

# **Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights**

**San Diego International Airport, San Diego CA**

## **DRAFT ENVIRONMENTAL ASSESSMENT**

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Prepared for:  
Federal Aviation Administration  
Air Traffic Operations  
Western Service Area  
Renton, WA

Contact: John Louie  
Environmental Engineer  
U.S. Department of Transportation  
Federal Aviation Administration  
Address  
(907) 271-4471  
john.louie@faa.gov

Prepared by:  
Volpe National Transportation Systems Center  
55 Broadway  
Cambridge, Massachusetts 02142

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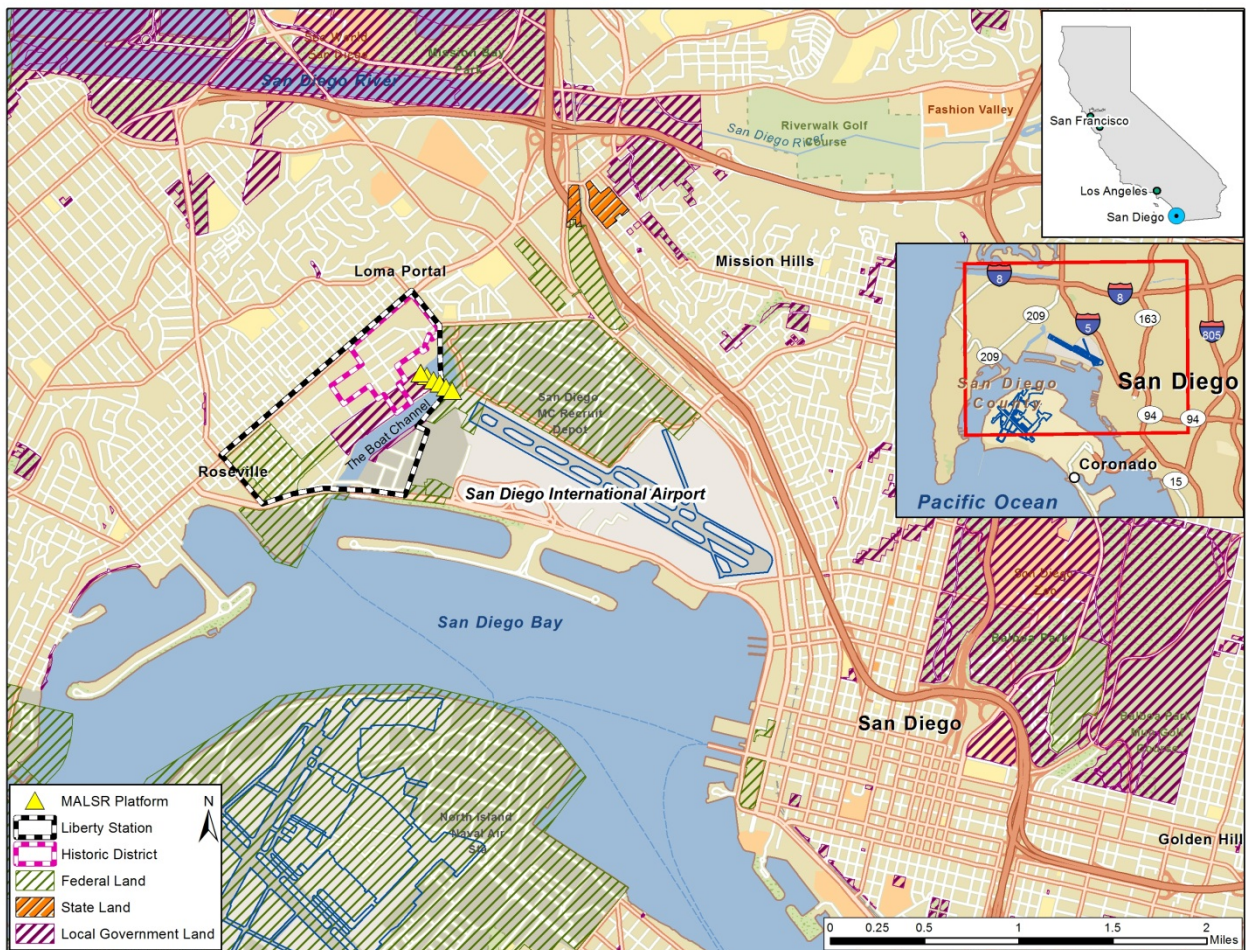
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# 1 PURPOSE OF AND NEED FOR ACTION

## 1.1 Background and Setting

The San Diego International Airport (FAA three-letter identifier code “SAN”) is located in the northwest portion of the downtown area of San Diego, California. The airport is bounded by North Harbor Drive and San Diego Bay to the south, the Navy water channel and Liberty Station to the west, the Marine Corps Recruit Depot to the north, and Pacific Highway and Interstate 5 to the east. The airport is operated by the San Diego County Regional Airport Authority (SDCRAA). The regional location map for SAN is depicted in Figure 1-1.

At 661 acres, SAN is one of the smallest major airport sites in the U.S. The airport has a single 9,401-foot-long, 200-foot-wide runway running east-west, and is the busiest single runway commercial airport in the nation. Figure 1-2 illustrates the existing facilities at SAN.



**Figure 1-1. Regional map of San Diego International Airport.**



**Figure 1-2 Aerial Map of San Diego International Airport.**

### **1.1.1 Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)**

A **visual guidance lighting system** is an important safety feature at many airports. The term “visual guidance lighting system” is used to identify, as a type of facility, those configurations of lights located on and in the vicinity of an airfield providing pilots with a visual reference for guidance purposes while operating an aircraft during an approach for landing. These facilities are vital visual aids to the pilot and may be used with or without electronic landing aids, such as an Instrument Landing System (ILS).

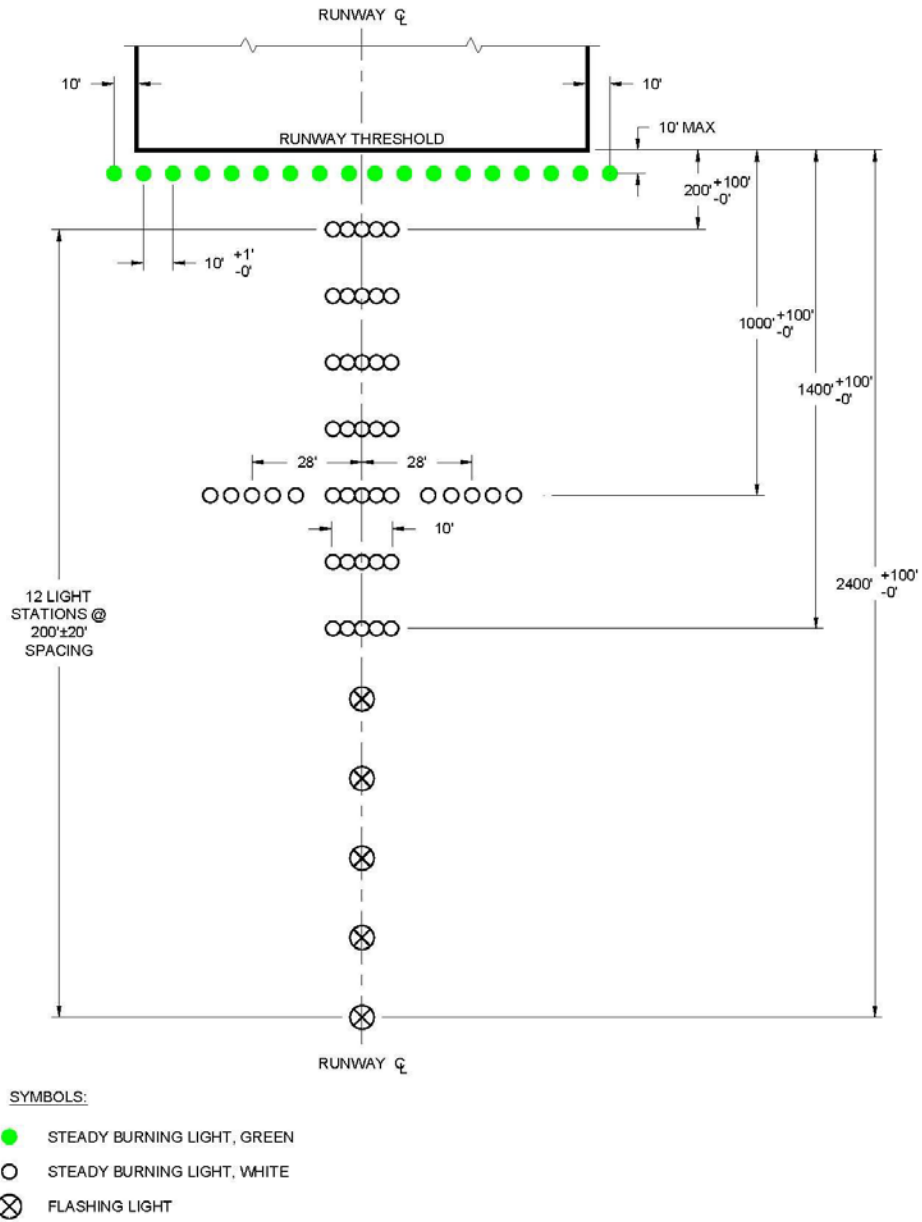
An **approach lighting system (ALS)** is a configuration of signal lights disposed symmetrically about the extended runway centerline, starting at the landing threshold and extending outward into the approach zone. This system provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references. The ALS at SAN is a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR)

A **MALSR** is the ALS standard configuration for **Category I** precision runways.<sup>1</sup> A standard MALSR configuration is shown in Figure 1-3 (FAA 2010b). The MALSR consists of a Medium Intensity Approach Lighting System (MALS) plus Runway Alignment Indicator Lights (RAIL).

- The MALS consists of a threshold light bar and seven five-light bars located on the extended runway centerline with the first bar located 200 feet from the runway threshold, and the remaining bars at each 200-foot interval out to 1,400 feet from the threshold. Two additional five-light bars are located, one on each side of the centerline bar, 1,000 feet from the runway threshold forming a crossbar 66 feet long. The spacing between individual lights in all bars is approximately 2-½ feet. All lights are aimed into the approach to the runway and away from the runway threshold. All lights in the system are white, except for the green threshold lights. The threshold lights are a row of lights on 10-foot centers located coincident with and within the runway edge lights near the threshold, and extend across the runway threshold. The RAIL portion of the facility consists of five sequenced flashers located on the extended runway centerline. The first is located 200 feet beyond the approach end of the MALS with successive units located at each 200-foot interval out to 2,400 feet from the runway threshold. These single white lights flash in sequence toward the threshold at the rate of twice per second. All lights are aimed into the approach to the runway and away from the runway threshold.

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<sup>1</sup> From FAA 2009: “*Precision Approach Category I (CAT I) Runway*. A runway with an instrument approach procedure which provides for approaches to a decision height (DH) of not less than 200 feet and visibility of not less than 1/2 mile or Runway Visual Range (RVR) 2400 (RVR 1800 with operative touchdown zone and runway centerline lights).” In lay terms, a CAT I runway is one equipped to enable approaches down to 200 feet where the pilot must be able to see the runway; if not, the approach must be aborted.



**Figure 1-3 MALSR Configuration**

Source: FAA Order JO 6850.2B (FAA 2010b)

### 1.1.2 MALSR at San Diego International Airport

A MALSR is present off the approach end of Runway 9 at SAN, and provides vital safety assistance to pilots arriving out of the west (approaching Runway 9 in a west-to-east direction). The MALSR environment and platforms at SAN are depicted in Figures 1-4 through 1-6 and described in Table 1-1. As shown in Figure 1-4, of the thirteen light stations that comprise the MALSR, four (Stations 15+00, 17+00, 19+00 and 21+00) lie in the boat channel just west of SAN.

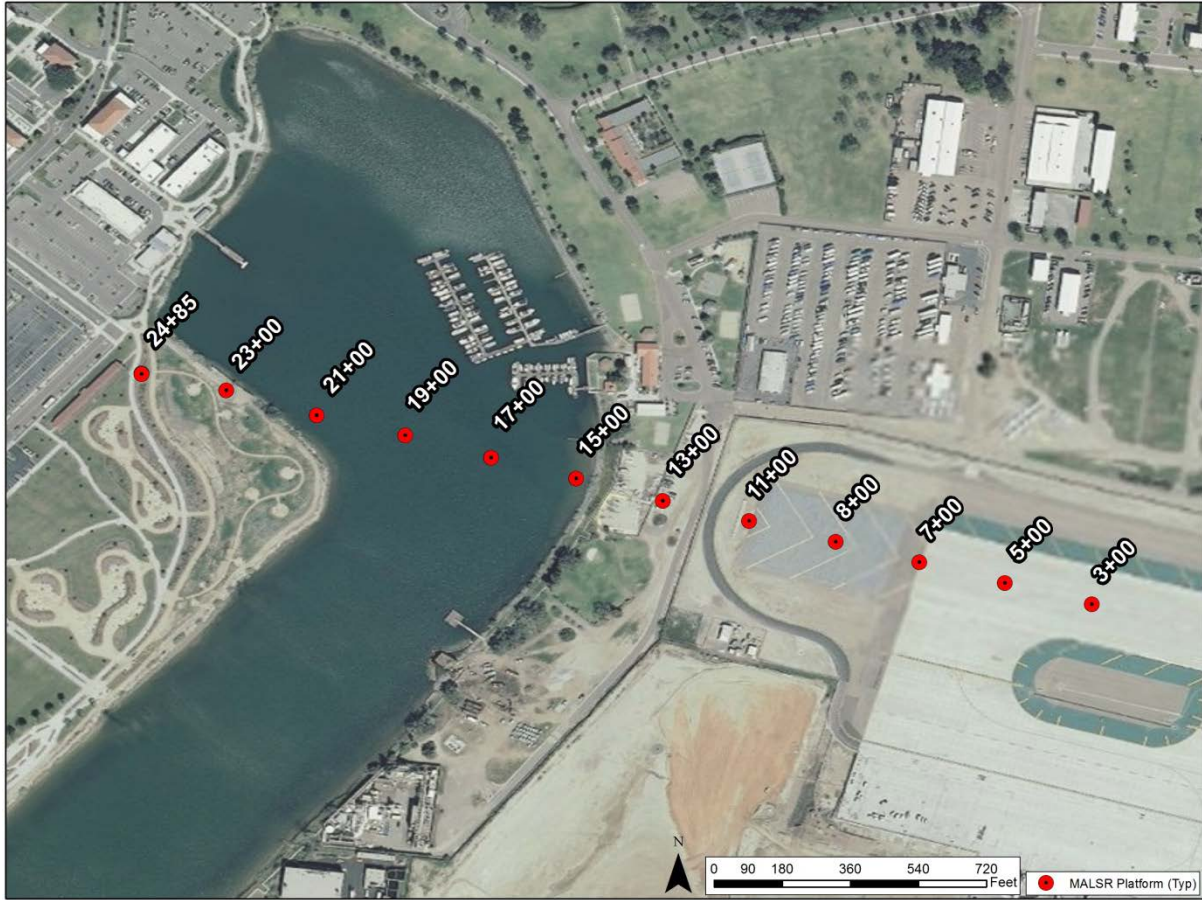
**Table 1-1 MALSR at SAN**

Station <sup>1</sup>	Item	Land/Water Location	Description
0+05	Threshold lights	Land	Ground mount
3+00	5-light bar	Land	Ground mount
5+00	5-light bar	Land	Ground mount
7+00	5-light bar	Land	Ground mount
8+90	5-light bar	Land	Ground mount
11+00	3 x 5-light bars	Land	Pole mount
13+00	5-light bar	Land	Pole mount
15+00	5-light bar	Water	Pole mount on elevated timber platform supported by two timber piles
17+00	1 flashing light	Water	Pole mount on elevated timber platform supported by two timber piles
19+00	1 flashing light	Water	Pole mount on elevated timber platform supported by two timber piles
21+00	1 flashing light	Water	Pole mount on elevated timber platform supported by two timber piles
23+00	1 flashing light	Land	Pole mount on elevated platform supported by steel tower
24+85	1 flashing light	Land	Pole mount on elevated platform supported by steel tower

Note: 1. Stations reflect distance from the runway end or threshold. Station 0+05 reflects 5 ft from threshold, Station 11+00 reflects 1,100 ft from runway end, and so on.

Source: FAA 1982





**Figure 1-4 MALSR Environment and Platforms off SAN Runway 9**



**Figure 1-5 SAN MALSR Land-based Platforms**



**Figure 1-6 SAN MALSR Water-based Platforms**

*Sta. 21+00 in foreground; Sta. 15+00 and airport in distance.*

## 1.2 Purpose and Need

The purpose of the Proposed Action is to maintain in operation an essential item of air navigation and safety, a MALSR, to the San Diego International Airport.

The needs for this action arise from the following:

- The current MALSR at SAN was erected in 1982, and elements of the system, such as the tower piles, have deteriorated severely to the point where immediate rehabilitation is required (Jacobs 2010, Collins 2010, WAS 2010).
- In addition to the rehabilitation of the system, the platforms must be brought up to current OSHA compliance standards (Jacobs 2010). The current OSHA compliance standards requires that the ladder be climb safe (in this case a compliant cage will be erected around the ladder), and that the guardrails meeting compliance by being 42” high, with a middle cross section and kick plate. These standards are necessary to help ensure that safety of the climber ascending the tower, as well as the preventing workers on the platform itself from falling off the tower, or kicking over materials on people below.
- An approach lighting system enhances the safety and significantly increases the utility and efficiency of SAN, particularly in periods of inclement weather, and an MALSR is an FAA-approved approach lighting system. The ability of Runway 9 to accommodate arrivals in poor weather conditions is currently due to the presence of the MALSR and additional air navigation equipment. As such, a MALSR enhances safety at SAN; additionally, the airport would not be able to accommodate arrivals in certain weather conditions without the presence of the MALSR.

Therefore, after inspection of the existing MALSR by Federal engineers and in consideration of the aforementioned studies, the Proposed Action incorporates a variety of replacements and upgrades that will ensure the MALSR is functioning properly and is OSHA-compliant. FAA is the federal authority responsible for providing the nation with a safe, efficient, civil aviation system. Maintaining the MALSR in proper working order is in keeping with that mandate.

## 1.3 Proposed Action

The Proposed Action is strictly maintenance-related and does not affect the existing functioning of the airport. It does not increase the throughput of the airport or permit larger planes to land, nor does it change flight patterns or approach/take-off flight paths. The Proposed Action does maintain safety margins at the airport, particularly in periods of inclement weather, and enhances the personal safety of FAA maintenance technicians by providing facilities in compliance with current OSHA requirements governing the workplace.

The Proposed Action consists of the following:

- Cut at mudline and remove six (6) existing timber piles – two each at three stations located within the boat channel: Stas 17+00, 19+00 and 21+00. Install six (6) new piles.
- Remove the wooden platforms and replace with a wider platform made of composite material and including an anti-bird perching design at four stations in the boat channel: Stas 15+00, 17+00, 19+00 and 21+00.
- Provide OSHA compliant ladders and guardrails at six (6) platforms: Stas 15+00, 17+00, 19+00 and 21+00, all in the boat channel, and Stas 23+00 and 24+85, located in Naval Training Center (NTC) Park.
- Replace submarine power/control cables that run from the airport property underwater along the sea floor to all six stations if necessary (i.e., if cables are found to be damaged or become unusable during the installation of the new piles); new cables would be enclosed in conduit and would only be laid on the sea bed so as to minimize disturbance. Provide OSHA compliant ladders and guardrails at six (6) platforms: Stas 15+00, 17+00, 19+00 and 21+00, all in the boat channel, and Stas 23+00 and 24+85, located in NTC Park.
- Replace submarine power/control cables that run from the airport property underwater along the sea floor to all six stations if necessary (i.e., if cables are found to be damaged or become unusable during the installation of the new piles); new cables would be laid directly on the lagoon sea-floor so as to minimize disturbance. Removal of entire cable may not be necessary, only damaged parts will be removed. If such an action is required, existing cables would be left in place.

It is expected that the rehabilitation of the MALSR would begin in fall 2012.

## 2 ALTERNATIVES CONSIDERED

Federal regulations concerning the environmental review process require that all reasonable and practicable alternatives which might accomplish the objectives of a proposed project be identified and evaluated. This evaluation is limited necessarily to a finite number of alternatives capable of achieving the project goals.

For the SAN MALSR Rehab project, two alternatives were developed and are discussed in this chapter. The environmental impacts associated with these alternatives are presented and assessed in Chapter 4 Environmental Consequences.

### 2.1 No Action Alternative

The No Action Alternative consists of ongoing basic maintenance to the existing MALSR platforms. Basic maintenance may consist of, but not be limited to, the following: bulb replacement; scraping and painting of various elements; and replacement of broken or rotting sections of the wooden platforms, stair rungs, structural members, etc.

Maintenance also may encompass repairs to (but not replacement of) the rotting timber piles, which may encompass repairs to and/or removal-and-replacement of the exterior coating of concrete as well as either injection of various materials into the rotting piles or the introduction of structural splices in an attempt to restore and/or maintain structural integrity.

