INDIVIDUAL NOISE ASSESSMENT REPORT

Site Name/Facility:	Murphy Canyon Channels
Master Program Map No.:	58 & 58a (Murphy Canyon Creek Channel)
Date:	June 10, 2013
Acoustician Name:	Mark Storm, INCE Bd. Cert.

Instructions: This form must be completed in its entirety for each target facility identified in the Annual Maintenance Needs Assessment report when the potential exists for sensitive wildlife to occur within 750 feet of a proposed maintenance activity. If no sensitive species are expected within 750 feet of maintenance, only the first two rows under the Existing Conditions section must be completed. Attach additional sheets as needed.

EXISTING CONDITIONS

Site Conditions:

The City of San Diego (City) has developed the Master Storm Water System Maintenance Program (MMP; Master Maintenance Program) to optimize its business processes and environmental protection practices related to channel operation and maintenance activities. The Master Maintenance Program is intended to integrate operation and maintenance planning, implementation and assessment activities with its water quality protection programs. This document provides a summary of the Individual Noise Assessment (INA) activities conducted within the Murphy Canyon Creek Channel in order to comply with the MMP's Programmatic Environmental Impact Report (PEIR).

To better describe and assess the segments that make up the Murphy Canyon Channel, the channel segments were assigned reach numbers (see Figure 1) pertinent to the hydrology and hydraulic analysis conducted for the Individual Hydrology & Hydraulic Assessment (IHHA). Through the MMP process, the IHHA determined that currently maintenance is only need for Reaches 1 and 2.

PROJECT LOCATION AND DESCRIPTION

The proposed work would take place within a portion of the Murphy Canyon Channel, between the Qualcomm Stadium parking lot on the west and Interstate 15 on the east, and north of Interstate 8. The site is within the San Diego Hydrologic Unit within the City of San Diego. The Murphy Canyon channel (Maps 58 and 58a) is broken into four reaches for the purposes of this analysis (see Figure 1) pertinent to the hydrology and hydraulic analysis conducted for the Individual Hydrology & Hydraulic Assessment (IHHA). Reaches 1 and 2 are included on MMP Map 58 and Reaches 3 and 4 are included on MMP Map 58a (City of San Diego 2011a). Based on the current IHHA results, the City is proposing to routinely maintain Reaches 1 and 2 through periodic removal of trash, debris, vegetation and accumulated sediment. The northern portion of Murphy Canyon consists of Reaches 3 and 4, which will not be maintained this year.

EXISTING CONDITIONS

Reaches 1 and 2 and the adjacent stadium parking lot area are within the FEMA Special Flood Hazard Areas Subject to Inundation by the 1-percent Annual Chance Flood (100-year floodplain) designated Zone A. Reaches 3, 4 and the adjacent area are within the Federal Emergency Management Agency's (FEMA) Special Flood Hazard Areas Subject to Inundation by the 1-percent Annual Chance Flood (100-year floodplain) designated Zone AE. Reaches 1, 2 and 3 do not contain flooding due to a 100-year storm event; however, Reach 4 does contain the 100-year storm event.

Reaches 1 & 2

Reaches 1 and 2 are a combination of earthen with rip-rap sides (Reach 1) and concrete (Reach 2) trapezoidal channel types that parallels I-15 to the east and Qualcomm Stadium and a Kinder Morgan tank farm facility to the west. The Qualcomm parking lot has a history of flooding issues by storm water flows from the channel, most recently in 2010.

Reach 1 has a length of approximately 1,662 feet from the downstream end of the concrete channel to the property line located approximately 40 feet south of the Stadium Road bridge. Access, loading, and staging areas for this channel maintenance reach include Access and Loading Areas 1A, 1B, 1C & 1D, and a Staging Area. Maintenance in Reach 1 will occur using a bulldozer or similar type equipment to excavate accumulated sediment, vegetation and other debris from the earthen channel bottom to the excavator located at the access and loading points designated on the maintenance plans. The excavator, or similar equipment, will be stationed at the access points to load the accumulated material from the channel into waiting dump trucks. The dump trucks will transport the accumulated materials to the temporary staging area before disposal of the materials at an appropriate disposal facility. No subsurface disturbance is expected at the access or staging areas associated with Reach 1 as they are 100% concrete-lined or asphalt paved.

