

# **Draft Environmental Assessment**

## *Don Edwards San Francisco Bay National Wildlife Refuge Warm Springs Unit Road Realignment*

August 2023

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# Environmental Assessment for Warm Springs Unit Access Road Realignment

**Date: August 21, 2023**

This Environmental Assessment is being prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. The National Environmental Policy Act (NEPA) requires examination of the effects of proposed actions on the natural and human environment.

## **I. Proposed Action**

At the Warm Springs Unit of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge)(Fig. 1), the U.S. Fish and Wildlife Service (Service) is proposing to remove and restore an existing refuge road segment and construct a new road segment to align with a new realigned access easement. Road to be removed is 850' long and 11-12' wide. New road construction will be 800' long and 11-12' wide (Fig. 2). Old road footprint will be restored and seeded with a native seed mix.

A proposed action may evolve during the NEPA process as the agency refines its proposal and gathers feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The proposed action will be finalized at the conclusion of the public comment period for the EA.

Figure 1: Warm Springs Unit of Don Edwards San Francisco Bay NWR

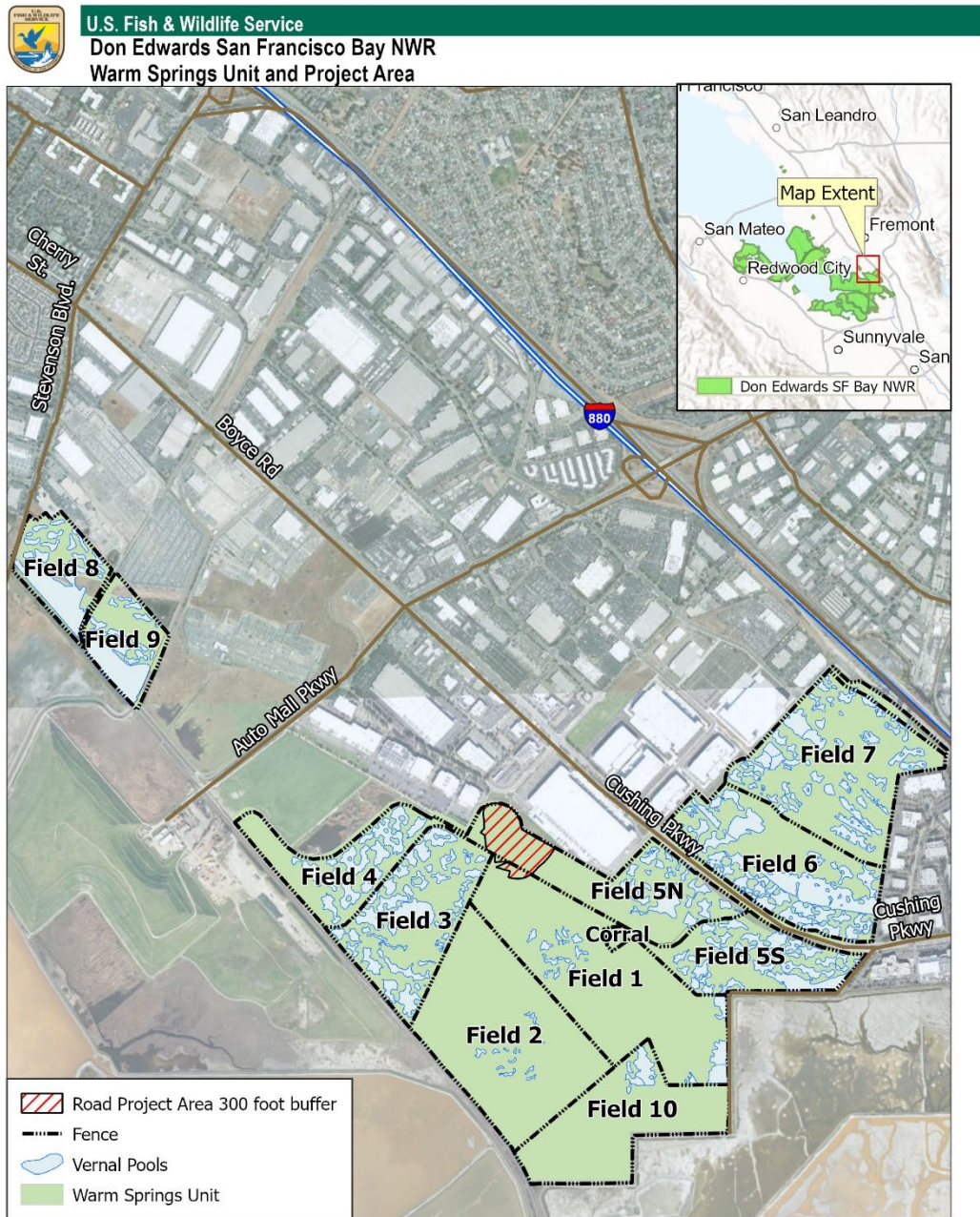
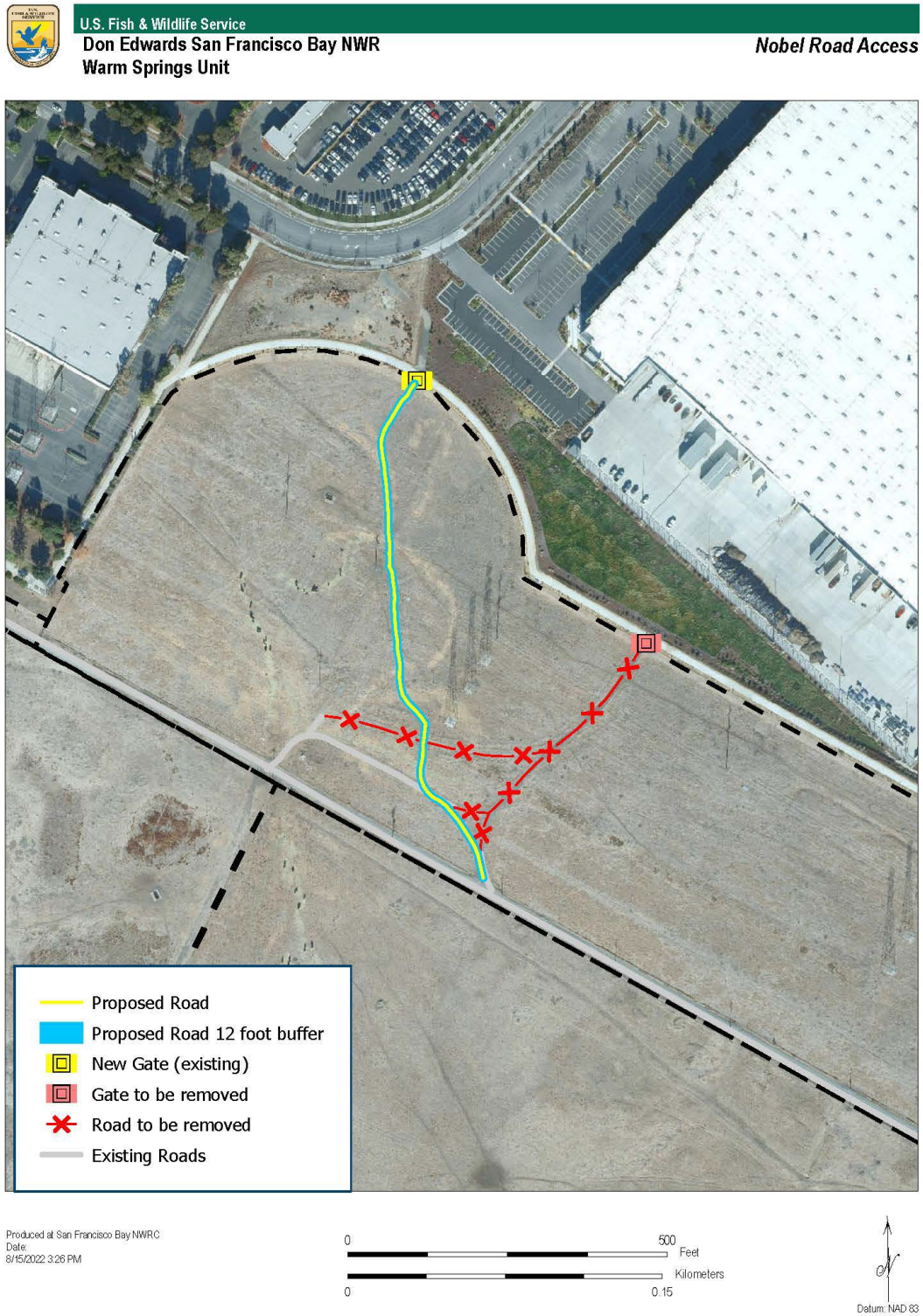


