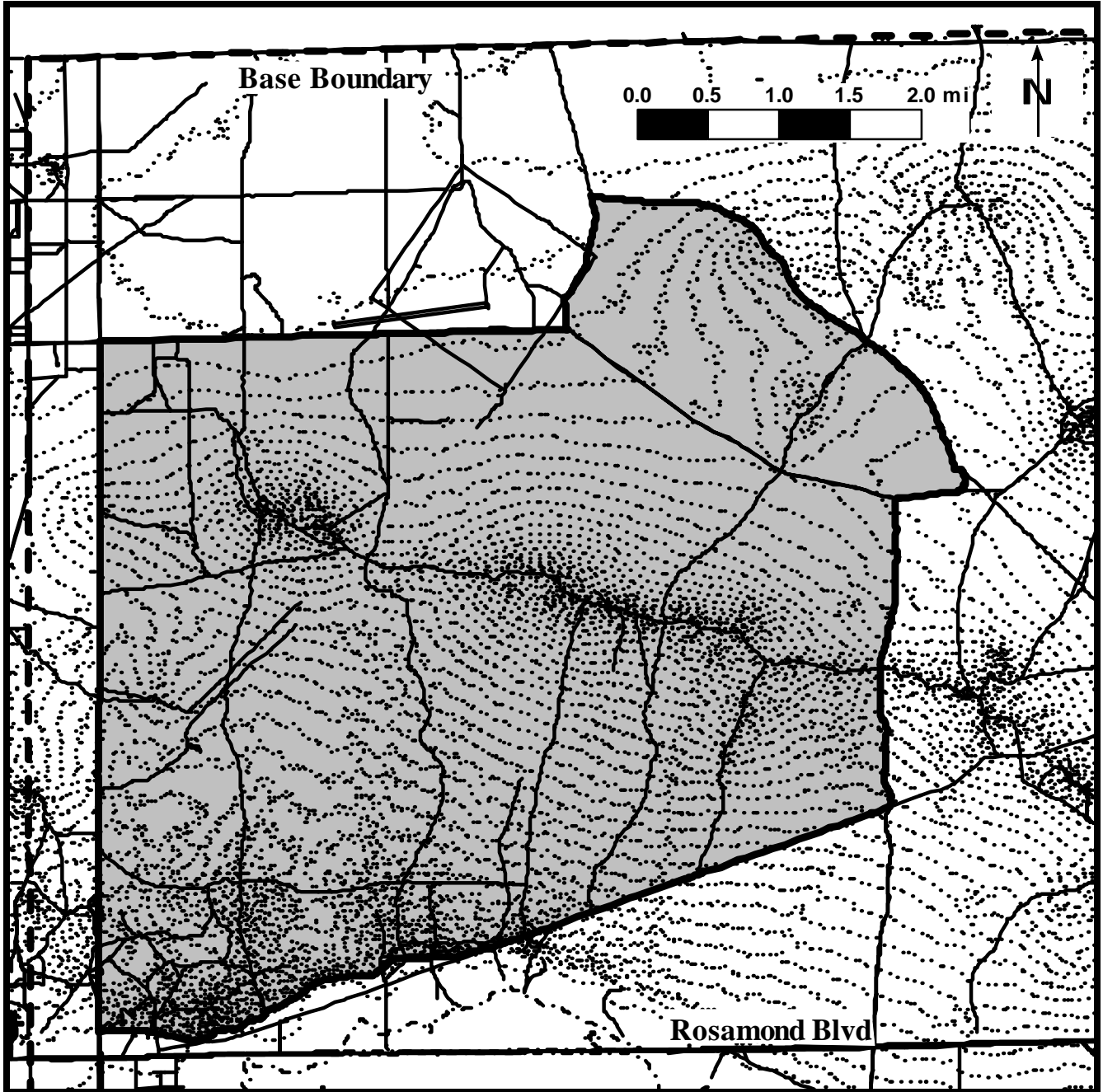


- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Rabbit, dove, chukar and quail hunting area. For area details see enlargement – Atch 3. 2. Dove, quail, chukar and rabbit hunting area. For area details see enlargement – Atch 4. 3. Base Sewage treatment plant lagoons. Closed to hunting. 4. Fishing pond. For area details see enlargement – Atch 4 & 4a. | <ol style="list-style-type: none"> 5. Waterfowl hunting area. For area details see enlargement – Atch 4 & 4a. 6. Piute Ponds waterfowl hunting area. For area details see enlargement – Atch 5. 7. Piute Ponds dove hunting area. For area details see enlargement – Atch 5. 8. Combat Arms Range. Closed to hunting. |
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Attachment 3

HUNTING AREA 1
ROSAMOND HILLS/BISSELL HILLS AREA

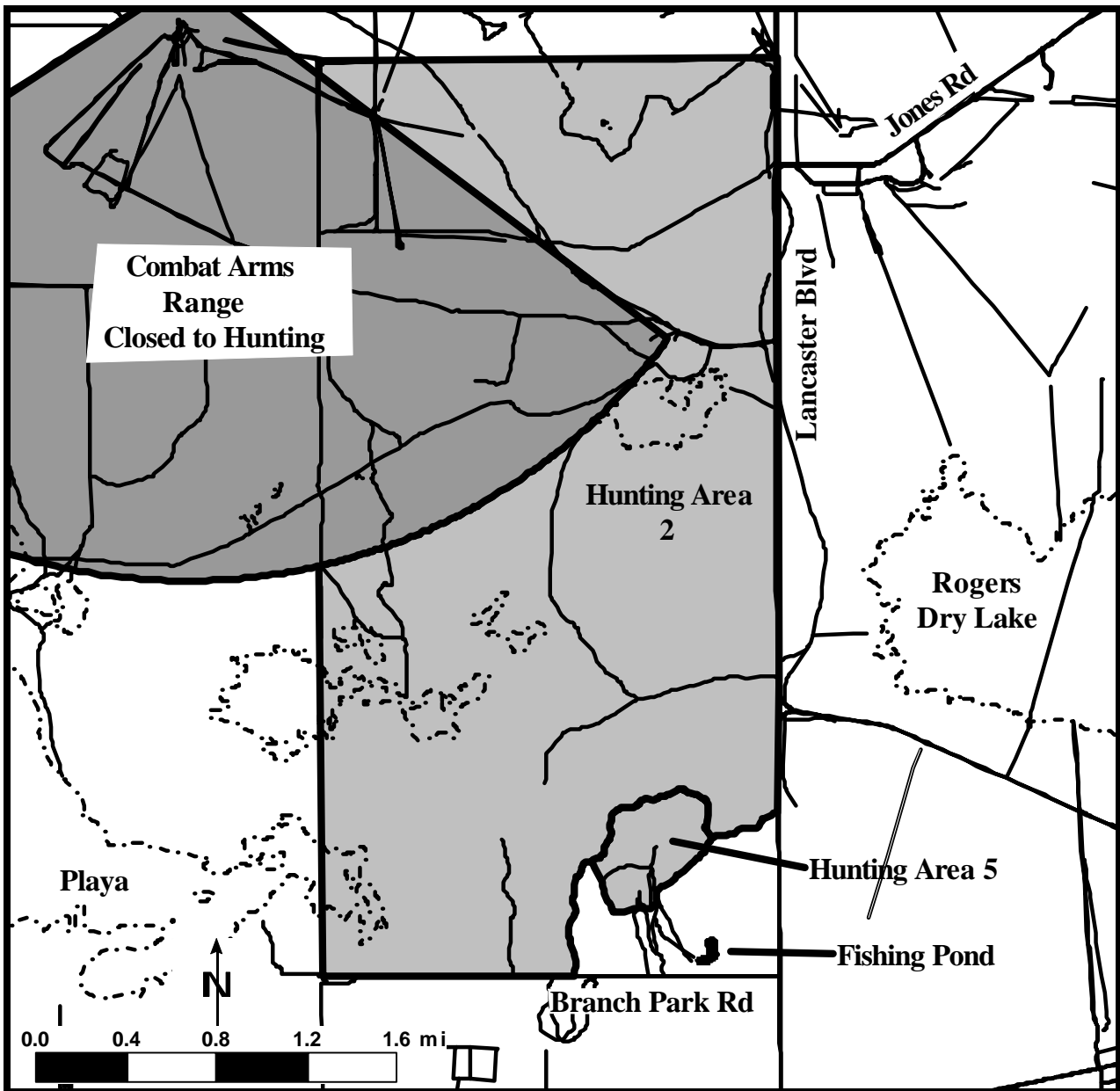


Hunting Area 1: Rabbit, dove, chukar, and quail hunting area.

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Attachment 4

HUNTING AREAS 2 & 5 AND FISHING POND



Hunting Area 2: Dove, quail, chukar and rabbit.