The City proposes to maintain a portion of Reach 2 that extends from 110 feet north of San Diego Mission Road to 96 feet south of San Diego Mission Road for a length of approximately 206 feet. Maintenance in this segment of Reach 2 will occur using a skid steer or similar type equipment to remove accumulated sediment, vegetation and other debris from the concrete channel bottom to the excavator located at the access and loading points designated on the maintenance plans. The excavator, or similar equipment, will scoop the accumulated material into waiting dump trucks. The dump trucks will then dispose of the accumulated materials at an appropriate disposal facility subsurface disturbance associated with this activity or these areas. Access and staging areas for this channel maintenance reach include Access and Loading Areas 1A, 1B, 1C & 1D, and a Staging Area. Reach 2 and its associated access and staging areas are 100% cement lined or asphalt paved and no subsurface disturbance is expected with this activity or these areas. The upstream portion of the Reach 2 is on Caltrans right-of-way and will not be maintained at this time.

EXISTING CONDITIONS

Reaches 3 & 4

Reaches 3 and 4 are the upstream continuation of the Murphy Canyon Channel north of the southern box culvert. These reaches are bounded by industrial and golf facilities to the west and Murphy Canyon Road to the east.

Survey Methods and Date:

Existing typical daytime outdoor ambient sound pressure levels (SPL) were measured at various locations that (to the extent practical) are near or coincident with a periphery approximately 750 feet from the above-referenced maintenance facility alignments. The measurements were limited to daytime periods due to the understanding that proposed facility maintenance activities would not occur during the evening (7 p.m. to 10 p.m.) or nighttime (10 p.m. to 7 a.m.) periods. The 750-foot periphery was selected due to the above-stated instructions for this INA and because a similar distance (at which 60 dBA from maintenance activity in the channel was anticipated) value was presented in the Final Recirculated Master Storm Water System Maintenance Program PEIR (PEIR). This periphery, and the bounded area within, overlaps land owned by the City of San Diego, the State of California, and private owners. The project area is not located within the City's Multiple Species Conservation Program's (MSCP) Multi-Habitat Planning Area (MHPA) as the nearest MHPA boundary is located immediately south of the Reach 1 maintenance area associated with the San Diego River corridor. The 60 dBA sound level is consistent with part 5 from the City of San Diego California Environmental Quality Act (CEQA) Significance Determination Thresholds (City of San Diego, 2011).

Attended SPL measurements were performed and collected with a Larson Davis Model 820 ANSI Type 1 sound level meter (SLM) (Serial Number 1655) on April 9, 2013. SLM calibration was field-checked with a Larson Davis Model CAL150B (SN 2233) acoustic calibrator. Measurements were conducted by a member of the URS San Diego acoustics and noise control practice team, as directed by the author of this INA (Mark Storm, an Institute of Noise Control Engineering [INCE] Board Certified Member having 20 years of noise control engineering experience) and in a manner compatible with appropriate ISO 1996 guidelines, including wind-screened microphone height at approximately 5-feet above grade.

The dominant noise source in the project area was traffic noise from I-15. Other observed or audible sound sources include intermittent trolley pass-bys, birds vocalizing, rustling leaves and aircraft flyovers.

Meteorological conditions during the measurement period were seasonally typical and appropriate for conducting ambient outdoor SPL measurements. Air temperatures at the measurement locations varied from 72°F to 82°F, with 48 percent to 51 percent relative humidity (RH). Winds ranged from zero miles-per-hour to eight miles-per-hour from the west. Table 1 below presents a summary of measured data collected at the five short-term survey locations. A-weighted equivalent sound levels (L_{eq}, dBA) represent the energy-average SPL over a period of thirty (30) consecutive minutes; and the L_{90} values statistically represent the SPL exceeded ninety percent of the time over these same

EXISTING CONDITIONS

measurement periods, thus characterizing what might be considered the "background" (e.g., distant highway traffic, other fairly continuous sources of noise, and the amalgam of distant but indiscernible noise) sound exclusive of intermittent and temporarily dominant sound sources such as the military fighter jets and helicopters.

Table 1 Summary of Existing Outdoor Ambient Sound Levels in Project Vicinity

Survey Location ID	Measured Existing Ambient Outdoor Sound Pressure Level (SPL)	
	L_{eq} (dBA)	L_{90} (dBA)
ST1	65	62
ST2	62	60
ST3	67	65
ST4	70	67
ST5	64	61

The difference between the L_{eq} and L_{90} levels is no greater than 3 dBA. This modest differential supports the observation that the acoustical environment in this area is dominated by constant traffic noise from I-15.

