State Clearinghouse No. 2016072038

ADDENDUM TO MITIGATED NEGATIVE DECLARATION

MALLARD FARMS PIPELINE REPLACEMENT PROJECT

January 2017

CEQA Lead Agency:
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

Project Proponent:
Chevron Pipe Line Company
9525 Camino Media Rm E2031
Bakersfield, CA 93311

MISSION STATEMENT

The California State Lands Commission provides the people of California with effective stewardship of the lands, waterways, and resources entrusted to its care through preservation, restoration, enhancement, responsible economic development, and the promotion of public access.

CEQA DOCUMENT WEBSITE

www.slc.ca.gov/Info/CEQA.html

Geographic Location (Lease PRC 3277):

North Work Area	South Work Area
Latitude: N121.915408	Latitude: N121.928685
Longitude: 38.102306	Longitude: 38.079831

NAD83 Datum

Cover photo: Suisun Marsh
(Photo courtesy of AECOM)

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LIST OF ABBREVIATIONS AND ACRONYMS

B	BAAQMD	Bay Area Air Quality Management District
C	CEQA	California Environmental Quality Act
	CESA	California Endangered Species Act
	CNRA	California Natural Resources Agency
	CO	carbon monoxide
	CO_2	carbon dioxide
	CO_2e	carbon dioxide equivalents
	CPL	Chevron Pipe Line Company
	CSLC	California State Lands Commission
D	DEPM	Division of Environmental Planning and Management
F	FESA	Federal Endangered Species Act
G	GHG	Greenhouse Gas
I	IS	Initial Study
K	km	kilometer
	knot	nautical mile per hour
M	MBTA	Migratory Bird Treaty Act
	MM	mitigation measure
	MND	Mitigated Negative Declaration
	$MTCO_2e$	metric tons of CO_2e
N	NO_2	nitrogen dioxide
	NO_X	oxides of nitrogen
P	PM_{10}	particulate matter with aerodynamic diameter of ≤ 10 microns
	$PM_{2.5}$	particulate matter with aerodynamic diameter of ≤ 2.5 micrometers
R	ROG	reactive organic gases
U	USACE	U.S. Army Corps of Engineers

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1.1 PROJECT LOCATION AND BACKGROUND

The Chevron Pipe Line Company (CPL) Mallard Farms Pipeline Replacement Project (Project) is located within Suisun Marsh in Solano County, and would temporarily extend into Honker Bay, south of Suisun Marsh, approximately 9,000 feet from shore (Figure 1-1).

On October 13, 2016, the California State Lands Commission (CSLC) adopted a Mitigated Negative Declaration (MND) for the original Project (State Clearinghouse No. 2016072038) and authorized a General Lease – Right-of-Way Use (PRC 3277.1) (Calendar Item C24) for the continued use and maintenance of an existing 8-inch-diameter refined petroleum products pipeline, the decommissioning and abandonment-in-place of pipeline segments, construction of a temporary work platform, installation of temporary pilings and buoys, installation of a new horizontally directionally drilled (HDD) 8-inch-diameter pipeline, and placement of articulated concrete blankets over the pipeline tie-ins. Project construction is scheduled to commence in May 2017.

1.2 LEASE PRC 3277.1 MODIFICATION AND PROJECT OBJECTIVES

Following a complete review of recent geotechnical investigations, CPL determined that the original location for the North Work Area is unsuitable for the proposed activity due to unconsolidated soils at the selected location. To resolve this, CPL proposes to relocate the North Work Area to the north to an area with more suitable soils for Project construction activities. This adjustment would extend the HDD for the Project, increasing the total length of replaced pipe from 1.2 miles to 1.7 miles. As a result, CPL has requested an amendment to the approved Project analyzed in the MND. Such amendment would reflect the new preferred North Work Area location and the extension of the HDD; these are briefly described below and discussed in greater detail in Section 2, Description of Lease Modification.

- The North Work Area would be relocated to the north of Grizzly Island Road in an area with greater soil stability.
- Construction equipment (e.g., drill rig) and logistics (e.g., HDD, pipe string assembly) would be modified at the North and South Work Areas due to the relocation of the North Work Area and extended HDD.
- Access and transportation routes would be altered through the Grizzly Island Wildlife Area due to the relocation of the North Work Area.
- Additional water resources would be needed to support the extended HDD.