Figure 2: Work Area and Proposed Work



## II. Background

National Wildlife Refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The Don Edwards San Francisco Bay National Wildlife Refuge was established in 1972 with three major purposes. The first is the preservation of the natural resources of the South Bay, which include among others the habitat of migratory birds, harbor seals, and threatened and endangered species. The second major purpose is to provide environmental education and wildlife interpretation opportunities to Bay Area schools and residents. Third, the Refuge will ensure the protection of an important open space resource and other wildlife-oriented recreation opportunities for the enjoyment of local residents and visitors (EDAW 1974). The Warm Springs Unit itself was established in 1992 to meet a portion of the first Refuge purpose under Public Law 92-330: “for the preservation and protection of critical habitat for migratory waterfowl and associated wildlife, including species known to be threatened with extinction, and provide opportunity for nature study in the open space preserve.”

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is

*“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans”*

Additionally, the NWRSA mandates the Secretary of the Interior in administering the NWRS (16 U.S.C. 668dd(a)(4)) to

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;

- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses; and monitor the status and trends of fish, wildlife, and plants in each refuge.

### **III. Purpose and Need for the Action**

The purpose and need for this proposed action is to provide continued access to the Warm Springs Unit of the Don Edwards San Francisco Bay National Wildlife Refuge from Nobel Road in Fremont. The access road realignment is required to maintain legal access for the USFWS and associated stakeholders, ensuring uninterrupted operations, emergency response capabilities, and improved access during adverse weather conditions.

Access is needed for staff, cooperators, volunteers, and emergency vehicles. The previous access easement from Nobel Road to the Warm Springs Unit needed to be realigned due to the development of the adjacent parcel known as the "Fremont Tech Center" and owned by American Realty Advisors (ARA). Prior to development of the Fremont Tech Center, this adjacent property was undeveloped and access through this property was consistently provided to the Refuge. The prior access route is shown in Figure 3 on a 2014 satellite image. During the development planning, it was legally required that the adjacent property continue to provide access for the Refuge and emergency vehicles. The Service worked with the adjacent landowner in coordination with our Realty Division and the Solicitor's Office to realign the easement and it was finalized in 2022. This access easement realignment resulted in a different entrance point to the Warm Springs Unit from the ARA property (Fig. 3). Access through the ARA property portion has been constructed and the Refuge has put in a gate at the boundary. In order to complete the access, however, a realignment of the internal Refuge road is needed. This requires the removal and restoration of the existing internal road and the construction of a new access road segment. The restoration of the old road as part of the project includes an opportunity to enhance grassland habitat and create a habitat patch for Narrow-leaved milkweed (*Asclepias fascicularis*), contributing to the conservation of the Monarch butterfly, a candidate species for listing. The adjacent landowner, ARA, has agreed to fund the proposed project on the Refuge to continue to provide Refuge access.

Figure 3: Previous Access Route through ARA Property shown on 2014 imagery.





## **IV. Alternatives**

### **A. Alternative A – No Action Alternative**

Under the No Action alternative, the Service would not construct a new road segment. Refuge staff, volunteers, school groups, our cooperative rancher, and emergency vehicles would need to use the Auto Mall access point. This access is further away from the Unit and is more difficult for those unfamiliar with Warm Springs to drive through, as it has a dirt surface and several gates to pass through. There is no space for large vehicles or busses to park or turn around when using this access so it cannot be used for busses, tours, or large volunteer groups. Emergency vehicles, such as fire trucks, would take longer to respond to parts of Warm Springs and would not have direct access to some of the fields. During the rainy season, access through Auto Mall can be difficult without a truck or SUV. Public tours and volunteer groups would be limited to other parts of Warm Springs with better access. No native plant restoration, including enhancing habitat for the Monarch butterfly and other wildlife, would occur.

### **B. Alternative B – Warm Springs Unit Access Road Realignment– Proposed Action**

The Proposed Action Alternative involves three phases: a) the removal of the old gate and the old road segment, b) the construction of the new access road segment, and c) the restoration of the old road footprint. Construction work will take place in September, before the start of the rainy season. It is estimated to take 4 days. The final step of broadcast seeding may be timed in the fall, closer to the rainy season. Specifically, the proposed project involves the following steps:

1. Using a backhoe and/or skip loader, contractor will remove old access gate (Figures 2 and 4) and partially buried broken pipe along bottom and will install brace, t-posts, and barbed wire hog wire fence with salamander barrier fence. Barrier fence consists of hog wire partially buried 18 inches deep into the ground and upper portion 18 inches above ground and securely fastened to fence to match adjacent fence line (Figure 5).
2. A paddle wheel scraper will be used to scrape/remove gravel road surface from areas marked with red X's on Figure 2. Total length of road to be removed and restored is 850' (259 m) and width varies between 10-12'(3.0-3.7 m). No burrows exist on this old road segment. Contractor will stage gravel in work area on an existing road segment to use on new road.
3. Refuge staff will mark the new road centerline with stakes and flag perimeter to make 12' wide road.
4. Contractor will build the new road using a grader. The new road will be 800' (244 m) long and 12' (3.7 m) wide. Where existing surface is sufficiently high, topsoil will be removed to a depth of 12" to be placed in old road footprint.

5. Contractor will spread stockpiled rock from old road into the new road footprint and will add rock to create 5:1 slope between new gate and road, where there is currently a steep slope (approximately 1:1). Virgin rock gravel will be purchased and used for all additional needs for the project to total an 18" virgin rock gravel layer on top of the newly constructed road. Recycled material will not be used due to sensitive vernal pool habitat. A water truck will spray the road and the road surface will be compacted using a tractor with roller.
6. Contractor will disk old road surface to loosen compaction before putting in topsoil or compost.
7. Contractor will spread topsoil removed from new road into old road footprint using a skip loader.
8. A total of 95 cubic yards of organic compost will be purchased to cover the old road footprint and to form a 3-inch layer of compost on top of the topsoil. Compost will be staged on a portion of an existing road.
9. The final step involves broadcasting/raking in seed of a native plant species seed mix on the old road. The seeded species palette (Table 1) includes native species of grasses as well as alkali heath, a forb species very common on the site. In addition, Refuge staff and volunteers will broadcast narrow leaved milkweed seeds. They will rake the seeds lightly in the compost to create new patches of milkweed. Seeds will be purchased by Hedgerow Farms ([www.hedgerowfarms.com](http://www.hedgerowfarms.com)) and will use local seedstock or seeds harvested from a compatible ecotype.

Figure 4. Photos of gate and pipe to be removed and existing access road to restore.



Figure 5. Salamander fence to match



Table 1. Native seed mix for restored road

Species	Common name	Ecotype/Origin	LiveSeeds/sq. ft	Bulk lbs for area (0.25 acres)
<i>Elymus triticoides</i>	creeping wildrye	Martinez Marsh, Contra Costa Co.	10	1.17
<i>Stipa pulchra</i>	purple needle grass	Napa-Sonoma Marsh, Napa Co.	5	1.28
<i>Hordeum depressum</i>	alkali barley	Davis Grasslands, Yolo Co.	10	2.28
<i>Festuca microstachys</i>	small fescue	Woodside, San Mateo Co.	15	1.11
<i>Lupinus nanus</i>	Sky lupine		8	
<i>Frankenia salina</i>	alkali heath	Santa Clara	10	1.25
<i>Asclepias fascicularis</i>	Narrow leaf milkweed	Yolo County		1.0

## V. Mitigation Measures to Avoid Conflicts:

Measures to avoid any potential impacts to California tiger salamander and the environment:

### *Biological Resources*

- The location of the new proposed road was determined after investigating possible alternatives, mapping the number of burrows to be affected in each alternative, and choosing the alternative with the lower number of burrows to be compromised and the least burrow density near the road to reduce disturbance. There are no vernal pools in the work area and the vegetation is principally composed of nonnative plant species.
- All construction activities will take place during the non-breeding season when all vernal pools are dry to avoid disturbance of emigrating salamanders. Construction work will be completed between September 1 and October 15<sup>th</sup>.
- Prior to the start of construction, a permitted Refuge biologist will conduct a training program for all construction personnel. The training will include a description of the California tiger salamander and its habitat within the action area, an explanation of the species status and protection, the avoidance and minimization measures to be implemented to reduce take of this species, communication, and work stoppage procedures in case a listed species is observed within the project area, and an explanation of the importance of the Refuge.
- The permitted Refuge biologist will be onsite during all construction activities and will maintain monitoring records.
- All work will be conducted within the footprint of the new and old roads to minimize damage to habitat.
- Care will be taken to contain rock/gravel on new road to 12' width to minimize disturbance to nearby burrows and potential to harm endangered species.
- All food and trash items will be properly disposed of off-site.
- No pets from project personnel will be allowed anywhere in the action area during construction.
- Only the permitted Refuge biologist shall participate in activities associated with the capture, handling, relocation, and monitoring of Central California tiger salamanders, and will be conducted based on the Service's completed Biological Opinion for the project (SFB-2023-01).