However, it should be noted that aforementioned maintenance on the MALSR platforms under the No Action Alternative may not be able to take place since the current platforms are not OSHA compliant. Further work on the MALSR platforms would be in violation of OSHA requirements.

Maintenance measures, if they are able to be conducted, may extend the life of the existing piles from 1-4 years (estimation). It is likely that eventually, one or more of the structural piles will collapse into the boat channel and destroy the integrity of the MALSR.

### 2.2 Proposed Action Alternative

The Proposed Action meets the purpose and need as described in Chapter 1 of this EA. The Proposed Action consists of the following:

- Cut at mudline and remove six (6) existing timber piles – two each at three stations located within the boat channel: Stas 17+00, 19+00 and 21+00. Install six (6) new piles.
- Remove the wooden platforms and replace with a wider platform made of composite material and including an anti-bird perching design at four stations in the boat channel: Stas 15+00, 17+00, 19+00 and 21+00.

- Provide OSHA compliant ladders and guardrails at six (6) platforms: Stas 15+00, 17+00, 19+00 and 21+00, all in the boat channel, and Stas 23+00 and 24+85, located in NTC Park.
- Replace submarine power/control cables that run from the airport property underwater along the sea floor to all six stations if necessary (i.e., if cables are found to be damaged or become unusable during the installation of the new piles); new cables would be laid directly on the lagoon sea-floor so as to minimize disturbance. Removal of entire cable may not be necessary, only damaged parts will be removed. If such an action is required, existing cables would be left in place.

Table 2-1 depicts the Proposed Action.

**Table 2-1 Proposed Action Alternative Work Elements**

Work Element	Station					
	15+00	17+00	19+00	21+00	23+00	24+85
Remove and replace piles		■	■	■		
Remove and replace wooden platforms	■	■	■	■		
Provide OSHA compliant ladders and guardrails	■	■	■	■	■	■

### 3 AFFECTED ENVIRONMENT

As directed by CEQ regulations and FAA Order 1050.1E, this chapter examines and describes the existing conditions of resource categories that may be affected by the federal action. The affected environment includes the study area, defined as the lagoon in which the MALSR is located, and properties along the lagoon's perimeter (see: Figure 1.1 for regional map of SAN; Figure 1.4 for a depiction of the MALSR; Section 1.1.2, MALSR at San Diego International Airport); areas outside of the study area may be included in the affected environment and described only if potential impacts are suspected.

This EA examines the resources germane to the federal action. The impact categories specified in Appendix A of FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, are considered; some are not affected and dismissed from detailed consideration (see Table 3-1). The text below discusses the rationale behind decisions regarding dismissal of impact categories from consideration.

**Table 3-1. Environmental Impact Categories Considered**

Impact Categories as listed in FAA Order 1050.1E	Considered but Dismissed	Considered and Retained
Air Quality	■	
Coastal Resources		■
Compatible Land Use	■	
Construction Impacts		■
Department of Transportation Act: Sec. 4(f)		■
Farmlands	■	
Fish, Wildlife, and Plants		■
Floodplains		■
Hazardous Materials, Pollution Prevention, and Solid Waste		■
Historical, Architectural, Archeological, and Cultural Resources		■
Light Emissions and Visual Impacts	■	
Natural Resources and Energy Supply		■
Noise	■	
Secondary (Induced) Impacts	■	
Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks	■	
Water Quality		■
Wetlands	■	
Wild and Scenic Rivers	■	

### 3.1 General setting

The thirteen light stations forming the 2,485-foot-long MALSR run from SAN's Runway 9 threshold, through the adjacent boat channel to NTC Park. The NTC park is a new park within the Liberty Station development.

#### 3.1.1 Marine Corps Recruit Depot San Diego

The Marine Corps Recruit Depot (MCRD) San Diego comprises 433 acres of land immediately north of and adjacent to SAN. The base borders a portion of the northernmost sections of the

boat channel. A marina on the base just north of the MALSR is for the exclusive use of MCRD San Diego (SDCRAA 2008).

MCRD San Diego has over 800 civilian employees and over 1,800 permanent military personnel. At any one time, approximately 4,000 recruits are housed at the base.

### **3.1.2 NTC Redevelopment**

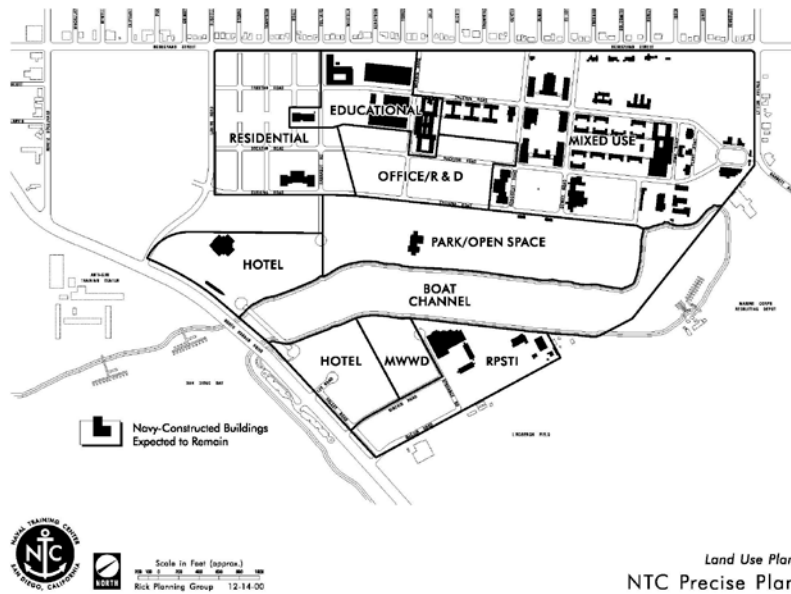
Since the time of the cold war, Naval Training Center (NTC) facilities have been periodically closed and some have been allowed interim use by the City of San Diego. In November 1996 a draft Reuse Plan for the NTC site was adopted and approved by the San Diego City Council, with the approval by the Navy coming in 1999. In May 2000, representatives of the Naval Facilities Engineering Command and the City of San Diego signed a Memorandum of Agreement governing conveyance of various parcels of the NTC from the Navy to the City of San Diego. To date, all parcels but the boat channel have been conveyed (San Diego 2011c).

### **3.1.3 Liberty Station**

Liberty Station is a new urban village formed from portions of the former NTC. In addition to Liberty Station, the NTC project area includes an ocean monitoring laboratory, the Regional Public Safety Training Institute, military housing and an airport expansion area (San Diego 2011b).

The 361-acre Liberty Station community, a joint development of the City of San Diego Redevelopment Agency and a private developer, includes 125 acres of parks, open space and a boat channel; shopping villages and restaurants; a 28-acre civic, arts and cultural district; the nine-hole Sail Ho Golf Club; three hotels on two sites; and six schools. Nearly 350 families now reside at Liberty Station and dozens of companies, with hundreds of employees, are doing business there.





**Figure 3-1 Liberty Station Land Use Plan**

Source: McMillin 2001.

### 3.1.4 Boat Channel

The boat channel (Figure 3-2) measures approximately 4,922 feet long by 558 feet wide with an average center point depth of 15 feet; the turning basin at the northern end is deeper with a center depth of 20+ feet. The channel banks are gently sloped and anchored by stone and concrete rip-rap (San Diego 2005).



**Figure 3-2 Boat Channel Looking Southwest from Northern Reach of Channel**

The northern reach contains a marina restricted to personnel associated with MCRD San Diego; a pier extending into the turning basin from Liberty Station; four MALSR platforms; several outfall structures; and a government-owned (no public access) floating dock south of the marina and MALSR and accessed through MCRD San Diego.

Land uses along the northern reach include Liberty Station, NTC Park and MCRD San Diego. The airport does not front directly on the boat channel.

The southern reach of the boat channel has no piers or docks. Land uses along the western shore of the boat channel in this area include NTC Park and a number of hotel developments within Liberty Station. Fronting the eastern shore are a power plant for MCRD San Diego, the Regional Public Safety Training Institute, the Metropolitan Waste Water Department and a vacant development site proposed for a major hotel. A pedestrian bridge and a second bridge carrying North Harbor Drive over the boat channel form the entry to the boat channel from San Diego Bay and Harbor.

San Diego Harbor is a naval, commercial and recreational center for the southwest U.S. The harbor serves the San Diego metropolitan area and is a major shipping point for agricultural goods from Southern California, Arizona and New Mexico.

## 3.2 Impact Categories Considered but Dismissed

An initial environmental review indicated that a number of the impact categories identified in FAA Order 1050.1E would not be affected by the federal action (see Table 3-1). These are discussed below.

### 3.2.1 Air Quality

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for six “criteria pollutants”: lead, ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide (CO), particulate matter smaller than 10 and 2.5 microns in diameter (respectively, PM10 and PM2.5). In addition, the CAA requires each state to adopt a plan to achieve the NAAQS for each pollutant within timeframes established under the CAA. This plan, known as a State Implementation Plan (SIP), is subject to approval by the U.S. Environmental Protection Agency (EPA).

EPA can designate an area as either nonattainment or maintenance. A nonattainment area is any geographic area of the U.S. that experiences a violation of one or more NAAQS. A maintenance area is any geographic area of the U.S. previously designated nonattainment for a criteria pollutant pursuant to the CAA Amendments of 1990 and subsequently re-designated to attainment. By default, an area not designated as either nonattainment or maintenance is “in attainment” with NAAQS.

Based on air quality monitoring data, the San Diego Area is designated as follows (EPA 2011a):

- Maintenance for CO
- Maintenance for Ozone-1 Hour
- Nonattainment for Ozone-8 Hour

The CAA 1990 Amendments require federal actions *conform* to the appropriate SIP, and the final rule issued by EPA in this regard is referred to as the General Conformity Rule. Conformity of an action is defined as conformity to the SIP’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards, and that such federal activities will not:

1. Cause or contribute to any new violation of any standard in any area.
2. Increase the frequency or severity of any existing violation of any standard in any area.
3. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area (FAA 2006).

FAA Order 1050.1E notes that certain federal actions are exempt from the General Conformity Rule for actions that create emissions clearly below threshold levels. Since the nature of the proposed action limits emissions associated with temporary construction activities, it is expected that the increase in emissions associated with the proposed action will result in de minimis levels. Therefore, per 40 CFR 93.153(c)(2), the General Conformity Rule does not apply.

### **3.2.2 Compatible Land Use**

The Proposed Action is a maintenance project, replacing components of a needed air navigation aid to maintain safety margins at SAN. The action will not trigger or alter in any way – directly, indirectly or cumulatively – development within the project area. The socioeconomic forces driving development and redevelopment in the immediate area are not related to, nor affected by, the presence of the MALSR. Therefore, no further discussion of compatible land use is warranted.

### **3.2.3 Farmlands**

The project area consists of developed urban land, a city park, a lagoon, a military facility and an international airport; no farmland is present. No further discussion of farmland is necessary.

### **3.2.4 Light Emissions and Visual Impacts**

The Proposed Action is a maintenance project, replacing components of a needed air navigation aid to maintain safety margins at SAN. The design of the MALSR, i.e., the placement and alignment of the light bars, the angle of the light planes, the brightness of the individual lamps and so forth, are dictated by FAA safety design standards.

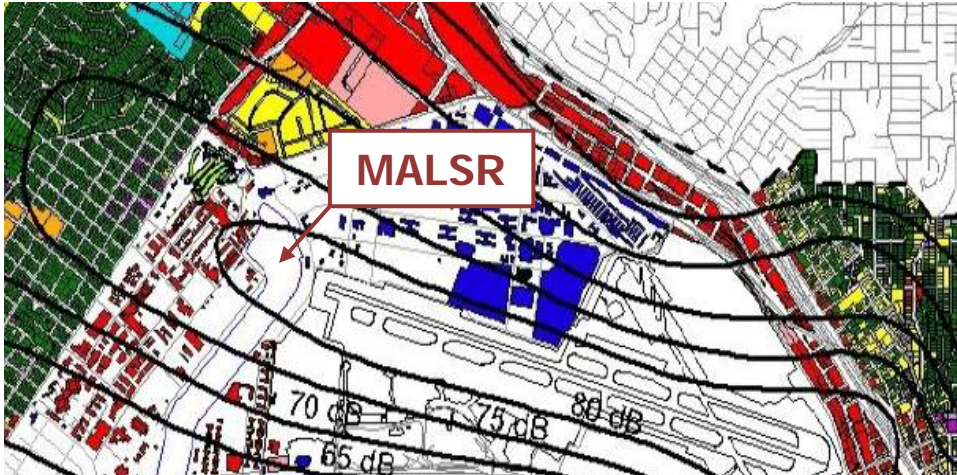
The Proposed Action will not alter any design feature affecting the existing vertical or horizontal alignment of the lights, the angle of the light plane, the brightness of the individual lamps or the general appearance of the light platforms. Therefore, light emissions and visual impacts will not differ from existing conditions, are considered negligible and will not be considered further.

### **3.2.5 Noise**

The MALSR falls within the 80 dB CNEL noise contours at SAN (Figure 3-3) (SDCRAA 2004).<sup>2</sup> In addition, the construction noise due to driving the replacement piles would be temporary and have no significant noise impacts. Therefore, the project will not have any effect on operations at SAN and noise impacts will not be discussed further.

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<sup>2</sup> The Community Noise Equivalent Level (CNEL) is a descriptor of the daily noise environment which accounts for the magnitude, time of day and the frequency of occurrence of noise intrusions. It is calculated using a formula prescribed in the California Noise Standards, and is based on the A-weighted decibel (SDCRAA 2004).



**Figure 3-3 MALSR Location With Projected CNEL Contours at SAN**

Source: SDCRAA 2004

### **3.2.6 Secondary (Induced) Impacts**

The Proposed Action is a maintenance project, replacing components of a needed air navigation aid to maintain safety margins at SAN. The action will not alter in any way – directly, indirectly or cumulatively – current or projected activity at the airport. No further discussion of secondary (induced) impacts is warranted.

### **3.2.7 Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks**

The action will have no socioeconomic impacts, do nothing to promote or hinder environmental justice, and will not contribute to children's environmental health and/or safety risks. Accordingly, no further discussion of these topics is deemed necessary.

### **3.2.8 Wetlands**

No wetlands are present in the study area. Impacts to lagoon waters, if any, are discussed in Section 4.9 Water Quality.

### **3.2.9 Wild and Scenic Rivers**

The National Wild and Scenic Rivers System were created by Congress in 1968 (Public Law 90-542; 16 U.S.C. 1271 et seq.) to preserve certain rivers with outstanding natural, cultural and recreational values in a free-flowing condition for the enjoyment of present and future generations. There are no wild, scenic or recreational rivers in the San Diego area (USFWS 2007). No further discussion is warranted.

### **3.3 Impact Categories Considered and Retained**

Nine impact categories are retained for further analysis.

#### **3.3.1 Coastal Resources**

The boat channel is located entirely within California's coastal zone, as defined in the California Coastal Act of 1976. The Federal Consistency Unit of the California Coastal Commission implements the federal Coastal Zone Management Act (CZMA) of 1972 as it applies to federal activities, development projects, permits and licenses, and provides support to state and local governments.

In the CZMA, the U.S. Congress created a federal and state partnership for management of coastal resources. The CZMA encourages states to develop coastal management programs, through, among other means, the federal consistency procedures of the CZMA. Upon certification of a state's coastal management program, a federal agency must conduct its activities (including federal development projects, permits and licenses, and assistance to state and local governments) in a manner consistent with the state's certified program. The processes established to implement this requirement is called a consistency determination for federal activities and development projects and a consistency certification for federal permits and licenses and federal support to state and local agencies.

The federal government certified the California Coastal Management Program (CCMP) in 1977. The enforceable policies of that document are Chapter 3 of the California Coastal Act of 1976. The Proposed Action is reviewed for consistency with these policies in Chapter 4 Environmental Consequences.

#### **3.3.2 Construction Impacts**

Construction impacts to the study area are assessed in Section 4.2 Construction Impacts.

#### **3.3.3 Department of Transportation Act: Section 4(f)**

Section 4(f) of the Department of Transportation (DOT) Act, which was recodified and renumbered as Section 303(c) of Title 49 United States Code (U.S.C.), states that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area or wildlife and waterfowl refuge of national, state or local significance, or land from an historic site of national, state or local significance, as determined by the officials having jurisdiction thereof, unless i) there is no feasible and prudent alternative to the use of such land and ii) such program or project includes all possible planning to minimize harm resulting from the use.

DOT Section 4(f) uniquely governs transportation programs and projects subject to approval by an agency that is part of the U.S. Department of Transportation, such as FAA. The responsible FAA official must consult all appropriate federal, state and local officials having jurisdiction over the affected section 4(f) resource(s) when determining whether program- or project-related

impacts would substantially impair the resource(s). However, following consultation, determinations of section 4(f) use by aviation programs and projects are the sole responsibility of FAA.

‘Use’ within the meaning of section 4(f) includes not only actual physical takings of such land but also adverse indirect impacts (constructive use) amounting to substantial impairment as well. When there is no physical taking but there is the possibility of constructive use, FAA must determine if the impacts would substantially impair the 4(f) resource. ‘Substantial impairment’ under section 4(f) is a specific standard relating to transportation use, and occurs only when the activities, features or attributes, purposes and values of a resource that contribute to its significance or enjoyment are substantially diminished.

Section 4(f) resources in the project vicinity are as follows:

- NTC Park managed by the City of San Diego
- NTC Historic District within Liberty Station (see Section 3.3.7 below)

Impacts to section 4(f) resources are addressed in Section 4.3.

### **3.3.4 Floodplains**

Executive Order 11988 directs federal agencies to take action to: reduce the risk of flood loss; minimize the impact of floods on human safety, health and welfare; and restore and preserve the natural and beneficial values served by floodplains. Order DOT 5650.2 contains DOT’s policies and procedures for implementing the executive order. Agencies are required to make a finding that there is no practicable alternative before taking action that would encroach on a base floodplain based on a 100-year flood (7 CFR 650.25).

If the agency finds that the only practicable alternative requires siting in the base floodplain, a floodplain encroachment would occur and further environmental analysis is needed. The FAA shall, prior to taking the action, design or modify the Proposed Action to minimize potential harm to natural floodplain values or within the base floodplain. The action is to be consistent with regulations issued according to section 2(d) of EO 11988. The FAA shall also provide the public with an opportunity to review the encroachment through its public involvement process and any public hearing presentations shall include identification of encroachment.

The analysis also shall indicate if the encroachment would be a ‘significant encroachment,’ that is, whether it would cause one or more of the following impacts:

1. The action would have a high probability of loss of human life.
2. The action would likely have substantial, encroachment-associated costs or damage, including interrupting aircraft service or loss of a vital transportation facility (e.g., flooding of a runway or taxiway, or having an important navigational aid out of service due to flooding, etc.); or
3. The action would cause adverse impacts on natural and beneficial floodplain values.

The boat channel is within Zone AE with a projected 100-year flood elevation of 6 feet. Adjacent lands are identified as within Zones D and X, where Zone D designates areas in which flood hazards are undetermined but possible, and Zone X designates areas determined to be outside the 0.2 percent annual chance floodplain. The ‘0.2 percent annual chance floodplain’ is that associated with a flood that has a 0.2 percent chance of being equaled or exceeded in any given year (FEMA 1997).

Impacts to floodplains are addressed in Section 4.4.

### **3.3.5 Fish, Wildlife, and Plants**

#### *Relevant Statutes*

Section 7 of the Endangered Species Act (ESA), as amended, applies to federal agency actions and sets forth requirements for consultation to determine if the Proposed Action “may affect” an endangered or threatened species. If an agency determines that an action “may affect” a threatened or endangered species, then Section 7(a)(2) requires each agency, generally the lead agency, to consult with the U.S. Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS). This consultation ensures that any action the agency authorizes, funds or carries out is not likely to jeopardize the continued existence of any federally listed endangered or threatened species or result in the destruction or adverse modification of critical habitat. (Note: The effects on fish, wildlife and plants include the destruction or alteration of habitat and the disturbance or elimination of fish, wildlife or plant populations.) As part of the consultation process, an Essential Fish Habitat (EFH) Assessment is prepared in order to evaluate potential impacts of the action alternatives on the EFH. This section constitutes the affected environment portion of the EFH assessment prepared for this project; it describes the existing aquatic communities within the study areas. Impacts to the EFH are given in Section 4.5.

Similarly, under the Magnuson-Stevens Act, federal agencies must consult with the NMFS with regard to any action authorized, funded, or undertaken that may adversely affect any essential fish habitat identified under the act. The consultation procedures are generally similar to ESA consultation requirements.

The Fish and Wildlife Coordination Act requires that federal agencies consult with state wildlife agencies and the FWS concerning the conservation of wildlife resources where the water of any stream or other water body is proposed to be controlled or modified by a federal agency or any public or private agency operating under a federal permit.

The Migratory Bird Treaty Act (MBTA 1998) prohibits private parties (and federal agencies in certain judicial circuits) from intentionally taking a migratory bird, their eggs or nests. Take is defined as “pursue, hunt, shoot, wound, kill, trap, capture, or collect” (16 U.S.C. §703). The MBTA prohibits taking, selling or other activities that would harm migratory birds, their eggs or nests, unless the Secretary of the Interior authorizes such activities under a special permit.