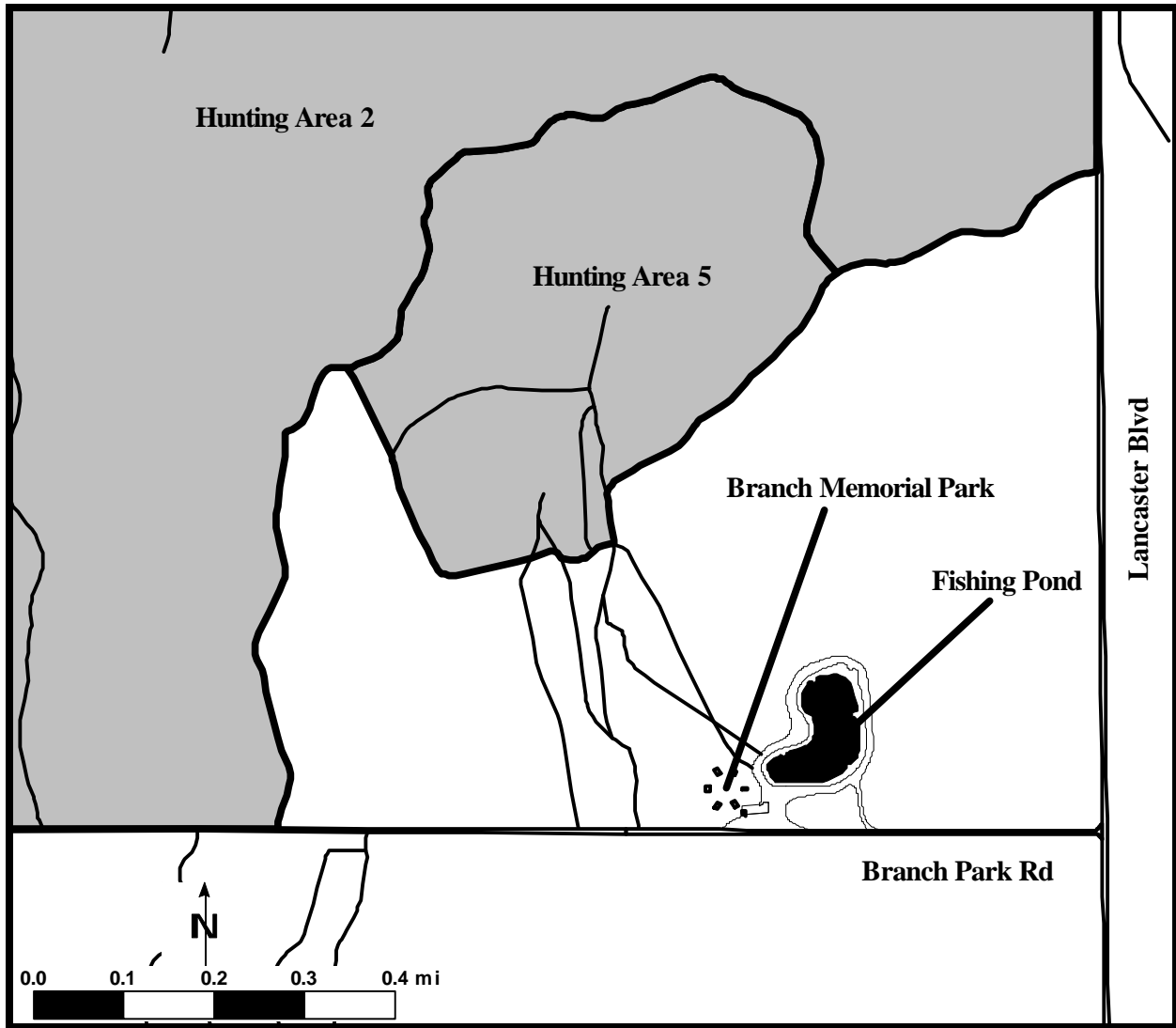
Hunting Area 5: Waterfowl.

Note: Hunting Areas 3 & 4 have been eliminated due to conflicts with the Combat Arms Range.

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Attachment 4a

HUNTING AREA 5/FISHING POND DETAIL



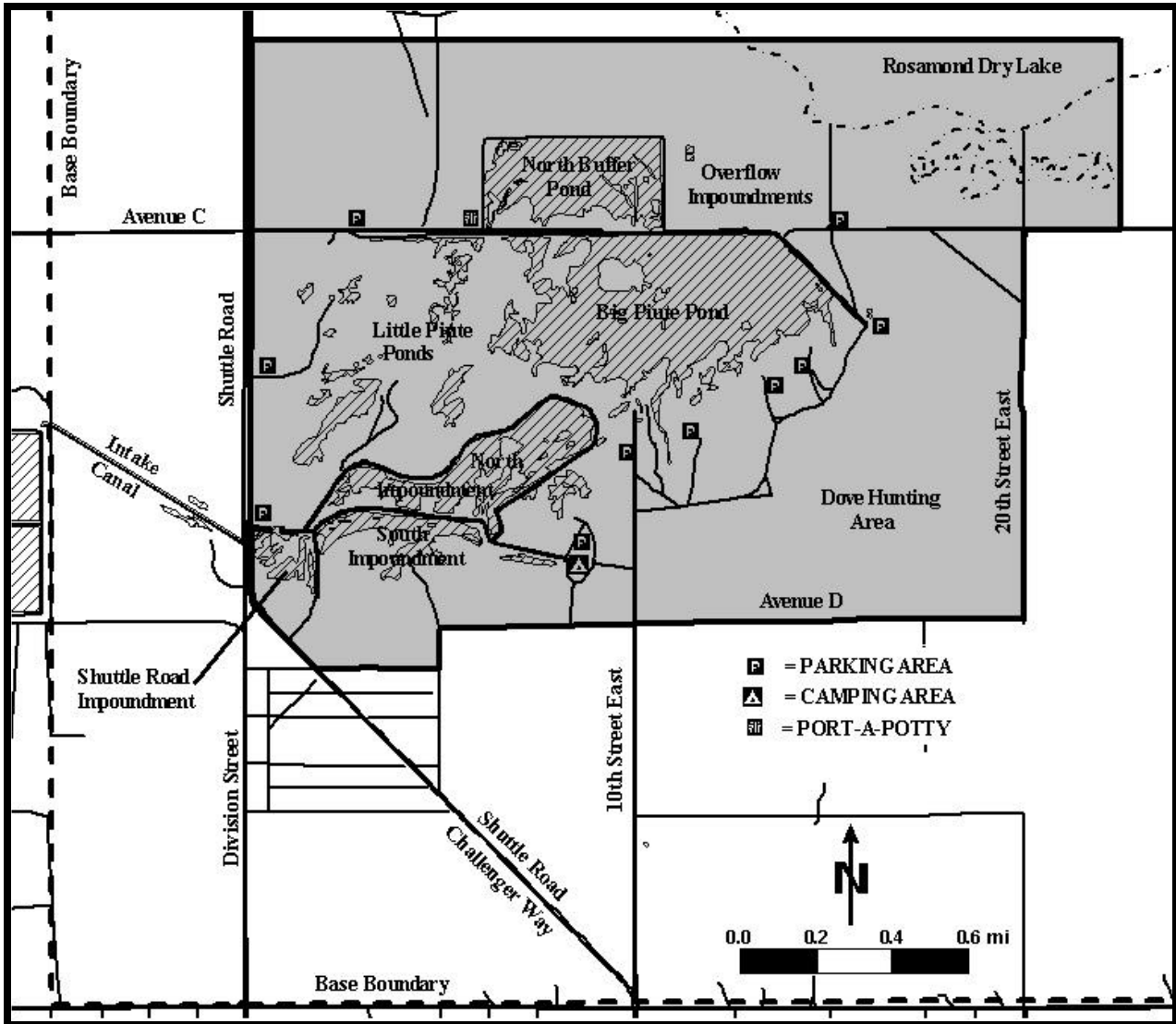
Hunting Area 5: Waterfowl.

Note: Hunting Areas 3 & 4 have been eliminated due to conflicts with the Combat Arms Range.

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Attachment 5

HUNTING AREAS 6 & 7 PIUTE PONDS



Hunting Area 6: Waterfowl.
Hunting Area 7: Dove.

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Attachment 6

SAMPLE AFFTC FORM 5149

| | | | |
|--|---------------------|-----------------|------------|
| <p>FISHING PERMIT EDWARDS AIR FORCE BASE, CALIFORNIA 93524 (THIS PERMIT FALLS UNDER THE PRIVACY ACT OF 1974, SEE REVERSE) THIS IS NOT A PASS THIS PERMIT IS NON TRANSFERRABLE</p> | | | |
| PERMIT NUMBER | ISSUE DATE | EXPIRATION DATE | |
| NAME/GRADE | | SSN | |
| BIRTH DATE | WEIGHT | HEIGHT | COLOR HAIR |
| COLOR EYES | SIGNATURE OF HOLDER | | |