Are there sensitive wildlife species within 750 feet of proposed maintenance?

YES	■	NO		

Sensitive Wildlife Observed/Detected:

Describe sensitive wildlife anticipated to occur within 750 feet of maintenance that were observed and the closest distance to proposed maintenance.

As reported in the Individual Biological Assessment (IBA), no federally- or state-listed special-status species were detected during the field survey. Additionally, no species considered special status (i.e., "covered") under the City of San Diego Multiple Species Conservation Program (MSCP, adopted March 1997) were detected. No raptors were detected during the field survey.

Although no special-status species were detected during the field investigation, there are habitats within and surrounding the maintenance areas (i.e., Southern Reach Map 58 and Northern Reach Map 58a) that have potential to support special-status wildlife species.

EXISTING CONDITIONS

Such habitats include: riparian (i.e., southern riparian forest and southern willow scrub) and wetland (freshwater marsh). The potential for special-status species to occur within each proposed maintenance area are described by reach below.

Reach 1

Southern riparian forest and southern willow scrub, including the disturbed forms of these communities, have a moderate to high potential to support least Bell's vireo (*Vireo bellii pusillus*, vireo)(State-/Federally-listed Endangered and MSCP covered) and yellow warbler (*Dendroica petechia brewsteri*) (CDFW State Species of Special Concern). Additionally, the riparian habitat (i.e., southern riparian forest and southern willow scrub, including the disturbed forms) have a moderate potential to support nesting raptors including red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), and Cooper's hawk (*Accipiter cooperii*) (CDFW State Species of Special Concern and MSCP covered species). The freshwater marsh habitat, including the disturbed form, has the potential to support least bittern (*Ixobrychus exilis*) (CDFW State Species of Special Concern) and light-footed clapper rail (*Rallus longirostris levipes*) (State-/Federally-listed Endangered and MSCP covered).

According to the San Diego Bird Atlas (Unitt 2004), least bittern has been documented breeding in the project vicinity (i.e., La Mesa Quadrangle) within the San Diego River habitat corridor downstream of the proposed maintenance area. Additionally, post breeding season light-footed clapper rail individuals have also been documented to occur downstream of the project within the San Diego River habitat corridor (Mock, pers. comm. 2013).

Reach 2

The few young willow trees within the maintenance area may provide habitat for yellow warbler, but do not contain substantial habitat to support nesting least Bell's vireo. Additionally, due to the lack of habitat it is unlikely that raptors would occupy these young willows identified within mapped freshwater marsh habitat for nesting.

The mapped freshwater marsh habitat may support least bittern (*Ixobrychus exilis*) (CDFW State Species of Special Concern) as this species has been documented breeding in the project vicinity (i.e., La Mesa Quadrangle) within the San Diego River habitat corridor downstream of the proposed maintenance area (Unitt 2004). Additionally, post breeding season light-footed clapper rail individuals (*Rallus longirostris levipes*) (State-/Federally-listed Endangered and MSCP covered) have also been documented to occur within suitable freshwater marsh habitat downstream of the project within the San Diego River habitat corridor (Mock, pers. comm. 2013).

Wildlife value:

Within the proposed maintenance areas, southern riparian forest, southern willow scrub, and freshwater marsh provide potential nesting and foraging habitat for a variety of

EXISTING CONDITIONS

songbirds. The open water mapped in the southern terminus of Reach 1 may provide habitat for waterfowl. White-throated swifts were observed nesting in crevices beneath the overpass for San Diego Mission Road above Reach 2. A combined list of the 12 wildlife species detected during the site survey is provided below.

- Anna's Hummingbird (*Calypte anna*)
- Bewick's Wren (*Thryomanes bewickii*)
- Black Phoebe (*Sayornis nigricans*)
- California Towhee (*Melozone crissalis*)
- Common Yellowthroat (*Geothlypis trichas*)
- House Finch (*Haemorhous mexicanus*)
- Lesser Goldfinch (*Spinus psaltria*)
- Mallard (*Anas platyrhynchos*)
- Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
- Song Sparrow (*Melospiza melodia*)
- White-throated Swift (*Aeronautes saxatalis*)
- Wrentit (*Chamaea fasciata*)

MAINTENANCE IMPACTS

List the equipment to be used during maintenance and anticipated noise levels associated with each.