The Marine Mammal Protection Act (MMPA 2007), enacted on October 21, 1972, protects all marine mammals. The MMPA prohibits, with certain exceptions, the “take” of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S.

### *Biotic Communities*

**Land-based.** Two stations (Stas 23+00 and 24+85) of the MALSR fall upland; specifically the NTC Park, a recently-developed city park overseen by the City of San Diego Community Parks Division. The immediate park environs are geared towards passive recreation activities.

The boat channel is lined with rock and concrete riprap intended to protect the shoreline from erosion due to tides, storm waves and storm surges, and surface runoff; such a shoreline can provide elevated roosting sites for waterbirds to conserve energy and avoid harsh weather conditions (USDON 1999).

A major survey of avian species within San Diego Bay was conducted between March 2006 and February 2007, partially in support of the San Diego Bay Integrated Natural Resources Management Plan (USDON 1999) revision and in concert with the 2000 San Diego Bay INRMP (Tierra 2009).

Of particular relevance are the shorebird surveys which took place monthly (excluding May and July) between March 2006 and February 2007.

Of the 22 point count stations, one, Station 5, is located north of Harbor Island and near the mouth of the boat channel. Specific bird counts at this station are noted in Table 3-2.

**Table 3-2. Bird Abundance in Boat Channel and Vicinity**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Total</b>
Bird abundance at Point Count Station 5		
Western gull	<i>Larus occidentalis wymani</i>	143
Bufflehead	<i>Bucephala albeola</i>	51
Rock pigeon	<i>Columba livia</i>	47
Marbled godwit	<i>Limosa fedoa fedoa</i>	32
Ring-billed gull	<i>Larus delawarensis</i>	30
Western grebe	<i>Aechmophorus occidentalis occidentalis</i>	24
Heermann's gull	<i>Larus heermanni</i>	23
Eared grebe	<i>Podiceps nigricollis californicus</i>	18
Snowy egret	<i>Egretta thula thula</i>	17
Willet	<i>Tringa semipalmata inornatus</i>	15
Herring gull	<i>Larus argentatus smithsonianus</i>	14
Other species <sup>1</sup>		82

Total	496
Other (select) species sited in boat channel	
Sanderling	<i>Calidris alba</i>
Short-billed dowitcher	<i>Limnodromus griseus caurinus</i>
Long-billed dowitcher	<i>Limnodromus scolopaceus</i>
California least tern	<i>Sternula antillarum browni</i>
Brown pelican	<i>Pelecanus occidentalis californicus</i>

1. Species (28) with less than 10 sightings per species.

Source: Tierra 2009.

**Marine-based.** San Diego Bay is an exceptional harbor because of its deep entrance and protected conditions and is unusual among the world's river-dominated estuaries because it receives minimal freshwater input and has a high evaporation rate, similar to estuaries of South Africa.

The Mean (tide) Range (MR) – the difference in height between [mean high water](#) and [mean low water](#) – is 4.05 feet in San Diego Bay (NOAAa 2011). High tides vary seasonally from 6.5 feet (March) to 7.6 feet (November); low tides range from -0.6 feet (September) to -1.8 feet (December) (NOAAb 2011).<sup>3</sup> The bay experiences two high tides and two low tides every lunar day.<sup>4</sup>

The channel riprap and other manmade structures, i.e., pier pilings, bulkheads, floating docks, sea walls, mooring systems and derelict ships/ship parts, form extensive artificial habitat in the northern and central portions of the bay and to a lesser extent in the southern bay. San Diego Bay presently has 45.4 mi of armored shoreline, or 74 percent of total shoreline (61.2 mi) (USDON 1999).

These manmade structures support a wealth of invertebrates and seaweeds, including many of the exotic species that have invaded the bay. Native and nonnative lobster, crabs, worms, mussels, barnacles, echinoderms (starfish, sea urchins), sponges, sea anemones and tunicates (sea squirts) are all known to inhabit artificial structures. These areas also provide refuge and feeding areas for certain juvenile and predator fishes, such as perches, basses, dogfish, opaleye and croaker. Floating structures in shallow water, which are relatively undisturbed by human

<sup>3</sup> Datum is mean lower low water (MLLW), which is the chart datum of soundings.

<sup>4</sup> A lunar day is the time it takes for a specific site on the Earth to rotate from an exact point under the moon to the same point under the moon. Unlike a solar day (24 hours), however, a lunar day is 24 hours and 50 minutes. (NOAAc 2011).

activity, are used for roosting and foraging by waterbirds such as brown pelicans, cormorants and gulls. Buoys in the bay's deep water have long been used as haul out sites for sea lions, while the smaller buoys in the boat channel provide perches for waterbirds.

A portion of the boat channel falls within intertidal habitat, as defined in the INRMP. The intertidal habitat – ranging from +7.8 to -2.2 ft mean lower low water (MLLW) – encompasses the area between high and low tides and is subject to varying degrees of tidal submergence. “Hard” intertidal habitat (riprap and other structures) is plentiful – the dominant shoreline ‘edge’ in the boat channel – but not natural to the bay (USDON 1999). Shorebirds are the most visible species depending upon intertidal habitat for feeding, roosting and resting (see discussion above), and the boat channel is a known foraging area for the California least tern (SDCRAA 2009b). Several areas of narrow intertidal flats occur along the boat channel. The upper, drier areas (at low tide) are habitat for beach hoppers, sand fleas and isopods, while the lower, wetter areas are dominated by polychaetes, clams, snails, crabs and others (USDON 1999).

Perhaps the greatest area of the boat channel falls within shallow subtidal habitat. Continually submerged, these shallow habitats extend from the low tide zone (-2.2 to -12 ft MLLW)(USDON 1999). The abundance and biomass of fishes are higher in shallow waters. Bird abundance and diversity are also higher at these depths, possibly due to the higher abundance of fish. Shallow waters support many thousands of resident and migratory birds every year for foraging and resting. While all waterbirds are more abundant in shallow waters close to the shoreline, the groups that appear to use these areas preferentially are bottom feeding divers such as scoter and scaup, dabbling brant (*Branta bernicla*), plunge divers such as terns and the surface-foraging black skimmer (*Rynchops niger niger*) (USDON 1999).

The INRMP and other channel-specific environmental reports cite the presence of beds of eelgrass (*Zostera marina*), a type of seagrass and a marine angiosperm (USDON 1999, SDCRAA 2009b) in the boat channel. Eelgrass habitats rank among the most productive habitats in the ocean. (USDON 1999). Eelgrass beds are an important component of the San Diego Bay food web. Much of the eelgrass primary productivity enters the food web as detritus. Fish and invertebrates use eelgrass beds to escape from predators, as a food source and as a nursery. Fish produced from these beds are consumed by fish-eating birds, including the California least tern. Waterfowl, especially surf scoter, scaup and brant, are present in high numbers in late fall and winter. Black brant, in particular, rely heavily on eelgrass of central and south bay as they are one of the few birds that consume it directly. A small population of the federally endangered green sea turtle (*Chelonia mydas*) feeds on eelgrass growing in several beds near the power plant channel in south bay (USDON 1999).

The main navigation channel and the center of the basin at the northernmost reach of the boat channel lie in moderately deep subtidal habitat (-12 to -20 ft MLLW), as defined in the INRMP. Baywide, it represents areas that generally have been dredged in the past but are not maintained as navigation channels, whereas in the boat channel itself this habitat includes the main navigation channel. The endangered California least tern forages throughout the boat channel.

In June 2009, a survey of the estuarine fishes within San Diego Bay was conducted. The goal of this survey was to determine the abundance and size class structure of avian forage species in San Diego Bay during the critical timing of the least tern breeding season (Fisheries Survey 2009).

Total catch was greatest at the North-Central Ecoregion (50.4 percent of total), followed by the North Ecoregion (30.3 percent), South-Central Ecoregion (13.6 percent) and South Ecoregion (5.6 percent). The boat channel falls within the North Ecoregion. Table 3-3 lists fish abundance and biomass of the fish species captured in the North Ecoregion in June 2009.

The study found avian forage species (slough anchovy, shiner perch, giant kelpfish and arrow goby) in all appropriate size classes for foraging terns. (Fisheries Survey 2009).

**Table 3-3. Fish Catch by Total and Biomass, North Ecoregion, June 2009**

Common Name	Scientific Name	No.	Percent	Mass (g)	Percent
Slough anchovy	<i>Anchoa delicatissima</i>	883	55.9	2,965	19.8
Shiner perch	<i>Cymatogaster aggregata</i>	409	25.9	1,655	11.1
Dwarf surfperch	<i>Micrometrus minimus</i>	139	8.8	277	1.9
Giant kelpfish	<i>Heterostichus rostratus</i>	34	2.2	408	2.7
Topsmelt	<i>Atherinops affinis</i>	30	1.9	361	2.4
Black perch	<i>Embiotoca jacksoni</i>	25	1.6	3,195	21.4
Kelp bass	<i>Paralabrax clathratus</i>	23	1.5	591	4.0
Arrow goby	<i>Clevelandia ios</i>	19	1.2	1	0.0
Round stingray	<i>Urobatis halleri</i>	5	0.32	940	6.3
Opaleye	<i>Girella nigricans</i>	3	0.19	1,270	8.5
Spotted sand bass	<i>Paralabrax maculatofasciatus</i>	3	0.19	750	5.0
Horn shark	<i>Heterodontus francisci</i>	2	0.13	1,680	11.2
Rock wrasse	<i>Halichoeres semicinctus</i>	1	0.06	12	0.1
Barred sand bass	<i>Paralabrax nebulifer</i>	1	0.06	800	5.4
White seaperch	<i>Phanerodon furcatus</i>	1	0.06	11	0.1
Diamond turbot	<i>Pleuronichthys guttulatus</i>	1	0.06	35	0.2
Bay pipefish	<i>Syngnathus leptorhynchus</i>	1	0.06	2	0.0
		1,580			
Total		0	100.0	14,953	100.0

Source: Fisheries Survey 2009

Marine mammals include those mammals that spend the majority of their lives at sea and are almost totally dependent on marine organisms for food. Common examples include seals, sea lions, dolphins and whales. According to the INRMP, only a handful of mammal species are found in San Diego Bay:

- Species known to be regularly encountered within the bay
  - California sea lion
  - coastal bottlenose dolphin
- Species that are occasional-to-frequent visitors to the north channels of the bay
  - Pacific harbor seal
  - gray whale

No sightings in the boat channel of these four mammals are documented in any of the literature surveyed for this EA (USDON 1999, SDCRAA 2009b).

#### *Endangered and Threatened Species*

A recent (2008) environmental study of proposed improvements at SAN states that no listed endangered or threatened plant species are present at the airport (SDCRAA 2008). Given this fact and that the only land-based platforms included in the Proposed Action are located within a developed and maintained urban park (NTC Park), it is inferred that there are no listed endangered or threatened plant species in the immediate project area.

The 2008 study does note, however, that SAN is used by the California least tern (*Sterna antillarum browni*; federal and state listed as endangered) and the western snowy plover (*Charadrius alexandrinus nivosus*; Pacific coastal population federally listed as threatened). Under an agreement with the U.S. Fish and Wildlife Service, SAN airport management maintains an active and productive least tern nesting area on the airport proper. In 2008, a survey of the least tern nesting site at the airport estimated 122-124 breeding pairs, up significantly from 45-50 pairs in 2003 (Patton 2009). The least tern is known to forage in the boat channel (SDCRAA 2009b).

The study further notes that the California horned lark (*Eremophila alpestris actia*), the peregrine falcon (*Falco peregrinus anatum*) and the California brown pelican (*Pelecanus occidentalis californicus*) use the airport and bay environs for roosting and foraging habitats. While once on various federal and/or state lists of endangered, threatened and species of special concern, none of these species appears on these lists now (CDFG 2008, CDFG 2011a).

### **3.3.6 Hazardous Materials, Pollution Prevention, and Solid Waste**

Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances and wastes. The two statutes of most importance to the FAA in proposing actions to construct and operate facilities and navigational aids are the Resource Conservation and Recovery Act (RCRA) (as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as

amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA or Superfund) and the Community Environmental Response Facilitation Act of 1992. RCRA governs the generation, treatment, storage and disposal of hazardous wastes. CERCLA provides for consultation with natural resources trustees and cleanup of any release of a hazardous substance (excluding petroleum) into the environment (FAA 2006).

CERCLA, as amended, requires that the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) include a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants or contaminants throughout the United States. The National Priorities List (NPL) constitutes this list; sites on the NPL are cited frequently as “Superfund sites.” The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. As of March 10, 2011, there is only one NPL site in San Diego County: Camp Pendleton Marine Corps Base; CERCLIS ID #CA2170023533; Final Listing Date: 11/21/1989 (EPA 2011b).

### **3.3.7 Historical, Architectural, Archeological, and Cultural Resources**

The National Historic Preservation Act (NHPA) of 1966 is the primary federal law governing historic preservation in the U.S. It establishes the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP) within the National Park Service, and mandates all federal agencies consider the impacts of a federal action on properties listed in or eligible for listing in the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to define and document the Area of Potential Effects (APE) in consultation with the State Historic Preservation Officer (SHPO). Within the APE, the federal agency must identify historic properties and determine the effect of the proposed project on them. Historic properties are buildings, structures, objects, sites and districts with significance in American history, architecture, archaeology, engineering and culture (Figure 3-4). These properties may be listed in or eligible for the National Register of Historic Places (NRHP).

According to 36 CFR 800.16(d), the Area of Potential Effects is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. Defining the APE is a process that considers the interplay of three factors: geographic area or setting; the scale and nature of the undertaking; and potential effects.

For the proposed MALSR rehab project, the APE is defined as a 300-foot offset from the MALSR platforms beginning with Sta. 15+00 and ending at Sta. 24+85 (Figure 4-2 depicts the APE). Surveys of published data indicate there are no historic properties on or eligible for inclusion in the NRHP within the APE.

The boat channel has been dredged over the years (USDON 1999) and the two land-based MALSR platforms are within the recently-developed NTC Park. Both the marine and land areas within the project area have been disturbed in the past; accordingly, there likely is little archaeological significance to these areas.



**Figure 3-4 NTC Historic District**

### **3.3.8 Natural Resource and Energy Supply**

There are no special purpose laws for natural resources and energy supply. It is the policy of FAA, consistent with NEPA and the CEQ regulations, to encourage the development of facilities that exemplify the highest standards of design including principles of sustainability.

Impacts to natural resources and energy supply are assessed in Section 4.5.

### **3.3.9 Water Quality**

The Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, EPA has implemented pollution control programs such as setting wastewater standards for industry, and has set water quality standards for all contaminants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches (EPA 2011c).

Project proponents applying for a NPDES permit or a section 404 permit from the U.S. Army Corps of Engineers must obtain a water quality certificate (WQC) to comply with section 401 of the Clean Water Act. Both a section 404 permit and a WQC will be required for this federal action.

Present day water quality concerns for San Diego Bay focus mainly on the quantities of contaminants found in the sediments, shellfish and other marine organisms. Monitoring studies and research are continuing to seek answers to the many questions about the water and sediment quality condition in the bay. The entire San Diego Bay is listed as an impaired water body (under Clean Water Act (CWA) Sec. 303[d]) by the California State Water Resources Control Board (SWRCB) due to benthic community degradation and toxicity. Contaminants that are currently of concern in San Diego Bay include: chlordane (total); chromium; copper; mercury; tributyltin (TBT); zinc; polycyclic aromatic hydrocarbon (PAH) compounds; and polychlorinated biphenyls (PCBs) (total) (USDON 1999).

The summary findings of a remedial investigation conducted as part of the development of the NTC park, include findings relevant to the study area. Two relevant key summary findings, finalized and published in October 2003 (Navy 2003), are as follows:

- Based on the physical characteristics of the boat channel and the observed distribution of sediment chemistry, the boat channel accumulates fine sediments, organic matter and contaminants in its northern end and may continue to do so. The fine sediments, organic matter and contaminants are accumulated from a large region that includes the former NTC, MCRD San Diego, the city of San Diego and SAN.
- Based on the results of the investigation, the boat channel was divided into two sections: northern and southern. The northern section, in which the study area for the Proposed Action is located, contains the stations identified as areas of ecological concern and potential areas of ecological concern, and was recommended for further study and analysis.<sup>5</sup> The southern section was recommended for no further action.

There are no EPA-designated sole source aquifers in the project vicinity (EPA 2011d).

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<sup>5</sup> Although this study is underway, it is now stalled pending resolution of technical questions being discussed between representatives of the U.S. Navy and the CA Regional Water Quality Control Board (Navy 2011a).



## 4 ENVIRONMENTAL CONSEQUENCES

This section assesses potential impacts/benefits in nine environmental areas: coastal resources; construction impacts; Department of Transportation Act: Section 4(f); floodplains; fish, wildlife and plants; hazardous materials, pollution prevention and solid waste; historic, architectural, archaeological and cultural resources; natural resources and energy supply; and water quality. Mitigation measures are presented in Chapter 5 Mitigation.

### 4.1 Coastal Resources

Given complex issues regarding coastal zone jurisdiction and review procedures, advice was sought from the Federal Consistency Coordinator with the California Coastal Commission on the issue of federal consistency and whether a coastal development permit was required.

In communications relating to this project, the coordinator responded as follows:

**“The proposed repair and maintenance work at San Diego International Airport is a federal agency (FAA) activity and thus: (1) requires the FAA to prepare and submit either a consistency or negative determination to this office; and (2) the FAA is not required to apply for a coastal development permit. We have determined that the proposed FAA activities would not affect coastal zone resources and therefore the FAA should submit a negative determination to the Commission[.]”**

Copies of all correspondence with the Federal Consistency Coordinator are present in Appendix A Correspondence, as is the Negative Determination addressed to the California Coastal Commission and the Commission’s response.

### 4.2 Construction impacts

Construction impacts alone are rarely significant pursuant to NEPA. Many construction impacts are temporal and sporadic in nature and of a defined duration.

Specific potential impacts to section 4(f) properties; fish, wildlife and plants; water quality; and other relevant impact categories are addressed under the relevant topic headings in Chapter 5.

#### 4.2.1 No Action Alternative

Activity in this alternative consists of on-going basic maintenance to the existing MALSR platforms. Basic maintenance may consist of, but not be limited to, bulb replacement; scraping and painting of various elements; and replacement of broken or rotting members of the wooden platforms, stair rungs, structural members, etc.

Maintenance also may encompass repairs to (but not replacement of) the rotting timber piles, which may encompass repairs to and/or removal-and-replacement of the exterior coating of concrete as well as injection of various materials into the rotting piles or the introduction of structural splices in an attempt to restore and/or maintain structural integrity.

Basic maintenance occurs on the platform itself and access to the platform is provided by a small 12-14-foot-long motor boat or launch. The boat is tied to one of the piers supporting the platform and access to the platform is provided by the access ladder. Basic hand tools are involved in maintenance, i.e., portable drills, saws, hammers, screwdrivers, sanders, scrapers, paint brushes and so forth. The work is generally of short-term duration and sporadic – on an as-needed basis.

There are no significant construction impacts in the No Action alternative.

#### **4.2.2 Proposed Action Alternative**

The bulk of the construction in the Proposed Action Alternative will take place in the marine environment from a barge situated in the boat channel. Prior to construction, turbidity curtains will be deployed around the construction site to contain any sediment disturbed during construction. The existing pressure-treated wooden platforms – four in total – will be dismantled, removed and all elements disposed of offsite. The six piles, two each at Stas; 17+00, 19+00 and 21+00, will be cut at the channel mudline, placed on a barge and disposed of offsite at a mainland Class II landfill. Past removal and disposal of creosote marine pilings in the State of California occurred in this same manner (Werme 2010), and the current creosote treated marine pilings meets the EPA exemptions for landfill disposal (EPA 2008). New piles will be driven into the channel bottom and the platforms rebuilt on the new piles. If wood or steel marine pilings are chosen for the project, vibratory hammers will be used to set the piles to minimize noise and lessen sediment disturbance. If fiberglass or concrete composite marine pilings are chosen for the project, water-jetting will be used to install the piles to about 18 feet of depth, and convention diesel or air hammers will drive the piles to its' final depth since vibratory hammers have proven damaging to pilings made of this material. Neither of these options will cause a significant impact. The construction noise created due to driving the replacement piles would be temporary and have no significant noise impacts (see section 3.2.5). In addition, an OSHA-compliant ladder will be provided as part of the new platform construction.

At the two land-based MALSR platforms – Stas. 23+00 and 24+85 – the only work item is the replacement of the existing access ladders with versions that conform to present-day OSHA standards.

Access to/from the construction barge will likely be by small boat or launch, through arrangements made by the construction contractor at the MCRD San Diego marina located just north of the MALSR platforms. Access to the two land-based platforms will be through NTC Park over a long-standing easement, which also covers access to the platforms in the boat channel (FAA 2010a).

Of critical importance is the continued safe operation of the airport at all times, particularly during landings to Runway 9 and take-offs from Runway 27. It is imperative, therefore, that penetrations by a crane, pile-driver or other equipment to the approach and departure surfaces defined for the Runway 9 environment of SAN be prevented. Of the two surfaces, the approach surface to Runway 9 is the more restrictive.