AFFTC Form 5149, Aug 95

Previous editions are obsolete

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Attachment 7

SAMPLE AFFTC FORM 5303

| HUNTER SURVEY | | | | | |
|---|--|---|---|-------------|---|
| NAME _____ | | | | | |
| HUNTING LOCATION <i>(Check appropriate block)</i> | | | | | |
| | AREA 1 – ROSAMOND HILLS/BISSELL HILLS AREA (Rabbit, dove, chukar, and quail) _____ | AREA 6 – BIG PIUTE POND/NORTH PIUTE POND/LITTLE PIUTE POND (Specify) _____ | | | |
| | AREA 2 – GRAHAM RANCH AREA/SOUTEAST OF THE ROD AND GUN CLUB (Rabbit, dove, chukar, and quail) _____ | AREA 7 – PIUTE PONDS PERIMETER/SOUTH OF ROSAMOND LAKE (Dove) _____ | | | |
| | AREA 3 – MESQUITE WOODLANDS AREA/NORTH OF BRANCH MEMORIAL PARK (Dove, chukar, and quail) _____ | OTHER HUNTING AREA (Specify) _____ | | | |
| | AREA 5 – RED BARN MARSH _____ | OTHER HUNTING AREA (Specify) _____ | | | |
| NO. OF HUNTERS IN PARTY | DATE | ARRIVAL TIME | DEPARTURE TIME | TOTAL HOURS | NO. OF MOTOR VEHICLES USED BY HUNTING PARTY |
| HARVEST RECORD <i>(Number)</i> | | | | | |
| PINTAIL (Sprig) _____ | | CANADA GOOSE (Honker) _____ | | | |
| MALLARD _____ | | LESSER CANADA GOOSE _____ | | | |
| WIGEON (Baldpate) _____ | | WHITE FRONT (Speckle) _____ | | | |
| SHOVELER _____ | | SNOWGOOSE _____ | | | |
| GREEN-WINGED TEAL _____ | | BRANT _____ | | | |
| CINNAMON TEAL _____ | | OTHER (Specify) _____ | | | |
| | | TOTAL GEESE HARVESTED _____ | | | |
| GADWALL (Grey Duck) _____ | | CALIFORNIA QUAIL (Valley Quail) _____ | | | |
| CANVASBACK _____ | | GAMBEL'S QUAIL _____ | | | |
| REDHEAD _____ | | CHUKAR (Red-legged partridge) _____ | | | |
| RING NECK DUCK (Blackjack) _____ | | MOURNING DOVE _____ | | | |
| OTHER (Specify) _____ | | OTHER UPLAND GAME BIRD (Specify) _____ | | | |
| TOTAL DUCKS HARVESTED _____ | | COTTONTAILED RABBIT _____ | | | |
| TOTAL COOTS HARVESTED _____ | | BLACKTAILED RABBIT _____ | | | |
| NUMBER OF BANDED BIRDS _____ | | OTHER MAMMALS (Specify) _____ | | | |
| BANDED BIRD RECORD | | | | | |
| SPECIES | | BAND NUMBER | | SPECIES | |
| BAND NUMBER | | SPECIES | | BAND NUMBER | |
| | | | | | |
| SUBMIT THIS FORM WITHIN 2 WEEKS OF EACH HUNT TO: | | | ENVIRONMENTAL MANAGEMENT OFFICE (AFFTC/EM) 5 S. POPSON AVENUE EDWARDS AFB CA 93524- | | |
| OR | | | | | |
| HAND DELIVER TO: | | | | | |

AFFTC Form 5303, Jan 03

Previous edition is obsolete.

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Attachment 8

SAMPLE AFFTC FORM 5317

| <p align="center">HUNTING PERMIT EDWARDS AIR FORCE BASE, CALIFORNIA 93524 (THIS PERMIT FALLS UNDER THE PRIVACY ACT OF 1974, SEE REVERSE) THIS IS NOT A PASS THIS PERMIT IS NON TRANSFERABLE</p> | | | |
|--|---------------------|--------|-----------------|
| PERMIT NUMBER | ISSUE DATE | | EXPIRATION DATE |
| NAME/GRADE | | | SSN |
| BIRTH DATE | WEIGHT | HEIGHT | COLOR HAIR |
| COLOR EYES | SIGNATURE OF HOLDER | | |

AFFTC Form 5317 Aug 95

Previous editions are obsolete

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Attachment 9

SAMPLE AFFTC FORM 5373

| | | | | | |
|--|--|----|----|--------------|------|
| | WILDLIFE CONSERVATIONIST EDWARDS AFB, CALIFORNIA (This card is affected by the Privacy Act - See Reverse) | | | DATE ISSUED | |
| | | | | DATE EXPIRES | |
| | NAME/RANK | | | SSN | |
| | DOB | WT | HT | HAIR | EYES |
| SIGNATURE | | | | | |
| THIS INDIVIDUAL IS AUTHORIZED TO BE A WILDLIFE CONSERVATIONIST TO CONDUCT WILDLIFE CONSERVATION PROJECTS ON BASE | | | | | |
| COMMANDER, 95TH SUPPORT GROUP | | | | | |

AFFTC Form 5373 Jul 95 Previous editions are obsolete

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Attachment 10

SAMPLE AFFTC FORM 5823

| HUNTER'S VEHICLE IDENTIFICATION | | | |
|--|--|---|--|
| NAME | | DATE | |
| NUMBER IN HUNTING PARTY | | BLIND NUMBER <i>(If blind hunting)</i> | |
| START TIME <i>((Circle AM or PM))</i> <div style="text-align: center; margin-top: 5px;"> AM PM </div> | | ESTIMATED RETURN TIME <i>(Circle AM or PM)</i> <div style="text-align: center; margin-top: 5px;"> AM PM </div> | |
| PLACE THIS CARD IN PLAIN SIGHT ON THE DRIVER'S SIDE OF THE DASH WHEN LEAVING YOUR VEHICLE UNATTENDED | | | |

AFFTC Form 5823 Jul 92 Replaces AFSC Form 5823, Dec 87, which may be used

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Attachment 11

SAMPLE AFFTC FORM 5875

| FISH SURVEY (BRANCH MEMORIAL PARK – EDWARDS AFB, CALIFORNIA) (Subject to PRIVACY ACT OF 1974) | | | | | |
|--|--------------|----------------------------|---|---------------|---------|
| AUTHORITY: 10 USC8012 Executive Order 9397. PRINCIPLE PURPOSE: Registration of personnel authorized to be a Wildlife Conservationist at Edwards AFB, California. ROUTINE USES: Used as a source document for identification of individuals. DISCLOSURE IS VOLUNTARY: Failure to fill out the identification will prevent positive identification for security requirements. | | | | | |
| Your help in completing this form will enable us to better manage this activity and to find out what we can do to make it better. Even if you didn't catch a fish, fill it out anyway! That is what we definitely want to improve! Thank you! | | | | ANGLER'S NAME | |
| DATE FISHED | TOTAL CAUGHT | NO. OF HOURS SPENT FISHING | ADDRESS | PHONE NUMBER | |
| STATISTICS | | | | | |
| | TOTAL CAUGHT | TYPE OF LURE/BAIT USED | WEIGHT | LENGTH | SPECIES |
| BASS | | | | | |
| CATFISH | | | | | |
| OTHER (IDENTIFY SPECIES) | | | | | |
| CARP | | | | | |
| ADDITIONAL COMMENTS | | | | | |
| PLEASE RETURN REPORT TO: | | | ENVIRONMENTAL MANAGEMENT OFFICE AFFTC/EMXC (NATURAL RESOURCES) 5 S. POPSON AVENUE | | |
| OR: Deposit report in the box near the display | | | | | |

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Attachment 12

**SAMPLE WILDLIFE CONSERVATION PROGRAM
COVENANT NOT TO SUE AND HOLD HARMLESS AGREEMENT**

MEMORANDUM FOR AFFTC/EMXC
5 East Popson Avenue Bldg 2650A
Edwards AFB CA 93524-6225

FROM: _____
Edwards AFB Wildlife Conservationist's Name

Address

City, State, Zip Code

SUBJECT: Covenant Not To Sue And Hold Harmless Agreement

In consideration of the permission granted to me to participate in the Wildlife Conservation Program, I, _____ hereby remise, release, and forever discharge the Federal Government of the United States, the Department of Defense, of the U.S. Armed Forces and their officers, agents, employees, servants, proceedings, debts, dues, judgments, and demands whatsoever in law or equity which I may have, or which my heirs, executors, administrators or assigns can, shall or may have by reason of my injury or death and of damage to property owned or being used by me, which occurs while I am in or on a DoD facility participating in this program.

I fully understand this document is a release of all possible claims which I might have as a result of my participation in the program and I acknowledge I have read and am aware of the terms of this release.

I further agree to defend, settle, or pay every claim or suit against the United States, its Agencies, and United States personnel, and will hold each of them harmless against any claim or suit including attorneys fees, costs and expenses, arising out of my participation in this activity.

I also acknowledge that I have been fully appraised of the rules and risks inherent in the Wildlife Conservation Program. I knowingly assume all risks associated with participation in this program.

Signature

Date

This page intentionally left blank.

Attachment 13

SAMPLE LETTER CERTIFYING INTENT TO HUNT FROM SELECTED DUCK BLIND

MEMORANDUM FOR AFFTC/CC

SUBJECT: Letter of Intent to Hunt From Selected Duck Blind

1. I hereby certify that I intend to hunt during the upcoming waterfowl season and will occupy the duck blind I am selected for as a primary or alternate reservation holder. This does not prevent me from jump shooting or utilizing other duck blinds as allowed in AFFTCI 32-8. If for any reason my intention changes, such as a temporary or permanent change in duty station that will not allow me to hunt during the upcoming waterfowl season, I will immediately notify the Rod and Gun Activity so that the duck blind may be reassigned to another hunter.

2. I fully understand that any breach of this certification may result in loss of hunting privileges, loss of duck blind reservation status, and any other such actions deemed appropriate by the Installation Commander.