Channel Maintenance Activity

The construction equipment roster for Murphy Canyon Creek Channel Maintenance is expected to include what is described in the IMP attachment 1d (Maintenance Methodology). The following is a list of anticipated construction equipment with corresponding estimates of individual equipment reference sound level (dBA, L_{max} at 50 feet) and acoustical usage factor (% of an hour) based on Federal Highway Administration (FHWA) Road Construction Noise Model (RCNM) User's Guide Table 1 (FHWA, 2006) information.

- "D8 Dozer" (Dozer, 82 dBA, 40%)
- "Cat 320" (Excavator, 81 dBA, 40%)
- "Cat 950" (Front End Loader, 79 dBA, 40%)
- "Dump Truck (20yd)" (Dump Truck, 76 dBA, 40%)
- "Skid Steer (Bobcat S650)" (All Other Equipment > 5 HP, 68 dBA, 50%)
- "Vactor (2100 Plus PD)" (Vacuum Excavator, 85 dBA, 20%)
- "6" Trash Pump (Wacker)" (pump, 81 dBA, 25%)

Stockpile/Staging Area Activity

The following mechanized equipment is expected for stockpile/staging areas. The list of equipment and its usage factors are based on the INA report for Tijuana River Pilot

MAINTENANCE IMPACTS

Channel & Smugglers Gulch Channel Maintenance. Corresponding estimates of individual equipment reference sound level (dBA, L_{max} at 50 feet) are from FHWA RCNM User's Guide Table 1 (FHWA, 2006), and acoustical usage factors are calculated from estimates of equipment/vehicle usage used in Smugglers Gulch Channel maintenance predictive noise analysis (Feb 2013). Reflecting the Maintenance Methodology description, the "Sweeper" has replaced the "Water Truck" from the Smugglers Gulch Channel list.

Staging Area

- "Back-hoe" (backhoe, 78 dBA, 40%)
- "Front-end Loader" (Front End Loader, 79 dBA, 40%)
- "Sweeper (Tymco 500X)" (Vacuum Street Sweeper, 82 dBA, 10%)
- "(1) Rock Truck disposing channel material" (Dump Truck, 76 dBA, 20%)
- "(1) Rock Truck taking material away from staging area" (Dump Truck, 76 dBA, 10%)

Access & Loading

For purposes of these maintenance activity noise analyses, and per the aforementioned IMP Attachment 1d, operating equipment or vehicles at the access and loading areas would be—as temporally appropriate—samples from the same lists above for channel and staging area activities. The access and loading areas are also either adjacent or in proximity to the channel or staging areas.

Potential Additional Equipment

If additional equipment or processes were added to these above anticipated rosters, such as de-watering operations involving pumps and other components that may have the potential for operating over portions of the Project duration, the aggregate noise level from maintenance activity would be expected to rise. The magnitude of this rise or additive effect would depend on a number of factors, including as follows:

- Quantity of operating process and activities, and their individual equipment or components;
- Location of the noise emitters, and their distance to noise-sensitive receivers;
- Sound power levels of the noise emitters, which are typically related to consumed power levels and/or fluid or mechanical capacities; and,
- Duration of the operating processes and their duty cycles (or, frequency of noise emission: continuous, intermittent, or impulsive?).

Definition of these factors would depend on Project needs or conditions as they are encountered, such as what may become the need for de-watering pumps—even while such equipment is not currently expected.

MAINTENANCE IMPACTS

Calculate the combined maximum hourly noise level associated with simultaneous operation of equipment during maintenance. Estimate the distance to the 60 dBA Leq including existing ambient noise sources affecting the maintenance area.

Channel Maintenance Activity

This analysis assumes that during a typical hour when maintenance activity occurs, all eight identified equipment may be operating simultaneously from a single point within the channel at the indicated usage factors, resulting in an aggregate reference sound level (i.e., the logarithmic sum of the eight, with each adjusted by its usage factor) of 84 dBA L_{eq} at 50 feet. Using this aggregate reference sound level, and accounting for geometric divergence (6 dBA per doubling of distance), atmospheric acoustical absorption (-1 dBA per 1000 feet), ground acoustical absorption (maximum of -4.8 dBA, per ISO 9613-2, eq. 10), and ignoring any potentially beneficial topographical occlusion between source and receiver, a project sound level of 60 dBA hourly L_{eq} may be expected at a distance of approximately 460 feet from a position along the 2013 H&H Work Area.