The approach surface to Runway 9 at SAN is a gradient of 34:1 of various widths to the displaced Runway 9 threshold. These dimensions frequently referred to as Part 77 surfaces due to their coding within Federal Aviation Regulations, are federal design standards governing the approach and departures to all airports in the U.S (FAA 2003).<sup>6</sup> The governing elevations of this surface to Runway 9 at SAN are listed in Table 4-1.

**Table 4-1 Part 77 Approach Surface to Runway 9 at SAN**

MALSR Platform	Elevation <sup>1</sup>
Sta. 15+00	53.39
Sta. 17+00	59.27
Sta. 19+00	65.16
Sta. 21+00	71.04
Sta. 23+00	76.92
Sta. 24+85	82.36

1. NAVD 88 datum.

Given that the pile lengths are on the order of 50-65 ft, it is likely that a crane setting the piles in place initially would ‘penetrate’ or extend into the approach surface at some point. This is viewed as an impediment to safety and the operational environment at SAN; accordingly, this is a potential impact due to construction and one which requires mitigation.

The approach surface is a consideration if the airspace over the MALSR platforms is ‘active,’ i.e., a landing on Runway 9 (west to east) or a take-off from Runway 27 (east to west). One mitigation approach is to operate the airport in a configuration – arrivals to Runway 27, departures from Runway 9 – that removes aircraft activity over the boat channel and MALSR platforms during the periods that the piles are being set. This operating configuration puts both landings and take-offs over the opposite end of the airport – Runway 27 – away from the Runway 9 environment.

Another possible mitigation option includes scheduling the pile-setting activity on days and/or for periods within a day when aircraft activity over the boat channel is absent.

Furthermore, the repair of the MALSR will result in a time period where the flasher lights portion of the system will have to be taken out of service to be reconnected on the new platforms. For this period, the MALSR light credit for the runway would be reduced or eliminated, meaning tighter requirements for aircrafts coming in on approach. To mitigate this impact, the FAA will decide on one of two possible mitigation options. For both options, the new

<sup>6</sup> [Federal Aviation Administration (FAA) 2003. *Part 77: Objections Affecting Navigable Airspace*. This FAA publication of the basic Part 77, effective May 1, 1965, incorporates Amendments 77-1 through 77-11 with preambles. ]

piles and platforms will be completed next to the old MALSRS system without taking the current MALSRS system down. Once this construction is completed, one mitigation option is to take the old MALSRS Light towers down, then transfer and electrically connect them to the new platforms. This transfer will occur all at once, eliminating the light credit for the MALSRS completely, but reducing the amount of time without flasher lights from about eight weeks down to two. The second mitigation option would be to start from the MALSRS lighting system closest to the runway, and transfer the flasher lights from an old tower to a new tower one at a time. This would result in only one lighting system being disconnected at a time, which would reduce, but not eliminate, the light credit for the MALSRS. This option has the possibility of extending the construction period over two weeks.

The FAA will select a particular mitigation option for the flasher light portion of the MALSRS via a meeting of a “Shutdown Committee,” comprised of representative of SAN airport that will determine if the mitigation option is acceptable for airport safety. This process usually takes about 30-40 days. Once the chosen mitigation option is incorporated into the proposed action, penetrations to the approach surface to Runway 9 and the decreased light credit for the MALSRS flasher light system will be mitigated, and therefore will not constitute significant construction impacts. The chosen mitigation option will be presented in the FONSI.

### **4.3 Department of Transportation Act: Section 4(f)**

For section 4(f) properties, the initial assessment will determine whether the requirements of section 4(f) are applicable.

An impact to 4(f) resources would occur pursuant to NEPA when a Proposed Action either involves more than a minimal physical use of a section 4(f) property or is deemed a constructive use substantially impairing the 4(f) property, and mitigation measures do not eliminate or reduce the effects of the use below the threshold of significance (e.g., by replacement in kind of a neighborhood park). If there is a physical or constructive use, FAA is responsible for complying with section 4(f) even if the impact is less than significant for NEPA purposes.

#### **4.3.1 No Action Alternative**

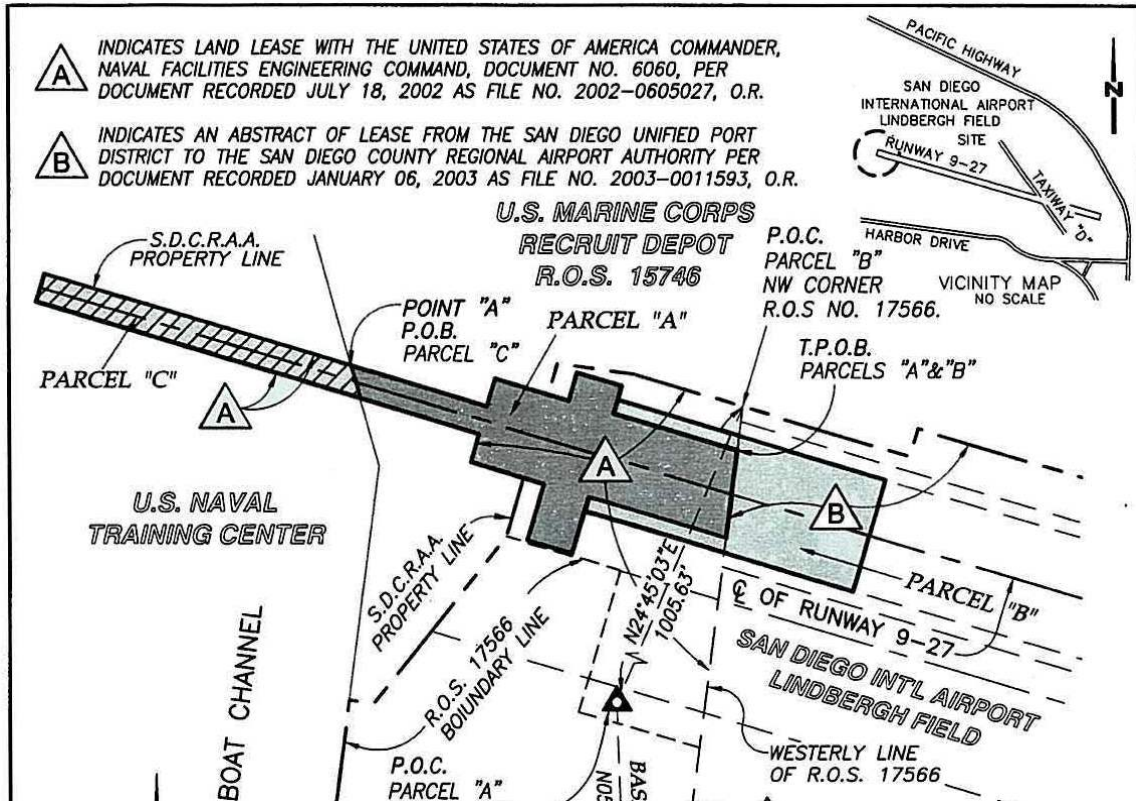
FAA has determined that there is no physical taking of section 4(f) properties in the No Action alternative. While two platforms – Stas. 23+00 and 24+85 – are located physically within NTC Park, a city park, access to these platforms is provided through a land lease/easement originally with the U.S. Navy and now with the City of San Diego (Figure 4-1).<sup>7</sup>

Furthermore, FAA has determined that the basic maintenance activities within the No Action alternative do not constitute a constructive use of NTC Park.

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<sup>7</sup> The relevant parcel is identified as “Parcel ‘C’” in FAA Easement No. 031-003 and consists of approximately 2.61 acres (FAA 2010a). The requirements of the land lease/easement were conveyed to the City of San Diego in various parcel conveyance documents from the U.S. Navy (Bingham 2011A).

In summary, there are no significant impacts to section 4(f) properties in the No Action alternative.



**Figure 4-1 MALSRL Lease Parcels in FAA Easement No. 013-003**

Source: (FAA 2010a)

### 4.3.2 Proposed Action Alternative

FAA has determined that there is no physical taking of section 4(f) properties in the Proposed Action Alternative. While two platforms – Stas. 23+00 and 24+85 – are located physically within NTC Park, a city park, access to these platforms is provided through a land lease/easement originally with the U.S. Navy and now with the City of San Diego (Figure 4-1).<sup>2</sup>

Furthermore, FAA has determined that the work elements within the Proposed Action Alternative do not constitute a constructive use of NTC Park. There will be construction noise associated with the driving of the piles; however, the existing environmental noise in this area of NTC Park already falls within the noisiest environment of the airport proper (see Section 3.2.5 above). In addition, the noise associated with driving the piles is intermittent and of relatively short duration, and, therefore, does not diminish the activities, features or attributes of the park or enjoyment of the park.

In summary, there are no significant impacts to section 4(f) properties in the Proposed Action Alternative.

## **4.4 Floodplains**

The existing facility lies within a floodplain and, thus, activities associated with both the No Action and Proposed Action alternatives will occur in the floodplain.

Floodplain impacts would be significant pursuant to NEPA if they would result in notable adverse impacts on natural and beneficial floodplain values. Mitigation measures for base floodplain encroachments may include committing to special flood-related design criteria, elevating facilities above base flood level, locating nonconforming structures and facilities out of the floodplain, or minimizing fill placed in floodplains.

### **4.4.1 No Action Alternative**

The layout of the MALSR is in accordance with national design standards established and maintained by FAA in FAA Order JO 6850.2B (FAA 2010b), *Visual Guidance Lighting Systems* (August 2010). Given the layout of Runway 9-27 at SAN, and the location and dimensions of the boat channel, four platforms of the MALSR layout fall within a floodplain. There are no alignments and/or configurations of the MALSR, which would avoid encroachment on the floodplain; accordingly, there is no practicable alternative to encroachment on the floodplain.

The encroachment is not considered a “significant encroachment” as defined in the applicable regulations (see section 3.3.4).

Basic maintenance activities would not result in notable adverse impacts on natural and beneficial floodplain values; accordingly, there are no significant impacts to the floodplain.

### **4.4.2 Proposed Action Alternative**

The layout of the MALSR is in accordance with national design standards established and maintained by FAA in FAA Order JO 6850.2B (FAA 2010b), *Visual Guidance Lighting Systems* (August 2010). Given the layout of Runway 9-27 at SAN, and the location and dimensions of the boat channel, four platforms of the MALSR layout fall within a floodplain. There are no alignments and/or configurations of the MALSR, a vital navigation feature at SAN, which would avoid encroachment on the floodplain; accordingly, there is no practicable alternative to encroachment on the floodplain.

The encroachment is not considered a “significant encroachment” as defined in the applicable regulations (see section 3.3.4).

The six replaced piles are of a diameter no bigger than the existing piles. The platforms will be rebuilt at an elevation above the 100-year flood elevation. There will be no diminution in the flow and flood capacity of the boat channel in a 100-year flood. Accordingly, the Proposed

Action Alternative would not result in notable adverse impacts on natural and beneficial floodplain values; therefore, there are no significant impacts to the floodplain.

## **4.5 Fish, Wildlife and plants**

An impact to federally-listed threatened and endangered species would occur when the FWS or NMFS determines that the Proposed Action would likely jeopardize the continued existence of the species in question, or would result in the destruction or adverse modification of federally-designated critical habitat in the affected area. As part of the consultation process, this section constitutes the environmental consequences section of the EFH assessment prepared for this project; it describes potential impacts from the No Action and Proposed Action alternatives to the existing aquatic communities within the study area.

The involvement of federally-listed threatened or endangered species and the possibility of impacts as potentially serious as extinction or extirpation, or destruction or adverse modification of designated critical habitat, are factors weighing in favor of a finding of significance. However, an action need not involve a threat of extinction to federally-listed species to meet the NEPA standard of significance. Lesser impacts including impacts on nonlisted species could also constitute an impact. In consultation with agencies and organizations having jurisdiction or special expertise concerning the protection and/or management of the affected species, FAA will consider factors affecting population dynamics and sustainability for the affected species such as reproductive success rates, natural mortality rates, non-natural mortality (e.g., road kills and hunting) and the minimum population levels required for population maintenance. Relevant information may be obtained from state and local wildlife management agencies and the scientific literature concerning wildlife management (e.g., USDA National Wildlife Research Center library).

### **4.5.1 No Action Alternative**

Activity in this alternative consists of on-going basic maintenance to the existing MALSR platforms (e.g., bulb replacement, painting, replacement of broken or rotting framing members and so forth). Maintenance also may encompass more extensive repairs but nothing approaching heavy construction.

Activity in the No Action alternative is minor, sporadic and of relatively short duration. Such activity is deemed unlikely to jeopardize the continued existence of any flora or fauna species or result in the destruction or adverse modification of federally-designated critical habitat in the affected area. Accordingly, there are no significant impacts to fish, wildlife and plants due to the No Action alternative.

### **4.5.2 Proposed Action Alternative**

There are known federal and state listed endangered species in the project area. Environmental documents for a recent drainage outfall project undertaken by SAN management south of the MALSR platforms noted the use of the boat channel as forage territory by the California least

tern (SDCRAA 2009b). The airport itself is home to a large community of least terns (SDCRAA 2008, SDCRAA 2009a).

California least terns breed from San Francisco Bay south to Baja California. In San Diego County, this species is a fairly common summer resident from early April to the end of September, moving on to wintering areas along the Pacific Coast of South America. This small migratory tern nests in colonies on undisturbed, sparsely vegetated, flat areas with loose, sandy substrate adjacent to open water foraging areas. Prey includes northern anchovy, top smelt, killifish, mosquito fish, shiner, surf perch and mudflat gobies.

The initial decline of the population of the California subspecies is attributed primarily to loss of nesting habitat. Few undisturbed beach nesting areas remain and California least terns are now found in varied habitats ranging from mudflats to airports, as at SAN. The terns exhibit an attachment to the colony site where they first breed successfully.

Given the use of the boat channel as foraging territory by the California least tern, there is the potential for impacts to the least tern due to the Proposed Action Alternative. Mitigation is proposed in the timing of construction.

In its granting of a CWA Section 401 Water Quality Certification (#09C-006) on the Remain Over Night (RON) Apron Storm Water Outfall Project – a drainage outfall project located approximately 500 ft south of the MALSR platforms, the California Regional Water Quality Control Board – San Diego Region listed this as a project condition: **“California least tern, *Sterna antillarum browni*, Breeding Season. No activities authorized under 09C-006 will be conducted within 1,000 yards of a California least tern breeding colony from April 1 through September 30.”** (Roberts 2009)

While no California least tern breeding colonies within 1,000 yards of the project area are known to exist, of note in the project condition is the time frame stated: April 1 – September 30, the period when the least tern resides in the bay region. FAA proposes to mitigate any potential impacts to the California least tern by beginning construction October 1 or later and concluding it by April 1 the following year; in effect, undertaking construction when the California least tern has left the bay region on its winter migration. With this proposed mitigation, there are no significant impacts to federal or state listed species due to the Proposed Action Alternative.

There is well-documented evidence of eelgrass in the bay area and the boat channel. The INRMP documents the presence of eelgrass beds throughout the bay region (USDON 1999). A graphic prepared in the San Diego Bay 2008 Eelgrass Survey notes eelgrass beds lining the boat channel (Merkel 2008). Pre- and post-construction eelgrass surveys conducted for a drainage outfall project south of the MALSR platforms document the nearshore presence of eelgrass beds in the boat channel (URS 2009, URS 2010).

Of particular interest is pre- and post-sampling eelgrass surveys performed in relation to an extensive sediment sampling program conducted in the boat channel by the U.S. Navy in



September-November 1998 (Merkel 1998a, Merkel 1998b). Excerpts from the pre-sampling survey report are as follows:

**The survey revealed extensive coverage of eelgrass along the shoreline extending from approximately 0 m MLLW to depths of -2.5 m [-8.2 ft] MLLW. The eelgrass located nearshore and at the top of the slope appeared to be in excellent health. ... The eelgrass occurred in a broad contiguous bed along the shoreline, restricted by desiccation stress at the upper limits and either steep slopes or light limitations at the lower limits, and sloped to the base of the channel. Most of the deep portions of the channel, including much of the northern basin, did not support eelgrass as a result of natural light limitation at these depths.** (Merkel 1998a)

Figure 2 in the pre-sampling eelgrass survey report does not depict any eelgrass beds in the vicinity of the MALSR platforms (Merkel 1998a).

Engineering construction documents prepared for the MALSR placement in 1982 indicate channel depths ranging from -14 to -16 ft MLLW at the three stations (Stas. 17+00, 19+00, 21+00) where existing piles will be removed and replaced (FAA 1992). At these depths, consistent with the findings of the 1998 eelgrass surveys, eelgrass beds are unlikely to occur. Accordingly, FAA has determined that there will be no significant impacts to eelgrass beds, an essential fish habitat, due to the Proposed Action Alternative.

Informal consultation under Section 7 of the Endangered Species Act (ESA) was initiated with the U.S. Fish & Wildlife Service. Similarly, informal consultation under Section 7 of the Endangered Species Act and under the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act was initiated with the National Marine Fisheries Service. Informal consultation under the California Endangered Species Act was initiated with the California Department of Fish & Game. All of the consultations resulted in agreements from the agencies with the analysis, and copies are provided in Appendix A.

## **4.6 Hazardous Materials, Pollution Prevention and Solid Waste**

Regarding the finding of impacts under this resource category, generally additional information or analysis is needed only if problems are anticipated with respect to meeting the applicable local, state, tribal or federal laws and regulations on hazardous or solid waste management. Actions that involve property listed (or potentially listed) on the NPL are considered significant pursuant to NEPA by definition.

### **4.6.1 No Action Alternative**

The basic maintenance activities in the No Action alternative are relatively small in scale, frequency and duration, and will not generate, disturb, transport, treat, store or dispose of any hazardous chemicals within the context of RCRA. While solid wastes may be generated in the

conduct of these maintenance activities, the nature and quantity of such wastes are manageable and handled and disposed of as common construction/maintenance debris.

#### **4.6.2 Proposed Action Alternative**

The work items in the Proposed Action Alternative will result in no change in energy amounts and source or other use of natural resources. The energy used to operate the MALSR is minor and does not strain the existing supply system. Therefore, there are no significant impacts to natural resources and energy supply.

Replacement of the damaged creosoted piles (6) and the degraded wooden platforms (4) does afford the opportunity to incorporate sustainable elements into the MALSR design. Various piles and pile materials were considered in the rehab of the MALSR platforms, among them the following:

- Treated wood piles
- Treated wood piles with a concrete veneer
- Concrete piles
- Plastic piles

The selected pile type/material has not yet been determined, but all of the above listed options would have no significant impact.

The existing pressure-treated wood platforms on Stas. 15+00, 17+00, 19+00 and 21+00 – all located in the boat channel – will be replaced with platforms made of a recycled and/or composite material such as Trex®. These materials are an inert combination of wood and plastic fibers from reclaimed or recycled resources (e.g., sawdust, used pallets from woodworking operations, recycled plastic grocery bags and so forth). Many of these items and materials likely would have ended up in landfills.

It has been determined that the current creosoted pilings are considered hazardous waste by RCRA. The Proposed Action Alternative will have no significant impact negatively on the site related to the pilings, but will create a benefit by removing the hazardous material from the site. There are other benefits associated with the Proposed Action Alternative as new materials introduced in the Proposed Action Alternative are more durable (thus requiring less frequent replacement) than other products, (i.e., treated wooden piles), and promote sustainability, (i.e., the composite material used in lieu of pressure-treated wood). In addition, six creosote-treated piles, sources for PAHs, will be removed from the marine environment and disposed of properly. Similarly, four platforms made of CCA-treated lumber will be removed from the marine environment and disposed of properly. The removal and safe disposal of these materials will prevent further pollution of the bay.

## **4.7 Historical, Architectural, Archeological and Cultural Resources**

As mentioned in Chapter 3, for the proposed MALSR rehab project, the APE is defined as a 300-foot offset from the MALSR platforms beginning with Sta. 15+00 and ending at Sta. 24+85 (Figure 4-2).

### **4.7.1 No Action Alternative**

All activities in the No Action alternative will occur within the APE. Any impacts associated with these basic maintenance activities i) are not significant and ii) do not exceed the boundaries of the APE. As there are no historic properties on or eligible for inclusion in the NRHP within the APE the FAA makes a Finding of No Historic Properties Affected.

### **4.7.2 Proposed Action Alternative**

All activities in the Proposed Action Alternative will occur within the APE. Any impacts associated with work items in the Proposed Action Alternative i) are not significant and ii) do not exceed the boundaries of the APE. As there are no historic properties on or eligible for inclusion in the NRHP within the APE (Figure 4-2) the FAA makes a Finding of No Historic Properties Affected. Informal consultation under Section 106 of NHPA took place with the CA SHPO. Appendix A contains all correspondence.



**Figure 4-2 Area of Potential Effect (APE)**

## 4.8 Natural Resource and Energy Supply

It is the policy of FAA, consistent with NEPA and CEQ regulations, to encourage the development of facilities that exemplify the highest standards of design including principles of sustainability. All elements of the transportation system should be designed with a view to their aesthetic impact, conservation of resources such as energy, pollution prevention, harmonization with the community environment and sensitivity to the concerns of the traveling public.