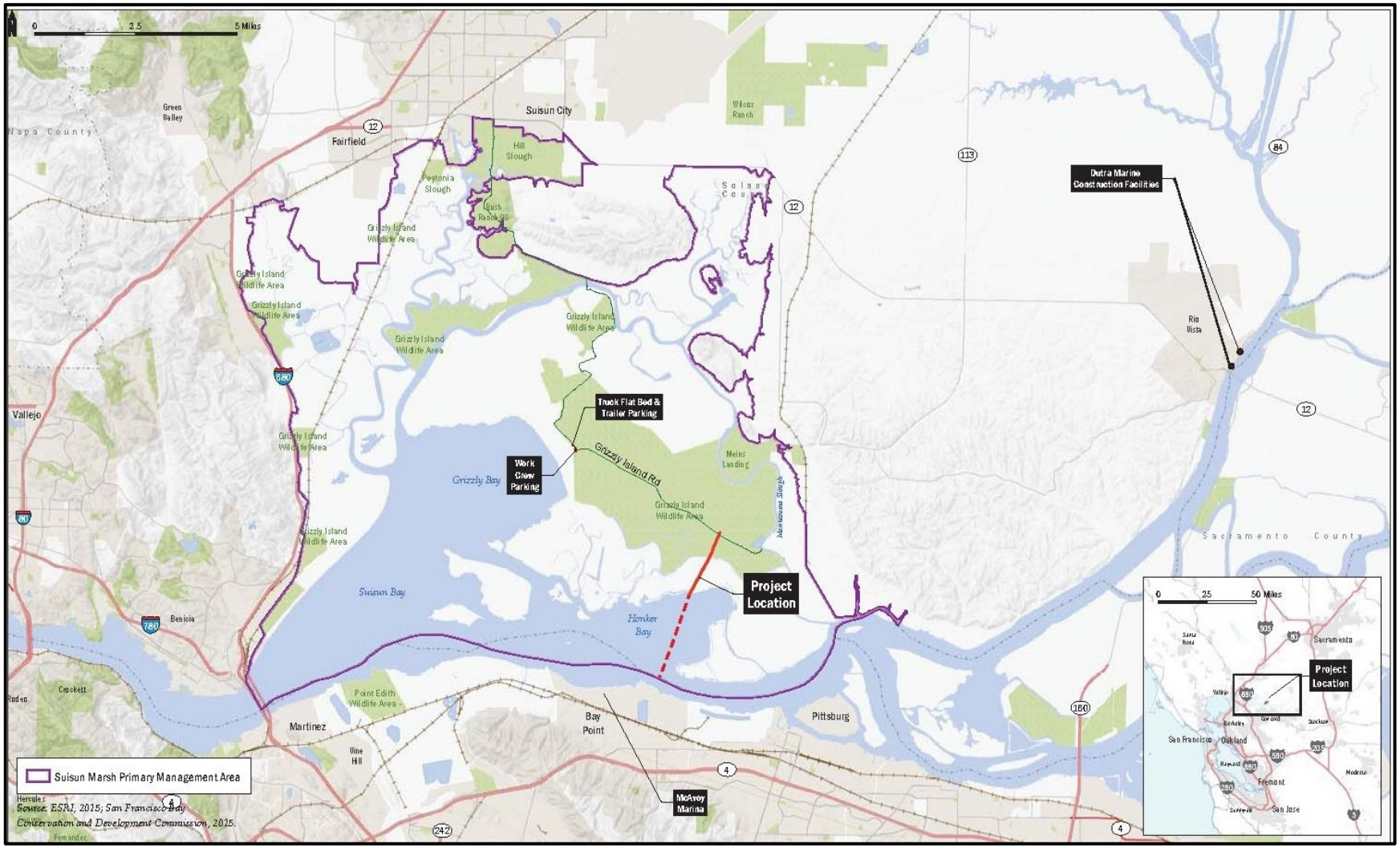

Figure 1-1. Project Location

2.0 DESCRIPTION OF LEASE MODIFICATION

2.1 ADDENDUM PURPOSE AND NEED

Per State California Environmental Quality Act (CEQA) Guidelines section 15164, once a Mitigated Negative Declaration (MND) has been adopted for a project, no subsequent negative declaration or environmental impact report shall be prepared unless the lead agency determines certain specific circumstances are present. These circumstances only occur when there is the involvement of a new significant impact, a substantial increase in a previously identified impact, or new information concerning mitigation measures or alternatives that would substantially reduce a significant impact (State CEQA Guidelines, § 15162). If the proposed changes do not involve these specific circumstances, but instead reflect minor modifications or additions, the lead agency is to prepare an addendum to the CEQA document, in this case, the previously adopted MND for the Chevron Pipe Line Company (CPL) Mallard Farms Pipeline Replacement Project (Project).

The purpose of this Addendum to the adopted MND is to verify that the modifications to the Project would not cause significant, adverse impacts to the environment. As presented below, none of the conditions described in State CEQA Guidelines section 15162 calling for the preparation of a subsequent environmental document has occurred. As a result, an addendum is the appropriate CEQA document for analysis and consideration of the Project.

Circulation of an addendum for public review is not necessary (State CEQA Guidelines, § 15164, subd. (c)); however, the addendum must be considered in conjunction with the previously adopted MND for the project by the decision-making body (State CEQA Guidelines, § 15164, subd. (d)), which for this Project is the California State Lands Commission.

2.2 COMPONENTS OF PROJECT MODIFICATION

Modifications to the Project would include relocating the North Work Area to the north in an area with greater soil stability. As a result, the revised Project also includes the replacement of a 1.7-mile segment of pipeline via horizontal directional drilling (HDD) (Figure 2-1). A summary of the Project's modified components are provided below.

2.2.1 Relocation of the North Work Area

As described in the adopted MND, the North Work Area would be located within Suisun Marsh and the Grizzly Island Wildlife Area; however, due to soil instability at the work area's original location, the North Work Area would be relocated to an area north of Grizzly Island Road (Figure 2-2). This work area is better suited for Project construction activities based on the quality of soils observed during geotechnical investigations and