(Signature)

(Date)

Please print legibly and fill in the following information:

(Full Name)

(Rank, Unit, Duty Station)

(Work Phone Number)

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Appendix N

Methods for Measures of Success Metrics

Estimated Completion Date 2014

Appendix O

Partnerships and Agreements

- 1. Edwards AFB/Ducks Unlimited (DU) MOA**
- 2. Edwards AFB/Lancaster Sanitation District 14/Ducks Unlimited MOA
ECD – 2014**
- 3. To be Determined**

MEMORANDUM OF AGREEMENT

BETWEEN

95 ABW/CC

AND

Ducks Unlimited, Inc.

MOA # 2010-10-02MA

5

Prepared by: 95 ABW/CEVN

Phone: 661 277-1426

POC: Wanda Deal

OPR: 95 ABW/CEVN

1. PURPOSE:

Edwards Air Force Base (AFB) and Ducks Unlimited, Inc. ("DU") have agreed to work together in support of conservation projects pursuant to the Edwards AFB, Integrated Natural Resources Management Plan and the Sikes Act, Title 16, Chapter 5C, Subchapter I 670. The first project will be the Sonoran Wetland Restoration NAWCA II, Piute Ponds Wetland and Riparian Restoration ("Project"). This Project will be partially funded pursuant to North American Wetlands Conservation Act Grant Agreement Number CA-N451B ("Grant") between DU and the U.S. Fish and Wildlife Service ("FWS"). The additional Project funds will be secured by DU. The Grant is incorporated into this Agreement by reference. A portion of this Grant will be used to assist Edwards AFB, as a sub recipient of the Grant, to enhance various lands ("Site") located within the Piute Ponds area (see exhibit B), as more fully described in the Project Proposal attached as Exhibit A. The enhancement of the Site will address the habitat conservation objectives of the North American Waterfowl Management Plan. The construction portion of this Project is expected to last up to 3 years.

2. RESPONSIBILITIES:

DU agrees:

1. To provide funding of an estimated amount of \$94,503.00, or one hundred percent (100%) of the total project costs, whichever is less and pending availability, for the funding of DU's obligations under Section 2.1. (as further described in Exhibit A).
2. To serve as Grantee of the Grant, make application for reimbursement under the Grant and receive Grant funds in an amount of \$91,035.00, in part, DU's funding obligation in this Agreement.
3. Subject to adequate funding, to be responsible for all reasonable and necessary services to ensure the timely completion of the Project, including: facilitate obtaining all required permits (including submitting environmental documentation to the U.S. Fish and Wildlife Service for compliance with the Endangered Species Act, National Environmental Policy Act, and National Historic Preservation Act, and coordinating of any applicable requirements of the documents), the development of the Site, any hiring of contractors for the development of the Site, project and construction management. Construction portion of this Project is expected to last up to 3 years. Project execution will comply with Edwards AFB procedures and all activities will be coordinated through 95 ABW/CE.

Edwards AFB agrees:

1. To provide access rights necessary for the development of the Project and provide to DU, and its officers, employees, agents, and the like, all reasonable assistance and cooperation necessary for the implementation of this Agreement.

2. To inform DU of any actions or inactions by either party to this Agreement which will change the required delivery or completion times stated in the Agreement.
3. To release DU from all responsibility and liability for any errors or omissions that may arise due to any changes requested, reviewed and approved by Edwards AFB in the Site development plans after the construction contract has been awarded, as well as from all responsibility and liability for any construction delays that may be due to the non-performance of Edwards AFB.
4. That DU may withhold funding for this Project if Edwards AFB materially fails to comply with the terms and conditions of this Agreement or any referenced Federal statute, regulation, assurance, or NAWCA Grant Administration Standards.
5. That the publication of any reports related to the Project which is produced under this Agreement, or parts thereof, by Edwards AFB or DU personnel will be coordinated prior to release with all parties. Authorship does not incur any privileges of copyright nor restriction on distribution.
6. That all new releases or other information on the Project published or released for publication by Edwards AFB must acknowledge that funding was made possible through NAWCA.
7. To provide DU with all information requested by DU that is necessary to meet DU's obligations under the Grant within the time period specified by DU in the request for information.
8. That, pursuant to Section 307 of the Omnibus Consolidated Appropriations Act of 1997, Public Law 104-208, 110 Stat. 3009, Edwards AFB is advised of the following:
 - a. In the case of any equipment or product that may be authorized to be purchased with financial assistance provided using funds made available in this act, it is the sense of the Congress that entities receiving the assistance should, in expending the assistance, purchase only American-made equipment and products.
9. Edwards AFB will work with DU to develop a cooperative Site inspection schedule for DU's and FWS's inspection of the Site throughout the term of this Agreement, if requested. The purpose of the Site inspections is to ensure that such habitat is managed for the purposes intended in this Agreement and the Grant. During the Site inspections, DU and FWS may also assess the impact of habitat management practices on the immediate watershed of such Site. Adequate notice will be given to Edwards AFB prior to site inspections.
10. Edwards AFB will cooperate in good with faith with District 14 to fulfill the terms of the memo at Exhibit C. District 14 pledges to conduct routine maintenance, ensuring the integrity of all structures constituting Piute Ponds and Impoundment Areas including the

proposed water control structures. This is in accordance with the existing MOA between District 14 and Edwards AFB dated 8 March 1991, attached as Exhibit D. *MB* *SE*

11. To ensure that any lands on which habitat is restored, enhanced, and/or created in this Project are managed and maintained for the purpose for which they were intended in the Grant as provided for in the Integrated Natural Resources Management Plan and the Sikes Act, Title 16, Chapter 5C, Subchapter I 670(a)(1)(A), (B), and (C). Edwards AFB shall operate in good faith to provide routine inspection and all operation, rehabilitation and maintenance necessary to maintain the continuing viability and function of the Project as intended in the Grant throughout the term of this Agreement.
12. To potentially provide funding to DU for future conservation projects pursuant to the Sikes Act as projects and funding become available and Edwards AFB and DU mutually agree to. This does not obligate Edwards AFB to fund any projects or to use DU for wetland conservation projects.

DU and Edwards AFB agree:

1. To recognize the cooperative nature of this Project. Such recognition shall include, but not necessarily be limited to, the erection and maintenance of mutually acceptable signs along roads, entrances, or convenient viewing locations on the Site in close proximity to the Project. Any oral or written communications related to the Project will acknowledge each party's contribution to the Project.
2. To cooperate in recognizing outside contributors that might provide funding to help underwrite development and restoration costs or who otherwise are mutually deemed to deserve special recognition; this recognition can include signs, plaques, and/or cairns on the Site as mutually agreed upon. The principal costs of such recognition shall be borne by the party initiating the recognition.
3. DU appoints their Regional Biologist as its Project Officer.
4. Edwards AFB appoints 95 ABW/CEVN Piute Ponds Project Manager as its Project Officer.
5. This MOA in no way restricts the parties from participating with other public or private agencies, organizations, and individuals.
6. The parties intend to conduct the activities contemplated in this agreement in accordance with existing authorities. If any provision of this MOA is determined to be inconsistent with existing laws, regulations, or directives, then the provisions of this MOA not affected by a finding of inconsistency shall remain in full force and effect.

3. LINKAGE TO OTHER AGREEMENTS: None

4. ADMINISTRATIVE:

- a. This Agreement shall become effective when signed by both parties and shall continue until mutually terminated or modified through written amendment by the Parties. This MOA may be modified or amended at any time by mutual written agreement of both parties, and may be terminated by either party upon sixty (60) days prior written notice. This Agreement will be accomplished in accordance with all the requirements of the Department of Defense Sikes Act, Title 16, Chapter 5C, Subchapter I 670(a)(1)(A), (B), and (C) which states "The Secretary of Defense shall carry out a program to provide for the conservation and rehabilitation of natural resources on military installations...provide for fish and wildlife management, land management, ...fish and wildlife-oriented recreation; fish and wildlife habitat enhancement or modifications; and wetland protection, enhancement, and restoration, where necessary for support of fish or wildlife."
- b. Although the Project Proposal (Exhibit A) refers to "wetlands," the parties recognize that Edwards AFB is of the opinion that Piute Ponds are not "wetlands" under any statutory definition. This agreement is not in any way intended to characterize Piute Ponds as "wetlands" under any statutory definition. Rather, the parties recognize that the intent of this agreement is to provide an efficient means of managing water being supplied to Piute Ponds by the Sanitation District 14 treatment plant. Nothing in this agreement is intended, or shall be construed as imposing any obligation upon Edwards AFB to repair existing dikes or associated structures or supply water or treated sewage effluent to any part of Piute Ponds and impoundment areas, as this is the responsibility of Sanitation District 14 as defined in Exhibits C and D. *MB sed*

5. EXECUTION:

EDWARDS AIR FORCE BASE

By: *Gregory E Schwab*

GREGORY E. SCHWAB, Colonel, USAF
Commander, 95th Air Base Wing

Date *9 December 2010*

DUCKS UNLIMITED, INC.

By: *Mark E Biddlecomb*

MARK E. BIDDLECOMB
Director

Date *1/24/11*

EXHIBIT A
PROJECT PROPOSAL
 ENHANCEMENT/RESTORATION

SUBMITTED BY: Chris Hildebrandt, Regional Biologist

Project Number: US-CA-426-10

Project Name: SWR II: Piute Ponds Wetland Restoration and Enhancement

Location: County: Los Angeles
 Latitude: 34.79780° Longitude: -118.11930°

Ownership & Management: Piute Ponds is owned by the United States Air Force, and managed by the Los Angeles County Sanitation District #14. The project site is located near Rosamond Lake on Edwards Air Force Base.