### 4.8.1 No Action Alternative

The basic maintenance activities in the No Action alternative are relatively small in scale and duration, and will entail no changes in basic materials used at present, energy amounts and source, or other use of natural resources. The energy used to operate the MALSRAPE is minor and does not strain the existing supply system. Therefore, there are no significant impacts to natural resources and energy supply.

#### **4.8.2 Proposed Action Alternative**

The work items in the Proposed Action Alternative will result in no change in energy amounts and source or other use of natural resources. The energy used to operate the MALSR is minor and does not strain the existing supply system.

Replacement of the damaged piles (6) and the degraded wooden platforms (4) does afford the opportunity to incorporate sustainable elements into the MALSR design. See discussion in Section 4.6.

Accordingly, there are no significant impacts associated with the Proposed Action Alternative in regards to natural resources and energy supply. There are benefits associated with the Proposed Action Alternative as new materials introduced in the Proposed Action Alternative are more durable (thus requiring less frequent replacement) than other products and promote sustainability; see full discussion in Section 4.6.

### **4.9 Water Quality**

FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, states that environmental assessments are to include sufficient description of a Proposed Action's design, and mitigation measures. This includes best management practices developed for nonpoint sources under section 319 of the CWA, and construction controls to demonstrate that water quality standards and any permit requirements will be met. Consultation with the appropriate officials must be undertaken if there is the potential for contamination of an aquifer designated by the EPA as a sole or principal drinking water resource for the area. Where appropriate, a CWA Section 401 water quality certification must be issued before FAA approves the Proposed Action.

Water quality regulations and permit/certification requirements will normally identify any deficiencies in the Proposed Action; any significant deviation from these regulations and/or requirements will raise issues regarding impacts.

#### **4.9.1 No Action Alternative**

Activity in this alternative consists of on-going basic maintenance to the existing MALSR platforms, i.e., bulb replacement, painting, replacement of broken or rotting framing members and so forth. Maintenance also may encompass more extensive repairs but nothing approaching heavy construction.

Activity in the No Action alternative is minor, sporadic and of relatively short duration. Such activity is deemed unlikely to jeopardize water quality in the project area. Accordingly, there are no significant impacts to water quality due to the No Action alternative.

#### **4.9.2 Proposed Action Alternative**

Based on the Navy 2003 report discussed in section 3.4.1 and the on-going nature of remedial studies within the northern reach of the boat channel, FAA has determined that there are

potential impacts to water quality in the Proposed Action Alternative. The following mitigation measures are proposed to address these potential impacts:

- FAA will remove the six piles to be replaced by cutting them at the mudline and removing the cut section from the marine environment; the remaining 'stub' or length of buried pile will remain in the channel bottom. The location of the six new piles will be shifted slightly (within FAA design standards) to clear the buried pile section to remain. This construction method will minimize disturbance to the channel bottom sediments and their suspension in the channel.
- FAA will require the contractor to deploy turbidity curtains prior to cutting and removing the piles. These curtains will be used to limit the transport of any sediments placed in suspension due to the construction activity. These curtains will be maintained for the duration of construction.
- Best management practices for construction in a marine environment will be specified and enforced.

Additional information on all proposed mitigation measures is presented in Chapter 6 Mitigation.

With this proposed mitigation, there are no significant impacts to water quality due to the Proposed Action Alternative.

Informal discussions with a representative of the California Regional Water Quality Control Board – San Diego Region were initiated regarding the general outlines of MALSR rehabilitation project. FAA will prepare an application for a CWA Section 401 Water Quality Certification once the engineering design, details and product specifications are further established.

## 5 MITIGATION

The Proposed Action will incorporate the following mitigation measures:

No.	Reference	Topic	Description
1A	NA	Notice to Mariners	There is some recreational boating activity in the boat channel related to the marina located north of the MALSR. Prior to construction, FAA will file a notice to mariners with the U.S. Coast Guard and will notify marina management of the estimated start and duration of construction.
1B	NA	Notice to Airmen	In the event that the MALSR is out of service for any period during construction, FAA itself will issue a notice to airmen and will coordinate the temporary shutdown with FAA air traffic control personnel and SAN representatives.
2	NA	Construction Start Date	The boat channel is a known foraging area for the California least tern, a federal and state endangered species. Construction will commence after October 1 in the construction year (estimated as fall 2012) to allow the least tern to migrate out of the bay region.
3	NA	Recycled/Salvaged Materials	Where feasible and practicable, building materials made of recycled elements and products will be utilized. Construction specifications will encourage the contractor to salvage and reuse offsite all materials, where practicable.
4	NA	Construction Techniques	FAA will employ specific construction measures and techniques to minimize disruption to the environment. The decayed piles will be cut at the mudline – and subsequently removed – to minimize disturbance to channel bottom sediments. If wood or steel marine pilings are chosen for the project, vibratory hammers will be used to set the piles to minimize noise and lessen sediment disturbance. If fiberglass or concrete composite marine pilings are chosen for the project, water-jetting will be used to install the piles to about 18 feet of depth, and convention diesel or air hammers will drive the piles to its' final depth since vibratory hammers have proven damaging to pilings made of this material. Turbidity curtains will be used to limit the transport of any sediments placed in suspension due to the construction activity. Best management practices for construction in a marine environment will be specified and enforced.

No.	Reference	Topic	Description
5	NA	Crane Heights	<p>Construction cranes may penetrate the approach surface to Runway 9, creating an unacceptable safety conflict. One mitigation approach is to operate the airport in a configuration – arrivals to Runway 27, departures from Runway 9 – that removes aircraft activity over the boat channel and MALSR platforms during the periods that the piles are being set. This operating configuration puts both landings and take-offs over the opposite end of the airport – Runway 27 – away from the Runway 9 environment.</p> <p>Another possible mitigation option includes scheduling the pile-setting activity on days and/or for periods within a day when aircraft activity over the boat channel is absent.</p> <p>The selection of a particular mitigation option will be determined after further coordination among the FAA facilities unit which oversees the MALSR, FAA air traffic control personnel at SAN and SAN representatives.</p>
6	NA	Flasher Lights	<p>The repair of the MALSR will result in a time period where the flasher lights portion of the system will have to be taken out of service to be reconnected on the new platforms. For this period, the MALSR light credit for the runway would be reduced or eliminated, meaning tighter requirements for aircrafts coming in on approach</p> <p>One mitigation option is to take the old MALSR Light towers down, then transfer and electrically connect them to the new platforms all at once.</p> <p>The second mitigation option would be to start from the MALSR lighting system closest to the runway, and transfer the flasher lights from an old tower to a new tower one at a time.</p> <p>The FAA will select a particular mitigation option for the flasher light portion of the MALSR via a meeting of a “Shutdown Committee,” comprised of SAN airport representatives.</p>



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 Construction Site Best Management Practices<sup>1</sup>


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7	NS-5	Clear Water Diversion	FAA will specify the use of turbidity curtains to deflect and contain sediment within a limited area around the construction site and provide retention time for particles to fall out of suspension.
8	NS-11	Pile Driving Operations	FAA will specify compliance with these BMPs as described in the Caltrans Construction Site BMP Manual. <sup>1</sup>
9	NS-13	Material and Equipment Use Over Water	
10	NS-15	Structure Demolition/Removal Over or Adjacent to Water	
11	WM-1	Material Delivery/Storage	FAA will specify compliance with these BMPs as described in the Caltrans Construction Site BMP Manual. <sup>1</sup>
12	WM-2	Material Use	
13	WM-4	Spill Prevention/Control	
14	WM-5	Solid Waste Management	
15	WM-6	Hazardous Waste Management	

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Note: 1. BMPs drawn from *Construction Site Best Management Practices (BMPs) Manual*, California Department of Transportation, March 2003.

## 6 LIST OF PREPARERS

This EA was prepared for the FAA, Mission Support Services, Western Service Center, by the Volpe National Transportation Systems Center.

### 6.1 Federal Aviation Administration

Kelly Yamakawa | Senior Operations Engineer  
 Janelle Cass | Environmental Engineer  
 John Louie | Environmental Engineer  
 Michael Poole | Airway Transportation Systems Specialist  
 Lorraine Herson-Jones | Attorney

### 6.2 Volpe National Transportation Systems Center

**Name/Title:** William Halloran/Project Manager  
**Education:** B.S. Civil Engineering; M.S. Civil Engineering  
**Experience:** 18 years in environmental and civil engineering  
**Role:** Project management

**Name/Title:** Frank T. Smigelski/Environmental Protection Specialist  
**Education:** B.S. Biology, M.S. Engineering (Environmental Studies)  
**Experience:** 23 years in environmental documentation and planning  
**Role:** EA preparation and review

**Name/Title:** Richard K. Domas/Volpe Contractor Senior Environmental Analyst  
**Education:** B.S. Civil Engineering; MCP, Master in City Planning;  
**Experience:** 33 years in transportation/environmental planning and environmental documentation  
**Role:** EA preparation and environmental documentation

**Name/Title:** Amishi Castelli /Environmental Scientist  
**Education:** B.A. Geology, Ph.D. Earth and Environmental Science.  
**Experience:** 10 years in environmental documentation and planning  
**Role:** EA preparation and review

**Name/Title:** Jonathan David Cybulski/Environmental Protection Specialist  
**Education:** B.S. Environmental Science  
**Experience:** 1 year in environmental documentation and planning  
**Role:** EA preparation and review

**Name/Title:** Michael J. Buonopane/Senior Project Engineer

**Education:** B.S. Civil Engineering/PMP  
**Experience:** 30+ years in marine engineering  
**Role:** Engineering design of the MALSR rehabilitation

**Name/Title:** Robert L. Pray, P.E./General Engineer  
**Education:** B.S. Marine Engineering; MSEs in Naval Architecture, Marine Engineering, Mechanical Engineering; P.E. License, MA  
**Experience:** 41 years in marine transportation engineering and planning  
**Role:** Senior Mechanical Engineer in the design of the MALSR rehabilitation

## 7 LIST OF AGENCIES AND PERSONS CONSULTED AND THOSE RECEIVING ENVIRONMENTAL ASSESSMENT

### Federal Agencies and Authorities

Kelly Yamakawa  
Senior Operations Engineer  
FAA Western-Pacific Region  
P.O. Box 92007  
Los Angeles, CA 90009-2007

Anthony Megliola  
Base Closure Manager  
BRAC PMO West  
Former MCAS El Toro  
7040 Trabuco Road  
Irvine, CA 92618

Janelle Cass  
Environmental Engineer  
Federal Aviation Administration  
1601 Lind Ave. SW  
Renton, WA 98055

Karen Goebel  
Assistant Field Supervisor for Los Angeles,  
Orange, and San Diego Counties  
Carlsbad Fish & Wildlife Office  
6010 Hidden Valley Road, Suite 101  
Carlsbad, CA 92011

John Louie  
Environmental Engineer  
Federal Aviation Administration  
NAVADS Engineering Center -  
Anchorage  
222 W. 7th Ave. #14  
Anchorage, AK 99513

Eric Chavez  
Fishery Biologist  
National Marine Fisheries Service  
Habitat Conservation Division  
501 West Ocean Boulevard  
Long Beach, CA 90802

Robert Revo Smith, Jr., P.E.  
Environmental Engineer/Civil Engineer  
U.S. Army Corps of Engineers  
Regulatory Project Manager  
Carlsbad Field Office  
6010 Hidden Valley Rd, Suite 105  
San Diego, CA 92011-4213

Ted Anasis, AICP  
Manager, Airport Planning  
San Diego County Regional Airport  
Authority  
San Diego International Airport  
3225 N. Harbor Dr.  
San Diego, California 92101

### State Agencies and Authorities

Milford Wayne Donaldson, FAIA, LEED  
AP  
State Historic Preservation Officer  
ATTN: Tristan Tozer

Eric Becker, P.E.  
Senior Water Resources Control Engineer  
Southern Watershed Unit  
SDRWQCB

State Historian  
Office of Historic Preservation  
1725 23rd Street, Suite 100  
Sacramento, CA 95816

9174 Sky Park Court, Suite 100  
San Diego, CA 92123

Habitat Conservation Planning Branch  
California Department of Fish & Game  
1416 Ninth Street, 12<sup>th</sup> Floor  
Sacramento, CA 95814

Larry Simon  
Federal Consistency Coordinator  
Energy, Ocean Resources and Federal  
Consistency Division  
California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105

**City of San Diego Agencies and Authorities**

Clay Bingham  
Deputy Director  
San Diego Community Parks Division  
2581 Quivira Court, MS 32  
San Diego, CA 92109

Thomas Wood  
District Manager  
San Diego Community Parks Division  
2581 Quivira Court, MS 32  
San Diego, CA 92109

Libby Day  
Project Manager  
Redevelopment Department  
Redevelopment Agency of the City of  
San Diego  
1200 Third Ave., Suite 1400  
San Diego, CA 92101-4110

**Other Agencies, Authorities and Interested Parties**

Richard Gilb  
Manager, Environmental Affairs  
San Diego County Regional Airport Authority  
PO Box 82776  
San Diego, CA 92138-2776

Manager  
Environmental Services  
Unified Port of San Diego  
Port of San Diego Admin Bldg  
3165 Pacific Highway  
San Diego, CA 92101-1128

Ted Anasis, AICP  
Manager, Airport Planning

Reference Desk  
Point Loma/Hervey Library

San Diego County Regional Airport  
Authority  
PO Box 82776  
San Diego, CA 92138-2776

3701 Voltaire St.  
San Diego, CA 92107

Reference Desk  
Mission Hills Library  
925 W. Washington St.  
San Diego, CA 92103

Reference Desk  
Central Library  
820 E St.  
San Diego, CA 92101

## 8 REFERENCES

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## APPENDIX A – AGENCY CONSULTATION

### Section 7 Consultation

#### *NMFS Initial Consultation*



U.S. Department  
of Transportation  
**Research and  
Innovative Technology  
Administration**

John A. Volpe  
National Transportation  
Systems Center

Kendall Square  
Cambridge, Massachusetts 02142

March 1, 2011

Eric Chavez  
Fishery Biologist  
National Marine Fisheries Service  
Habitat Conservation Division  
501 West Ocean Boulevard  
Long Beach, California 90802

Re: Consultation under Section 7 of the Endangered Species Act and under the  
Essential Fish Habitat Provisions of the Magnuson-Stevens Fishery Conservation and  
Management Act  
San Diego International Airport MALSR Rehabilitation Project

Dear Mr. Chavez:

In accordance with Section 7 of the Endangered Species Act (**ESA**), and pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), this letter initiates consultation, on behalf of the Federal Aviation Administration (FAA), for a federal maintenance project at the San Diego International Airport. Further details are provided below.

### **Background**

The FAA owns and maintains an approach lighting system (ALS) to Runway 9 at the San Diego International Airport. An ALS is a configuration of signal lights disposed symmetrically about

the extended runway centerline, starting at the landing threshold and extending outward into the approach zone. This system provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references.

Specifically, the system is a Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL), considered a **MALSR** in combination. The MALS consists of a threshold light bar and seven steady burning light bars spaced at 200-foot intervals along the extended runway centerline and extending out a distance of 1,400 feet from the Runway 9 threshold. The RAIL portion consists of five sequence flashers located on the extended runway centerline, the first being located after the last steady burning light station, with successive light stations located at 200-foot intervals out to approximately 2,400 feet from the runway threshold. All lights are aimed into the Runway 9 approach and away from the runway threshold.

Approximately 97 percent of all arrivals to the San Diego airport land on Runway 27 in a prevailing east-to-west direction (west flow). In periods of inclement weather, however, an arrival on Runway 9 (west-to-east or east flow) is the preferred approach. The ability of Runway 9 to accommodate arrivals in poor weather conditions (where Runway 27 is not) is due to the presence of the MALSR and additional air navigation equipment. As such, safety is enhanced at the airport; in fact, the airport would not be able to accommodate arrivals in certain weather conditions without the presence of the MALSR.

MALSR Station 15+00 and each successive light station after that are supported on top of an elevated timber platform (see attached photos). Four of the platforms (Stas 15+00, 17+00, 19+00, 21+00) are located in the San Diego Lagoon (also referred to on some maps as Navy Lagoon or simply as the boat channel) and the last two stations (Stas 23+00 and 24+85) are located on land across the lagoon on similar elevated platforms. Initially installed in 1982, the platforms and two of the supporting piles have deteriorated to a point where the structural and operational integrity of the MALSR is in question. In addition, OSHA standards for workplace safety have changed in the last 28 years and the platforms do not comply with present-day OSHA standards; accordingly, the platforms constitute a potential safety hazard for the FAA technicians who maintain the MALSR.

### **Proposed Action**

FAA plans to make necessary repairs to the MALSR and bring the platforms into OSHA compliance. To this end, the Volpe National Transportation Systems Center in Cambridge, Massachusetts, on behalf of FAA, will undertake an environmental assessment of the proposed

action and design the necessary improvements to the MALSR, based on the successful completion of NEPA analyses.

At this point in time, the preliminary scope of the proposed action is as follows:

- Cut at mudline and remove six (6) existing timber piles – two each at three stations located within the boat channel: Stas 17+00, 19+00 and 21+00. Install six (6) new piles.
- Remove and replace the wooden platforms at four stations in the boat channel: Stas 15+00, 17+00, 19+00 and 21+00.
- Provide OSHA compliant ladders and guardrails at all six (6) platforms (six in total): Stas 15+00, 17+00, 19+00 and 21+00, all in the boat channel, and Stas 23+00 and 24+85, located in NTC Park.
- All ancillary environmental review, engineering design, permit application and project management.

**The proposed action is strictly maintenance-related and does not affect the existing functioning of the airport.** It does not increase the throughput of the airport or permit larger planes to land. The proposed action does maintain safety margins at the airport, particularly in periods of inclement weather, and enhances the personal safety of FAA maintenance technicians by providing facilities in compliance with present-day OSHA standards governing the workplace.

### Consultation

In accordance with Section 7 of the Endangered Species Act (ESA), and pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), this letter initiates consultation, on behalf of the Federal Aviation Administration (FAA), for the project described above. The attached graphic (Figure 1) identifies the location of the project in relation to Runway 9 at the airport, and identifies the latitudes and longitudes at two points along the MALSR: the first is a location roughly in the center of the existing lagoon; the second is the outermost station (Sta 24+85), located 2,485 feet from the Runway 9 threshold. Several photos (attached) reflect the present alignment and condition of the MALSR.

Please forward the appropriate ESA species list at your earliest convenience.

If you have any specific questions about the project, please do not hesitate to contact Rick Domas at (617) 494-3570 or via e-mail at richard.domas.ctr@dot.gov. Mr. Domas is the lead environmental planner on this project.

Yours truly,

Amishi Castelli

Environmental Protection Specialist

cc: Kelly Yamakawa, FAA

Janelle Cass, FAA

John Louie, P.E., FAA

Enclosures: 1) Figure 1. Project Area 2) Photos (2)

**FIGURE 1. Project Area. San Diego International Airport MALS.R.**





**Photographs. San Diego International Airport MALSR.**





U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Air Traffic Organization  
Western Service Area  
Tech Ops  
Engineering Services

FAA Alaska Region  
222 W. 7<sup>th</sup> Ave., Suite 14  
Anchorage, AK 99513-7587

October 24, 2011

Eric Chavez  
Fishery Biologist  
National Marine Fisheries Service  
Habitat Conservation Division  
501 West Ocean Boulevard  
Long Beach, California 90802

Re: Consultation under Section 7 of the Endangered Species Act and under the Essential Fish Habitat Provisions of the Magnuson-Stevens Fishery Conservation and Management Act  
San Diego International Airport MALSR Rehabilitation Project

Dear Mr. Chavez:

We contacted you on March 1, 2011, in order to initiate consultation in accordance with Section 7 of the Endangered Species Act (ESA), and pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), for a federal maintenance project at the San Diego International Airport. Since that communication, there have been minor changes made to the proposed action. I am writing to update you on these changes. (Our team's original communication is attached with this letter for your convenience.)

The changes to the proposed action of the project are:

- Cutting at the mudline and removing six (6) existing timber piles instead of the previously proposed two (2) piles
- Using composite materials and including anti-bird perching designs for the four platforms being replaced
- Replacing submarine power/control cables that run from the airport property underwater along the sea floor to all six stations if necessary, new cables would be enclosed in conduit and would only be laid on the sea bed so as to minimize disturbance. If such an action is required, existing cables would be left in place.

I feel these are not significant changes for your needs, but wanted to make you aware of any updates.

If you have any specific questions about the project, please do not hesitate to contact me at (907) 271-4471 or via e-mail at [john.louie@faa.gov](mailto:john.louie@faa.gov).

Yours truly,



John J Louie  
Environmental Engineer  
FAA Air Traffic Organization  
WSA Engineering Services  
Anchorage, Alaska  
AJW-W15Q

Attachment: Original Consultation Letter to National Marine Fisheries Service, March 1, 2011.