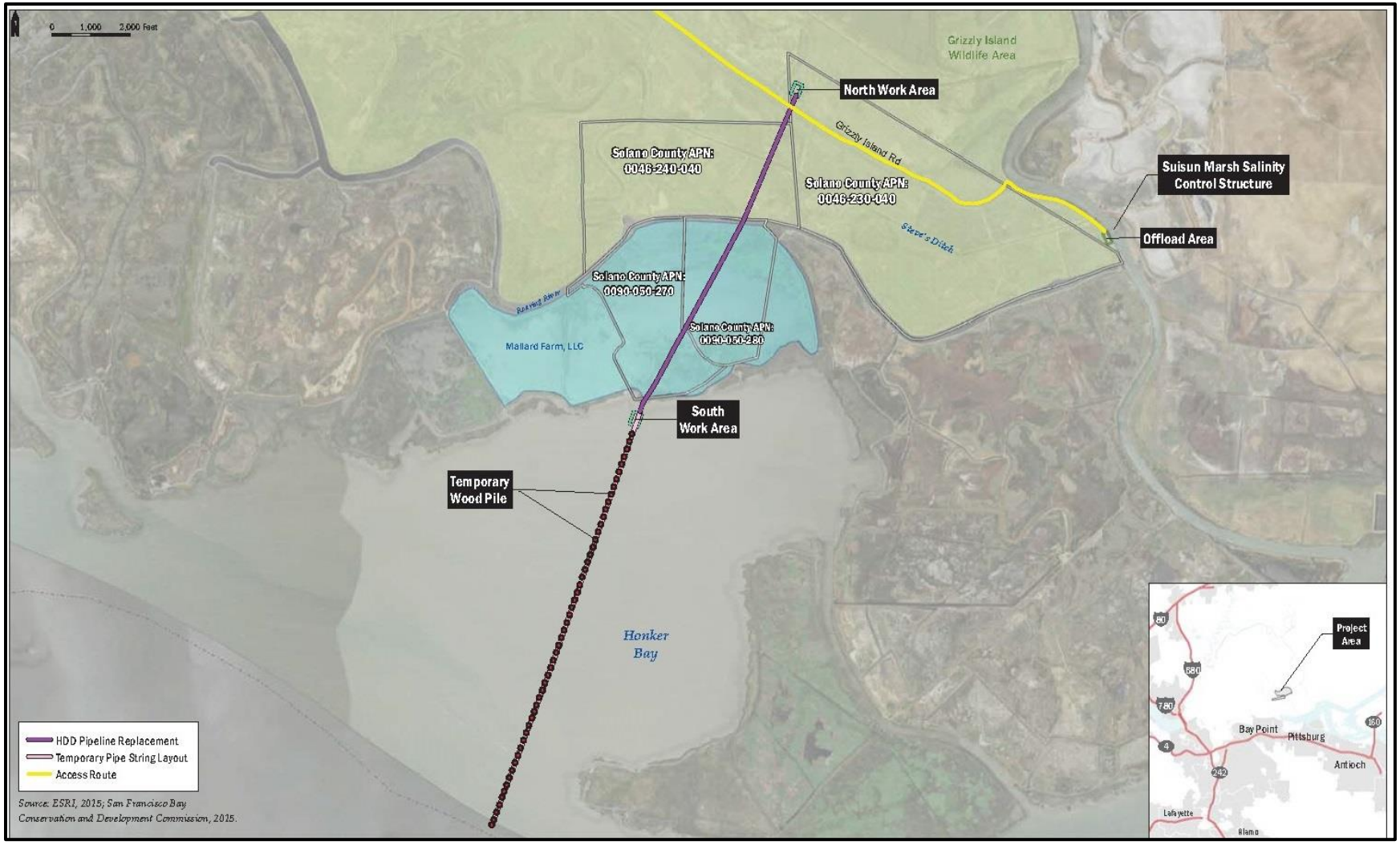

Figure 2-1. Project Area/Site Plan

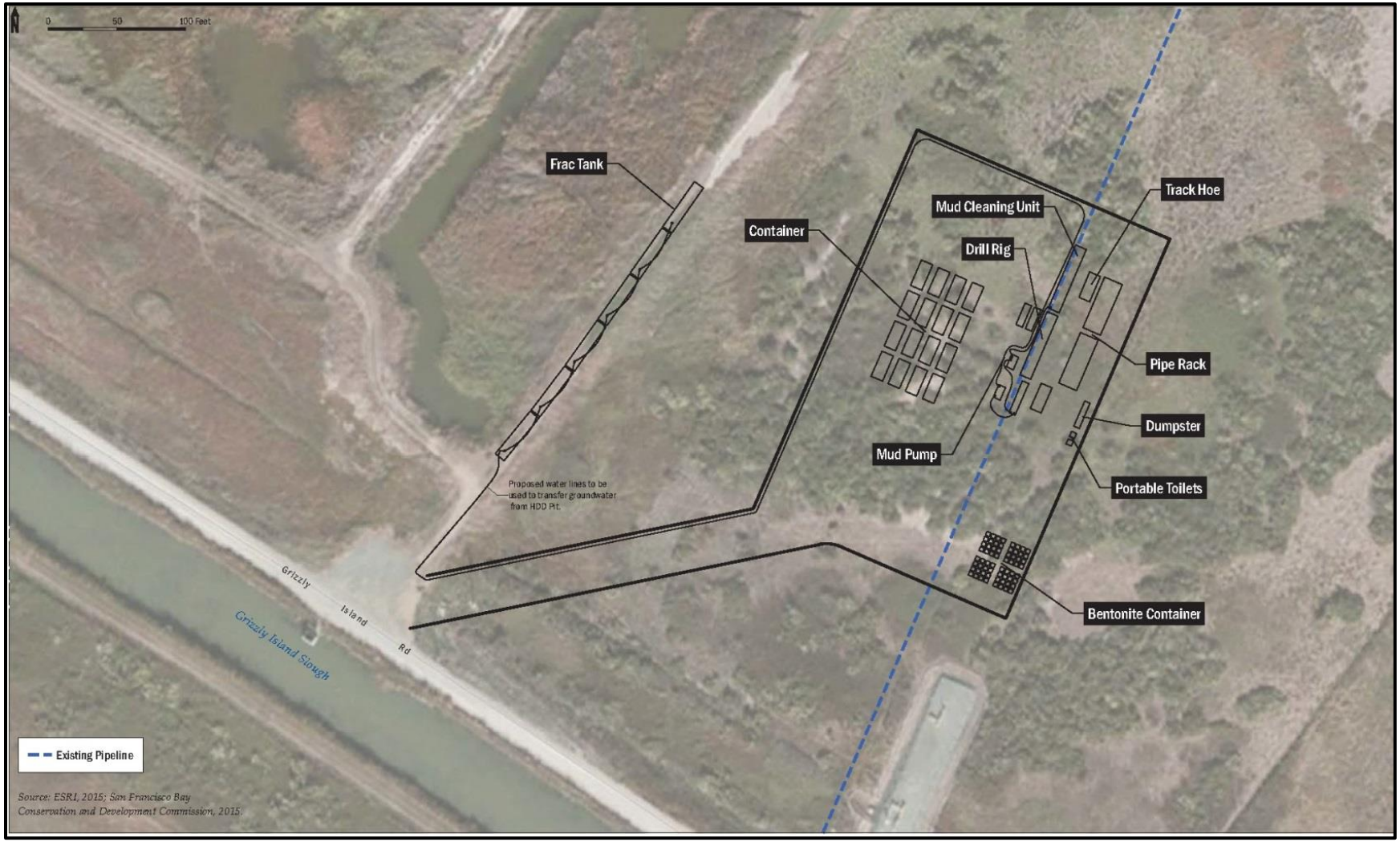

Figure 2-2. Relocated North Work Area

preliminary reports received in October 2016. The drilling pad would remain the same size (200 by 300 feet) as addressed in the adopted MND; however, an access ramp would be required to ensure safe transport of equipment to the work area on Grizzly Island Road.

2.2.2 Modification of North Work Area Construction Activities

A work pad would be created at the North Work Area using clean fill material to provide a level and stable work surface. Pad construction would be similar to that described in the adopted MND. Filter fabric would be installed on the ground surface over existing vegetation and held in place with sand bags. Although vegetation trimming would be necessary before placement of the fabric, the ground surface would not be cleared to bare ground or graded. A low ground pressure bulldozer would push out the first layer of fill material over the top of the fabric, followed by additional layers of rock. Additional layers of filter fabric or triaxial geogrid products may also be installed between rock layers to spread loads and reinforce the work area. The work area fill would be covered by a series of interlocking, all-weather mats to help provide a stable work surface to accommodate the drill rig, drill entry (and fluid collection) pit, and construction materials and equipment. An upland area (approximately 12 by 260 feet) on the adjacent levee would be used for the placement of fixed axle water storage tanks (Figure 2-2). This area on the levee road would be prepared with the placement of all-weather mats.

Equipment at the relocated North Work Area would consist of the drill rig and additional equipment to support operations as described in the adopted MND. Modifications to the equipment list have been made (e.g., changes in equipment horsepower, days of usage) based on current construction needs.

Prior to the start of HDD, a temporary large-diameter conductor casing would be installed to provide lateral support of the drill rig. This conductor casing would be installed on the same line and grade as the HDD profile and at an angle matching the entry angle of the pilot drill down to a depth that provides adequate lateral support for the anticipated installation loads. The conductor casing would aid in maintaining drilling fluid returns in addition to providing anchorage for the drill rig during drilling operations. The drill string would be inserted into this casing.

2.2.3 Modifications to North Work Area Site Access

In the Project area, construction equipment would be transported to the North Work Area via Grizzly Island Road, as described in the adopted MND, and would use the levee road adjacent to the work site (Figure 2-1). Travel on levee roads south of Grizzly Island Road would not be necessary.

2.2.4 Modification to South Work Area

Based on the current proposal using a temporary pile-supported platform, the footprint of the South Work Area would not change.

Due to the relocation of the North Work Area, the length of the pipe string assembly would increase from 7,000 feet to 9,000 feet. To accommodate the additional pipe string length, 15 additional 12-inch-diameter wood piles would be temporarily installed in Honker Bay using vibratory pile driving methods. The additional 15 piles would result in an additional 12 square feet of temporary fill (39.5 square feet total). As described in the adopted MND, the pipe string would remain in position in Honker Bay for up to 2 weeks until it is installed through the drilled hole (pullback). The additional pipe string length would not interfere with navigation through Honker Bay as it would still remain outside the main shipping channel.

As described above and in the adopted MND, the Project would construct and use a temporary pile-supported work platform in the South Work Area. The Project is also considering the use of a jack-up barge instead of the pile-supported work platform; however, the availability of the barge is uncertain at this time due to limited availability in the west coast region. If a jack-up barge becomes available, its footprint (60 by 50 feet) would be smaller than the proposed platform. To position the barge at the South Work Area, the legs of the barge would be extended into to the bay floor, powered by an engine on the barge. As a result, this option would not require pile driving activities, thus eliminating the potential underwater noise effects described in the adopted MND. If a jack-up barge is secured for the Project, the CPL would notify the regulatory agencies and provide additional information if needed. This jack-up barge option, if used, would reduce overwater fill and underwater noise impacts in Honker Bay.