Size: Project Site:

| | |
|--------------------------------------|---------------|
| Total Wetland Area Enhanced: | 300 AC. |
| Total Upland Area Enhanced: | 40 AC. |
| Total Wetland Area Restored: | 300 AC. |
| Total Upland Area Restored: | 10 AC. |
| <u>Total Riparian Area Restored:</u> | <u>30 AC.</u> |
| Total Project Area: | 680 AC. |

Purpose: Ducks Unlimited is working with the United States Air Force to restore and enhance palustrine emergent wetlands, riparian, and associated upland habitats on the Piute Ponds tract located on Edwards Air Force Base. Project activities will benefit a variety of wildlife and maximize their management capabilities while conserving water.

| | | |
|-------------------------------------|--|----------|
| Need: | The Piute Ponds tract currently lacks an adequate water conveyance infrastructure to provide optimal conditions for wetland habitat and subsequent management capabilities. The need for such habitats in this region is increasing as the amount of available habitat is severely threatened by human perturbations due to a rapidly increasing human population. | |
| Project Activities | The goal of this project is to restore 300 acres of palustrine emergent wetlands, 10 acres of associated uplands and 30 acres of riparian habitat, and enhance 300 acres of palustrine emergent wetlands and 40 acres of associated uplands at the Piute Ponds tract on Edwards AFB. Concrete water control structures will be installed on man-made levees and subsequent water conveyance capabilities will be improved. These activities will improve management capabilities while increasing the amount of available habitat. | |
| History & Management | Piute Ponds near Rosamond Lake occupies territory once explored by Spanish colonists and settled by pioneer homesteaders. It is currently owned and managed by the United States Air Force, and has been for over 70 years. | |
| Wildlife Values | | |
| Ancillary Benefits: | The increased shallow water habitat, riparian, and associated uplands restored and enhanced will benefit a variety of wildlife including waterfowl, shorebirds, colonial waterbirds, and Neotropical songbirds. In addition, many species of local wildlife will benefit from improved wetland habitat conditions as a result of an improved water conveyance infrastructure. | |
| Management Plans: | Management of the Piute Ponds tract will follow the existing management plan for the area developed by the U.S. Air Force. | |
| Monitoring & Evaluation: | Conservation staff will monitor the effectiveness of this project as part of their management plan and DU will make occasional site visits to ensure the enhanced and restored habitats are functioning as designed. | |
| Project Cost Estimate: | DU (indirects) | ████████ |
| | <u>DU (NAWCA)</u> | ████████ |
| | Total | ████████ |
| Length of Agreement: | 25 years after end of Grant period of performance | |

EXHIBIT B

Ducks Unlimited Proposal 2009 Piute Ponds Map

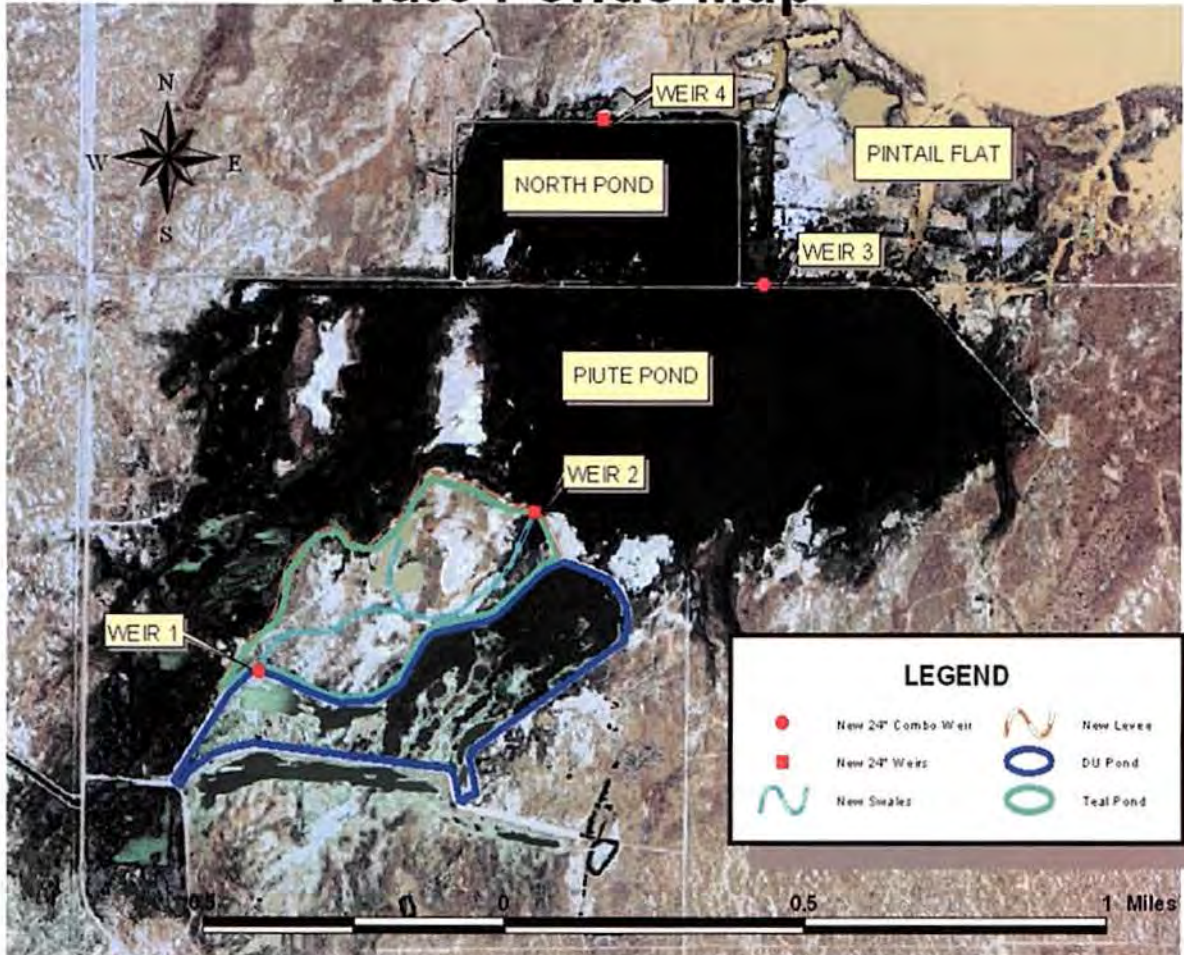


EXHIBIT C



COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 499B, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsdc.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

April 9, 2010
File No. 14-14.01-00

Robert Wood
Chief of Environmental Management Division
Edwards Air Force Base
95 ABW/CC
5 North Seller Avenue
Edwards AFB, California 93524

Dear Mr. Wood:

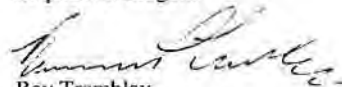
Piute Ponds Wetland/Riparian Restoration Project

County Sanitation District No. 14 of Los Angeles County (Sanitation District) supports the proposed Piute Ponds Wetland/Riparian Restoration Project (No. US-CA-426-10) developed by Ducks Unlimited, Inc. (DU) in cooperation with Edwards Air Force Base (EAFB). The project will benefit Piute Ponds and the surrounding area by installing additional water control structures that will allow recycled water to be judiciously applied in a manner that will also allow for seasonal drying of various areas. In addition, the project will replace water-hungry, invasive tamarisks trees with native tree species (willows and cottonwoods), which will minimize the amount of recycled water required in the future to maintain Piute Ponds at the current footprint.

The Sanitation District understands that DU is in the process of securing grant funds for the project through the North American Wetlands Conservation Act (NAWCA) and is drafting a Site Specific Agreement that will likely include provisions for the routine inspection and maintenance of the new water control structures. As discussed with EAFB staff, the Sanitation District will conduct routine maintenance, ensuring the integrity of all structures constituting Piute Ponds and Impoundment Areas including the proposed water control structures, in accordance with the existing Memorandum of Agreement (MOA) with EAFB dated March 8, 1991.

The Sanitation District looks forward to continuing to work with EAFB on this and future projects. Please feel free to contact Tom Weiland at (562) 908-4288, extension 2855, with any questions or concerns related to this matter.

Very truly yours,
Stephen R. Maguin


Ray Tremblay
Assistant Department Head
Technical Services

RT:ED:imb
cc: Dave Snyder

DOC #1509327

MEMORANDUM OF AGREEMENT

This Memorandum of Agreement (MOA) is made and entered into this 8th day of March, 1991 by and between the Air Force Flight Test Center, Edwards Air Force Base (hereinafter referred to as AFFTC) and County Sanitation District No. 14 of Los Angeles County (hereinafter referred to as District 14). This MOA addresses the long term management, operation, and maintenance of Piute Ponds and impoundments Areas located on Edwards Air Force Base south of Rosamond Dry Lake as shown on Exhibit A.