### *Air Quality*

- A speed limit of 15 miles per hour (mph) in the project footprint will be enforced to reduce dust and excessive soil disturbance.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California Airborne Toxics Control Measure Title 13, Section 2485 of the California Code of Regulations).

- All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- All exposed surfaces (e.g. staging areas, soil piles, graded areas, and unpaved access roads) shall be watered as needed to prevent dust.
- All haul trucks transporting gravel, dirt, compost or other loose material off site shall be covered.

#### *Noise*

- Project activities will occur only during daytime hours.
- All stationary construction equipment shall be placed so that emitted noise is directed away from developed areas nearest the active project site.
- The immediate neighboring property owner is a partner on this project and is aware of the noise. The site is leased to UPS and has a lot of routine truck traffic.
- A sign will be placed along the adjacent City of Fremont Trail to let trail users know in advance that there will be noise associated with the project. Refuge staff contact information will be provided.

#### *Cultural Resources*

- A cultural records review and Section 106 (National Historic Preservation Act) compliance was conducted prior to the initiation of the project (USFWS 2023b). The proposed project is considered in compliance if the conditions listed below are met.
- The presence of cultural resources cannot be predicted with certainty. If buried cultural resources are discovered during implementation of the project, ground disturbing activities in the vicinity of the find should be halted and the zone archaeologist should be notified immediately in order to determine next steps for protection of cultural resources.
- If project activities or locations change, the zone archaeologist should be notified in order to determine whether additional fieldwork is warranted.

The proposed alternative fulfills the need for continued legal access for the Service and associated stakeholders, ensuring uninterrupted operations, emergency response capabilities, and improved access during adverse weather conditions. The Service has determined that the Road Realignment (Alternative B) is compatible with the purposes of Don Edwards San Francisco Bay NWR and the mission of the NWRS.

## VI. Affected Environment and Environmental Consequences

This section is organized by affected resource categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

The Warm Springs Unit consists of 719 acres in Fremont, California. (Fig. 1). Warm Springs is a vernal pool grassland habitat. The proposed action is located in Field 5 North, adjacent to Nobel Road and the ARA property, currently leased to UPS (Fig. 2).

For more information regarding the general characteristics of the refuge’s environment, please see section 3 (Affected Environment) of the Refuge’s Comprehensive Conservation Plan, which can be found here: <https://ecos.fws.gov/ServCat/Reference/Profile/43999> and the Refuge Complex Natural Resource Management Plan, which can be found here: <https://ecos.fws.gov/ServCat/Reference/Profile/114709>.

The following resources would either not be affected or only negligibly affected by the proposed action:

Floodplains

Water Quality

Socioeconomic Effects

Environmental Justice

### A. Natural Resources

#### Terrestrial Wildlife and Aquatic Species

##### *Affected Environment*

##### **Description of Affected Environment for the Affected Resource**

Warm Springs encompasses 719 acres of vernal pool grassland and ecotone in South Fremont, with both natural and restored vernal pools adjacent to South San Francisco Bay. Vernal pools are precipitation-filled topographic depressions that alternate between periods of inundation in the winter and desiccation in the summer. Warm Springs consists of the original 265 acres in Fields 1, 2 and 10 as well as 444 acres that were restored as the “Pacific Commons Preserve” and added to the Warm Springs Unit later as Fields 3-9 (Fig. 1). These restored acres had most of their natural topography leveled during the late 1900's for various uses including agriculture, a

racetrack, and a glider airport. Vernal pool habitat was restored in phases during 1998-2003 by Catellus Development as mitigation for an adjacent development. This large-scale vernal pool restoration project involved creating pools through restoration of topography, establishing native species in the pools, managing invasive species, removal of a flood control channel, creation of hydrological connection to the existing Refuge, fence installation, and extensive biological and hydrological monitoring until permit conditions were met. These lands were added to the Refuge in 2008, management was transferred to the Refuge in 2012, and Pacific Commons Preserve became part of the Warm Springs Unit. The proposed project site is on part of these restored acres, specifically in Field 5. Due to a PG&E right of way easement for transmission towers in the immediate project location (see Fig. 2), no vernal pools were constructed in this area. The immediate project area and within a 300' buffer is all upland grassland habitat or developed lands. The 200' wide PG&E easement has electrical transmission towers and lines crossing the field. Both the existing road to be removed and the proposed new road segment cross under the powerlines.

Warm Springs is grazed year-round in a rotational grazing program in accordance with a cooperative agriculture agreement, and vegetation is kept fairly short for the benefit of wildlife and plants. Other habitat management includes invasive weed control utilizing herbicide and manual removal. Refuge management is adaptive, and refuge objectives are to improve habitat for native plant and animal species. Biological surveys are conducted annually at Warm Springs for wildlife and vegetation. The entire project area was delineated and mapped by a field survey to find the route that would result in the fewest ground squirrel burrows disturbed.

Species commonly found in the project area are grassland species such as California ground squirrel, black-tailed jackrabbit, cottontail, striped skunk, gopher snake, western meadowlark, savannah sparrow, white-crowned sparrow, loggerhead shrike, western kingbird, American crow, turkey vulture, red-tailed hawk, Northern harrier, and terrestrial invertebrates such as grasshopper, beetle, bee, and ant species.

### **Description of Cumulative Impacts, Environmental Trends, and Planned Actions**

California's vernal pool ecosystems have been significantly fragmented and reduced in size by anthropogenic habitat alterations including urbanization, agricultural conversion, unsuitable grazing regimes, and non-native plant invasion. As a result, many of the endemic species that inhabit these vanishing wetlands have experienced population declines. In addition, climate change is an increasing threat in vernal pool habitats as extreme weather conditions, such as prolonged drought cycles, can have devastating impacts to native species. Vernal pool species are typically adapted to seasonal drought, but severe drought periods can completely prevent vernal pool ponding, and many pools experience minimal ponding duration in years with below-average precipitation.

At Warm Springs, most native species are currently stable, and the 2023 rain year was the best on record for our aquatic species. The 2019 Natural Resource Management Plan for the San Francisco Bay National Wildlife Refuge Complex (NRMP) (USFWS 2019) identified three key



ecological attributes (KEA) and associated indicators to represent the ecological integrity and health of the vernal pool grassland ecosystem at Don Edwards San Francisco Bay NWR: California tiger salamander breeding activity/vernal pool hydrology, Vernal Pool Vegetation Composition, and Grassland Vegetation Structure and Composition. As of 2023, the status and trends of the KEAs and associated indicators for this target range from fair to very good (scale: poor, fair, good, very good). Actual quantitative measures associated with each rating are based on refuge data and refuge staff best professional judgment.

However, the Western burrowing owl has documented a decline throughout the South Bay Area. Warm Springs has not supported a breeding population of burrowing owls in five years despite favorable habitat conditions (Talon, 2022). Similar declines in breeding populations have been documented in other South Bay Area sites (Shoreline Park, Moffett Airfield, San Jose Airport) but not in other parts of the species' range. Researchers are not certain as to the cause but suspect increased fragmentation, development of nearby open space, and it's associated increased predation pressure. There are still a few wintering owls documented at Warm Springs each year, though those numbers are also declining.