2.2.5 Resource Utilization

An additional 233,750 gallons of water would be needed to complete the Project (1,033,750 gallons total): 229,000 gallons would be used for drilling operations and 4,750 gallons would be used for hydrostatic testing. Potable water from the City of Fairfield would be used, as described in the adopted MND.

Staging Areas 1 and 2, as described in the adopted MND, would not be needed. This change would reduce the amount of traffic beyond the barge offloading location at Montezuma Slough and discontinue the use of the levee roads beyond the offload area. Some drilling equipment would be staged at the hunting control station adjacent to Grizzly Island Road. This area was previously designated for use as the crew parking area (as shown in Figure 1-1) and would continue to serve this function in addition to its use for temporary staging.

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The following comparative analysis was undertaken to analyze whether the revised Mallard Farms Pipeline Replacement Project (Project) proposed by Chevron Pipe Line Company would have any significant environmental impacts that were not addressed in the Mitigated Negative Declaration (MND) adopted by the California State Lands Commission (CSLC) in 2016 for the Project. The comparative analysis (1) discusses whether impacts are increased, decreased, or unchanged from the conclusions discussed in the MND, and (2) addresses whether any changes to mitigation measures are required. The MND and this Addendum found no impacts to occur to the following environmental issue areas: Agriculture and Forestry Resources, Mineral Resources, Population and Housing, Recreation, and Public Services; therefore, they are not discussed further in this Addendum.

3.1 AESTHETICS

As with the original Project, visual impacts associated with construction activities are short-term, temporary visual impacts. Construction would occur between May and July 2017. Most activities would occur during daylight hours, with the exception of pulling the assembled pipe through the drilled hole (pullback), which is estimated to require approximately 30 hours. No additional nighttime lighting is required from that analyzed in the adopted MND. Therefore, no new impacts have been identified and no new mitigation measures are required.

3.2 AIR QUALITY

The revised Project includes the relocation of the North Work Area, which would result in approximately 5 additional days of drilling and a slightly revised list of construction equipment (see Appendix A). Revisions to the equipment list include changes in horsepower, number of days of use, hours per day of operation, and load factors for some pieces of equipment. While equipment usage would increase in some cases due to the longer drill distance, the relocated North Work Area would also result in slightly fewer vehicle miles traveled since trucks do not have to traverse the added distance of levee roads south of Grizzly Island Road. These revisions were accounted for in air quality modeling for the revised Project.

Emissions for the revised Project were estimated using the methodologies described in the adopted MND. Total Project construction emissions were estimated for the revised Project, and a daily average emissions rate was calculated for comparison with applicable significance thresholds. Based on the construction schedule, this analysis assumes that construction activities would be completed over approximately 4 months. Average daily emissions were calculated using this 4-month construction duration, assuming 30 working days per month. Emissions calculations for each work component

are summarized in Table 3.2-1 and included in Appendix A. The Project would not violate any air quality standards or contribute substantially to any existing or projected air quality violation because Project-related emissions do not exceed Bay Area Air Quality Management District (BAAQMD) significance thresholds.

Table 3.2-1. Revised Project Construction Criteria Pollutant Emissions

Work Component	Construction Source Emissions (tons)			
	ROG	NO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Horizontal Directional Drilling	0.04	0.72	0.02	0.02
Pipeline Replacement	0.03	0.28	< 0.01	< 0.01
Construction Office[1]	0.01	0.20	< 0.01	< 0.01
Marine Construction Equipment[2]	0.20	1.86	0.06	0.06
Total Construction Emissions (tons)[3]	**0.29**	**3.06**	**0.09**	**0.09**
Average Daily Construction Emissions (lbs/day)[4]	**4.8**	**51.0**	**1.4**	**1.4**
BAAQMD Daily Threshold (lbs/day)	**54**	**54**	**82**	**54**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Acronyms: BAAQMD = Bay Area Air Quality Management District; lbs/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} and $PM_{2.5}$ = particulate matter less than or equal to 10 microns in diameter or 2.5 micrometers in diameter, respectively; ROG = reactive organic gases.

Notes:

[1] Construction office activities include the operation of vehicles and off-road equipment.

[2] Marine equipment activities include the operation of marine vessels, vehicles, and off-road equipment.

[3] Totals in the table may not exactly add up due to rounding.

[4] Average daily emissions calculated assuming construction activities occur over 4 months at 30 days per month.

The BAAQMD does not have quantitative mass emissions thresholds for fugitive dust or particulate matter less than or equal to 10 microns in diameter (PM_{10}) or 2.5 micrometers in diameter ($PM_{2.5}$). Instead, the BAAQMD recommends the implementation of applicable Best Management Practices to reduce fugitive dust emissions. As described in the adopted MND, the Project would incorporate the Basic Construction Mitigation Measures listed in the BAAQMD 2011 CEQA Guidelines (BAAQMD 2011). Therefore, no new impacts have been identified and no mitigation measures are required.

3.3 BIOLOGICAL RESOURCES

3.3.1 Environmental Setting

Terrestrial environments are found within and adjacent to the relocated North Work Area, access roads, and the Grizzly Island hunting control station. As with the original location of the North Work Area, the new location is within the boundaries of the Grizzly Island Wildlife Area. The Grizzly Island Wildlife Area is managed by the California

Department of Fish and Wildlife (CDFW) and consists of 88,000 acres of naturally tidal wetlands and artificially diked marsh, providing expansive wildlife habitat and a variety of recreational opportunities, including hunting and fishing. In the Grizzly Island Wildlife Area, elk hunting season begins in late July and continues through late September, while waterfowl hunting season begins in October and continues through February. During these hunting seasons, the CDFW restricts access to the Grizzly Island Wildlife Area, including the new North Work Area. The new North Work Area is located within mostly upland habitat with marsh habitat present and is bordered to the south by Grizzly Island Road and an unvegetated engineered channel (Grizzly Slough) (see Figure 2-2).

3.3.1.1 Habitat Types

Wetlands

The terrain in the Grizzly Island Wildlife Area at the new North Work Area supports a variety of hydrophytic vegetation communities. Throughout much of the site, California rose (*Rosa californica*) briar patches blend borders separating distinct communities. Along a portion of the levee road that borders the western edge of the work area, the upper stratum is dominated by common reed (*Phragmites australis*). A large portion of the North Work Area has a lower stratum dominated by a dense mat of salt grass (*Distichlis spicata*), with spearscale (*Atriplex prostrata*) and western goldenrod (*Euthamia occidentalis*) unevenly dispersed throughout. The low-lying land near the levee road is dominated by dense stands of Baltic rush (*Juncus balticus*) where scattered pickleweed (*Salicornia pacifica)* mats are present. Dense pickleweed patches are absent and only five sparse patches of pickleweed plants have been observed in the new North Work Area. Two of these patches are located amidst Baltic rush and spearscale in a wetland near the southern edge of the work area.

A delineation of jurisdictional wetlands was conducted in the new North Work Area. Results of this delineation are shown in Figure 3-1.

Upland/Ruderal Vegetation

The majority of the central and eastern portions of the new North Work Area are a mosaic of dense shrubby communities interspersed with swaths of herbaceous cover. The shrub composition is primarily coyote brush (*Baccharis pilularis*), a woody upland shrub. Interspersed within the coyote brush is California rose and herbaceous species like cudweed (*Pseudognaphalium canescens*). Toward the south-central portion of the new North Work Area, an herbaceous community dominated by Harding grass (*Phalaris aquatica*) is present, extending the upland vegetation out of the shrubs and into herbaceous cover.

