Supplemental Environmental Impact Statement/
Supplement to the Subsequent Environmental Impact Report

State Clearinghouse No. 2010051001

U.S. Department of Transportation
Federal Transit Administration

and the
San Diego Association of Governments

July 2014
Supplemental Environmental Impact Statement/
Supplement to the Subsequent Environmental Impact Report
July 2014

Prepared by:
The San Diego Association of Governments (SANDAG)
Mid-Coast Corridor Transit Project
San Diego, California

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

PREPARED PURSUANT TO:


The Federal Transit Administration may issue a single Final Supplemental Environmental Impact Statement and Record of Decision document pursuant to Pub. L. 112-141, 126 Stat. 405, Section 1319(b) unless the Federal Transit Administration determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to Section 1319. In that case, Federal Transit Administration would issue a Final Supplemental Impact Statement followed by a Record of Decision, as needed.

by the

FEDERAL TRANSIT ADMINISTRATION
U.S. DEPARTMENT OF TRANSPORTATION

and the

SAN DIEGO ASSOCIATION OF GOVERNMENTS

Leslie T. Rogers
Regional Administrator, Region IX
Federal Transit Administration

Gary Gallegos
Executive Director
San Diego Association of Governments

JUL 3 2014
Date of Approval

7-3-2014
Date of Approval
ABSTRACT

The Federal Transit Administration and the San Diego Association of Governments (SANDAG) have prepared this Supplemental Environmental Impact Statement for the Mid-Coast Corridor Transit Project in San Diego, San Diego County, California. Pursuant to 23 Code of Federal Regulations 771.130, this document was prepared to supplement the Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement (SEIS) (SANDAG, 2013a), which was circulated for review and comment from May 17, 2013 to July 17, 2013. This document provides for review and comment of an impact that was not evaluated in the Draft SEIS. This is a limited-scope document that evaluates a previously unidentified impact to San Diego fairy shrimp (*Branchinecta sandiegonensis*), a federally listed endangered species, and discusses the proposed mitigation.

FOR ADDITIONAL INFORMATION CONCERNING THIS DOCUMENT, CONTACT:

Alexander Smith  
Community Planner  
Federal Transit Administration, Region IX  
201 Mission Street, Suite 1650  
San Francisco, CA 94105  
415-744-3133

Leslie Blanda  
Mid-Coast Project Development Program Manager  
San Diego Association of Governments  
401 B Street, Suite 800  
San Diego, CA 92101  
619-699-6907

This document is being made available to the public for a 45-day comment period in accordance with the National Environmental Policy Act. Comments during this review period must be limited to the analysis of impacts to the San Diego fairy shrimp as presented in this document only.

Visit the Mid-Coast Corridor Transit Project website (www.sandag.org/midcoast) where you can view and download this document and the Draft SEIS and request a compact disc of the documents. Printed copies of the documents are available for review and purchase at the SANDAG offices at the address listed above; compact discs are available free of purchase.

Printed copies of this document have been placed for review in the following public libraries: Balboa Branch Library; City of San Diego Central Library; Clairemont Branch Library; Kensington-Normal Heights Branch Library; La Jolla/Riford Branch Library; Linda Vista Branch Library; Mesa College Library; Mission Hills Branch Library; Mission Valley Branch Library; North Clairemont Branch Library; North Park Branch Library; North University Community Branch Library; Ocean Beach Branch Library; Pacific Beach/Taylor Branch Library; Point Loma/Hervey Branch Library; San Diego County Public Law Library; Serra Mesa-Keamy Mesa Branch Library; University Community Branch Library; University Heights Branch Library; University of California, San Diego Geisel Library; and University of San Diego Copley Library.

Comments may be submitted in writing during the 45-day comment period. Written comments should be submitted to Ms. Leslie Blanda, Mid-Coast Project Development Program Manager, at the address above or submitted via e-mail at midcoast@sandag.org. Responses to comments received on this document will be included in the Final SEIS for the project.
SUPPLEMENT TO THE MID-COAST CORRIDOR TRANSIT PROJECT DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

LEAD AGENCY:  San Diego Association of Governments

STATE CLEARINGHOUSE NO.:  2010051001

TITLE OF PROPOSED ACTION:  Mid-Coast Corridor Transit Project

ABSTRACT:
The San Diego Association of Governments (SANDAG) has prepared this supplement for the Mid-Coast Corridor Transit Project in San Diego, San Diego County, California. This document was prepared to supplement the Mid-Coast Corridor Transit Project Draft Subsequent Environmental Impact Report (Draft SEIR) (SANDAG, 2013a), which was circulated for public review from May 17, 2013 to July 17, 2013. This document provides for review and comment of an impact that was not evaluated in the Draft SEIR. This is a limited-scope document that evaluates a previously unidentified potentially significant impact to San Diego fairy shrimp (Branchinecta sandiegonensis), a federally listed endangered species, and discusses proposed mitigation.

FOR ADDITIONAL INFORMATION CONCERNING THIS DOCUMENT, CONTACT:

Alexander Smith
Community Planner
Federal Transit Administration, Region IX
201 Mission Street, Suite 1650
San Francisco, CA 94105
415-744-3133

Leslie Blanda
Mid-Coast Project Development Program Manager
San Diego Association of Governments
401 B Street, Suite 800
San Diego, CA 92101
619-699-6907

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Visit the Mid-Coast Corridor Transit Project website (www.sandag.org/midcoast) where you can view and download this document and the Draft SEIR and request a compact disc of the documents. Printed copies of this document are available for review and purchase at the SANDAG offices at the address listed above; compact discs are available free of purchase.