There are no other known planned actions that may affect this resource.

### ***Impacts on Affected Resource***

#### **Alternative A**

Under the No Action Alternative, the Service would not realign the access road. No impacts to wildlife species would occur.

#### **Alternative B**

Under the proposed alternative, some terrestrial wildlife species, such as ground squirrels and jack rabbits, may be disturbed or affected by road construction activity. However, the limited scope and duration of the project is not expected to result in significant or long-term impacts. No vernal pools are within a 300' buffer of the project site so no impacts to vernal pool vegetation or aquatic species are expected. This alternative will result in the loss of 0.22 acres of grassland habitat and 15 burrows to road construction. However, 0.25 acres of existing road will be restored to habitat, resulting in a small net gain of wildlife habitat. Refuge management for wildlife would essentially stay the same.

The proposed project will restore the old road footprint to native grassland vegetation that will include narrow-leaved milkweed, which is a host plant of the Monarch butterfly. Restoration of the old road area is expected to have a beneficial effect on the butterfly and to increase fossorial activity of ground squirrels since it involves disking previously compacted old road areas. California ground squirrels often prefer to dig in recently disturbed areas. Refuge staff expect that new burrows will outnumber those impacted by the project. There should be no impact to burrowing owls as they have not had a breeding population at the Refuge since 2018 and have not been observed at Warm Springs during this 2023 breeding season. A pre-construction survey

for burrowing owls will nonetheless be conducted by a Refuge biologist and, if owls are found within the project buffer area, construction timing or design would be modified to avoid impacts.

## **Threatened and Endangered Species, and Other Special Status Species**

### ***Affected Environment***

#### **Description of Affected Environment for the Affected Resource**

The vernal pools and surrounding grasslands at Warm Springs provide habitat for Contra Costa goldfields (CCG; *Lasthenia conjugens*), which are federally listed as endangered. In addition, these areas provide habitat for the vernal pool tadpole shrimp (VPTS; *Lepidurus packardii*), which is federally listed as endangered, and California tiger salamander (CTS; *Ambystoma californiense*), which is federally listed as threatened.

Vernal pools at Warm Springs support a suite of native plant species adapted for wetland conditions. While these species are generally found only in wetlands, most are not considered rare. However, Contra Costa goldfield (CCG) is federally listed as endangered due to its limited range. Monitoring of CCG populations and wetland vegetation is performed through the annual vernal pool vegetation survey. Total CCG cover varies annually, influenced largely by annual precipitation amounts and timing, but is stable. CCG is primarily located in Fields 1, 2, 7, and 10 at Warm Springs. There have been no CCG observed in Field 5N.

Endemic to California and found mostly in the state's Central Valley and San Francisco Bay area, VPTS is usually found in sparsely vegetated, grass-bottomed swales on old alluvial soils that are underlain by hardpan, or in mud-bottomed pools containing highly turbid water. At Warm Springs, VPTS is associated with mud-bottomed pools. During dry periods, VPTS occur as dormant cysts that can remain viable for up to 10 years. When rain falls, some of these cysts, or fertilized eggs protected with a hard shell to prevent desiccation, will hatch. After 3–8 weeks, shrimp will reach sexual maturity and females will deposit eggs on vegetation and other objects on the bottom of pools. VPTS develop slowly and require a minimum hydroperiod of about 6–7 weeks to reach reproductive maturity. Inundation period, or the length of time the pool holds water, is an important factor in determining which vernal pools provide suitable breeding habitat for VPTS as well as CTS, with pools with observed VPTS or CTS larvae exhibiting greater maximum depths and inundation periods, on average, than pools where these species were not observed (WRA Inc., 2012).

CTS found at Warm Springs depend on the vernal pools and the surrounding grasslands to survive and reproduce. While CTS breeds in the vernal pools, it is otherwise terrestrial and spends most of its post-metamorphic life in widely dispersed underground retreats, such as the burrows of small mammals such as ground squirrels. At Warm Springs, ground squirrel burrows are found in large numbers throughout the Unit and only a very small portion of the burrows are located within the project area.

Monarch butterfly (*Danaus plexippus*) is a Candidate species for Listing (88 FR 41560). At Warm Springs, this species has been casually observed in very low numbers in the areas with Narrowleaf milkweed (*Asclepias fascicularis*). Small patches of milkweed are found in fields 1,2, 7 and 10. The largest and most persistent patches of milkweed, are primarily found in field 2. While the population size of monarch butterflies supported in Warm Springs Unit is unknown, we can assume that expanding the population of the milkweed will benefit reproduction of the species and increase their population. The abundance of late summer blooming native flowers at Warm Springs, which monarchs rely on to build fat reserves for their migration to the south, makes any project that involves the enhancement of milkweed population beneficial for the monarch butterflies. The proposed project seeks to restore a portion of an old road in native grassland vegetation with high presence of milkweed.

### **Description of Cumulative Impacts, Environmental Trends, and Planned Actions**

Prior to 1999, the vernal pool grassland ecosystem at Warm Springs was highly altered as a result of human uses including farming, a glider airport, duck hunting ponds, utility right of ways, and a racetrack. Much of the area was leveled but several vernal pools remained untouched. Restoration of this area began in 1999 by Catellus Development as mitigation for adjacent development. In 2012, management of the Pacific Commons Preserve was turned over to Don Edwards San Francisco Bay NWR to become part of the Warm Springs Unit with a permanent endowment to provide for management in perpetuity. The lands surrounding Warm Springs that were part of the Catellus development proposal have now been fully developed.

Climate change, and particularly the associated sea level rise, can be detrimental in the future for habitats at Warm Springs that are lower in elevation and closer to the Bay. Projection tools, such as the NOAA Sea Level Rise Viewer, show that in the next 50 years large portions of Field 2 may be inundated by Bay water. Currently the best patches of milkweed at Warm Springs are located in that field. Therefore, it is very prudent to use any opportunity to establish large patches of milkweed on higher elevation areas such as the project area in Field 5.

There are no other known planned actions that may affect threatened and endangered species in the project area.

### ***Impacts on Affected Resource***

#### **Alternative A – No Action Alternative**

Under the No Action Alternative, the Service would not realign the access road. No impacts to threatened and endangered species would occur.

#### **Alternative B**

The endangered species Section 7 consultation determined that the proposed action will have no effect on vernal pool tadpole shrimp or Contra Costa goldfield. Although these species are found at Warm Springs, there are no vernal pools in the project site or within a 300' buffer of the project area. Additionally, these two species are not active in the summer months.

The Service determined that the proposed action may affect and is likely to adversely affect the Central California tiger salamander (*Ambystoma californiense*) which is listed as federally threatened. The Biological Opinion for the project (SFB-2023-01) determined that there may be some direct loss of individuals and disturbance to California tiger salamanders during road construction but no net loss of habitat and no jeopardy to the species would result. The Biological Opinion for this project also specified the avoidance and minimization measures the Refuge will utilize to minimize potential for effects. These measures have been incorporated into the project and are included in the Mitigation Measures to Avoid Conflict section of this document. The proposed action also may benefit candidate species Monarch butterfly (*Danaus plexippus*) by increasing the population of milkweed, a necessary resource for the reproduction of monarch butterflies.

The Section 7 consultation for the proposed project evaluated all federally listed species included in the iPaC list of species with potential to occur in the project vicinity. It was determined that there will be no effect on 14 species resulting from the proposed action based on species-specific information. In summary the most common factor of making a no-effect determination of species within the Action Area of the Proposed Project is the lack of suitable habitat within the Action Area. The species excluded from further analysis are Vernal Pool Tadpole Shrimp, Contra Costa Goldfields, Salt Marsh Harvest Mouse, San Joaquin Kit Fox, California Ridgway's Rail, California Least Tern, Western Snowy Plover, Yellow-billed Cuckoo, Alameda Whipsnake, California Red-Legged Frog, Delta Smelt, Conservancy Fairy Shrimp, California Seablite, and Robust Spineflower.