Figure 3-1. Wetlands at the Relocated North Work Area

The tops and edges of levees near the work and staging areas primarily feature invasive herbaceous species including poison hemlock (*Conium maculatum*), perennial pepperweed (*Lepidium latifolium*), wild radish (*Raphanus sativus*), and fennel (*Foeniculum vulgare*). Native upland species along the marsh edges include California rose, coyote brush, and saltmarsh sand spurry (*Spergularia marina*). Along Grizzly Island Road, at the southern-most end of the new North Work Area, the vegetation is primarily fennel, poison hemlock, and bristly ox-tongue (*Helminthotheca echioides*).

Disturbed Areas

Staging Areas 1 and 2 would no longer be used under the revised Project. Instead, some equipment and supplies would be staged at the Grizzly Island hunting control station (see Figure 1-1). As described in the adopted MND, the hunting control station was previously designated for use as the crew parking area, and would continue to serve this function in addition to its use for temporary staging. This approximately 0.9-mile-long, 40-foot-wide area runs parallel to Grizzly Island Road and is approximately 4 miles northwest of the relocated North Work Area. This location is graded and graveled, and is bordered by brackish marsh to the east and west. Only the unvegetated, graveled surface would be used for staging and parking.

Sensitive Natural Communities and Designated Critical Habitat

No sensitive natural communities are present in the Project area, including the new North Work Area. During a field review, as described in the adopted MND, dominant vegetation in the North Work Area, including the relocated work area, was mapped in general accordance with the Manual of California Vegetation (Sawyer et al. 2009). The results of the vegetation mapping were compared with the List of Vegetation Alliances and Associations (CDFW 2010) to determine if any of the identified natural communities represent a high-quality example of a sensitive natural community (those with a State Rank[1] of 3 or higher). One plant species, alkali health (*Frankenia salina*), was found on top of the levee road within a small portion of the new North Work Area. Within this small patch, no co-dominant herbaceous vegetation species typically associated with a high-quality example of this community were observed. Furthermore, this population of alkali health does not receive the normal hydrological regime or tidal fluctuations. For these reasons, it is not considered a sensitive natural community.

Most of the Grizzly Island Wildlife Area is considered designated critical habitat for Delta smelt (*Hypomesus transpacificus*); however, the new North Work Area, staging areas, and access roads are largely upland areas, lacking open water to support delta smelt.

[1] State Rank 3 is a community that is classified as vulnerable. A community is considered vulnerable in California due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

3.3.1.2 Special-Status Species

Based on reviews of the California Natural Diversity Database (CNDDB), an official species list from the National Marine Fisheries Service, a U.S. Fish and Wildlife Service Information Planning and Conservation official species list, a California Native Plant Society query, other available public documents, and in coordination with CDFW, several special-status species have the potential to occur in the Project vicinity (Table 3.3-1). These descriptions have been updated to provide information specific to the relocated North Work Area. The determinations for the potential to occur in the Project area are based on the range and habitat requirements of the species, the habitats present within the Project area, and the number of site visits conducted to gather information about the vegetation and wildlife present. Appendix B provides a list of wildlife species observed at the new North Work Area.

Table 3.3-1. Special-Status Species that May Occur at the Relocated North Work Area

Common Name	Scientific Name	Status	Habitat	Potential to Occur
Plants				
Soft bird's beak	*Chloropyron molle* ssp. *molle*	FE, SR, CNPS 1B[1]	Upper reaches of coastal marsh, at the limit of tidal influence. Elevations 0-3m.	**No Potential**: No potential to occur due to lack of suitable habitat. The plant was not observed during surveys conducted within the blooming period.
Suisun thistle	*Cirsium hydrophilum var. hydrophilum*	FE, CNPS 1B	Riparian, salt, and brackish marshes. Elevations 0-1m.	**Low Potential**: Marginal habitat is present in the western portion of the North Work Area; however, this species was not observed during surveys, and the nearest occurrence is more than 5 miles away. This species is a perennial and no unidentified *Cirsium* sp. were observed during surveys; therefore, it is unlikely to occur at the Project site.
Delta tule pea	*Lathyrus jepsonii* var. *jepsonii*	CNPS 1B	Occurs in marshes and swamps, both freshwater and brackish. Elevations 0-5m.	**Moderate Potential**: Suitable habitat present in the Project area; however, this species is a perennial and no species within the Fabaceae family were observed during field surveys.
Mason's lilaeopsis	*Lilaeopsis masonii*	SR, CNPS 1B	Occurs in riparian, freshwater, and brackish marshes. Common in Suisun Bay. Exploits newly deposited or exposed sediment. Elevation 0-10m.	**Low Potential**: Marginal habitat present in the western portion of the North Work Area; however, this species was not observed during surveys conducted within the blooming period.

Table 3.3-1. Special-Status Species that May Occur at the Relocated North Work Area

Common Name	Scientific Name	Status	Habitat	Potential to Occur
Suisun marsh aster	*Symphyotrichum lentum*	CNPS 1B	Commonly found in both brackish and freshwater marshes and swamps. Elevations 0-3m.	**Low Potential**: Marginal habitat is present in the western portion of the North Work Area. This species was not observed during surveys conducted within the blooming period.
Reptiles				
Giant garter snake	*Thamnophis gigas*	FT, ST	Freshwater marsh, slow flow streams, canals, and irrigation ditches.	**Low Potential**: Aquatic habitat along access roads is atypical for species (brackish); however, a single occurrence was recorded on a levee access road in 2010.
Birds				
California black rail	*Laterallus jamaicensis coturniculus*	ST, FP	Freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	**Moderate Potential**: The majority of the habitat (coyote brush and California rose) within the North Work Area is not suitable for this species. Marsh habitat to the west may contain suitable habitat for this species; however, playback calls were conducted in November and no black rails responded.
Swainson's hawk	*Buteo swainsoni*	ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands. Requires adjacent suitable foraging areas (e.g., grasslands, or alfalfa or grain fields that support rodent populations).	**Present**: This species was observed during a site visit flying overhead. No nests have been observed and no nesting trees are located within 1,200 feet of the North Work Area. Due to the presence of dense shrubs, most of the site offers poor quality foraging habitat.
White-tailed kite	*Elanus leucurus*	FP	Rolling foothills/valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Found in open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**Present**: This species was observed flying over the Project site. No nests have been observed and no nesting trees are located within 1,200 feet of the North Work Area. Due to the presence of dense shrubs, most the of site offers poor quality foraging habitat.
Northern harrier	*Circus cyaneus*	CSC	Frequents meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands; seldom found in wooded areas. Nests on ground near marsh edge or grassland. Preys	**Present**: This species was observed flying over the Project site. No nests have been observed, and breeding bird surveys would be conducted prior to ground disturbing activities. Due to the presence of dense shrubs, most of the site

Table 3.3-1. Special-Status Species that May Occur at the Relocated North Work Area