WITNESSETH

WHEREAS, District 14 owns and operates a wastewater treatment plant located westerly of Edwards Air Force Base; and

WHEREAS, Rosamond Dry Lake is located within the borders of Edwards Air Force Base; and

WHEREAS, flooding of Rosamond Dry Lake adversely impacts the accomplishment of the military mission of the AFFTC; and

WHEREAS, this MOA establishes the parameters under which the AFFTC will accept discharge of effluent water from District 14 onto Edwards Air Force Base; and

WHEREAS, this MOA also assigns maintenance and operation responsibilities for Piute Ponds and Impoundment Areas used by District 14 on Edwards Air Force Base; and

WHEREAS, the discharge of treated effluent from District 14 onto Edwards Air Force Base is governed by discharge requirements issued by the California Regional Water Quality Control Board-Lahontan Region (hereinafter referred to as RWQCB); and

WHEREAS, a three party agreement (hereinafter referred to as MOU) as detailed in a letter dated May 6, 1981 and signed by the U.S. Air Force, California Department of Fish and Game, Region 4, and District 14 stipulates 'discharge to Paiute (sic) Ponds, which will be maintained at 200 acres year-round, will be 1,000 gallons per minute (1.44 mgd) for the period April through September and a discharge rate equivalent to the evaporative loss from a 200-acre impoundment for the period October through March.'

NOW THEREFORE, it is agreed by and between the parties hereto as follows:

1. District 14 may discharge treated effluent onto Edwards Air Force Base from its treatment plant at the locations and subject to the terms and conditions of this agreement. To this end, District 14 will ensure that Rosamond Dry Lake will remain free from effluent water flooding.

2. In order for the AFFTC to retain the capability of utilizing Rosamond Dry Lake for tests and evaluation of aerospace vehicles, the year-around discharge to Piute Ponds will not exceed either the inlet capacity or the holding capacity of the Piute Ponds nor will there be overflow from the Piute Ponds spillways except as a result of natural stormwater input. This result will be accomplished in part through compliance with Board Order requirements of RWQCB that prohibit effluent overflows onto Rosamond Dry Lake. District 14 shall not be responsible for controlling stormwater which drains naturally to Rosamond Dry Lake due to the topography of the area.

3. Restricted access with respect to public use of all Edwards Air Force Base property will continue.

4. Impoundment Areas A, B, and C.

(a) Discharge of water to Impoundment Areas will be restricted to the seasonal period of 1 November through 15 April as required by District 14 for disposal of effluent water, and will not exceed either the inlet capacity or the holding capacity nor overflow the Impoundment Areas spillways except by natural stormwater input.

(b) Control of inflow of water during this seasonal period will be the sole and exclusive responsibility of the AFFTC. The 6500 Air Base Wing Commander may delegate this authority in writing for the period of 1 November through 15 April of each year and at such other times as may be deemed appropriate upon written request from District 14.

c. Written request for delegation of authority to control this seasonal inflow must be submitted to the 6500 Air Base Wing Commander not later than 1 August of each year.

5. It shall be the responsibility of District 14 to conduct routine maintenance, ensuring the integrity of all structures constituting Piute Ponds and Impoundment Areas.

6. Neither the AFFTC nor District 14 shall be obligated to replace Piute Ponds, Impoundment Areas and associated structures should they become damaged or destroyed.

7. All ground disturbing undertakings required for maintenance outside Piute Ponds and the Impoundment Areas by District 14 or its contractors will be coordinated with the Environmental Planning and Compliance Branch of the AFFTC. Proponents of planned undertakings will be responsible for accomplishing any necessary environmental compliance.

8. District 14 will monitor the chemical and biological quality of the effluent to ensure that water delivered to Edwards Air Force Base complies with all applicable Federal, State and local laws, rules and regulations relating to treated effluent water generated by District 14. Results of all such monitoring and testing shall be fully disclosed and available upon request to the AFFTC.

9. District 14 will notify the AFFTC of any known hazards that may pose a threat to human health and safety and will remediate any such hazards resulting from effluent discharges to Edwards Air Force Base.

10. District 14 and AFFTC will coordinate to perform vegetation control to minimize fire hazards. Vegetation control through controlled burns or other means will be provided by AFFTC on an annual basis for an area not to exceed 25% nor to occur more than once per year. District 14 will support this action by directing flows to allow areas designated for control burns to be dry prior to the burn.

11. Administrative:

(a) This MOA will become effective when signed by both parties hereto and shall remain in effect until terminated as provided for herein.

(b) This MOA may be terminated:

(i) by mutual agreement of both parties;

(ii) upon 365-day written notice by either party, or

(iii) immediately by either party upon written notification of failure to comply with the terms of this agreement by the other party hereto.

(c) Revisions and modifications to this MOA may be proposed by either party and shall become effective upon approval in writing by both parties.

12. The AFFTC and District 14 designate the following offices which shall be responsible for the administration and management of this MOA:

AFFTC: Environmental Planning and Compliance Branch
6500 ABW/DEV
Edwards Air Force Base CA 93523-5000
(805) 277-8092

District 14: Financial Planning and Property Management Section
County Sanitation Districts of Los Angeles County
P.O. Box 4998
Whittier CA 90607-4998
(213) 699-7411

APPROVED AS TO FORM:
KNAPP, MARSH, JONES AND DORAN

COUNTY SANITATION DISTRICT NO. 14
OF LOS ANGELES COUNTY

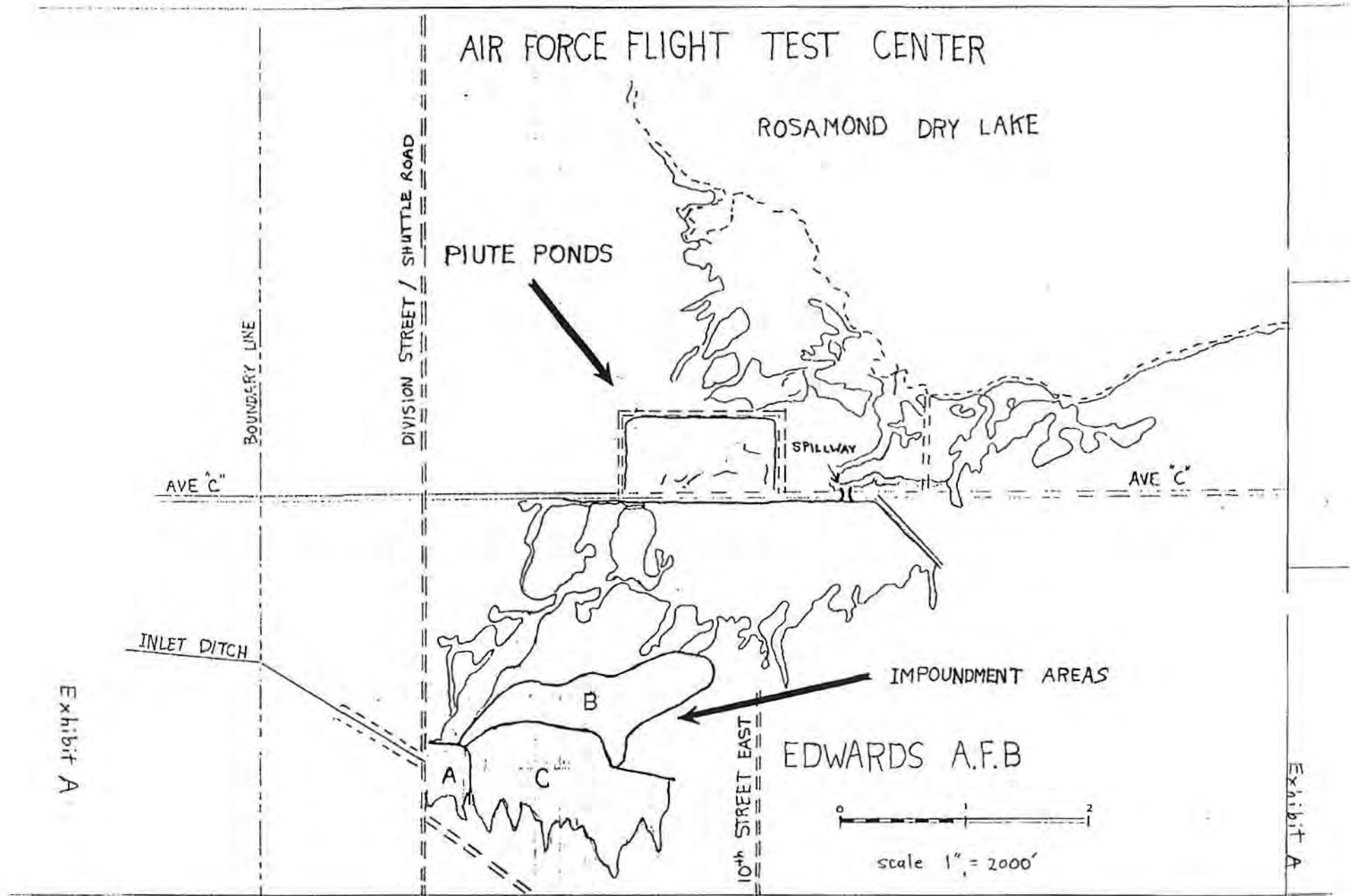
By: *B.R. Marshall* Date: 2-25-91 By: *Paul Knapp* Date: 2-28-91
District Counsel Chairperson, Board of Directors

ATTEST:

By: *Greg Jones* Date: 2-28-91 By: *J.P. Brady* Date: 8 March 91
Secretary J. P. BRADY
Chief, Plans and Programs Office
Air Force Flight Test Center



42 381 30 SHEETS 3 SQUARE
42 382 100 SHEETS 3 SQUARE
42 383 200 SHEETS 3 SQUARE





May 16, 2012

SOUTH PACIFIC FLYWAY PROJECT PROPOSAL
WETLAND ENHANCEMENT/RESTORATION

SUBMITTED BY: Chris Hildebrandt, Regional Biologist

Project Number: CA-426-16

Project Name: SWR III: Piute Ponds Wetland Restoration and Enhancement, Phase 2

Location: County: Los Angeles
Latitude: 34.79780° Longitude: -118.11930°

Ownership & Management: Piute Ponds is owned by the United States Air Force, and managed through coordination of the Los Angeles County Sanitation District #14 and Edwards AFB environmental staff. The project site is located near Rosamond Lake on Edwards Air Force Base.