## **Habitat and Vegetation**

### ***Affected Environment***

#### **Description of Affected Environment for the Affected Resource**

Warm Springs encompasses the largest remnant vernal pool grassland in the San Francisco Bay area. While the precise historical extent of this vernal pool ecosystem is not known, land use changes over the last two centuries have resulted in extensive destruction of California's vernal pool landscape. California's vernal pool habitat is concentrated in the Central Valley, but it's also found in the foothills of the Coast Ranges and the Sierra Nevada (Holland 1996).

California's vernal pool ecosystems have been fragmented and reduced in size by anthropogenic habitat alterations including urbanization, agricultural conversion, unsuitable grazing regimes, and non-native plant invasion.

In addition to providing habitat for a variety of native and special status species, the vernal pool grassland at Warm Springs is one of the few remaining areas circumventing the San Francisco Bay that serves as the transitional ecotone between tidal marsh and grassland habitat. Due to their proximity to the Bay and resultant saline-alkali substrate, Warm Springs' vernal pools are classified as alkaline vernal pools and they are associated with a high proportion of halophytic

(i.e. salt-loving) vegetation such as pickleweed (*Salicornia* spp.), alkali heath (*Frankenia salina*) and salt grass (*Distichlis spicata*).

The Project Area is on restored mitigation lands and specifically on lands that had been farmed. The Project Area has a 200' wide PG&E easement with electrical transmission towers crossing the field. Because of this easement and the need for PG&E maintenance of their transmission lines, no vernal pools were constructed within this right of way. Thus, the project area and 300' buffer consists of grassland habitat only and does not contain vernal pools.

Summer vegetation surveys are conducted across Warm Springs annually. Grassland vegetation in Field 5, where the proposed project is located, is dominated by non-native European grasses (*Hordeum* spp., *Festuca perennis*, *Avena* spp., *Bromus hordeaceus*) with some non-native forbs (*Brassica nigra*, *Lepidium latifolium*, *Dittrichia graveolens*). Native species include two grass species, *Distichlis spicata* and *Elymus triticoides*, and a few native forbs, primarily *Frankenia salina* and *Centromadia pungens* (Fig. 6). Of the ten fields at Warm Springs, native species cover is consistently lowest in Field 5 and averages 10-12%. This field rates as “poor” in the indicator scale for vegetation composition according to the objectives developed in the Natural Resource Management Plan (Fig. 7). Finally, according to data obtained in plots of the Summer Vegetation Survey in the last three years, vegetation in the direct area of project influence is dominated by nonnative grasses and weeds, with very limited presence of *Frankenia salina* and *Distichlis spicata*, two native plant species.

Fig. 6. Average Cover of vegetation categories in Field 5 during Summer Vegetation Survey 2022.

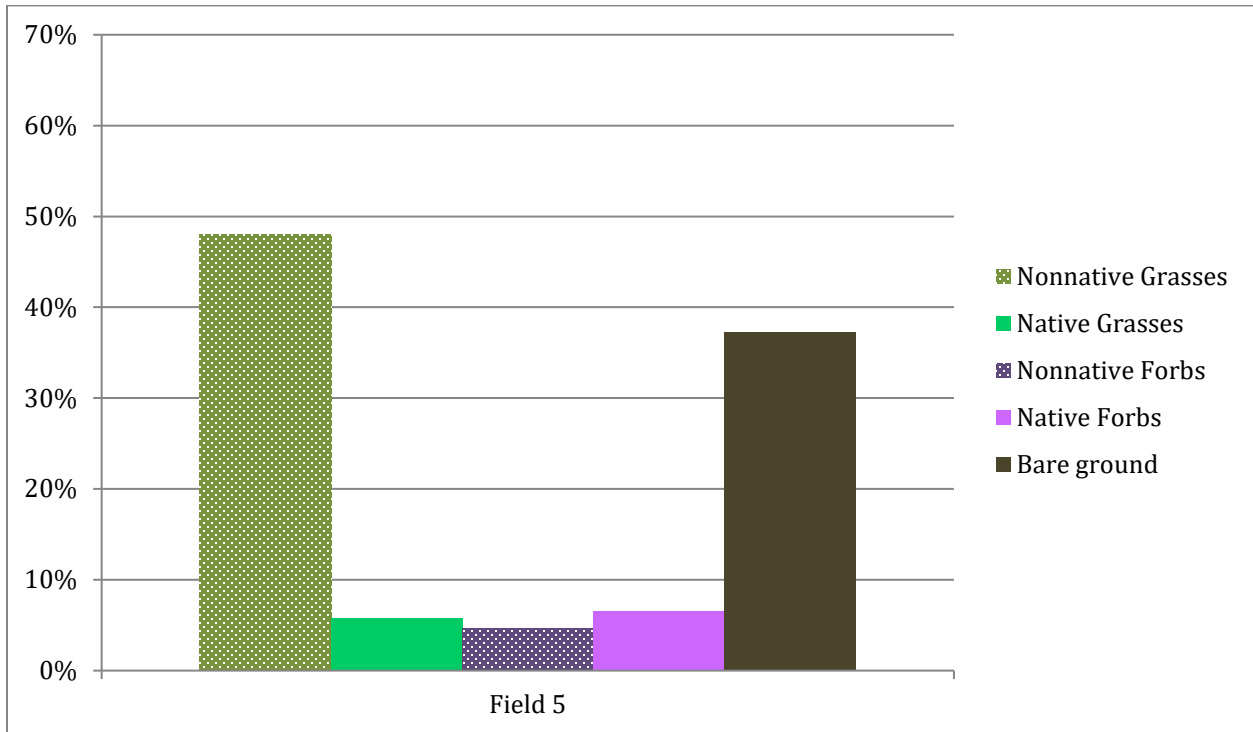
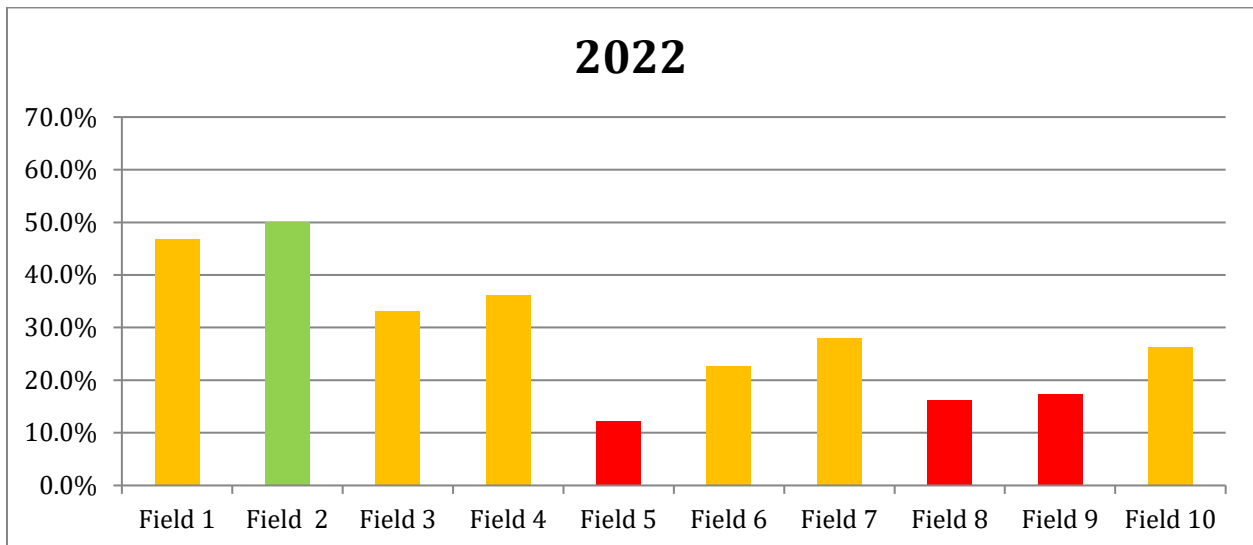


Fig. 7. Native species cover by field at Warm Springs during Summer Vegetation Survey 2022. Fields rated good are shown in green, fair in yellow, and poor in red.



### **Description of Cumulative Impacts, Environmental Trends, and Planned Actions**

Upland areas of Warm Springs, like most California grasslands, are dominated by non-native annual European grasses. Due to the history of disturbance in the area, Field 5 (location of project area) had been dominated by invasive forb species as well, particularly mustard (*Brassica nigra*) and perennial pepperweed (*Lepidium latifolium*). Through ongoing refuge management, including grazing and invasive species management, the cover of these target weed species has declined over the last ten years.