U.S. Department  
of Transportation  
**Research and  
Innovative Technology  
Administration**

John A. Volpe  
National Transportation  
Systems Center

Kendall Square  
Cambridge, Massachusetts 02142

March 1, 2011

Eric Chavez  
Fishery Biologist  
National Marine Fisheries Service  
Habitat Conservation Division  
501 West Ocean Boulevard  
Long Beach, California 90802

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### **Background**

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Specifically, the system is a Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL), considered a **MALSR** in combination. The MALS consists of a threshold light bar and seven steady burning light bars spaced at 200-foot intervals along the extended runway centerline and extending out a distance of 1,400 feet from the Runway 9 threshold. The RAIL portion consists of five sequence flashers located on the extended runway centerline, the first being located after the last steady burning light station, with successive light stations located at 200-foot intervals out to approximately 2,400 feet from the runway threshold. All lights are aimed into the Runway 9 approach and away from the runway threshold.

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MALSR Station 15+00 and each successive light station after that are supported on top of an elevated timber platform (see attached photos). Four of the platforms (Stas 15+00, 17+00, 19+00, 21+00) are located in the San Diego Lagoon (also referred to on some maps as Navy Lagoon or simply as the boat channel) and the last two stations (Stas 23+00 and 24+85) are located on land across the lagoon on similar elevated platforms. Initially installed in 1982, the platforms and two of the supporting piles have deteriorated to a point where the structural and operational integrity of the MALSR is in question. In addition, OSHA standards for workplace safety have changed in the last 28 years and the platforms do not comply with present-day OSHA standards; accordingly, the platforms constitute a potential safety hazard for the FAA technicians who maintain the MALSR.

### **Proposed Action**

FAA plans to make necessary repairs to the MALSR and bring the platforms into OSHA compliance. To this end, the Volpe National Transportation Systems Center in Cambridge, Massachusetts, on behalf of FAA, will undertake an environmental assessment of the proposed action and design the necessary improvements to the MALSR, based on the successful completion of NEPA analyses.

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### Consultation

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If you have any specific questions about the project, please do not hesitate to contact Rick Domas at (617) 494-3570 or via e-mail at richard.domas.ctr@dot.gov. Mr. Domas is the lead environmental planner on this project.

Yours truly,

[signed]

Frank Smigelski  
Environmental Protection Specialist

cc: Kelly Yamakawa, FAA  
Janelle Cass, FAA  
John Louie, P.E., FAA

Enclosures: 1) Figure 1. Project Area 2) Photos (2)

FIGURE 1. Project Area. San Diego International Airport MALSR.



Photographs, San Diego International Airport MALSR.





*USFWS Initiation Consultation*



U.S. Department  
of Transportation

John A. Volpe  
National Transportation  
Systems Center

Kendall Square  
Cambridge,  
Massachusetts 02142

**Research and  
Innovative Technology  
Administration**

March 1, 2011

Karen Goebel  
Assistant Field Supervisor for Los Angeles, Orange, and San Diego Counties  
Carlsbad Fish & Wildlife Office  
6010 Hidden Valley Road, Suite 101  
Carlsbad, California 92011

Re: Consultation under Section 7 of the Endangered Species Act  
San Diego International Airport MALSR Rehabilitation Project

Dear Ms. Goebel:

In accordance with Section 7 of the Endangered Species Act (ESA), and on behalf of the Federal Aviation Administration (FAA), this letter initiates Section 7 consultation for a federal maintenance project at the San Diego International Airport. Further details are provided below.

**Background**

The FAA owns and maintains an approach lighting system (ALS) to Runway 9 at the San Diego International Airport. An ALS is a configuration of signal lights disposed symmetrically about the extended runway centerline, starting at the landing threshold and extending outward into the approach zone. This system provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references.

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**Consultation**

In accordance with Section 7 of the ESA, and on behalf of FAA, this letter initiates Section 7 consultation. The attached graphic (Figure 1) identifies the location of the project in relation to Runway 9 at the airport, and identifies the latitudes and longitudes at two points along the MALSR: the first is a location roughly in the center of the existing lagoon; the second is the outermost station (Sta 24+85), located 2,485 feet from the Runway 9 threshold. Several photos (attached) reflect the present alignment and condition of the MALSR.

Please note that we attempted to utilize the online IPaC system but the website referred us to your office to obtain a ESA species list. Please forward this list at your earliest convenience.

From recent discussions with environmental/planning staff at the San Diego International Airport, we are aware that the boat channel is a foraging area for the California least tern (*Sterna antillarum browni*), an endangered species. Our preliminary planning and engineering of the project already is addressing this fact and we are prepared to discuss our project in greater detail with your office in the future.

If you have any specific questions about the project, please do not hesitate to contact Rick Domas at (617) 494-3570 or via e-mail at richard.domas.ctr@dot.gov. Mr. Domas is the lead environmental planner on this project.

Yours truly,

Amishi Castelli  
Environmental Protection Specialist

cc: Kelly Yamakawa, FAA  
Janelle Cass, FAA  
John Louie, P.E., FAA

Enclosures: 1) Figure 1. Project Area 2) Photos (2)

Figure 1. Project Area. San Diego International Airport MALSR.



**Photographs. San Diego International Airport MALSR.**



*USFWS Follow-up Consultation*



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Air Traffic Organization  
Western Service Area  
Tech Ops  
Engineering Services

FAA Alaska Region  
222 W. 7<sup>th</sup> Ave., Suite 14  
Anchorage, AK 99513-7587

October 24, 2011

Karen Goebel

Assistant Field Supervisor for Los Angeles, Orange, and San Diego Counties

Carlsbad Fish & Wildlife Office  
6010 Hidden Valley Road, Suite 101  
Carlsbad, California 92011

Re: Consultation under Section 7 of the Endangered Species Act  
San Diego International Airport MALSR Rehabilitation Project

Dear Ms. Goebel:

We contacted you on March 1, 2011, in order to initiate consultation in accordance with Section 7 of the Endangered Species Act (ESA) for a federal maintenance project at the San Diego International Airport. Since that communication, there have been minor changes made to the proposed action. I am writing to you to update you on these changes. (Our team's original communication is attached with this letter for your convenience.)

The changes to the proposed action of the project are:

- Cutting at the mudline and removing six (6) existing timber piles instead of the previously proposed two (2) piles
- Using composite materials and including anti-bird perching designs for the four platforms being replaced
- Replacing submarine power/control cables that run from the airport property underwater along the sea floor to all six stations if necessary, new cables would be enclosed in conduit and would only be laid on the sea bed so as to minimize disturbance. If such an action is required, existing cables would be left in place.

I feel these are not significant changes for your needs, but wanted to make you aware of any updates.

If you have any specific questions about the project, please do not hesitate to contact me at (907) 271-4471 or via e-mail at [john.louie@faa.gov](mailto:john.louie@faa.gov).

Yours truly,

A handwritten signature in blue ink that reads "John Louie".

John J Louie  
Environmental Engineer  
FAA Air Traffic Organization  
WSA Engineering Services  
Anchorage, Alaska  
AJW-W15Q

Attachment: Original Consultation Letter to Carlsbad FWS, March 1, 2011



U.S. Department  
of Transportation  
  
Research and  
Innovative Technology  
Administration

John A. Volpe  
National Transportation  
Systems Center

Kendall Square  
Cambridge, Massachusetts 02142

March 1, 2011

Karen Goebel  
Assistant Field Supervisor for Los Angeles, Orange, and San Diego Counties  
Carlsbad Fish & Wildlife Office  
6010 Hidden Valley Road, Suite 101  
Carlsbad, California 92011

Re: Consultation under Section 7 of the Endangered Species Act  
San Diego International Airport MALSR Rehabilitation Project

Dear Ms. Goebel:

In accordance with Section 7 of the Endangered Species Act (ESA), and on behalf of the Federal Aviation Administration (FAA), this letter initiates Section 7 consultation for a federal maintenance project at the San Diego International Airport. Further details are provided below.

### Background

The FAA owns and maintains an approach lighting system (ALS) to Runway 9 at the San Diego International Airport. An ALS is a configuration of signal lights disposed symmetrically about the extended runway centerline, starting at the landing threshold and extending outward into the approach zone. This system provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references.

Specifically, the system is a Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL), considered a MALSR in combination. The MALS consists of a threshold light bar and seven steady burning light bars spaced at 200-foot intervals along the extended runway centerline and extending out a distance of 1,400 feet from the Runway 9 threshold. The RAIL portion consists of five sequence flashers located on the extended runway centerline, the first being located after the last steady burning light station, with successive light stations located at 200-foot intervals out to approximately 2,400 feet from the runway threshold. All lights are aimed into the

Runway 9 approach and away from the runway threshold.

Approximately 97 percent of all arrivals to the San Diego airport land on Runway 27 in a prevailing east-to-west direction (west flow). In periods of inclement weather, however, an arrival on Runway 9 (west-to-east or east flow) is the preferred approach. The ability of Runway 9 to accommodate arrivals in poor weather conditions (where Runway 27 is not) is due to the presence of the MALSR and additional air navigation equipment. As such, safety is enhanced at the airport; in fact, the airport would not be able to accommodate arrivals in certain weather conditions without the presence of the MALSR.

MALSR Station 15+00 and each successive light station after that are supported on top of an elevated timber platform (see attached photos). Four of the platforms (Stas 15+00, 17+00, 19+00, 21+00) are located in the San Diego Lagoon (also referred to on some maps as Navy Lagoon or simply as the boat channel) and the last two stations (Stas 23+00 and 24+85) are located on land across the lagoon on similar elevated platforms. Initially installed in 1982, the platforms and two of the supporting piles have deteriorated to a point where the structural and operational integrity of the MALSR is in question. In addition, OSHA standards for workplace safety have changed in the last 28 years and the platforms do not comply with present-day OSHA standards; accordingly, the platforms constitute a potential safety hazard for the FAA technicians who maintain the MALSR.

### **Proposed Action**

FAA plans to make necessary repairs to the MALSR and bring the platforms into OSHA compliance. To this end, the Volpe National Transportation Systems Center in Cambridge, Massachusetts, on behalf of FAA, will undertake an environmental assessment of the proposed action and design the necessary improvements to the MALSR, based on the successful completion of NEPA analyses.

At this point in time, the preliminary scope of the proposed action is as follows:

- Cut at mudline and remove six (6) existing timber piles – two each at three stations located within the boat channel: Stas 17+00, 19+00 and 21+00. Install six (6) new piles.
- Remove and replace the wooden platforms at four stations in the boat channel: Stas 15+00, 17+00, 19+00 and 21+00.
- Provide OSHA compliant ladders and guardrails at all six (6) platforms (six in total): Stas 15+00, 17+00, 19+00 and 21+00, all in the boat channel, and Stas 23+00 and 24+85, located in NTC Park.
- All ancillary environmental review, engineering design, permit application and project management.



**The proposed action is strictly maintenance-related and does not affect the existing functioning of the airport.** It does not increase the throughput of the airport or permit larger planes to land. The proposed action does maintain safety margins at the airport, particularly in periods of inclement weather, and enhances the personal safety of FAA maintenance technicians by providing facilities in compliance with present-day OSHA standards governing the workplace.

#### Consultation

In accordance with Section 7 of the ESA, and on behalf of FAA, this letter initiates Section 7 consultation. The attached graphic (Figure 1) identifies the location of the project in relation to Runway 9 at the airport, and identifies the latitudes and longitudes at two points along the MALSR: the first is a location roughly in the center of the existing lagoon; the second is the outermost station (Sta 24+85), located 2,485 feet from the Runway 9 threshold. Several photos (attached) reflect the present alignment and condition of the MALSR.

Please note that we attempted to utilize the online IPaC system but the website referred us to your office to obtain a ESA species list. Please forward this list at your earliest convenience.

From recent discussions with environmental/planning staff at the San Diego International Airport, we are aware that the boat channel is a foraging area for the California least tern (*Sterna antillarum breweri*), an endangered species. Our preliminary planning and engineering of the project already is addressing this fact and we are prepared to discuss our project in greater detail with your office in the future.

If you have any specific questions about the project, please do not hesitate to contact Rick Domas at (617) 494-3570 or via e-mail at richard.domas.ctr@dot.gov. Mr. Domas is the lead environmental planner on this project.

Yours truly,

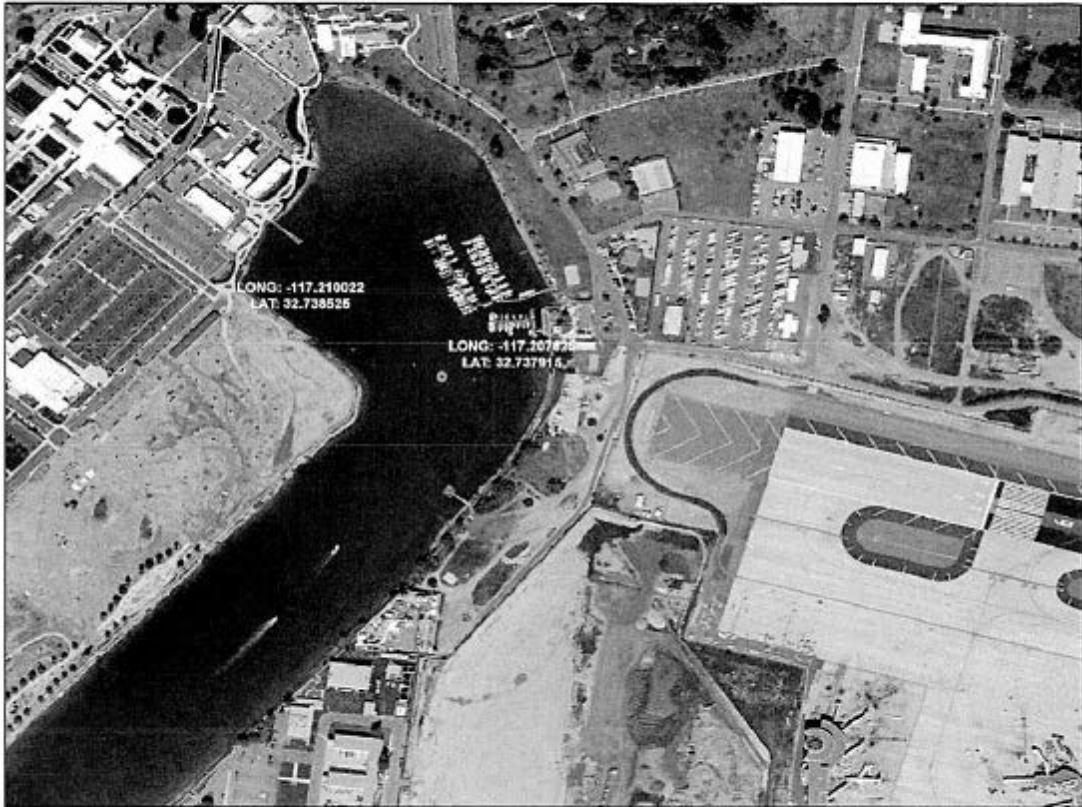
[signed]

Frank Smigelski  
Environmental Protection Specialist

cc: Kelly Yamakawa, FAA  
Janelle Cass, FAA  
John Louie, P.E., FAA

Enclosures: 1) Figure 1. Project Area 2) Photos (2)

FIGURE 1. Project Area. San Diego International Airport MALSR.



Photographs. San Diego International Airport MALSR.



*CESA Initiation Consultation*

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Air Traffic Organization  
Western Service Area  
Tech Ops  
Engineering Services

FAA Alaska Region  
222 W. 7<sup>th</sup> Ave., Suite 14  
Anchorage, AK 99513-7587

October 24, 2011

Habitat Conservation Planning Branch  
California Department of Fish & Game  
1416 Ninth Street, 12<sup>th</sup> Floor  
Sacramento, California 95814

Re: Informal Consultation under California Endangered Species Act  
San Diego International Airport MALSR Rehabilitation Project

Ladies and Gentlemen:

In accordance with the California Endangered Species Act (CESA), this letter initiates consultation by the Federal Aviation Administration (FAA) for a federal maintenance project at the San Diego International Airport. Further details are provided below.

### **Background**

The FAA owns and maintains an approach lighting system (ALS) to Runway 9 at the San Diego International Airport. An ALS is a configuration of signal lights disposed symmetrically about the extended runway centerline, starting at the landing threshold and extending outward into the approach zone. This system provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references.

Specifically, the system is a Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL), considered a **MALSR** in combination. The MALS consists of a threshold light bar and seven steady burning light bars spaced at 200-foot intervals along the extended runway centerline and extending out a distance of 1,400 feet from the Runway 9 threshold. The RAIL portion consists of five sequence flashers located on the extended runway centerline, the first being located after the last steady burning light station, with successive light stations located at 200-foot intervals out to approximately 2,400 feet from the runway threshold. All lights are aimed into the Runway 9 approach and away from the runway threshold.

Approximately 97 percent of all arrivals to the San Diego airport land on Runway 27 in a prevailing east-to-west direction (west flow). In periods of inclement weather, however, an arrival on Runway 9 (west-to-east or east flow) is the preferred approach. The ability of Runway 9 to accommodate arrivals in poor weather conditions (where Runway 27 is not) is due to the presence of the MALSR and additional air navigation equipment. As such, safety is

enhanced at the airport; in fact, the airport would not be able to accommodate arrivals in certain weather conditions without the presence of the MALSR.

MALSR Station 15+00 and each successive light station after that are supported on top of an elevated timber platform (see attached photos). Four of the platforms (Stas 15+00, 17+00, 19+00, 21+00) are located in a boat channel (the former mouth of the San Diego River and referred to on some maps as Navy Lagoon) and the last two stations (Stas 23+00 and 24+85) are located on land across the lagoon on elevated platforms as well within NTC Park, a recently-developed San Diego city park. Initially installed in 1982, the platforms and six of the eight supporting piles have deteriorated to a point where the structural and operational integrity of the MALSR is in question. In addition, OSHA standards for workplace safety have changed in the last 29 years and the platforms do not comply with present-day OSHA standards; accordingly, the platforms constitute a potential safety hazard for the FAA technicians who maintain the MALSR.

#### **Proposed Action**

FAA plans to make necessary repairs to the MALSR and bring the platforms into OSHA compliance. To this end, the Volpe National Transportation Systems Center in Cambridge, Massachusetts, on behalf of FAA, will undertake an environmental assessment of the proposed action and design the necessary improvements to the MALSR, based on the successful completion of NEPA analyses.

At this point in time, the preliminary scope of the proposed action is as follows:

- Cut at mudline and remove six (6) existing timber piles – two each at three stations located within the boat channel: Stas 17+00, 19+00 and 21+00. Install six (6) new piles.
- Remove the wooden platforms and replace with a wider platform made of composite material and including an anti-bird perching design at four stations in the boat channel: Stas 15+00, 17+00, 19+00 and 21+00.
- Provide OSHA compliant ladders and guardrails at all six (6) platforms (six in total): Stas 15+00, 17+00, 19+00 and 21+00, all in the boat channel, and Stas 23+00 and 24+85, located in NTC Park.
- Replace submarine power/control cables that run from the airport property underwater along the sea floor to all six stations if necessary (i.e., if cables are found to be damaged or become unusable during the installation of the new piles); new cables would be enclosed in conduit and would only be laid on the sea bed so as to minimize disturbance. If such an action is required, existing cables would be left in place.

**The proposed action is strictly maintenance-related and does not affect the existing functioning of the airport.** It does not increase the throughput of the airport or permit larger planes to land. The proposed action does maintain safety margins at the airport, particularly in periods of inclement weather, and enhances the personal safety of FAA maintenance technicians by providing facilities in compliance with present-day OSHA standards governing the workplace.

John Louie to CDFG Habitat Conservation Planning Branch  
Consultation under CESA  
San Diego International Airport MALSIR Rehabilitation Project

October 24, 2011  
Page 3

### Consultation

In accordance with the California Endangered Species Act (CESA), this letter initiates consultation by the FAA for the project described above. The attached graphic (Figure 1) identifies the location of the project in relation to Runway 9 at the airport, and identifies the latitudes and longitudes at two points along the MALSIR: the first is a location roughly in the center of the existing lagoon; the second is the outermost station (Sta 24+85), located 2,485 feet from the Runway 9 threshold. Several photos (attached) reflect the present alignment and condition of the MALSIR.

Please note that similar letters have been sent to Karen Goebel of the Carlsbad Fish and Wildlife Office and Eric Chavez of the National Marine Fisheries Service to initiate consultation under Section 7 of the Endangered Species Act and pursuant to the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act.

Note that we are aware that the boat channel is used as foraging territory for the California least tern, a federal and state endangered species. We will address this by specifying that construction begin after October 1 to allow the least tern to vacate the bay region on their seasonal migration.

If you have any specific questions about the project, please do not hesitate to contact me at (907) 271-4471 or via e-mail at [john.louie@faa.gov](mailto:john.louie@faa.gov).