Common Name	Scientific Name	Status	Habitat	Potential to Occur
			mostly on voles and other small mammals, birds, frogs, small reptiles, crustaceans, insects, and rarely on fish.	offers poor quality foraging habitat.
Short-eared owl	*Asio flammeus*	CSC	Found in wetlands, marshes, meadows, valley and foothill grassland, and irrigated alfalfa fields; tule patches/tall grass is needed for nesting/ daytime seclusion. Nests on dry ground in depression concealed in vegetation.	**High Potential**: Suitable habitat is present; this species is known to occur in the Grizzly Island Wildlife Area (according to the CDFW refuge manager).
Ridgway's rail (formerly California clapper rail)	*Rallus obsoletus*	FE, SE, FP	Saltwater and brackish marshes traversed by tidal sloughs around San Francisco Bay. Associated with abundant growth of pickleweed. Feeds away from cover on invertebrates from mud-bottomed sloughs.	**No Potential**: This species has not been observed or documented within Grizzly Island Wildlife Area and the North Work Area is outside of its known range. Habitat within the relocated North Work Area is not suitable for this species.
Mammals				
Salt marsh harvest mouse	*Reithrodontomys raviventris*	FE, SE, FP	Found only in saline or brackish upland, emergent wetlands of San Francisco Bay and its tributaries. Pickleweed is its primary habitat. It does not burrow, but builds loosely organized nests and requires higher areas for flood escape.	**Moderate Potential**: Suitable habitat occurs in the vicinity of the relocated North Work Area where small patches of pickleweed occur. The majority of the habitat (coyote brush and California rose) within the North Work Area is typically not suitable for this species. However, species has been observed in similar habitats within Grizzly Island Wildlife Area (Thompson 2016).

Acronyms: CNPS = California Native Plant Society; DPS = Distinct Population Segment; FE = Federally Endangered; FP = Fully Protected; FT = Federally Threatened; m = meter(s); ppt = parts per thousand; SE = State Endangered; SR = State Rare; ST = State Threatened, CSC = California Species of Special Concern
Note: [1] CNPS List 1.B = Plants Rare, Threatened, or Endangered in California and Elsewhere.

The Project area is located outside of the known geographic range and lacks suitable habitat for many of the special-status species identified in the Project area based on background research and coordination with CDFW. For these reasons, these special-status species have no potential to occur in the Project area and are not discussed below. For many other species, the Project area contains marginal habitat, has very poor-quality habitat, or is located on the edge of the species' known geographic or elevation range; for these reasons, these species have very low potential to occur in the Project area based on background research and coordination with CDFW. These

species are included in the analysis below because potentially suitable habitat is present and the Project is located within the known geographic and elevation range of these species. Additionally, some have been known to occur near the Project area. The special-status species that have moderate or high potential to occur, or are present in the Project area, are discussed in more detail in the analysis below. In total, 13 special-status species have a potential to occur at the Project site. These species include: five plant, one reptile, six bird, and one mammal species. Fish species found in open water areas, including the Mallard Farm tract and Honker Bay, were described in the adopted MND and would remain the same.

Plants

Several special-status plant species are known to occur within a 5-mile radius of the Project area, including the relocated North Work Area (CDFW 2016). Based on these known occurrences and the presence of potentially suitable habitat, five species were considered to have potential to occur in the Project area: Mason's lilaeopsis (*Lilaeopsis masonii*), Suisun thistle (*Cirsium hydrophilum* var. *hydrophilum*), soft bird's beak (*Chloropyron molle* ssp. *molle*), Suisun marsh aster (*Symphiotrichum lentum*), and delta tule pea (*Lathyrus jepsonii* var. *jepsonii*). However, field surveys (conducted on October 21, November 1, December 1, December 6, and December 22, 2016) indicated that the Project area is largely devoid of suitable habitat for these species, as the majority of the habitat present at the new North Work Area is upland habitat. Additionally, no rare or other special-status plants were observed. As a result, the potential for special-status plant species to occur in the Project area, including the relocated North Work Area, is low. Plant species observed in the Project area are included in Appendix B.

Reptiles

Only one special-status reptile has potential to occur in the Project area: the giant garter snake (*Thamnophis gigas*). Aquatic habitats near the relocated North Work Area are not likely to contain habitat for giant garter snake as the water is considered too brackish; however, there was a single occurrence of this species reported in the CNDDB in 2010 along a nearby levee road near Montezuma Slough. As a result of this record, it is assumed that this species has low potential to occur in the Project Area, specifically along levee roads and near the offloading area at Montezuma Slough, as described in the adopted MND.

Fish

As discussed in the MND, several special-status fish species have the potential to occur in the overall Project area, particularly at the South Work Area in Honker Bay. There is no potential for special-status fish to occur at the relocated North Work Area because the work area is not inundated with enough water to support fish species.

Birds

Special-status bird species could be present in the Project area, including the relocated North Work Area. Special-status bird species include migratory birds protected under the Migratory Bird Treaty Act (MBTA) and birds listed under the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA). Nesting birds have been observed in the Project area and may be present during construction. Special-status bird species protected under the FESA and CESA with potential to occur in or near the Project area are: Ridgway's rail (*Rallus obsoletus*), California black rail (*Laterallus jamaicensis coturniculus*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), short-eared owl (*Asio flammeus*), and Swainson's hawk (*Buteo swainsoni*). Both Ridgway's rail and California black rail are known to occur in portions of the Suisun Marsh year-round, approximately 8 to 10 miles northwest of the relocated North Work Area. The closest known Ridgway's rail breeding habitat is on Snag Island, approximately 5.5 miles west of the new North Work Area. Other recorded occurrences are approximately 3.5 miles southwest of the South Work Area. Ridgway's rails have not been observed in the Grizzly Island Wildlife Area since 2008 and have not been seen in Suisun Marsh since 2011 (Graham 2016; Estrella 2016). This species is unlikely to occur in the new North Work Area due to poor quality habitat, lack of preferred habitat, and tidal influence.

California black rails are known to occur within marsh habitat similar to that present north of the new North Work Area and south of Grizzly Island Road. This species has been observed in the Grizzly Island Wildlife Area (Graham 2016), and there are several CNDDB occurrences in the vicinity of the relocated North Work Area (CDFW 2016). Although this species is not expected to occur at the new North Work Area due to the lack of suitable habitat, habitat to the west could support breeding due to the presence of high marsh habitat. The staging areas, low marsh, and open water areas present in the South Work Area and between the North and South Work Areas do not contain suitable habitat for the Ridgway's rail or California black rail (Solano County Water Agency 2012); however, these species could occur occasionally or incidentally in or near the Project area as they move between areas of suitable habitat.

Based on site visits and a review of aerial photography, no suitable nest trees for Swainson's hawk or white-tailed kite are present within 1,000 feet of the Project area. Five Swainson's hawk nests have been recorded within 10 miles of the relocated North Work Area. The closest of these sites is located 1.4 miles northeast of the new North Work Area. Swainson's hawks were observed in that vicinity between 2007 and 2011, but none were observed in 2012 (CDFW 2016). Suitable foraging habitat is generally present in Suisun Marsh; however, due to the presence of dense shrubs, most the of new North Work Area location offers poor quality foraging habitat. Northern harrier and short-eared owl (both California Species of Special Concern) are ground nesters for which suitable habitat may be present at the new North Work Area.