The distances at which project noise levels are expected, at 5 dBA decrements and in terms of hourly L_{eq}, are also presented in Table 2 below.

Stockpile/Staging Area Activity

Based on the expected equipment and their usage levels from the preceding paragraphs, this analysis anticipates a reference sound level as high as 79 dBA L_{eq} at 50 feet for Staging Areas. After accounting for naturally-occurring sound attenuation in the same fashion as for aggregate noise emission from maintenance activity in the channel, this analysis predicts a project sound level of 60 dBA hourly L_{eq} might also be expected at a distance of approximately 265 feet from each Staging Area.

Channel + Stockpile/Staging Area Activity

Where Staging Areas and Channel alignment are immediately adjacent, it is possible that concurrent activity would take place at both locations and therefore create a condition where noise from the two activities would be greater than either of them separately. The corresponding distances for expected project noise levels from a combination of Channel and Staging Area activities appear in Table 2.

Access Roads

Along an access road that connects a channel alignment to a stockpile, the source of noise would largely be truck movements. Were one to assume five truckloads or pass-bys per hour (as does the analysis in the aforementioned PEIR), and a pass-by duration of about one minute, the resulting estimate for acoustical usage factor would be about 8%, and the expected reference noise level would therefore be 73 dBA. After accounting for naturally-occurring attenuation, a sound level of 60 dBA hourly L_{eq} may be expected at a distance of approximately 155 feet from a position along the access road centerline.

MAINTENANCE IMPACTS

The occurrence of this anticipated 60 dBA hourly L_{eq} project noise level is presented as a single isopleth or contour on Figure 1. Note that this contour represents a boundary showing the aggregate extent, over the one-month duration of the project, where this project noise level may attain 60 dBA hourly L_{eq} at a perpendicular distance in feet according to Table 2.

Because the ambient noise levels already exceed 60 dBA hourly L_{eq} as shown in Table 1, the impact threshold would become the same as the ambient noise level instead of 60 dBA hourly L_{eq}. So that a reader might compare these measured existing ambient L_{eq} with predicted project noise, Figure 1 also depicts 65, 70, and 75 dBA hourly L_{eq} predicted project noise contours.

Table 2 Approximated Distances for Predicted Project Noise Levels

Project Activity	Approximate distance (feet) at which predicted project activity noise level (hourly L_{eq}) is expected to occur					
	75 dBA	70 dBA	65 dBA	60 dBA	55 dBA	50 dBA
Channel	110	170	275	460	770	1280
Staging Area	70	105	165	265	445	750
Channel + Staging Area	120	190	310	515	865	1430
Access Road	45	70	100	155	250	420

Would sensitive wildlife receptors be affected by maintenance noise in excess of 60 dBA Leq?

YES	■	NO		

Observed sensitive wildlife receptors within a 60 dBA contour would be under consideration in this study; thus, *when present during their breeding seasons*, they would be exposed to maintenance noise in excess of 60 dBA hourly L_{eq}. If project noise is not expected to occur during these breeding seasons or if project noise does occur during this time but is expected to be less than or equal to the nearest representative location of measured current pre-project ambient sound level that is already higher than 60 dBA hourly L_{eq} (See Table 1), no affects are anticipated. Project noise would be expected to be less than 60 dBA hourly L_{eq} beyond this buffer distance, and diminish in magnitude with increasing distance.

MITIGATION

What mitigation measures would be required to avoid adverse impacts to sensitive wildlife (e.g. barriers or limitations on hours of operation)?

Temporary construction noise from the use of heavy equipment would generate noise in excess of 60 dBA L_{eq} during the maintenance period. Maintenance conducted outside the breeding/nesting season for protected avian species would not result in a significant direct noise impact and no noise attenuation mitigation would be required.

In compliance with the USFWS Section 7 BO and Master Program PEIR Mitigation Measures 4.1.2 and 4.1.8, protocol surveys are required if maintenance exceeds noise level of 60 dBA or is proposed during the breeding seasons for the following species:

- Raptor nest – between January 15 and August 15;
- Coastal California Gnatcatcher – between March 1 and August 15 inside the MHPA only; no restrictions outside MHPA;
- Least Bell's vireo – between March 15 and September 15;
- Southwestern willow flycatcher – between May 1 and September 1; and
- Light-footed clapper rail – between March 15 and September 15.