Yours truly,



John J Louie  
Environmental Engineer  
FAA Air Traffic Organization  
WSA Engineering Services  
Anchorage, Alaska  
AJW-W15Q

cc: Kelly Yamakawa, FAA  
John Louie, P.E., FAA

Enclosures: 1) Figure 1. Project Area  
2) Photos (2)

John Louie to CDFG Habitat Conservation Planning Branch  
Consultation under CESA  
San Diego International Airport MALSR Rehabilitation Project

October 24, 2011  
Page 4

**FIGURE 1. Project Area, San Diego International Airport MALSR.**



John Louie to CDFG Habitat Conservation Planning Branch  
Consultation under CESA  
San Diego International Airport MALSR Rehabilitation Project

October 24, 2011  
Page 5

**Photographs. San Diego International Airport MALSR.**



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## Section 106 Consultation

### *SHPO Initiation Consultation*



U.S. Department  
of Transportation

Federal Aviation  
Administration

July 19, 2011

Milford Wayne Donaldson, FAIA, LEED AP  
State Historic Preservation Officer  
Office of Historic Preservation  
1725 23rd Street, Suite 100  
Sacramento, California 95816

ATTN: Tristan Tozer

FAA Alaskan Region  
ATO/WSA/Engineering Services

929 W. 7th Avenue, Box 14  
Anchorage, Alaska 99513-7587

Re: Consultation under Section 106 of the National Historic Preservation Act  
San Diego International Airport MALSR Rehabilitation Project

Dear Mr. Donaldson:

In accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended, and on behalf of the Federal Aviation Administration (FAA), this letter initiates Section 106 consultation for a federal maintenance project at the San Diego International Airport. Further details are provided below.

#### **Background**

The FAA owns and maintains an approach lighting system (ALS) to Runway 9 at the San Diego International Airport. An ALS is a configuration of signal lights disposed symmetrically about the extended runway centerline, starting at the landing threshold and extending outward into the approach zone. This system provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references.

Specifically, the system is a Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL), considered a MALSR in combination. The MALS consists of a threshold light bar and seven steady burning light bars spaced at 200-foot intervals along the extended runway centerline and extending out a distance of 1,400 feet from the Runway 9 threshold. The RAIL portion consists of five sequence flashers located on the extended runway centerline, the first being located after the last steady burning light station, with successive light stations located at 200-foot intervals out to approximately 2,400 feet from the runway threshold. All lights are aimed into the Runway 9 approach and away from the runway threshold.

Approximately 97 percent of all arrivals to the San Diego airport land on Runway 27 in a prevailing east-to-west direction (west flow). In periods of inclement weather, however, an arrival on Runway 9 (west-to-east or east flow) is the preferred approach. The ability of Runway 9 to accommodate arrivals in poor weather conditions (where Runway 27 is not) is due

John J Louie to Milford Wayne Donaldson  
 Consultation under Section 106 of the National Historic Preservation Act  
 San Diego International Airport MALSR Rehabilitation Project

Page 2

to the presence of the MALSR and additional air navigation equipment. As such, safety is enhanced at the airport; in fact, the airport would not be able to accommodate arrivals in certain weather conditions without the presence of the MALSR.

MALSR Station 15+00 and each successive light station after that are supported on top of an elevated timber platform. Four of the platforms (Stas 15+00, 17+00, 19+00, 21+00) are located in the San Diego Lagoon (also referred to on some maps as Navy Lagoon) and the last two stations (Stas 23+00 and 24+85) are located on land across the lagoon on similar elevated platforms. Initially installed in 1982, the platforms and two of the supporting piles have deteriorated to a point where the structural and operational integrity of the MALSR is in question. In addition, OSHA standards for workplace safety have changed in the last 28 years and the platforms do not comply with present-day OSHA standards; accordingly, the platforms constitute a potential safety hazard for the FAA technicians who maintain the MALSR.

#### **Proposed Action**

FAA plans to make necessary repairs to the MALSR and bring the platforms into OSHA compliance. To this end, the Volpe National Transportation Systems Center in Cambridge, Massachusetts, on behalf of FAA, will undertake an environmental assessment of the proposed action and design the necessary improvements to the MALSR. The work is just now underway with a target date of late summer 2012 for construction.

At this point in time, the preliminary scope of the proposed action is as follows:

- Abandon in place two (2) existing piles and install two (2) new piles at two stations in the lagoon.
- Remove and replace the wooden platforms at the four stations in the lagoon.
- Perform maintenance, i.e., scrape/paint; replace rotten boards, if any; and so forth on the two (2) land-based platforms.
- Provide OSHA compliant ladders and guardrails at all platforms (six in total).
- (If necessary:) Abandon in place the existing submarine electrical cable to the four platforms in the lagoon and replace with new submarine cable.

The proposed action is strictly maintenance-related and does not affect the existing functioning of the airport. It does not increase the throughput of the airport or permit larger planes to land. The proposed action does maintain safety margins at the airport, particularly in periods of inclement weather, and enhances the personal safety of FAA maintenance technicians by providing facilities in compliance with present-day OSHA standards governing the workplace.

John J Louie to Milford Wayne Donaldson  
 Consultation under Section 106 of the National Historic Preservation Act  
 San Diego International Airport MALSR Rehabilitation Project

Page 3

### Consultation

In accordance with Section 106 of the National Historic Preservation Act (NHPA), as amended, and on behalf of FAA, this letter initiates Section 106 consultation. The attached graphic (Figure 1) identifies the location of the project in relation to Runway 9 at the airport, and identifies the latitudes and longitudes at two points along the MALSR: the first is a location roughly in the center of the existing lagoon; the second is the outermost station (Sta 24+85), located 2,485 feet from the Runway 9 threshold.

Please note that we are aware of an extensive assemblage of historic property data prepared in the recent past for the final environmental impact report on the San Diego International Airport Master Plan.<sup>1</sup> We are reviewing this information now. Unfortunately, it appears that the scope of the architectural survey report did not extend into the lagoon. We specifically request your assistance in identifying i) any possible historic marine properties (listed or eligible for listing on the National Register of Historic Places) that may be in the lagoon, and ii) any possible land-based historic properties (listed or eligible for listing on the National Register of Historic Places) that may be in the vicinity of MALSR Stas 23+00 and 24+85.

If you have any specific questions about the project, please do not hesitate to contact me at (907) 271-4471 or via e-mail at [john.louie@faa.gov](mailto:john.louie@faa.gov).

Yours truly,



John J Louie  
 Environmental Engineer  
 FAA Air Traffic Organization

Enclosure: Figure 1. Project Area

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<sup>1</sup> *Historic Architectural Survey Report: San Diego International Airport Master Plan*, prepared for the San Diego County Regional Airport Authority by Affinis and Walter Enterprises, May 2006. This report constitutes Appendix F in *Final Environmental Impact Report – Airport Master Plan – San Diego International Airport*, prepared for the San Diego County Regional Airport Authority by HNTB, Inc., April 2008 (SDCRAA # EIR-06-01; State Clearinghouse No. 2003091105).

John J Louie to Milford Wayne Donaldson  
Consultation under Section 106 of the National Historic Preservation Act  
San Diego International Airport MALSR Rehabilitation Project

Page 4

FIGURE 1. Project Area. San Diego International Airport MALSR.



*SHPO Follow-up Consult*

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Air Traffic Organization  
Western Service Area  
Engineering Services

FAA Alaska Region  
222 W. 7<sup>th</sup> Ave., Suite 14  
Anchorage, AK 99513-7587

October 24, 2011

Milford Wayne Donaldson, FAIA, LEED AP  
State Historic Preservation Officer  
Office of Historic Preservation  
1725 23rd Street, Suite 100  
Sacramento, California 95816

ATTN: Tristan Tozer,  
State Historian

Re: Consultation under Section 106 of the National Historic Preservation Act  
San Diego International Airport MALSR Rehabilitation Project

Dear Mr. Donaldson:

We previously contacted on July 19, 2011, in order to initiate consultation in accordance with Section 106 of the National Historic Preservation Act (NHPA), for a federal maintenance project at the San Diego International Airport in accordance. I am writing to you to update you on some minor changes to the proposed action, as well as answer your questions asked in response to our first letter (the original letter initiating consultation has been attached to this letter for your convenience).

The changes to the proposed action of the project include:

- Cutting at the mudline and removing six (6) existing timber piles instead of the previously proposed two (2) piles
- Using composite materials and including anti-bird perching designs for the four platforms being replaced
- If necessary, replacing submarine power/control cables that run from the airport property underwater along the sea floor to all six stations. If this action is necessary, existing cables would be left in place and new cables would be enclosed in conduit and would only be laid on the sea bed so as to minimize disturbance.

I feel these are not significant changes for your needs, but wanted to make you aware of any updates.

*ation*

In response to the original consultation, Mr. Tristan Tozer stated that the structures themselves (i.e., the timber piles) need not be treated as historical properties since they are less than fifty years old. He continued to say that the ground disturbance associated with the removal of the piles could affect prehistoric resources, and the archeological sensitivity of the project area should be determined.

Per his advice, we researched this question in the Airport Master Plan, in which we found no mention of the archaeological sites within the area. Further research led to the Final Environmental Assessment/FONSI, completed for the FAA in 2009 by HNTB Corporation, in which the report states that there are multiple archaeological sites within a one mile radius of the airport, but none that fall within the canal itself. Furthermore, according to our research for the draft EA for this project, we find that the marine and land areas within the project area have been disturbed in the past; accordingly, we presume that there likely is little archaeological significance to these areas.

If you have any further questions about the project, please do not hesitate to contact me at (907) 271-4471 or via e-mail at [john.louie@faa.gov](mailto:john.louie@faa.gov).

Yours truly,



John Louie  
FAA ATO WSA Engineering Services  
Anchorage, AK  
AJW-W15Q

## CCC Consultation

### CCC Communication

#### Domas, Richard CTR (VOLPE)

---

**From:** Larry Simon [lsimon@coastal.ca.gov]  
**Sent:** Wednesday, February 23, 2011 4:27 PM  
**To:** Domas, Richard (MacroSys) (VOLPE)  
**Subject:** RE: ADDTL INFORMATION re: Request for Guidance: 1) Federal Consistency 2) Coastal Development Permit re: federal maintenance project within the coastal zone

Rick,

I've reviewed the materials you sent me yesterday and this morning. The proposed repair and maintenance work at San Diego International Airport is a federal agency (FAA) activity and thus: (1) requires the FAA to prepare and submit either a consistency or negative determination to this office; and (2) the FAA is not required to apply for a coastal development permit. We have determined that the proposed FAA activities would not affect coastal zone resources and therefore the FAA should submit a negative determination to the Commission, at the address below. Negative determinations are processed administratively by the Commission staff and do not require a public hearing in front of the Commission. Advice on the preparation of a negative determination can be found at the Commission's website. Please contact me should you have any questions on the preparation of the negative determination for your project. Best regards,

Larry Simon

Larry Simon  
 Federal Consistency Coordinator  
 Energy, Ocean Resources and Federal Consistency Division  
 California Coastal Commission  
 45 Fremont St., Suite 2000  
 San Francisco, CA 94105  
 (415) 904-5288  
[lsimon@coastal.ca.gov](mailto:lsimon@coastal.ca.gov)  
[www.coastal.ca.gov](http://www.coastal.ca.gov)

---

**From:** Richard.Domas.CTR@dot.gov [mailto:Richard.Domas.CTR@dot.gov]  
**Sent:** Wednesday, February 23, 2011 10:56 AM  
**To:** Larry Simon  
**Cc:** Janelle.Cass@faa.dot.gov; John.Louie@faa.dot.gov; Kelly.Yamakawa@faa.dot.gov; Bill.Halloran@dot.gov; Frank.Smigelski@dot.gov; Bob.Pray@dot.gov; Michael.J.Buonopane@dot.gov; Richard.Domas.CTR@dot.gov  
**Subject:** ADDTL INFORMATION re: Request for Guidance: 1) Federal Consistency 2) Coastal Development Permit re: federal maintenance project within the coastal zone

Mr. Simon,

I have additional information which you should be aware of. Please note the following (Items 3.7 and 3.8 below):

### 3. Specifics and Details

3.7 Two platforms – Stas 23+00 and 24+85 – fall within NTC Park, a new city park owned, developed and maintained by the City of San Diego (see attached photo). Land for this park – originally part of the Naval Training Center in San Diego – was conveyed to the City of San Diego by the U.S. Navy in September 2001 as a public benefit conveyance. (Note: FAA maintenance work at these two platforms likely will consist of the installation of OSHA-compliant ladder systems only.)

3.8 Much of the former Naval Training Center has been conveyed to the City of San Diego for urban redevelopment. The entire NTC site is within the coastal zone, and city planners drafted the *NTC Precise Plan and Local Coastal Program* dated September 2001. An earlier version of the *NTC Precise Plan and Local Coastal Program* was approved by the California Coastal Commission in June 2001.

In summary, some portion of the maintenance work will be performed on four platforms in the boat channel and another portion on two land-based platforms situated within the NTC Park. Please advise as to the proper jurisdictions and filing requirements.

Rick Domas

Richard (Rick) Domas  
Senior Environmental Analyst  
V-TRAC | Volpe National Transportation Systems Center  
55 Broadway, Room 520B  
Cambridge MA 02142-1093  
(617) 494-3570 phone  
(781) 223-0208 cellphone  
(617) 494-2789 fax

---

**From:** Domas, Richard (MacroSys) (VOLPE)  
**Sent:** Tuesday, February 22, 2011 3:44 PM  
**To:** 'lsimon@coastal.ca.gov'  
**Cc:** Cass, Janelle <FAA>; Louie, John <FAA>; Yamakawa, Kelly <FAA>; Halloran, Bill (VOLPE); Smigelski, Frank (VOLPE); Pray, Bob (VOLPE); Buonopane, Michael (VOLPE)  
**Subject:** Request for Guidance: 1) Federal Consistency 2) Coastal Development Permit re: federal maintenance project within the coastal zone

Mr. Simon,

The Volpe National Transportation Systems Center is assisting the Federal Aviation Administration (FAA) in the envr review, permitting and design of needed repairs to an existing and vital piece of air navigation equipment off the Rwy 9 end at the San Diego Intl Airport. I'm seeking guidance on the issue of federal consistency and whether a CDP is reqd or not. I apologize for the length and detail in this e-mail but I've tried to capture and present all of the relevant aspects of the project here. The project particulars are as follows:

#### 1. Background

The FAA owns and maintains a Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL), considered a **MALSR** in combination. The MALS consists of a threshold light bar and seven steady burning light bars spaced at 200-foot intervals along the extended runway centerline and extending out a distance of 1,400 feet from the Runway 9 threshold. The RAIL portion consists of five sequence flashers located on the extended runway



centerline, the first being located after the last steady burning light station, with successive light stations located at 200-foot intervals out to approximately 2,400 feet from the runway threshold. All lights are aimed into the Runway 9 approach and away from the runway threshold. The MALS, in combination with other air navigation eqpt at the airport, provides visual guidance which enables a pilot to get lower and closer to the runway threshold, a vital safety measure in periods of inclement weather.

An attached graphic identifies the location of the project in relation to Runway 9 at the airport, and identifies the latitudes and longitudes at two points along the MALS: the first is a location roughly in the center of the existing lagoon; the second is the outermost station (Sta 24+85), located 2,485 feet from the Runway 9 threshold.

Approximately 97 percent of all arrivals to the San Diego airport land on Runway 27 in a prevailing east-to-west direction (west flow). In periods of inclement weather, however, an arrival on Runway 9 (west-to-east or east flow) is the preferred approach. The ability of Runway 9 to accommodate arrivals in poor weather conditions (where Runway 27 is not) is due to the presence of the MALS and additional air navigation equipment. As such, safety is enhanced at the airport; in fact, the airport would not be able to accommodate arrivals in certain weather conditions without the presence of the MALS.

MALS Station 15+00 and each successive light station after that are supported on top of an elevated platform. Four of the platforms (Stas 15+00, 17+00, 19+00, 21+00) are located in the San Diego Lagoon (also referred to on some maps as Navy Lagoon and frequently cited simply as the boat channel) and the last two stations (Stas 23+00 and 24+85) are located on land across the boat channel on similar elevated platforms. The four platforms in the boat channel are made of pressure-treated wood supported by two wooden piles driven into the channel bottom. Each pile is covered with a veneer of concrete to prevent marine borer species from attacking the wood piles (see attached photos). The two land-based platforms are steel and steel mesh on a steel tower (see attached photo).

Initially installed in 1982, the four platforms in the boat channel and two of the supporting piles (one each in two platforms) have deteriorated to a point where the structural and operational integrity of the MALS is in question. In addition, OSHA standards for workplace safety have changed in the last 28 years and the platforms do not comply with present-day OSHA standards; accordingly, the platforms constitute a potential safety hazard for the FAA technicians who maintain the MALS.

## 2. Proposed Action

FAA plans to make necessary repairs to the MALS and bring the platforms into OSHA compliance. The work is just now underway with a target date of late summer 2012 for construction.

At this point in time, the preliminary scope of the proposed action is as follows:

- Cut at the mudline and remove two (2) existing piles. Install two (2) new piles immediately alongside the cut piles at two stations in the lagoon.
- Remove and replace the wooden platforms at the four stations in the lagoon. The wooden platforms likely will be replaced using a recycled or composite material.
- Provide OSHA compliant ladders and guardrails at all platforms (six in total).

**The proposed action is strictly maintenance-related and does not affect the existing functioning of the airport.** It does not increase the throughput of the airport or permit larger planes to land. The proposed action does maintain safety margins at the airport, particularly in periods of inclement weather, and enhances the personal safety of FAA maintenance technicians by providing facilities in compliance with present-day OSHA standards.

## 3. Specifics and Details

3.1 The MALS is owned and maintained as a federal facility by FAA. Congressionally-appropriated federal funds allocated to the FAA will be used to repair the MALS. The FAA will contract directly with a contractor to perform the necessary maintenance work.

3.2 The boat channel is owned by two federal agencies: the U.S. Navy and the U.S. Marine Corps. FAA has a long-standing lease to place, operate and maintain the MALS.

3.3 The MALS falls within the mean high tide line (see attached graphic), and the boat channel is within the jurisdiction of the San Diego Port Master Plan.

3.4 The boat channel is considered "Federal (Military) - Deeded Submerged Lands" according to Figure 2 San Diego Bay Tidelands Ownership (see attached graphic) in the San Diego Port Master Plan.

3.5 We're researching now whether the present MALS is covered by a USACOE Section 404/10 permit. If so, the project can move forward under Nationwide Permit #3 Maintenance. If not, a Sect 404/10 permit app will be filed with the USACOE.

3.6 A USACOE NWP 3 activity is not exempt from a section 401 water quality certification by the CA Regional Water Quality Control Board. Accordingly, a water quality certification through the CA Regional Water Quality Control Board - San Diego Region will be sought.

Please advise as to where to file the request for concurrence with a federal consistency determination and whether a coastal development permit is required. I've reviewed 14 CCR § 13252 and it appears that the project may fall under a repair/maintenance exclusion and thus be exempt from the need to submit a CDP. If that is not the case, however, please advise as to which local or state agency has jurisdiction in this regard.

If you require additional information, please do not hesitate to contact me.

Rick Domas

Attachments (6)

Richard (Rick) Domas  
Senior Environmental Analyst  
V-TRAC | Volpe National Transportation Systems Center  
55 Broadway  
Cambridge MA 02142-1093  
(617) 494-3570 phone  
(781) 223-0208 cellphone  
(617) 494-2789 fax

**From:** [john.louie@faa.gov](mailto:john.louie@faa.gov)  
**To:** [Larry Simon](#)  
**Cc:** [Castelli, Amishi \(VOLPE\)](#); [Hallowan, Bill \(VOLPE\)](#); [Cybulski, Jonathan \(VOLPE\)](#); [Buonopane, Michael \(VOLPE\)](#)  
**Subject:** RE: ND-050-11 (San Diego International Airport)  
**Date:** Thursday, January 05, 2012 5:21:44 PM

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Thanks Larry.

John

**From:** "Larry Simon" <[lsimon@coastal.ca.gov](mailto:lsimon@coastal.ca.gov)>  
**To:** John Louie/AAL/FAA@FAA  
**Date:** 01/05/2012 01:10 PM  
**Subject:** RE: ND-050-11 (San Diego International Airport)

---

Hi John,

Thanks for your reply below and for your phone message. I reviewed your email with my supervisor, Mark Delaplaine, and we both agree that requiring removal of the existing cable, should its function be replaced with a new cable, will not be necessary. We have experience with projects in the boat channel and understand that the sediments in this waterway are, to say the least, not perfectly clean. I will prepare a draft concurrence letter for our Executive Director's review early next week and I expect to mail out a final letter by the end of next week, prior to the January 14 deadline for Commission action. Should our ED have any additional questions about the project, I will contact you ASAP.

Regards,

Larry

Larry Simon  
Federal Consistency Coordinator  
Energy, Ocean Resources and Federal Consistency Division  
California Coastal Commission  
45 Fremont St., Suite 2000  
San Francisco, CA 94105  
(415) 904-5288  
[lsimon@coastal.ca.gov](mailto:lsimon@coastal.ca.gov)  
[www.coastal.ca.gov](http://www.coastal.ca.gov)

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**From:** [john.louie@faa.gov](mailto:john.louie@faa.gov) [<mailto:john.louie@faa.gov>]  
**Sent:** Tuesday, January 03, 2012 12:51 PM  
**To:** Larry Simon

**Subject:** RE: ND-050-11 (San Diego International Airport)

Hi Larry.

Thanks for following up.

To clarify, it is not certain that the power cables would be replaced. The power cables would be replaced if and only if the existing cables are damaged or deteriorated to the point of needing replacement. In the event the existing cables, or portions thereof, need to be replaced, FAA proposes to leave any abandoned cables in place based on the following rationale.