Migratory birds protected under the MBTA may also be present within the Project area. Due to the presence of coyote brush shrubs at the relocated North Work Area, the site offers structural habitat not present in high quantities in other areas of the marsh. While coyote brush isn't a preferred habitat for sensitive species, it does provide habitat for wintering and non-breeding migratory birds. Additionally, there is a moderate to high potential for passerine species to nest within coyote brush and California rose habitat during the breeding season (February 15 to September 1). Due to the dominance of coyote brush and California rose, the new North Work Area may provide marginal foraging habitat for raptors; however, adjacent lands with lower vegetation cover would be preferred over the dense cover present at the new North Work Area.

Mammals

Only one special-status mammal species has potential to occur in the Project area: the salt marsh harvest mouse (*Reithrodontomys raviventris*). Known occurrences of the salt marsh harvest mouse are documented in marshes north, east, and west of the relocated North Work Area and along Grizzly Island Road immediately south of the work area. There is potential for the species to occur in the vicinity of the new North Work Area due to the presence of pickleweed. A small patch of pickleweed is located along the access route to the work area (Figure 3-1). Additionally, the species has been documented by CDFW using non-pickleweed marsh habitat and adjacent uplands (Thompson 2016); however, coyote brush and California rose are not preferred salt marsh harvest mouse habitat, and the species is less likely to use the habitat if preferred marsh habitat occurs on adjacent lands.

3.3.2 Impacts

The relocated North Work Area pad and access ramp would result in the temporary disturbance of 1.6 acres of habitat, which is an approximately 0.2-acre increase from the original location. Although the pad itself is the same size as the originally proposed pad, the slight increase in total disturbance is due to the need for a longer ramp to access the pad from Grizzly Island Road. Although the total disturbance is larger, a large portion of the new location is in less sensitive upland habitat than the previously proposed location.

Special-status species at the new North Work Area are similar to those at the previous location. One state-listed bird species (white-tailed kite) and two bird species listed as California Species of Special Concern (northern harrier and short-eared owl) were added to the list of species discussed because they have been observed in the marsh and can use upland habitat for foraging and nesting. The new North Work Area location provides marginal upland foraging and ground nesting habitat for these species.

Table 3.3-2 summarizes the total area of impact to wetlands and other waters (shown in Figure 3-1) from construction of the new North Work Area and the installation of the

temporary work platform and support barge at the South Work Area. The relocated work area would result in temporary disturbance to 0.37 acre of potentially jurisdictional wetland, of which 0.02 acre consists of pickleweed. Wetland impacts at the relocated North Work Area would be approximately 1.04 acres less than at the previously proposed location. The 15 additional 12-inch wood piles that would be temporarily installed in Honker Bay to accommodate the additional length of the pipe string would contribute a negligible increase in temporary fill (12 square feet).

Table 3.3-2. Summary of Impacts to Wetlands and Other Waters

Waters of the U.S.	Area Temporarily Impacted (acres)
Wetlands (North Work Area)	0.37
Other Waters (South Work/Pipe String Areas)	0.67[1]
Total	**1.04**

Note: [1] Approximately 0.17 acre of the fill in "Other Waters" is associated with removal and replacement of the existing and previously permitted concrete mats covering the Bay Area Pipeline in Honker Bay. The USACE considers this "fill" for permitting purposes; however, it does not represent a net change in fill, loss of waters due to fill from Project activities, or change in habitat from existing conditions.

Underwater noise impacts from the installation and removal of the 15 additional 12-inch wood piles in Honker Bay would be the same as previously analyzed in the adopted MND. Installation of these piles would add one to two days of additional pile driving.

Mitigation Measures (MM) BIO-1 through MM BIO-9 described in the adopted MND would apply and would be implemented, reducing the impacts to listed species and wetlands of the revised Project to less than significant. No new mitigation measures would be required.

3.4 CULTURAL AND PALEONTOLOGICAL RESOURCES

As described in the adopted MND, a records search for the Project area was conducted on June 9, 2015, at the Northwest Information Center. The study area for the records search also included the new North Work Area location. The records search identified two built-environment resources approximately 0.25 mile southwest of the new North Work Area. These resources, located along Grizzly Island Slough, consist of gates used to flood and drain the marshland and several pumps located throughout the marsh. Neither the gates nor pumps appear to meet the criteria consideration of exceptional significance required for listing in the National Register of Historic Places or the California Register of Historical Resources. Furthermore, neither of these built environment resources would be impacted by the Project.

A pedestrian survey of the new North Work Area location was conducted on December 20, 2016. This area is within a densely vegetated marsh area approximately 300 feet northeast of Grizzly Island Road and adjacent to the east side of an un-named levee access road. Transects were spaced approximately 10 to 15 meters apart. Ground

visibility was relatively low (0 to 10 percent) due to the tall and dense vegetation; however, ground visibility was increased by implementing periodic boot scrapes along transect lines. In addition, exposures along the levee road were examined for indications of cultural deposits. No new cultural resources were identified as a result of this field survey.

Based on current and previous studies, the possibility of unidentified or buried archaeological sites are low in the new North Work Area. The Anthropological Studies Center (1998) identified seven prehistoric archaeological sites recorded within a 6-mile radius of the study area, and "all are located between 0-20 foot elevation, and, with the exception of two shellmounds…on the south side of Suisun Bay, all are at slope changes and changes in vegetation [;]" however, the landscape of the relocated North Work Area does not correspond to these criteria. Of the entire Suisun Marsh studied by Meyer et al. (2013), which includes the study area, 95 percent has a moderate or lower sensitivity for buried archaeological resources. The remaining high (or very high) sensitivity areas are found northwest of, and well beyond, the relocated North Work Area and in the uplands to the east near Montezuma Hills.

Additionally, as described in the adopted MND, no paleontological resources were identified within the Project area or its immediate surroundings. Given the limited depth of construction, any such paleontological deposits are unlikely to be affected by the Project.

The revised Project would not result in new impacts to cultural or paleontological resources and no new mitigation measures would be required.

3.5 GEOLOGY AND SOILS

Based on recent geotechnical investigations, soils at the new North Work Area location are better suited for construction activities, including sustaining heavy equipment loads during construction. The new location would not require additional actions to prepare the site for construction activities beyond those already considered in the MND. Therefore, the revised Project would not result in new impacts to geology or soils and no new mitigation measures are required.

3.6 GREENHOUSE GAS (GHG) EMISSIONS

The BAAQMD has adopted 1,100 metric tons of carbon dioxide equivalent per year ($MTCO_2e$/year) as a GHG operational emissions significance criterion for development projects, but has not adopted thresholds for evaluating GHG emissions from construction activities. Construction activities for the revised Project are short term, and direct comparison of construction GHG emissions with long-term thresholds would not be appropriate because these emissions cease upon completion of construction. Other districts (e.g., South Coast Air Quality Management District 2008; San Luis Obispo

County Air Pollution Control District 2012) recommend that GHG emissions from construction activities (and other short-term sources) be evaluated as part of the total project GHG emissions by amortizing total emissions during construction over a project's operational lifetime for comparison with long-term GHG emissions significance thresholds.

For this analysis, the amortization method was applied over the Project's projected operational lifetime (30 years). Total construction GHG emissions were calculated using methods described in the adopted MND (see Appendix A for detailed calculations), amortized over 30 years, and compared to the BAAQMD operational threshold. Table 3.6-1 lists GHG emissions for each construction source. The Project would generate a total of 744.7 $MTCO_2e$ over the entire construction period. Amortized over the Project's anticipated 30-year operational lifetime, construction would result in amortized annual emissions of 24.8 $MTCO_2e$ per year. Amortized annual construction emissions would not exceed the threshold of significance; therefore, GHG emissions would be less than significant and no mitigation measures would be necessary.