Climate change, the changes in the measures of climate over a long period of time – including precipitation and temperature, is an increasing threat to vernal pool grassland habitat. Fire frequency, prolonged drought periods, and extreme flood events are expected to increase.

The proposed project will restore and improve habitat on more area than it removes.

### **Impacts on Affected Resource**

#### **Alternative A**

Under the No Action Alternative, the Service would not realign the access road. No impacts to habitat would occur. No additional habitat enhancement with native species would occur.

#### **Alternative B**

Under Alternative B, which involves the realignment of the access road, the habitat and vegetation within the project area would be impacted. The project proposes to remove an existing road segment, construct a new access road, and restore the old road footprint. The project is expected to have both short-term and long-term effects on the habitat and vegetation of the Warm Springs area. Short-term effects include loss of habitat in the new road footprint (0.22 acres). In the long-term, the proposed project will restore and improve habitat on more habitat area than it impacts by removing and restoring the old road segment (0.25 acres). Native species plantings could improve overall plant diversity in the area and provide better habitat for native species. In particular, seeding with milkweed, the primary host plant for Monarch butterflies, will enhance habitat for this species. If restoration efforts are successful, the overall health and resilience of the grassland habitat within the Warm Springs area could be enhanced, providing better conditions for the native vegetation and associated wildlife.

## **B. Abiotic Environment**

### **Geology and Soils**

#### ***Affected Environment***

##### **Description of Affected Environment for the Affected Resource**

The project site and the entire San Francisco Bay Area is in a seismically active region subject to strong seismic ground shaking. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground-shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The closest fault to the project site is the Hayward Fault, located to the east. The project area and surrounding vicinity is level in elevation and is not located within an earthquake-induced or rainfall-induced landslide zone. The proposed project would require some scraping of ground surface. Because the project area has a history of disturbance, it is unlikely that the construction would encounter paleontological resources. However, in the event that fossil remains are encountered, or paleontologically sensitive formations are exposed, impacts to paleontological resources could occur. There are no other known planned actions that may affect the resource.

#### ***Impacts on Affected Resource***

##### **Alternative A**

Under the No Action Alternative the Service would not realign the access road. No effects to geology or soils would occur.

##### **Alternative B**

The proposed project would remove an existing gravel road segment, construct a new gravel road segment, and restore the old road including adding compost to amend the soil. Construction would be performed by an appropriately-licensed contractor. No businesses or residences would be constructed as part of the proposed project and people would not regularly access the project site upon completion. Therefore, the proposed project would not expose people or structures to substantial effects related to ground-shaking.

Removal of the gravel surface from the old road and construction of the new road could increase dust and erosion temporarily. Long-term effects are not expected due to the relatively level ground and the covering of exposed surfaces with either permeable gravel or compost and native seeds. In addition, mitigation measures implemented for air quality (fugitive dust control measures) also minimize potential impacts from soil erosion.



## **Noise**

### ***Affected Environment***

#### **Description of Affected Environment for the Affected Resource**

Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound.

Sound levels in dB are calculated on a logarithmic basis. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent human sensitivity to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise sensitive receptor of concern.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (Leq) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the Leq, the community noise equivalent level (CNEL), and the day-night average level (Ldn) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly Leq for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). Ldn is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and Ldn are within one dBA of each other and are normally exchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

A project would have a significant noise effect if it would substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of applicable regulatory agencies, including, as appropriate, the City of Fremont.

Certain land uses are considered more sensitive to noise than others. Examples of these land uses include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest sensitive receptors are over one mile from the project area. The project area is immediately adjacent to a UPS warehouse facility, with significant truck traffic. Other nearby businesses include Auto Mall dealerships and light industrial.

## **Description of Cumulative Impacts, Environmental Trends, and Planned Actions**

Most of the surrounding lands that were part of the Pacific Commons Development project have now been developed. The only known remaining development in the area that could impact noise is on the City of Fremont's parcel south of Auto Mall parkway and adjacent to Warm Springs Field 4. In the City's latest Capital Improvement Program report (City of Fremont 2023), this parcel is planned for eventual development of a 40-acre public sports complex dubbed the Pacific Commons Sports Park. However, it is noted that this project has been delayed due to lack of funding. It is currently undeveloped and disked regularly.

### ***Impacts on Affected Resource***

#### **Alternative A**

Under the No Action Alternative the Service would not realign the access road. No noise effects would occur.

#### **Alternative B**

The proposed project would remove an existing gravel road segment, construct a new gravel road segment, and restore the old road. The construction portion of the project is expected to take four days. Short-term (construction) noise impacts would result from the project. Maximum construction noise would be short-term, generally intermittent depending on the construction phase, and variable depending on receiver distance from the active construction zone. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed. No noise impacts to residents, schools, and other sensitive sensors would result since they are over one mile from the project location.

Once construction activities are complete, the proposed project would not result in an increase in operational vehicle trips and would not be a source of operational noise. Therefore, the proposed project would not result in long-term noise impacts.

## **Air Quality**

### **Affected Environment**

#### **Description of Affected Environment for the Affected Resource**

The proposed project is located in the City of Fremont and is within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD), which regulates air quality in the San Francisco Bay Area. Air quality conditions in the San Francisco Bay Area have improved significantly since the BAAQMD was created in 1955. Ambient concentrations of air pollutants and the number of days during which the region exceeds air quality standards have fallen substantially. In Fremont, and the rest of the air basin, exceedances of air quality standards occur primarily during wildfire events or during meteorological conditions conducive to high pollution levels, such as cold, windless winter nights or hot, sunny summer afternoons.

Within the BAAQMD, ambient air quality standards for ozone, carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>), and lead (Pb) have been set by both the State of California and the federal government. The State has also set standards for sulfate and visibility. The BAAQMD is under State non-attainment status for ozone and particulate matter standards. The BAAQMD is classified as non-attainment for the federal ozone 8-hour standard and non-attainment for the federal PM<sub>2.5</sub> 24-hour standard.

### **Description of Cumulative Impacts, Environmental Trends, and Planned Actions**

Most of the surrounding lands that were part of the Pacific Commons Development project have now been developed. The only known remaining development in the area that could impact air quality is on the City of Fremont's parcel south of Auto Mall parkway and adjacent to Warm Springs Field 4. This parcel is planned for eventual development of a 40-acre public sports complex, Pacific Commons Sports Park (City of Fremont, 2023). However, it is noted that this project has been delayed due to lack of funding.

### ***Impacts on Affected Resource***

#### **Alternative A**

Under the No Action Alternative, the Service would not reconfigure the access road. There would be no air quality impacts related to construction in the Warm Springs Unit of the Refuge under this alternative.

#### **Alternative B**

Under Alternative B, the proposed action, minimal and short-term effects to air quality may occur. Construction Emissions: During road removal and construction, short-term degradation of air quality may occur due to the release of particulate matter emissions (i.e., dust) generated by heavy equipment, grading, hauling, disking, and other activities. Emissions from construction equipment would include CO, nitrogen oxides (NO<sub>x</sub>), ROG, directly emitted particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), and toxic air contaminants (TACs) such as diesel exhaust particulate matter.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The BAAQMD has established standard measures for reducing fugitive dust emissions (PM<sub>10</sub>). With the implementation of these Basic Construction Mitigation Measures, fugitive dust emissions from construction activities would not result in adverse air quality impacts. These mitigation measures for fugitive dust are included in the Proposed Action.

In addition to dust-related PM<sub>10</sub> emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO<sub>2</sub>, NO<sub>x</sub>, ROGs and some soot particulate (PM<sub>2.5</sub> and PM<sub>10</sub>) in exhaust emissions. These emissions would be temporary and limited to the immediate area surrounding the construction site. The Proposed Action would have minor effects to air quality.

Operational emissions: Long-term air emission impacts are associated with stationary sources and mobile sources. Stationary source emissions result from the consumption of natural gas and

electricity. Mobile source emissions result from vehicle trips and result in air pollutant emissions affecting the entire air basin. The proposed project would result in more efficient access to the Warm Springs Unit. The project would result in a net *decrease* in the vehicle miles traveled that would result in a net decrease in air pollutant emissions. The Proposed Action is not a source of stationary source emissions.