Size: Project Site:

| | |
|------------------------------------|---------------|
| Total Wetland Area Restored: | 362 AC. |
| Total Upland Area Restored: | 4 AC. |
| Total Wetland Area Enhanced: | 124 AC. |
| <u>Total Upland Area Enhanced:</u> | <u>30 AC.</u> |
| Total Project Area: | 520 AC. |

Purpose: Ducks Unlimited is working with the United States Air Force to restore and enhance palustrine emergent wetlands and associated upland habitats on Piute Ponds located on Edwards Air Force Base. Project activities will provide wetland management options to improve habitat and manage available water resources.

Need: The Piute Ponds tract currently lacks an adequate water conveyance infrastructure to provide optimal conditions for wetland habitat and subsequent management capabilities. The need for such habitats in this region is increasing as the amount of available habitat is severely threatened by human perturbations due to a rapidly increasing human population.

Project Activities The goal of this project is to restore 362 acres of palustrine emergent wetlands, 4 acres of associated uplands, and enhance 124 acres of palustrine emergent wetlands and 30 acres of associated uplands at Piute Ponds on Edwards Air Force Base. Earthmoving will restore wetland basins and 19 concrete water control structures with HDPE pipe will be installed on levee embankments to provide water conveyance and wetland depth control. Grass seed will be planted on disturbed upland areas to restore grasslands and reduce erosion. These activities will improve management capabilities while increasing the amount of available habitat.

History & Management

Piute Ponds near Rosamond Lake occupies territory once explored by Spanish colonists and settled by pioneer homesteaders. It is currently owned and managed by the United States Air Force, and has been for over 70 years.

Wildlife Values Ancillary

Benefits:

The increased shallow water habitat, riparian, and associated uplands restored and enhanced will benefit a variety of wildlife including waterfowl, shorebirds, colonial waterbirds, and Neotropical songbirds. In addition, many species of local wildlife will benefit from improved wetland habitat conditions as a result of an improved water conveyance infrastructure.

Management Plans: Management of the Piute Ponds tract will follow the existing management plan for the area developed by the U.S. Air Force.

Monitoring & Evaluation:

Conservation staff will monitor the effectiveness of this project as part of their management plan and DU will make occasional site visits to ensure the enhanced and restored habitats are functioning as designed.

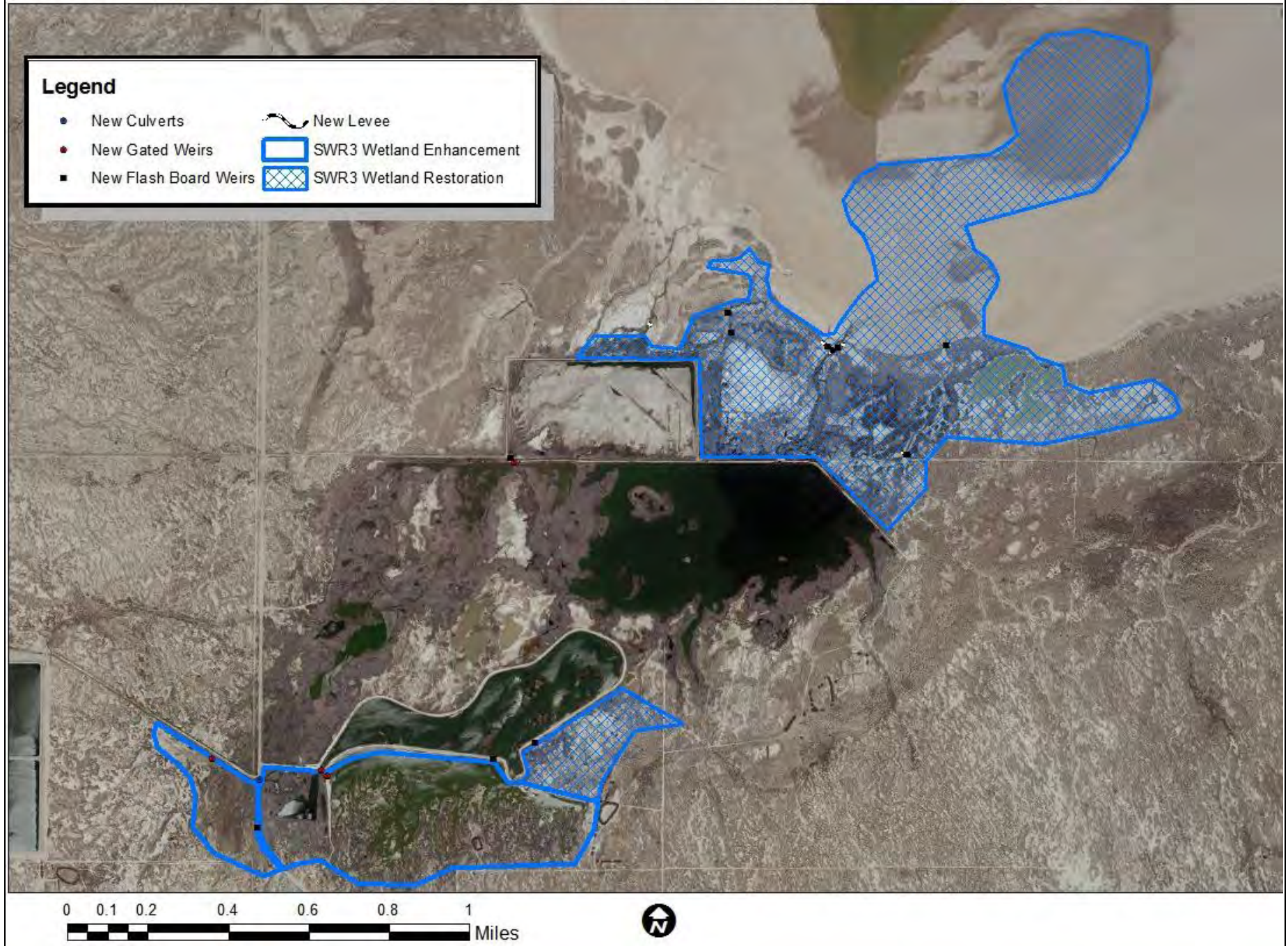
Project Cost Estimate:

| | | |
|--------------|---|------------|
| DU | - | ██████████ |
| Total | - | ██████████ |

Length of Agreement:

25 Years

Piute Ponds Wetland Restoration and Enhancement Project, Phase 2



Appendix P

Funding Processes

Estimated Completion Date 2015

Appendix Q

Project list, Synopsis of Results, Table of Completion

Project list, synopsis of results, table of completion

Projected Contract efforts

Rosamond Watershed Assessment

Accomplish a Rosamond watershed assessment to supplement the 2010 surface flow study to provide answers to the following questions:

- a. How much water is needed to maintain lakebed health
- b. How much was the historic waterflow into the Piute Complex
- c. How much surface flow can be diverted and from which water courses and still maintain the Rosamond Lake surface in its present state or if not healthy enhance it.

Funding/Resource

Contract

Government oversight and assessment

Tri-colored blackbird management

Tri-colored blackbirds are considered to be a species at considerable risk. They were proposed for listing under the federal Endangered Species Act and although denied it is expected that another request for listing will be submitted over the next few years. There is currently marginal habitat for the species within the Piute Complex. Tri-colored blackbirds are one of the focal species the Complex will be managed for in order to provide a safe haven to assist in increasing this species. Tri-colored blackbirds forage on invertebrates and prefer a relatively dense vegetative structure in and near water during breeding season. Through water management, vegetation control, and vegetation planting it is expected that the preferred vegetative structure will be obtained. Due to invertebrates being one of the main components for a breeding colony establishment and success, there is a need to understand the invertebrate (terrestrial and aquatic) presence, population levels, and seasonal availability to determine what management steps are required to increase the desirability of the habitat for tri-colored blackbirds at the Piute Complex. A viable tri-colored blackbird colony at the Piute Complex would assist in increasing their populations which would then negate the need to list the species. If the species is subsequently listed having a breeding colony at the Piute Complex will assist in mitigating the impact of listing on EAFB operational missions.

Funding/Resource:

Invertebrate Contract

Ongoing Invertebrate surveys – government/volunteers/conservation group

Invertebrate Assessments – government/research volunteers

Projects projected to be accomplished by Government, Volunteer, Conservation Partnerships, etc

Avian Breeding Inventory

An ongoing breeding season inventory would be accomplished on an annual basis for the next 5 years and then every 3 years afterwards. Nestling/fledgling presence, time of observations, number, locations, and any other important observations would be documented.

Funding/Resource

Volunteers
Conservation organizations
Researchers already studying the Piute Complex

Amphibian Inventory

An inventory for amphibians using the Piute Complex will be accomplished to document the species present within the area noting any sensitive species. This will build on the current inventory.