If work is proposed between January 15 (start of the raptor nesting season) and August 15, a pre-maintenance survey for active raptor nests shall be conducted by a qualified biologist in areas supporting suitable habitat. If active raptor nests are found, maintenance shall not occur within 300 feet of a Cooper's Hawk nest, 900 feet of a Northern Harrier's nest, or 500 feet of any other raptor's nest until any fledglings have left the nest.

There is no potential habitat area sited for Coastal California Gnatcatcher within a 60 dBA hourly L_{eq} composite contour and MHPA.

Least Bell's Vireo and Light-Footed Clapper Rail are considered to have a potential to be present in or adjacent to the project area (See Figure 1). Those areas along Reaches 1 and 2 would not be practical to mitigate because their presence is in the channel area. For the area south of the Trolley track also would not be practical to mitigate because the temporary barrier would potentially interrupt water flow in the channel. Therefore, URS strongly recommends that maintenance activity be avoided during this species' breeding season.

For reader convenience, applicable noise-related PEIR Mitigation Measures have been included in their entirety as Attachment 1.

ADDITIONAL COMMENTS OR RECOMMENDATIONS
For residential receivers, the San Diego Municipal Code states the 75 dBA L_{eq} as a limit for daytime-allowed (7 a.m. to 7 p.m.) construction noise per 59.5.0404 (c) (if the project maintenance activity were to be classified as construction noise). As presented in Figure 1, there is no residential land use within 75 dBA L_{eq} contour line. Thus, no noise impact is expected. Nonetheless, Attachment 1d of the IMP indicates that expected hours of maintenance activity are from 6 a.m. through 6 p.m., seven days a week, for the duration of the project. Since this includes Sundays and may include holidays, during which time 59.5.0404 (a) of the San Diego Municipal Code would consider noise from such maintenance activity unlawful without a permit, URS recommends that a permit be applied for and granted before commencement of maintenance activity by the City's Noise Abatement and Control Administrator.

Attachment 1: Applicable noise-related PEIR Mitigation Measures

Legend

Project Features

- 2013 H&H Work Area
- Staging Areas

Reach

- 1
- 2
- 3
- 4

Noise Features

- Noise Measurement Location
- Noise Contours

Sensitive Habitats

- Least Bell's Vireo/Light-Footed Clapper Rail/Raptor
- Least Bell's Vireo/Light-Footed Clapper Rail
- Multi-Habitat Planning Area
- Creeks

Reach 4
Reach 3
Reach 2
Reach 1
MURPHY CANYON RD
ST1
ST2
ST3
ST4
ST5
75 dBA
70 dBA
65 dBA
60 dBA
HARCOURT DR
MISSION VILLAGE DR
FRIARS RD
SAN DIEGO MISSION RD
RANCHO MISSION RD
REFLECTION DR
15
Qualcomm Stadium
San Diego River

SOURCES:
Impact Areas, Channel Survey,
Map Extents (City of San Diego, 2012).
Roads (SanGIS, 2012).
Aerial (Aerials Express, 2011).

CITY OF SAN DIEGO
CHANNEL IMPACT AREAS AND NOISE SURVEY CONTOURS
MURPHY CANYON CHANNEL
MASTER STORM WATER MAINTENANCE PROGRAM

URS

250 0 250 500 Feet
1 inch = 500 feet
SCALE CORRECT WHEN PRINTED AT 11X17

CREATED BY: PM	DATE: 6/17/2013	FIG. NO: 1
PM: BE	PROJ. NO: 27679954.11300	

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Attachment 1

Applicable Noise-Related PEIR Mitigation Measures

BIOLOGICAL RESOURCES

Mitigation Measure 4.3.13: Prior to commencing any maintenance activity which may impact sensitive biological resources, the monitoring biologist shall verify that the following actions have been taken, as appropriate:

- Fencing, flagging, signage, or other means to protect sensitive resources to remain after maintenance have been implemented;
- Noise attenuation measures needed to protect sensitive wildlife are in place and effective; and/or
- Nesting raptors have been identified and necessary maintenance setbacks have been established if maintenance is to occur between January 15 and August 31.

The designated biological monitor shall be present throughout the first full day of maintenance, whenever mandated by the associated IBA. Thereafter, through the duration of the maintenance activity, the monitoring biologist shall visit the site weekly to confirm that measures required to protect sensitive receivers (e.g., flagging, fencing, noise barriers) continue to be effective. The monitoring biologist shall document monitoring events via a Consultant Site Visit Record. This record shall be sent to the Maintenance Manager (MM) each month. The MM will forward copies to the Mitigation Monitoring Coordinator (MMC).