## **C. Human Environment**

### **Visitor Use and Experience**

#### ***Affected Environment***

##### **Description of Affected Environment for the Affected Resource**

The Warm Springs Unit is open to the public for guided tours and planned environmental education, volunteer, and interpretive events. Warm Springs has several partnerships with local schools and universities. Warm Springs is not open for unrestricted public use due to the sensitivity of the habitat. However, Warm Springs can be viewed along adjacent public perimeter trails, either on the Refuge (Warm Springs Trail) or on the City of Fremont trail (Pacific Commons Linear Park). Interpretive signs providing information about Warm Springs are along both perimeter trails. Warm Springs provides a rare opportunity for the public to visit and learn about vernal pool habitat in the Bay Area, and protects open space in an increasingly developed part of Fremont.

##### **Description of Cumulative Impacts, Environmental Trends, and Planned Actions**

Prior to development of the adjacent ARA parcel, Refuge staff were able to access Warm Springs through the Nobel Drive gate. This gate provided access to parts of Warm Springs that would otherwise not be feasible for visitors, especially school groups in larger vehicles. Access for volunteers to efficiently reach certain fields was also useful to accomplish Refuge objectives.

With the recent development in the area, the Refuge also collaborated with the City of Fremont on the adjacent trail and interpretive signage and it is now complete. As a result of new businesses moving into the adjacent development and the increased Refuge visibility and interpretation along the City trail, local neighboring businesses have shown a strong interest in land stewardship and volunteer opportunities with the Refuge and we expect those partnerships to grow.

The general public has also been increasingly involved in Citizen Science efforts at Warm Springs, through staff-led BioBlitz events to document natural resources.

The City of Fremont, in their latest Capital Improvement Program report (City of Fremont 2023), has plans to eventually develop a 40-acre public sports complex, the Pacific Commons Sports Park, at their parcel south of Auto Mall parkway and adjacent to Warm Springs Field 4. However, it has been delayed due to lack of funding. It is currently undeveloped and disked regularly.

## ***Impacts on Affected Resource***

### **Alternative A**

Under the No Action Alternative, the Service would not reconfigure the access road. There would be no feasible access for visitors to this portion of the Warm Springs Unit of the Refuge. Emergency response vehicles would not have efficient access to this portion of the Warm Springs Unit.

### **Alternative B**

Under the proposed action, Refuge visitors would have feasible all-weather access to expanded areas of the Warm Springs Unit. This will allow Refuge staff to plan volunteer and interpretive events in these areas and can give visitors more options. Refuge tours and school events, in particular, will not be limited to one main access point due to the lack of parking and all weather access along other access points. This proposed road relocation is in an area that already has a parking loop for ease of turning around large or multiple vehicles. In addition, different fields often have different time frames in terms of peak blooming periods or weed management needs, so it would provide flexibility in planning interpretive and volunteer events. Finally, the proposed access road will increase safety by providing faster response times for emergency vehicles in case of fire or medical emergency on the Refuge.

## **Cultural Resources and Subsistence**

### ***Affected Environment***

#### **Description of Affected Environment for the Affected Resource**

The natural habitat of the Warm Springs Unit was vernal pool grassland and tidal marsh transition zone. A historical summary for certain units of the Don Edwards San Francisco Bay National Wildlife Refuge have been summarized previously in the Refuge's CCP (USFWS 2012, Foothills Resources Ltd. and Far Western Anthropological Research Group Inc. 2011). Warm Springs is within the Mowry Unit described in the CCP. The Refuge and its vicinity were most recently occupied by a people originally referred to as Costanoan; which is derived from a Spanish word meaning coast people or coastal dwellers. They occupied the area from the San Francisco Bay in the north to the Carmel River in the south. The Costanoans, whose descendants now refer to themselves as the Ohlone, entered the Bay Area approximately 1,500 years ago, coming in from the Delta region and displacing earlier Hokan speakers living there. The Ohlone people lived in permanent villages on high ground near marshes, streams, or springs. They hunted, fished, and gathered food from the land. Ohlone groups relied on a large array of plant and animal foods, but like elsewhere in California acorns were a key staple of the diet. Common village structures consisted of family dwellings, dancehouses, and sweathouses, all of which were of a domed and thatched design with a round or elliptical floorplan (Levy 1978:492). They

altered the ecology of the Bay Area by using fire. Fire encouraged plant growth of certain beneficial species while preventing brush from overtaking meadows and reducing fuel build-up. It also improved habitat for elk, deer, and antelope, important natural grazers of the area. Ohlone groups were utterly devastated by the combined effects of missionization, secularization of the mission system, epidemic disease, and displacement; by the 1830s, the Ohlone population had been reduced to fewer than 2,000 individuals (Levy 1978:486).

The Spanish came in 1797 and founded Mission San Jose. The ranchos era began after Mexico won independence from Spain in 1836. Governor Alvarado appointed Vallejo the administrator of Mission San Jose, which he divided into 4 large tracts, one being the Rancho del Agua Caliente or Warm Springs Area. American pioneers soon changed the focus in Alameda County from grazing to intensive agriculture, though grazing was continued at Warm Springs. In 1876, a 4500 acre tract of land in the vicinity of Dumbarton was purchased by the Pacific Railroad Company and a railroad was then built along the western border of Warm Springs, thereby preventing natural tidal water from Mud Slough from reaching the unit. Prior to the line, marsh bordered Warm Springs.

Warm Springs's homestead area was owned by Margaret Poorman in 1893. It is unknown exactly when the house was built and when it was removed. In the 1920's Joe Eastwood, an employee of the Pacific State Steel Mill, lived on Warm Springs. He created the diked pond area for a private duck club. These diked ponds changed the hydrology of the northern portion of Warm Springs by disrupting the overflow movement of water. Several wells were dug to provide water for the home and ponds, and hunt blinds were constructed. Duck ponds were also constructed in parts of the mitigation lands later added to the Refuge but were all converted to other uses by 1980. In the 1930s farming of the area began and drainage ditches were constructed. Grazing occurred at Warm Springs throughout most of the 20th century including dairy cows in the 40's-60's and beef cows thereafter. A flood control stormwater runoff channel was constructed in the 1970s adjacent to the Project Area, as well as a glider airport, and a racetrack on the east side of Cushing Parkway. In 1998-2003, 444 acres of degraded vernal pool habitat were restored by Catellus Development as mitigation for an adjacent development. Restoration included changes to the topography to create vernal pools, converting the stormwater runoff channel to an underground storm drain system and treatment wetland (adjacent to Refuge) and filling the existing channel. It also included building water troughs and an underground water pipeline system for cattle grazing, installing fence, restoring native species with seeding, and continued biological monitoring.

The Project Area is on the restored mitigation lands and specifically on lands that had been farmed from approximately the 1940s-1990s. The Project Area currently has a 200' wide PG&E easement with electrical transmission towers crossing the field as well as a Union Sanitary District easement for an underground wastewater pipeline. The transmission lines have been there since at least 1942 and were expanded in the 1950s. Examination of historical aerial photographs (1946-2020) and USGS topographic maps (1897-2020) show no other development

in the project area. Nonetheless, the area does have an extensive history of ground disturbance with no documented reports of cultural resources found. Warm Springs is grazed year-round in a rotational grazing program in accordance with a cooperative agriculture agreement, and vegetation is kept fairly short.

A literature search of relevant documents pertaining to properties inside and within the vicinity of the Refuge was completed in 2011 as part of the CCP to determine if any archaeological surveys have taken place and if any archaeological resources have been located in the Refuge area. Numerous historical and archaeological surveys have been conducted throughout the Refuge over the years and can be reviewed at the Northwest Information Center (NWIC). Records of surveys and personal accounts indicate that there were far more archaeological sites along the Bay in the late 1800s than there are at present. The first wave of archaeological investigations in the early 1900s focused on the obvious sites; large earthen mounds and shell middens. It is possible that many of these sites were disturbed or destroyed for agricultural purposes or used as fill. The literature search did not indicate any archaeological resources within the entire Warm Springs Unit; however, sites may be present here. A previous literature search was also conducted in 2003 on the Warm Springs Unit specifically as part of the unit's Habitat Management Plan.