Funding/Resource:

Government
Research volunteers

Mammal Inventory

An inventory for mammals using the Piute Complex will be accomplished to document the species present within the area noting any sensitive species. This will build on the current inventory.

Funding/Resource:

Government
Research volunteers

Rosamond Lake Mapping

Accomplish on the ground topographic survey of the lakebed surface noting strength, cracking, sink holes, washes, debris, etc. A grid system would be designed for the lake and observations and measurements, photos, would be taken and gpsd for each grid. This will provide a map of the area which can be used to determine best use areas for base operations and provide information which can be used for a lakebed health assessment.

Funding/Resource:

Government

Volunteers
Volunteer Researchers
High School Environmental Club
Science Fair Students

Vegetation community and association mapping

Accomplish an on the ground inventory of vegetation communities and associations within the Piute Complex to include mapping of sensitive plants such as the Alkali Mariposa Lily and unwanted vegetative species populations, gps approximate boundaries.

Funding/Resource:

Government
Volunteers
Volunteer Researchers
Conservation Groups

Pond mapping

Accomplish on the ground topographic mapping of ponds noting different depths, vegetation, islands, washes, etc

Funding/Resource

Government
Volunteers
Conservation organization

Road improvements

There are approximately 59, 476 feet (11 miles) of roads in and around the Piute Complex. Some areas of these roads are impassable after flooding and should be evaluated to determine if gravel or some other option could be used to correct this situation. Gravel on most of the roads would help in decreasing erosion.

Funding/Resource

Material available on base
D14 would place the material if provided and staged within the Complex.
Volunteers

Tire cleanup

Hundreds of tires have been dumped at the Piute Complex and require clean up. Tires may have also have been used in the past as rip rap on some of the dikes when they were constructed and should be replaced as they tend to float out into the ponds when dislodged and create an eyesore or clog the weirs.

Funding/Resource

Volunteers

Conservation organizations for pick up and staging

Landfill contract for disposal

Trash cleanup

Cans, cinder blocks, barb wire, broken and unbroken bottles (some recent, some old), etc are present throughout the Complex, both in and out of the ponds. An effort to deal with, and where possible, remove the trash should be undertaken. Cultural review for some or all of this effort may be needed. Trash which cannot be removed should be assessed to determine if it is a hazard or not and if it is, an effort should be designed and accomplished to alleviate the hazard.

Methods could include covering or fencing off the particular trash area.

Funding/Resource

Government oversight

In-house contract assessment

Volunteers

Conservation organizations

History of Piute Ponds Complex

The Piute Complex has an illustrious history which should be captured and documented. An effort to pull together all documentation on the Complex should be undertaken and where feasible scanned into an electronic format.

Funding/Resource

Volunteer

Piute Complex Expansion

Review Complex area and determine possible expansion areas which would have limited impact on existing resources. Evaluate potential scenarios which would include mapping, noting potential capacity, water circulation, value enhancement to existing areas.

Funding/Resource

Ducks Unlimited/Audubon Society

Hunting and Fishing, Agriculture, Forestry funds

Government

D14

Air Strike Risk Evaluation

Refine evaluation of operational mission overlaid with avian use of the Complex. Make observations of avian response during mission use of lakebed both on the ground and in the air noting the bird's response.

Funding/Resource

Purchase equipment/webcam (hunting/fishing, agriculture, forestry funds)

Government – observations and evaluation

For Observations:

Volunteer

Conservation Organization

Desert High Biology Students

High School Environment Club

Education

Set up web cam within the Piute Complex to allow remote viewing of nesting, migration, foraging habits of wildlife using the Complex. Purchase 2 to 3 webcams.

Funding/Resource

Hunting/Fishing, Agriculture, Forestry

Conservation grants

Wetland productivity evaluation and monitoring

In order to maintain wetland productivity, wetlands need to experience periodic water level fluctuations and should generally not exceed 3 to 4 feet in depth. Keeping an ongoing record of water level changes will help assess the response of vegetation communities to the rate and timing of flooding and discharge. A monitoring program will allow for fine-tuning of water depths in order to create optimal use by wildlife. (Ducks Unlimited).

Standard census techniques will be used to monitor wildlife and invertebrate response to changes in vegetation, hydrology and soil conditions. The productivity and water cycles of each wetland area are unique, therefore records will be kept for individual management units. Initial conditions of the ponds will be documented as a baseline. Detailed records of the following will be obtained: water depth, duration and time of flooding, rates of flooding and discharge, vegetation composition, wildlife use, harvest of game species, seed yields and weather conditions (Ducks Unlimited).

Funding/Resource

Measuring equipment: (hunting/fishing, conservation grant)

Government

Volunteers

High School

Conservation Organizations

Improve handicap hunting opportunities

Work with Fergosa Foundation and other disabled veteran organizations to increase and improve handicapped hunting opportunities at the Piute Complex.

Funding/Resource

Partnerships

Future Major Construction Projects Planned within Piute Ponds Complex (Figure 1)

2015-2016

Construct dike work within Pintail Flats, remove old dike work, leave some old dike work for islands. Install water control structures.

Plan and blue print design already completed by Ducks Unlimited, 2014. Will need to be modified to provide access to ground water monitoring well and prevent flooding of well.

Construct short dikes within channels northeast of North Ducks Unlimited Pond. Install water control structures within channel dikes allowing flow to Big Piute. Cut swale to facilitate water flow from existing pool which stagnates due to no outflow.

Correct any issues with previously completed work (dikes, water control structures, etc). Remove vegetation, install rip rap.

2016-2017

Extend Little Piute to north to use old existing ponds to provide increased capacity, and more flexibility with lakebed flooding. Flow of water would be through existing channels to the old ponds. Old pond dikes would be restored in breached areas. Water control structures would be installed.

2017-2018

Establish additional flow into Little Piute and ponding of area north of Coot Chute. Develop in such a way as to protect utility line poles which were historically established within the flood plain and are naturally flooded during rainy periods.

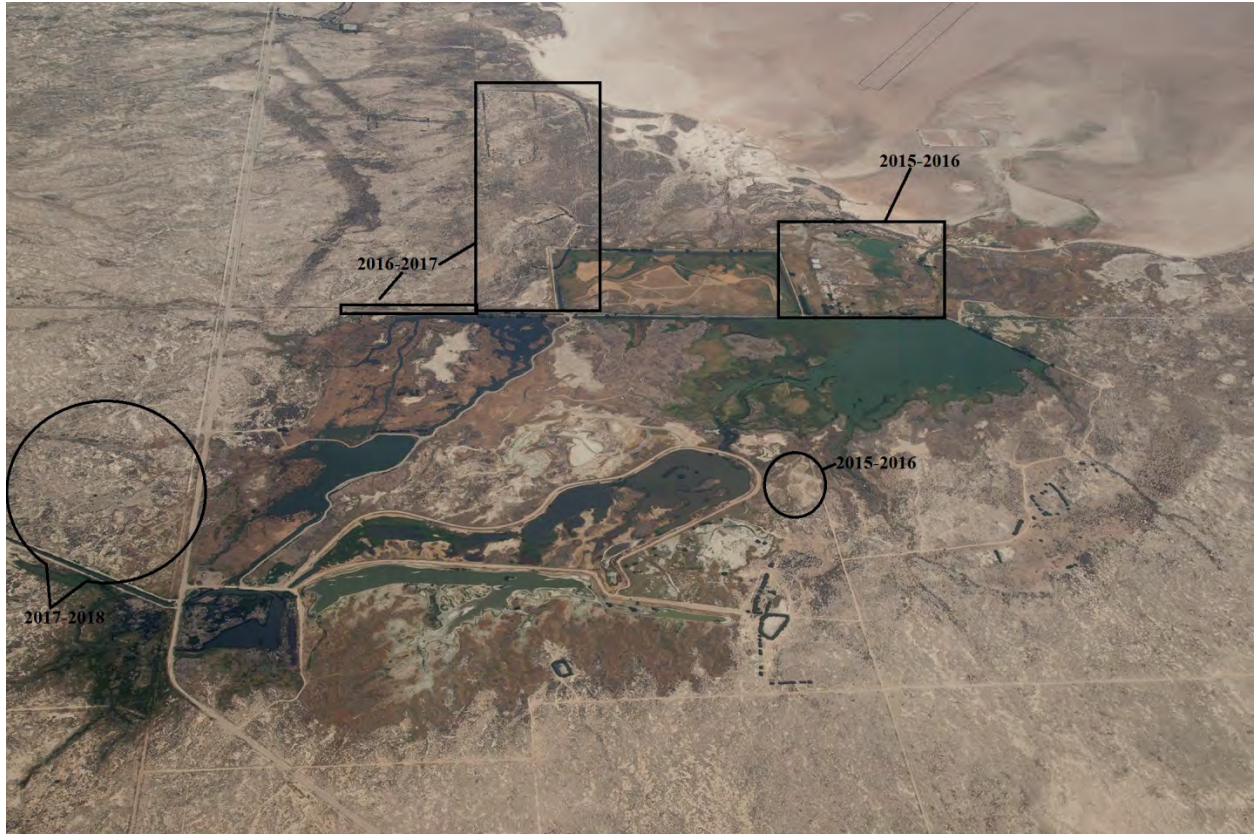


Figure 1. Area of proposed projects by estimated year.