The pros of leaving abandoned cables in place:

- The existing cable is buried about ~1-2 feet or more beneath the surface of the marine floor. Removing the cable would essentially be a dredging operation involving a crane, etc. Therefore, we are concerned about widespread disturbance of the sea floor over this area, and potential impacts on marine ecology in the lagoon. Environmental impacts include those normally associated with dredging: short term increases in turbidity (affecting marine species), potential release of toxic chemicals from bottom sediments into the water column, and secondary impacts from uptake of those chemicals and increased turbidity.
- While the marine floor will certainly be disturbed to some extent during the replacement of the MALSR piles, that disturbance will be contained with appropriate equipment (turbidity curtains, etc). The cables, however, would span a linear area of a minimum of 200 feet (distance between piles), to over 1000 feet (distance from shore to piles and then in between piles), depending on amount of cable that needs to be replaced, and therefore, the disturbance would be more difficult to contain.
- Disposal of the cable could turn out to be onerous as well.

The cons of leaving cable in place:

- Over the long term, the cables would decompose. The cables are likely made of copper surrounded by rubber.

FAA is willing and able to do either method that the CCC suggests, but right now, we're seeking CCC's advice informally. Would you be available for a phone call to discuss this in more detail this week?

Sincerely,

John Louie  
Environmental Engineer  
FAA ATO WSA  
AJW-W15Q  
(907) 271-4471

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**From:** Larry Simon  
**Sent:** Monday, December 19, 2011 2:38 PM  
**To:** 'john.louie@faa.gov'  
**Subject:** ND-050-11 (San Diego International Airport)

Hi John,

I'm working on your negative determination for MALSR rehabilitation at San Diego and have a question. The ND states on Page 2 that if the existing underwater power cables need to be replaced, the existing power cables would be left in place. The Coastal Commission typically takes a very strong position that sea floor equipment should not be left in place if it is no longer in use unless there is documentation that removal would lead to significant adverse effects on marine habitat/resources. The FAA either needs to agree to remove the existing power cables if they are to be replaced or provide evidence of the adverse effects to marine habitat that would occur upon removal. Please contact me if you wish to discuss this matter. Regards,

Larry Simon  
Federal Consistency Coordinator  
Energy, Ocean Resources and Federal Consistency Division  
California Coastal Commission  
45 Fremont St., Suite 2000  
San Francisco, CA 94105  
(415) 904-5288  
[lsimon@coastal.ca.gov](mailto:lsimon@coastal.ca.gov)  
[www.coastal.ca.gov](http://www.coastal.ca.gov)

*CCC Negative Determination*

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Air Traffic Organization  
Western Service Area  
Engineering Services

FAA Alaska Region  
222 W. 7<sup>th</sup> Ave., Suite 14  
Anchorage, AK 99513-7587

October 24, 2011

Larry Simon  
Federal Consistency Coordinator  
Energy, Ocean Resources and Federal Consistency Division  
California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, California 94105

Re: Negative Determination  
San Diego International Airport MALSR Rehabilitation Project

Dear Mr. Simon:

The Federal Aviation Administration (FAA) is proposing to rehabilitate an essential piece of air navigation equipment at the San Diego International Airport (SAN). This equipment provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references during a landing onto Runway 9 at SAN. Based on phone and email discussions with you in addition to the information in this document, FAA has determined that the proposed action will not affect the California coastal zone.

This **Negative Determination** is submitted in compliance with National Oceanic and Atmospheric Administration (NOAA) Federal Consistency Regulations (15 CFR 930). We respectfully request the California Coastal Commission concur with this Negative Determination.

### **Background**

The FAA owns and maintains an approach lighting system (ALS) to Runway 9 at SAN. An ALS is a configuration of signal lights disposed symmetrically about the extended runway centerline, starting at the landing threshold and extending outward into the approach zone. This system provides pilots with visual information regarding runway alignment, height perception, roll guidance and horizon references.

Specifically, the system is a **Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL)**, considered a **MALSR** in combination. The MALS consists of a threshold light bar and seven steady burning light bars spaced at 200-foot intervals along the extended runway centerline and extending out a distance of 1,400 feet from the Runway 9 threshold. The RAIL portion consists of five sequence flashers located on the extended runway centerline, the first being located after the last steady burning light station, with successive light

stations located at 200-foot intervals out to approximately 2,400 feet from the runway threshold. All lights are aimed into the Runway 9 approach and away from the runway threshold.

Approximately 97 percent of all arrivals to the San Diego airport land on Runway 27 in a prevailing east-to-west direction (west flow). In periods of inclement weather, however, an arrival on Runway 9 (west-to-east or east flow) is the preferred approach. The ability of Runway 9 to accommodate arrivals in poor weather conditions (where Runway 27 is not) is due to the presence of the MALSR and additional air navigation equipment. As such, safety is enhanced at the airport; in fact, the airport would not be able to accommodate arrivals in certain weather conditions without the presence of the MALSR.

MALSR Station 15+00 and each successive light station after that are supported on top of an elevated platform. Four of the platforms (Stas. 15+00, 17+00, 19+00, 21+00) are located in a boat channel (formerly the mouth of the San Diego River; also referred to on some maps as Navy Lagoon) just west of the airport; the last two stations (Stas. 23+00 and 24+85) are located in a city park (NTC Park) across the lagoon on similar elevated platforms (Figures 1-4). Initially installed in 1982, some of the platforms and supporting piles have deteriorated to a point where the structural and operational integrity of the MALSR is in question. In addition, Occupational Safety and Health Administration (OSHA) standards for workplace safety have changed in the last 28 years and the platforms do not comply with present-day OSHA standards; accordingly, the platforms constitute a potential safety hazard for the FAA technicians who maintain the MALSR.

### Proposed Action

FAA plans to make necessary repairs to the MALSR and bring the platforms into OSHA compliance. The Proposed Action consists of the following:

- Cut at mudline and remove six (6) existing timber piles – two each at three stations located within the boat channel: Stas 17+00, 19+00 and 21+00. Install six (6) new piles.
- Remove the wooden platforms and replace with a wider platform made of composite material and including an anti –bird perching design at four stations in the boat channel: Stas 15+00, 17+00, 19+00 and 21+00.
- Provide OSHA compliant ladders and guardrails at all six (6) platforms (six in total): Stas 15+00, 17+00, 19+00 and 21+00, all in the boat channel, and Stas 23+00 and 24+85, located in NTC Park.
- Replace submarine power/control cables that run from the airport property underwater along the sea floor to all six stations if necessary (i.e., if cables are found to be damaged or become unusable during the installation of the new piles); new cables would be enclosed in conduit and would only be laid on the sea bed so as to minimize disturbance. If such an action is required, existing cables would be left in place.

John J Louie to Larry Simon  
Negative Determination  
San Diego International Airport MALSR Rehabilitation Project

October 24, 2011  
Page 3



**Figure 1 MALSR Environment off SAN Runway 9**



**Figure 2 SAN MALSR Land-based Platforms**

*Sta. 23+00 in foreground; Sta. 24+85 in background.*



**Figure 3 SAN MALSR Water-based Platforms**

*Sta. 21+00 in foreground; Sta. 15+00 and airport in distance.*



The proposed action is strictly maintenance-related and does not affect the existing functioning of the airport. It does not increase the throughput of the airport or permit larger planes to land. The proposed action does maintain safety margins at the airport, particularly in periods of inclement weather, and enhances the personal safety of FAA maintenance technicians by providing facilities in compliance with present-day OSHA standards governing the workplace.

#### Consideration of the California Coastal Zone

In arriving at a negative determination, FAA reviewed carefully the coastal resources planning and management policies contained in Chapter 3 of the California Coastal Act, particularly Article 4 Marine Environment. FAA will take specific measures to avoid, minimize and mitigate significant impacts to the marine environment, among them the following:

- The boat channel is a known foraging area for the California least tern, a federal and state endangered species. Construction will commence after October 1 in the construction year (estimated as fall 2012) to allow the least tern to migrate out of the bay region.
- There is some recreational boating activity in the boat channel related to the marina located north of the MALSR (Figure 1).<sup>1</sup> Prior to construction, FAA will file a notice to mariners with the U.S. Coast Guard and will notify marina management of the estimated start and duration of construction.
- FAA will employ specific construction measures and techniques to minimize disruption to the environment, including:
  - The decayed piles will be cut at the mudline – and subsequently removed – to minimize disturbance to channel bottom sediments.
  - If wood or steel marine pilings are chosen for the project, vibratory hammers will be used to set the piles to minimize noise and lessen sediment disturbance (however, if fiberglass or concrete composite marine pilings are chosen for the project, conventional diesel or air hammers will be used since vibratory hammers have proven damaging to pilings made of this material).
  - Turbidity curtains will be used to limit the transport of any sediments placed in suspension due to the construction activity.
  - Best management practices for construction in a marine environment will be specified and enforced.
- Where feasible and practicable, building materials made of recycled elements and products will be utilized.

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<sup>1</sup> The marina is related to the Marine Corps Recruiting Depot San Diego and its use and access are restricted to those associated with MCRD San Diego.

John J Louie to Larry Simon  
Negative Determination  
San Diego International Airport MALSIR Rehabilitation Project

October 24, 2011  
Page 5

The rehabilitation of the MALSIR platforms will not reduce the flow and flood capacity of the boat channel in a 100-year flood, or introduce any new or additional elements to the floodplain. No alteration of the channel's depths or banks will occur. The proposed action will not result in notable adverse impacts on natural and beneficial floodplain values; therefore, there are no significant impacts to the floodplain.

The MALSIR falls within the 80 dB CNEL noise contours at SAN, the noisiest environment at the airport.<sup>2</sup> In addition, few residences are in the near vicinity of the MALSIR. Given the existing noise environment, the temporary construction noise due to driving the replacement piles would have no significant impacts.

The duration of the construction work is short – an estimated 8-10 weeks – and will take place within defined construction boundaries. Access to the marina located north of the MALSIR will be maintained at all times during construction. As noted above, construction techniques will be specified to minimize noise and sediment disturbance. Accordingly, there are no projected significant impacts due to construction.

In summary, after careful review and consideration of all impacts, FAA has determined that the proposed action will not affect the California coastal zone. We respectfully request that the commission concur with this negative determination.

If you have any specific questions about this negative determination, please do not hesitate to contact me at (425) 227-1343 or via e-mail at [John.Louie@faa.gov](mailto:John.Louie@faa.gov).

Yours truly,



John J Louie  
Environmental Engineer  
FAA Air Traffic Organization  
WSA Engineering Services  
Anchorage, Alaska  
AJW-W15Q

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<sup>2</sup> The Community Noise Equivalent Level (CNEL) is a descriptor of the daily noise environment which accounts for the magnitude, time of day and the frequency of occurrence of noise intrusions. It is calculated using a formula prescribed in the California Noise Standards, and is based on the A-weighted decibel.



Figure 4 SAN MALSR Project Area

**CALIFORNIA COASTAL COMMISSION**

45 FREMONT, SUITE 2000  
SAN FRANCISCO, CA 94105-2219  
VOICE (415) 904-5200  
FAX (415) 904-5400  
TDD (415) 597-5885



January 11, 2012

John J. Louie  
FAA Air Traffic Organization  
WSA Engineering Services  
222 W. 7<sup>th</sup> Avenue, Suite 14  
Anchorage, AK 99513-7587

Subject: Negative Determination ND-050-11 (San Diego International Airport MALSR  
Rehabilitation Project, San Diego County)

Dear Mr. Louie:

The Coastal Commission staff has reviewed the above-referenced negative determination. The Federal Aviation Administration (FAA) proposes to rehabilitate existing air navigation equipment used for aircraft landings on San Diego International Airport's Runway 9 (the runway designation for west-to-east landings onto the airport's sole runway that occur during inclement weather conditions). The FAA owns and maintains the Medium Intensity Approach Lighting System (MALS) and Runway Alignment Indicator Lights (RAIL), which in combination are referred to as the MALSR system. The system is comprised of signal lights that are sited along the runway centerline, beginning at the landing threshold at the west end of Runway 9 and extending westward into the approach zone, and provides pilots with visual information regarding runway alignment, height perception, roll guidance, and horizon references.

The FAA proposes to rehabilitate six of the MALS light platforms; four are located in a boat channel immediately west of the airport and two in a city park just west of the channel. The platforms and supporting pilings were installed in 1982 and have deteriorated to a point where the structural and operational integrity of the platforms are in question. Additionally, the platforms do not comply with current Occupational Safety and Health Administration (OSHA) standards for workplace safety and are a safety hazard for FAA technicians who maintain the MALSR. The FAA also notes that the proposed maintenance activities will not increase the throughput of the airport or permit larger planes to land. Construction is planned to commence in fall 2012 and will last approximately ten weeks.

The Commission staff previously concurred with negative determination ND-046-11 in September 2011 for geotechnical investigations to characterize subsurface conditions in the vicinity of the existing platforms in the boat channel prior to completing the design of the replacement platforms. The proposed action consists of the following:

ND-050-11 (Federal Aviation Administration)

Page 2

- Cut at the mudline and remove six existing timber piles (two each at three stations located within the boat channel: Stations 17+00, 19+00, and 21+00) and install six new piles.
- Remove the wooden platforms and replace with a wider platform made of composite material and including an anti-bird perching design at the four stations within the boat channel: Stations 15+00, 17+00, 19+00, and 21+00.
- Install OSHA-compliant ladders and guardrails at the four boat channel stations and the two land stations (23+00 and 24+85).
- Replace submarine power/control cables that run from the airport property underwater and beneath the sea floor to all six stations, if necessary (i.e., if cables are found to be damaged or become unusable during new pile installation). Any new cables would be enclosed in conduit and laid on the sea bed.

The negative determination states that if the existing underwater power cables must be replaced, the existing cables would be left in place. Commission staff asked the FAA to provide additional information to justify leaving the existing cables in place if they are no longer operational after the MALSRS platforms are rehabilitated. The FAA replied that the existing cable is buried between 1 and 2+ feet beneath the floor of the boat channel and that to remove the cable would require a dredging operation with increases in turbidity and the potential release into the water column of contaminants found within boat channel sediments. Pile removal and installation will disturb bottom sediments but this activity will be limited to the immediate pile area and will be further contained by the use of silt curtains. The existing cables span a linear area of 1,000 feet and their removal would require much greater sediment disturbance which would be more difficult to contain. As a result, the FAA believes that in order to avoid the potential for significant adverse effects on water quality, the disturbance of bottom sediments should be kept to the absolute minimum and existing cables, if they are replaced, should be left in place.

As the boat channel is a foraging area for the endangered California least tern, all construction work will take place outside the nesting season. Prior to construction in the channel, the FAA will file a "Notice to Mariners" with the U.S. Coast Guard in order to alert recreational boaters who transit the channel to and from the Marine Corps Recruiting Depot marina located immediately to the north of the MALSRS platforms. Boating access to the marina will be maintained at all times during the construction period. To protect water quality in the boat channel during construction, sediment disturbance must be minimized. To that end, decayed piles targeted for replacement will be cut at the mudline and removed, turbidity curtains will be used to limit the transport of any sediments placed in suspension due to construction work, and vibratory hammers will be used to install new wood or steel marine pilings to minimize noise and lessen sediment disturbance. (The FAA states that if fiberglass or concrete composite marine piles are used, conventional diesel or air hammers will be used for installation since vibratory hammers have proven damaging to piles made of these materials. The FAA reports that given the existing noise environment at the project site, temporary construction noise due to installing

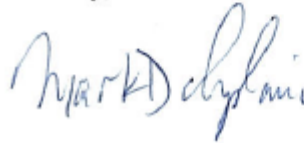
ND-050-11 (Federal Aviation Administration)

Page 3

the replacement piles would not create a significant impact.) Standard best management practices for construction on the marine environment will be designed and enforced by the FAA.

In conclusion, the Commission staff **agrees** with the FAA that the proposed MALSR rehabilitation project adjacent to San Diego International Airport will not adversely affect coastal resources. In addition, although the Commission typically requires that sea floor equipment be removed if it is no longer in use, it has also found that occasionally there are situations where removal of buried equipment can lead to greater impacts to marine habitat and resources. In the proposed MALSR project, the Commission staff agrees with the FAA that should the existing cables need to be replaced, it is more protective of marine resources in the boat channel to not excavate and remove these cables. We therefore **concur** with your negative determination made pursuant to 15 CFR 930.35 of the NOAA implementing regulations. Please contact Larry Simon at (415) 904-5288 should you have any questions regarding this matter.

Sincerely,



(for) CHARLES LESTER  
Executive Director

cc: CCC – San Diego Coast District

## APPENDIX B ACRONYMS AND ABBREVIATIONS

AAIA	Airport and Airway Improvement Act
AC	Advisory Circular
ACHP	Advisory Council on Historic Preservation
ACI-NA	Airports Council International - North America
ACRP	Airport Cooperative Research Program
AIP	<a href="#">Airport Improvement Program</a>
ALP	Airport Layout Plan
ALS	Approach Lighting System
ALSF-2	High Intensity ALS with Sequenced Flashers
APE	Area of Potential Effect
ARC	Airport Reference Code
ARFF	Airport Rescue and Fire Fighting Facility
ARP	FAA Office of Airports
ATC	Air Traffic Control
AQS	Air Quality Systems
AWPA	American Wood Protection Association
BRAC	Base Realignment and Closure Commission
CA	California
CAA	Clean Air Act
CAA	Civil Aeronautics Administration
CAB	Civil Aeronautics Board
Caltrans	California Department of Transportation
CAT	Category
CATEX	Categorically Excluded
CBRA	Coastal Barriers Resources Act
CCA	Copper Chromate Arsenic

CCC	California Coastal Commission
CCMP	California Coastal Management Program
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CIP	Capital Improvement Plan
CO	Carbon Monoxide
CWA	Clean Water Act
CY	Calendar Year
CZMA	Coastal Zone Management Act of 1972
dB	Decibel
dba	A-weighted Decibel
DH	Decision Height
DHS	Department of Homeland Security
DNL	Day-Night Average Sound Level
DOI	Department of Interior
DOT	Department of Transportation
DP	Departure Procedure
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FAAP	Federal Aid to Airports Program
FBO	Fixed Base Operator



FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FICAN	Federal Interagency Committee on Aviation Noise
FICON	Federal Interagency Committee on Noise
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FR	Federal Register
FSDO	Flight Standards District Office
ft	Feet
FTA	Federal Transit Administration
FW	Fixed-Wing
FWS	Fish and Wildlife Service
FY	Fiscal Year
G	Gram
GAO	Government Accountability Office
GIS	Geographic Information Systems
GPRA	Government Performance and Results Act
ILS	Instrument Landing System
IMPROVE	Interagency Monitoring of Protected Visual Environment
INM	Integrated Noise Model
INRMP	Integrated Natural Resources Management Plan
IPCC	Intergovernmental Panel on Climate Change
L <sub>50</sub>	50-Percentile Exceeded Sound Level
L <sub>Aeq</sub>	A-Weighted Equivalent Sound Level
L <sub>max</sub>	Maximum Sound Level
lbs	Pounds
LOMR	Letter of Map Revision
MALS	Medium Intensity Approach Lighting System

MALSF	Medium Intensity Approach Lighting System with Sequenced Flashers
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
MBTA	Migratory Bird Treaty Act
MCRD	Marine Corps Recruiting Depot
MLLW	Mean Lower Low Water
mm	Millimeter
MMPA	Marine Mammal Protection Act
MR	Mean (tide) Range
NAAQS	National Ambient Air Quality Standards
NAMS	National Air Monitoring Systems
NAS	National Airspace System
NB	Navy Building
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966
NM	Nautical Mile
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPIAS	National Plan of Integrated Airport Systems
NPL	National Priorities List
NPS	National Park Service
NRHP	National Register of Historic Places
NTC	Naval Training Center
NTSB	National Transportation Safety Board
ODALS	Omnidirectional Approach Lighting System
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic Aromatic Hydrocarbon

PARTNER	Partnership for Air Transportation Noise and Emissions Reduction
PCB	Polychlorinated Biphenyl
pcf	pounds per cubic foot
PE	Professional Engineer
PM	Project Manager
PM2.5	Particulate Matter 2.5 micrometers or less
PM10	Particulate Matter 10 micrometers or less
RAIL	Runway Alignment Indicator Lights
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
RON	Remain-Over-Night
RVR	Runway Visual Range
SAN	San Diego International Airport
SARA	Superfund Amendments and Reauthorization Act of 1986
SCB	Southern California Bight
SDCRAA	San Diego County Regional Airport Authority
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLAMS	State and Local Air Monitoring Stations
SSALR	Simplified Short Approach Lighting System with Runway Alignment Indicator Lights
Sta.	Station
Stas.	Stations
SWRCB	California State Water Resources Control Board
TBT	Tributyltin
TRB	Transportation Research Board
TSA	Transportation Security Administration
U.S., US	United States
USACE	United States Army Corps of Engineers

U.S.C, USC	United States Code
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USMC	United States Marine Corps
USNMFS	United States National Marine Fisheries Service
VFR	Visual Flight Rules
Volpe Center	Volpe National Transportation Systems Center
WQC	Water Quality Certificate