The Service recognizes cultural resources as fragile, irreplaceable assets with potential public and scientific uses, representing an important and integral part of the heritage of our Nation and descendant communities. It is our policy to identify, protect, and manage cultural resources located on our lands and affected by what we do, in a spirit of stewardship and in compliance with cultural resources legislation for future generations.

No sites within the Refuge are currently listed on the National Register of Historic Places (NRHP), although sites in the vicinity of the Refuge are listed or have been deemed eligible for listing on the NRHP. No known cultural resources exist on Warm Springs. There are no other known planned actions that may cumulatively affect the resource.

### ***Impacts on Affected Resource***

#### **Alternative A**

Under the No Action Alternative, no impacts to cultural resources are expected.

#### **Alternative B**

The Refuge's assessment, NWIC records search and field survey did not identify cultural resources on the project site. The project site also has a history of ground disturbance from levelling for agricultural production and construction of the PG&E transmission lines in the 1940s to construction of a flood control channel in the 1970s. During the restoration for mitigation during the 1990s and early 2000s, the project site also had topography restoration, filling of the flood control channel, and construction of cattle water troughs and pipelines. Due to the history of ground disturbance in the project area, the Proposed Action is not expected to

adversely affect any cultural resources. However, it cannot be entirely ruled out that archaeological cultural resources could be encountered during project construction. There will be some ground disturbance in removing the old road segment and preparing the road surface on the new road. Therefore, the Refuge would implement the mitigation measures described for cultural resources under the Proposed Action Alternative.

Tribal letters were sent to four local tribes in July 2023 to coordinate on the proposed project and invite them to provide any input or concerns. None of the tribes contacted responded to the Service's invitation to consult. The FWS Cultural Resources Team reviewed the project and provided conditions for Section 106 compliance in August 2023 (USFWS 2023b). The conditions have been incorporated into the project. They concluded that

“The activities fall under Appendix A of the Programmatic Agreement among the U.S. Fish and Wildlife Service, Advisory Council on Historic Preservation, and California State Historic Preservation Officer Regarding the Administration of Routine Undertakings in the State of California (PA) and no field inventory for cultural resources is warranted in regards to this project. An Appendix A determination indicates that the FWS has evaluated the potential impact of the proposed project on cultural resources at the location listed above, and we do not anticipate that the project would affect or impact historic properties. The project will be included in the annual report prepared by the CRT and submitted to the State Historic Preservation Officer (SHPO) under the terms of the PA at the end of the fiscal year.”

## **Refuge Management and Operations**

### ***Affected Environment***

#### **Description of Affected Environment for the Affected Resource**

The need for the access road realignment arises from the changes in the adjacent property, now known as the "Fremont Tech Center," which necessitated the realignment of the existing access easement. The previous access point was impacted by the development of the adjacent parcel, resulting in the need for a new entrance point on the Refuge. The access road realignment is required to maintain legal access for the USFWS and associated stakeholders, ensuring uninterrupted operations, emergency response capabilities, and improved access during adverse weather conditions. Roads on Warm Springs are primarily utilized by Refuge staff and the cooperative rancher. Other users include Special Use Permit holders such as utilities (PG&E, Union Sanitary District) and researchers, law enforcement and emergency personnel, and, on occasion, public groups during staff-led educational, interpretive, and volunteer events.

Current Refuge management in the project area includes a rotational grazing program, invasive weed management, public tours and volunteer events, and biological monitoring of aquatic and terrestrial species.

#### **Description of Cumulative Impacts, Environmental Trends, and Planned Actions**

The proposed action would result in the removal and restoration of a no longer useful road segment and the construction of a new road segment to tie into the existing roads at Warm



Springs. The project will allow continued access through Nobel Road. The adjacent Fremont Tech Center lands were part of the Pacific Commons Development proposal that resulted in the expansion of the Warm Springs Unit through restoration and protection of 444 acres as mitigation for the development. The project area is on these lands. The Fremont Tech Center and other portions of the development have all been completed over the last five years.

Warm Springs is now surrounded by either developed lands or other portions of the Don Edwards San Francisco Bay NWR. Local development has resulted in an increased interest in the Warm Springs Unit from neighboring companies and trail users. The Refuge has developed new partnerships in the community and has strengthened existing partnerships in recent years. Increased development around Warm Springs has also resulted in a notable increase in law enforcement issues including trespass, dumping of garbage, and some vandalism/destruction of infrastructure (cutting holes in fence). Wildfires on Warm Springs have occurred in the past and are expected to increase with surrounding development and the effects of climate change.

### ***Impacts on Affected Resource***

#### **Alternative A**

Under the no action alternative, the road would not be realigned. The old road segment would not be removed and restored. The Refuge and its partners, visitors, and volunteers would not have access from Nobel Drive. A previously utilized legal access point would no longer exist.

#### **Alternative B**

Under the proposed alternative, legal access for the Service and emergency responders would be restored to Warm Springs from Nobel Drive. Staff and cooperators would be able to access the site more efficiently. Special events such as volunteer events and tours could occur in different, more appropriate, parts of the unit. Law enforcement, fire, and emergency personnel could respond more quickly to incidents. There would be slightly more road removed and restored than built, resulting in no net loss of habitat. Most Refuge management, including rotational grazing, invasive weed control, and biological surveys would remain unchanged but would be conducted more efficiently.

## **VII. Monitoring**

The construction activity, which is expected to take 4 days, will be closely monitored by a Permitted Refuge Biologist, ensuring compliance with the necessary guidelines and regulations.

The project area will also be monitored in the long-term in accordance with the San Francisco Bay National Wildlife Refuge Complex Natural Resource Monitoring Plan (USFWS 2019). Specifically, all vegetation in the Warm Springs Unit is monitored annually in the summer to inform adaptive management and invasive species prioritization.

## **VIII. Summary of Analysis**

### **A. Alternative A – No Action Alternative**

As described above, the No Action Alternative would not result in direct impacts on terrestrial wildlife, aquatic species, threatened and endangered species, habitat, or cultural resources. Noise and air quality effects would be negligible as there would be no construction activity. The Refuge, its partners, and visitors would face limitations on refuge use due to lack of continued access from Nobel Drive, hindering efficient operations, emergency response capabilities, and access during adverse weather conditions. Under Alternative A, current refuge management practices would continue without substantial alteration.

### **B. Alternative B – Proposed Action**

As described above, Alternative B entails realigning the access road and will result in short-term impacts due to construction activities. Threatened California tiger salamander could experience disturbance and take during road construction. Through the Biological Opinion, avoidance and minimization measures have been incorporated into the project to minimize these potential impacts. While some habitat loss would occur due to road construction, the subsequent restoration efforts on the old road segment would lead to a small net gain in habitat. Native vegetation restoration of the old road footprint is expected to benefit species like ground squirrels and Monarch butterflies. Short-term noise and air quality impacts during construction would cease once the project is completed and will be minimized through best management practices. No effects to cultural resources are expected due to the site's land history and limited footprint. Staff, cooperators, and visitor access and efficiency would be improved under Alternative B, enabling expanded access to the refuge, enhancing interpretive and volunteer events, and ensuring faster emergency vehicle response times.

This alternative helps meet the purpose and needs of the Service as described above because it would restore legal access and enhance operational efficiency on the refuge while resulting in no net loss of habitat or jeopardy to the California tiger salamander. Alternative B would provide additional wildlife-dependent recreation opportunities while increasing safety of refuge staff and visitors.

## **IX. List of Sources, Agencies and Persons Consulted**

The Service notified four local Native American tribes of the proposed action. Tribes have 30 days following notification of a project to request consultation with the lead agency. None of the tribes contacted for this project responded to the Service's invitation to consult within the 30-day notification period.

The Service has consulted with their Endangered Species Office, Realty Division, and the Department of Interior Solicitor's Office on the easement and road realignment project. The Refuge has coordinated with the adjacent landowner ARA, the proposed construction contractor, PG&E, and the cooperative rancher.

## **X. List of Preparers**

Ivette Loreda, Wildlife Refuge Specialist

## **XI. Public Outreach**

The public will have the opportunity to review and comment on this draft EA which will be available until September 12, 2023. Notice is posted on the Refuge Complex website. Please submit comments to [ivette\\_loredo@fws.gov](mailto:ivette_loredo@fws.gov) by Sept. 12, 2023.

## **XII. References**

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