Table 3.6-1. Project Construction Greenhouse Gas Emissions

Work Component	CO_2e Emissions (metric tons)
Horizontal Directional Drilling	201.8
Pipeline Replacement	224.5
Construction Office (includes operation of vehicles and off-road equipment)	77.5
Marine Construction Equipment (includes operation of marine vessels)	240.9
Total Construction Emissions (metric tons)[1]	**744.7**
GHGs Amortized Over 30 years (metric tons/year)	**24.8**
BAAQMD Project Threshold of Significance (metric tons/year)	**1,100**
Exceeds Threshold?	**No**
Notes: [1] Totals in table may not exactly add up due to rounding.	

GHGs from construction activities emitted either directly or indirectly would not have a significant impact on the environment or substantially contribute to global GHG emissions. Therefore, the revised Project would not conflict with applicable plans, policies, or regulations adopted for the purposes of reducing GHG emissions. Further, as operational emissions of the pipeline would not change following Project completion, the Project would not conflict with established GHG reduction targets. Therefore, the revised Project would not result in new impacts from GHG emissions and no new mitigation measures are required.

3.7 HAZARDS AND HAZARDOUS MATERIALS

As with the original Project, the potential for the release of hazards and hazardous materials would be limited to the use of gasoline, diesel, lubricants, and solvents. The

revised Project would not result in additional sources of hazardous material; however, due to the added drill distance, the Project would consume additional fuels, solvents, and lubricants during construction. As described in the adopted MND, risk associated with hazardous materials would be mitigated through the implementation of existing regulations, construction industry standards for the containment and recovery of spills (e.g., Oil Spill Contingency Plan), and the implementation of the original Project's Applicant Proposed Measures. Therefore, the revised Project would not result in new hazards or hazardous material impacts and no new mitigation measures are required.

3.8 HYDROLOGY AND WATER QUALITY

The revised Project would not result in any changes to the water quality or hydrology impacts described in the adopted MND, and no new impacts have been identified. Therefore, no new mitigation measures are required.

3.9 LAND USE AND PLANNING

The revised Project would not result in any changes to the proposed land uses described in the adopted MND. While the North Work Area would be relocated from one area of Suisun Marsh to another, the two areas are similar and use of the new work area location would be temporary. Therefore, the revised Project would not result in new land use and planning impacts and no new mitigation measures are required.

3.10 NOISE

The nearest sensitive noise receptors, including residences, schools, or hospitals are located in the Bay Point area of Pittsburg, approximately 3.5 miles south of the South Work Area. As described in the noise analysis provided in the adopted MND, noise from the originally proposed North Work Area location (approximately 4.7 miles north of Bay Point) would be negligible. Relocation of the North Work Area approximately 1,500 feet north would place the work area farther from these sensitive receptors; therefore, noise from construction would remain less than significant. Noise from truck and barge trips to deliver materials to the North and South Work Areas was also found to be less than significant. Due to additional materials deliveries for the longer drill distance, truck trips would increase by approximately 45 to 55 trips over the construction period (an average of about one truck per day). The small increase in trips would remain less than significant because the individual trips would not generate higher noise levels than those assessed in the adopted MND. Therefore, the revised Project would not result in new noise impacts and no new mitigation measures are required.

3.11 TRANSPORTATION/TRAFFIC

Local traffic may increase slightly (about one to two trucks per day) due to the revised Project's need for additional resources including pipe, water, and fuels for construction

activities. This increase in traffic due to materials delivery would be negligible and would remain less than significant. Therefore, the revised Project would not result in new transportation/traffic impacts and no new mitigation measures are required.

3.12 TRIBAL CULTURAL RESOURCES

As described in the adopted MND and in Section 3.4, Cultural and Paleontological Resources, a records search for the Project area, including the new North Work Area location, was conducted at the Northwest Information Center. The records search identified two built-environment resources approximately 0.25 mile southwest of the new North Work Area, and no tribal cultural resources were identified. Additionally, the Native American Heritage Commission (NAHC) searched its Sacred Lands File for Native American cultural sites and found no occurrences within the Honker Bay U.S. Geological Survey quadrangle (NAHC letter to the CSLC dated March 14, 2016).

As described in the adopted MND, the NAHC provided a list of two Tribes that CSLC staff should contact for information on the potential for tribal cultural resources within the Project area. On June 15, 2016, CSLC staff notified these Tribes to proactively engage with the Tribes to ensure they have the opportunity to provide meaningful input on the Project's potential effects. Following an inquiry from the Yocha Dehe Wintun Nation regarding their cultural resources interests in the Project area, CSLC staff accompanied the Tribe's representatives on a Project site visit and requested input on proposed mitigation measures related to cultural and paleontological resources. Based on the Tribe's feedback, a 100-foot work-stoppage buffer was included for cultural and paleontological discoveries during all earth-disturbing work (MM CUL-1 and MM CUL-2). On December 21, 2016, the CSLC's Tribal Liaison contacted the previously identified Tribal representatives to advise them of the relocation of the North Work Area and invite their input regarding potential concerns as a result of this Project change. In response, the Yocha Dehe Wintun Nation's Tribal Secretary sent a letter to CSLC staff (dated January 9, 2017) noting that the tribe is not aware of any known cultural resources near the new North Work Area and that adequate mitigation measures have been incorporated into the document to protect tribal cultural resources.

The revised Project would not result in new impacts to tribal cultural resources and no new mitigation measures would be required.

3.13 UTILITIES AND SERVICE SYSTEMS

The revised Project would result in an increase in the water requirements for the extended drill operations (approximately 233,750 gallons). The additional volume of water is available from the City of Fairfield, the water source identified in the adopted MND. Therefore, the revised Project would not result in new utilities and service systems impacts and no new mitigation measures are required.

4.0 DETERMINATION/ADDENDUM CONCLUSION

As detailed in the analysis presented above, this Addendum to the Mitigated Negative Declaration (MND) adopted by the California State Lands Commission (CSLC) in October 2016, as lead agency under the California Environmental Quality Act (CEQA), supports the conclusion that the changes to the overall Mallard Farms Pipeline Replacement Project (Project) would not result in any new significant environmental effects. Specifically, the CSLC has determined, based on substantial evidence in the light of the whole record, that none of the following circumstances exists:

- Substantial changes proposed in the Project which will require major revisions of the previous MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects (State CEQA Guidelines, § 15162, subd. (a)(1)); or
- Substantial changes that will occur with respect to the circumstances under which the Project is undertaken which will require major revisions of the previous MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects (State CEQA Guidelines, § 15162, subd. (a)(2); or
- New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous MND was adopted by the CSLC (State CEQA Guidelines, § 15162, subd. (a)(3).

The Project is consistent with State CEQA Guidelines section 15164 in that only minor changes have been made to the Project, and none of the conditions described in State CEQA Guidelines section 15162 has occurred. Therefore, the CSLC has determined that no subsequent or supplemental negative declaration or environmental impact report is required.

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5.0 ADDENDUM PREPARATION SOURCES AND REFERENCES

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