Mitigation Measure 4.3.20: If no surveys are completed and no sound attenuation devices are installed, it will be assumed that the habitat in question is occupied by the appropriate species and that maintenance activities would generate more than 60 dBA L_{eq} within the habitat requiring protection. All such activities adjacent to the protected habitat shall cease for the duration of the breeding season of the appropriate species and a qualified biologist shall establish a limit of work.

LAND USE

Mitigation Measure 4.1.3: If a listed species is located within 500 feet of a proposed maintenance activity and maintenance would occur during the associated breeding season, an analysis of the noise generated by maintenance activities shall be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the ADD Environmental Designee. The analysis shall identify the location of the 60 dBA L_{eq}

noise contour on the maintenance plan. The report shall also identify measures to be undertaken during maintenance to reduce noise levels.

Mitigation Measure 4.1.4: Based on the location of the 60 dBA L_{eq} noise contour and the results of the protocol surveys, the Project Biologist shall determine if maintenance has the potential to impact breeding activities of listed species. If one or more of the following species are determined to be significantly impacted by maintenance, then maintenance (inside and outside the MHPA) shall avoid the following breeding seasons unless it is determined that maintenance is needed to protect life or property.

- Coastal California gnatcatcher (between March 1 and August 15 inside the MHPA only; no restrictions outside MHPA);
- Least Bell's vireo (between March 15 and September 15); and
- Southwestern willow flycatcher (between May 1 and September 1).

Mitigation Measure 4.1.5: If maintenance is required during the breeding season for a listed bird to protect life or property, then the following conditions must be met:

- At least two weeks prior to the commencement of maintenance activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from maintenance activities shall not exceed 60 dBA hourly average at the edge of occupied habitat. Concurrent with the commencement of maintenance activities and the maintenance of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dBA hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated maintenance activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season of the subject species, as noted above.
- Maintenance noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the maintenance activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dBA hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD, as necessary, to reduce noise levels to below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. Such measures may include, but are not limited to, limitations on the placement of maintenance equipment and the simultaneous use of equipment.
- Prior to the commencement of maintenance activities that would disturb sensitive resources during the breeding season, the biologist shall ensure that all fencing,

staking and flagging identified as necessary on the ground have been installed properly in the areas restricted from such activities.

- If noise attenuation walls or other devices are required to assure protection to identified wildlife, then the biologist shall make sure such devices have been properly constructed, located and installed.

Mitigation Measure 4.1.8: Prior to commencing any maintenance in, or within 500 feet of any area determined to support coastal California gnatcatchers, the ADD Environmental Designee shall verify that the MHPA boundaries and the following project requirements regarding the coastal California gnatcatcher are shown on the maintenance plans:

NO MAINTENANCE ACTIVITIES SHALL OCCUR BETWEEN MARCH 1 AND AUGUST 15, THE BREEDING SEASON OF THE COASTAL CALIFORNIA GNATCATCHER, UNTIL THE FOLLOWING REQUIREMENTS HAVE BEEN MET TO THE SATISFACTION OF THE ADD ENVIRONMENTAL DESIGNEE:

a. A QUALIFIED BIOLOGIST (POSSESSING A VALID ENDANGERED SPECIES ACT SECTION 10(a)(1)(A) RECOVERY PERMIT) SHALL SURVEY THOSE HABITAT AREAS <u>WITHIN THE MHPA</u> THAT WOULD BE SUBJECT TO MAINTENANCE NOISE LEVELS EXCEEDING 60 DECIBELS (dBA) HOURLY AVERAGE FOR THE PRESENCE OF THE COASTAL CALIFORNIA GNATCATCHER. SURVEYS FOR THE COASTAL CALIFORNIA GNATCATCHER SHALL BE CONDUCTED PURSUANT TO THE PROTOCOL SURVEY GUIDELINES ESTABLISHED BY THE U.S. FISH AND WILDLIFE SERVICE WITHIN THE BREEDING SEASON PRIOR TO THE COMMENCEMENT OF ANY MAINTENANCE. IF GNATCATCHERS ARE PRESENT, THEN THE FOLLOWING CONDITIONS MUST BE MET:

1. BETWEEN MARCH 1 AND AUGUST 15, MAINTENANCE OF OCCUPIED GNATCATCHER HABITAT SHALL BE PERMITTED. AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; AND

2. BETWEEN MARCH 1 AND AUGUST 15, NO MAINTENANCE ACTIVITIES SHALL OCCUR WITHIN ANY PORTION OF THE SITE WHERE MAINTENANCE ACTIVITIES WOULD RESULT IN NOISE LEVELS EXCEEDING 60 dB(A) HOURLY AVERAGE AT THE EDGE OF OCCUPIED GNATCATCHER HABITAT. AN

ANALYSIS SHOWING THAT NOISE GENERATED BY MAINTENANCE ACTIVITIES WOULD NOT EXCEED 60 dBA HOURLY AVERAGE AT THE EDGE OF OCCUPIED HABITAT MUST BE COMPLETED BY A QUALIFIED ACOUSTICIAN (POSSESSING CURRENT NOISE ENGINEER LICENSE OR REGISTRATION WITH MONITORING NOISE LEVEL EXPERIENCE WITH LISTED ANIMAL SPECIES) AND APPROVED BY THE CITY MANAGER AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES. PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES DURING THE BREEDING SEASON, AREAS RESTRICTED FROM SUCH ACTIVITIES SHALL BE STAKED OR FENCED UNDER THE SUPERVISION OF A QUALIFIED BIOLOGIST; OR

3. AT LEAST TWO WEEKS PRIOR TO THE COMMENCEMENT OF MAINTENANCE ACTIVITIES, UNDER THE DIRECTION OF A QUALIFIED ACOUSTICIAN, NOISE ATTENUATION MEASURES (e.g., BERMS, WALLS) SHALL BE IMPLEMENTED TO ENSURE THAT NOISE LEVELS RESULTING FROM MAINTENANCE ACTIVITIES WILL NOT EXCEED 60 dBA HOURLY AVERAGE AT THE EDGE OF HABITAT OCCUPIED BY THE COASTAL CALIFORNIA GNATCATCHER. CONCURRENT WITH THE COMMENCEMENT OF MAINTENANCE ACTIVITIES AND THE MAINTENANCE OF NECESSARY NOISE ATTENUATION FACILITIES, NOISE MONITORING* SHALL BE CONDUCTED AT THE EDGE OF THE OCCUPIED HABITAT AREA TO ENSURE THAT NOISE LEVELS DO NOT EXCEED 60 dBA HOURLY AVERAGE. IF THE NOISE ATTENUATION TECHNIQUES IMPLEMENTED ARE DETERMINED TO BE INADEQUATE BY THE QUALIFIED ACOUSTICIAN OR BIOLOGIST, THEN THE ASSOCIATED MAINTENANCE ACTIVITIES SHALL CEASE UNTIL SUCH TIME THAT ADEQUATE NOISE ATTENUATION IS ACHIEVED OR UNTIL THE END OF THE BREEDING SEASON (AUGUST 16).

* Maintenance noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the maintenance activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. If not, other measures shall be implemented in consultation with the biologist and the ADD

environmental designee, as necessary, to reduce noise levels to below 60 dBA hourly average or to the ambient noise level if it already exceeds 60 dBA hourly average. Such measures may include, but are not limited to, limitations on the placement of maintenance equipment and the simultaneous use of equipment.

b. IF COASTAL CALIFORNIA GNATCATCHERS ARE NOT DETECTED DURING THE PROTOCOL SURVEY, THE QUALIFIED BIOLOGIST SHALL SUBMIT SUBSTANTIAL EVIDENCE TO THE CITY MANAGER AND APPLICABLE RESOURCE AGENCIES WHICH DEMONSTRATES WHETHER OR NOT MITIGATION MEASURES SUCH AS NOISE WALLS ARE NECESSARY BETWEEN MARCH 1 AND AUGUST 15 AS FOLLOWS:

1. IF THIS EVIDENCE INDICATES THE POTENTIAL IS HIGH FOR COASTAL CALIFORNIA GNATCATCHER TO BE PRESENT BASED ON HISTORICAL RECORDS OR SITE CONDITIONS, THEN CONDITION A.III SHALL BE ADHERED TO AS SPECIFIED ABOVE.

2. IF THIS EVIDENCE CONCLUDES THAT NO IMPACTS TO THIS SPECIES ARE ANTICIPATED, NO MITIGATION MEASURES WOULD BE NECESSARY.