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Comments may be submitted in writing during the 45-day comment period. Written comments should be submitted to Ms. Leslie Blanda, Mid-Coast Project Development Program Manager, at the address above or submitted via e-mail at midcoast@sandag.org. Responses to comments received on this document will be included in the Final SEIR for the project.
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The following acronyms, initialisms, and short forms are used in this report.

2030 RTP 2030 San Diego Regional Transportation Plan: Pathways for the Future
BMPs Best Management Practices
Caltrans California Department of Transportation
CDFW California Department of Fish and Wildlife
CEQA California Environmental Quality Act
CFR Code of Federal Regulations
EIS Environmental Impact Statement
EMI Electromagnetic Interference
ESA Endangered Species Act
FTA Federal Transit Administration
I- Interstate
LOSSAN Los Angeles—San Diego—San Luis Obispo Rail Corridor Agency
LRT light rail transit
MSCP Multiple Species Conservation Program
MTS Metropolitan Transit System
OTTC Old Town Transit Center
ROD Record of Decision
SANDAG San Diego Association of Governments
Scripps Hospital Scripps Memorial Hospital, La Jolla
SEIS/SEIR Supplemental Environmental Impact Statement and Subsequent Environmental Impact Report
Supplement Supplemental Environmental Impact Statement/Supplement to the Subsequent Environmental Impact Report
TPSSs traction power substations
Trolley San Diego Trolley
UCSD University of California, San Diego
USC United States Code
USFWS U.S. Fish and Wildlife Service
UTC University Towne Centre
VA Veterans Administration
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S.0 EXECUTIVE SUMMARY

The Federal Transit Administration (FTA) and the San Diego Association of Governments (SANDAG) have prepared this Supplemental Environmental Impact Statement/Supplement to the Subsequent Environmental Impact Report (Supplement) for the Mid-Coast Corridor Transit Project in San Diego, California. Pursuant to Title 23 of the Code of Federal Regulations, Section 771.120, and the California Code of Regulations, Title 14, Chapter 3, Section 15088.5, this document was prepared to supplement the Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) (SANDAG 2013a), which was circulated for review and comment from May 17, 2013 to July 17, 2013. This is a limited-scope document that evaluates a previously unidentified impact to San Diego fairy shrimp (Branchinecta sandiegonensis), a federally listed endangered species protected pursuant to the federal Endangered Species Act (ESA), and discusses the proposed mitigation.

The scope of this Supplement is limited to the evaluation of direct, indirect, and cumulative impacts to San Diego fairy shrimp; the discussion of formal Section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) pursuant to the ESA; and the identification of mitigation measures. Potential impacts to the San Diego fairy shrimp are described for a No-Build Alternative and the Refined Build Alternative. The Refined Build Alternative was approved by the SANDAG Board of Directors on November 15, 2013, and amended by the Board of Directors on May 9, 2014, for evaluation in the Final SEIS/SEIR. The Refined Build Alternative is described in the Mid-Coast Corridor Transit Project Final Refined Build Alternative Report (SANDAG, 2014). The project alignment under the Refined Build Alternative at the location of the potential impacts to the San Diego fairy shrimp is the same as the Build Alternative evaluated in the Draft SEIS/SEIR. The No-Build Alternative in this Supplement also is the same as that presented in the Draft SEIS/SEIR.

San Diego fairy shrimp were identified as present within an ephemeral basin (referred to as Basin II), which is approximately 76 feet long and 5.5 feet wide (approximately 425 square feet). Direct impacts would occur to the basin and San Diego fairy shrimp as a result of grading and filling activities associated with at-grade track construction to accommodate the new San Diego Trolley tracks. Impacts to ephemeral basins occupied by San Diego fairy shrimp, such as Basin II, are proposed to be mitigated at a 2:1 ratio through restoration and/or enhancement of vernal pools within west Otay Mesa on property purchased for vernal pool mitigation or within another approved mitigation area acceptable to the USFWS. Restoration would be conducted at a minimum 1:1 ratio to achieve a no-net-loss of San Diego fairy shrimp habitat; a combination of restoration and enhancement would make up the remaining mitigation.

Formal consultation with the USFWS under Section 7 of the ESA was initiated by the FTA and SANDAG on June 12, 2014. Documentation of correspondence with the USFWS regarding San Diego fairy shrimp is provided in Appendix A. The Mid-Coast Corridor Transit Project Section 7 Consultation Biological Assessment is provided in Appendix B.
This Supplement will be available for a 45-day review and comment period prior to the issuance of a combined Final SEIS and Record of Decision (ROD) by FTA, and prior to certification of the Final SEIR by SANDAG. Any comments on this Supplement should be limited to the scope of analysis of this document. Responses to comments received on this Supplement will be provided with the Final SEIS/SEIR for the project. SANDAG, in coordination with the FTA, will complete the Final SEIS/SEIR and associated documents. The FTA will continue Section 7 consultation with the USFWS, which will conclude with the USFWS issuing a Biological Opinion. The FTA may issue a single Final SEIS and ROD pursuant to Public Law 112-141, 126 Statute 405, Section 1319(b) unless the FTA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to Section 1319. In that case, FTA would issue a Final SEIS followed by the ROD.
1.0 INTRODUCTION

1.1 Background

This Supplemental Environmental Impact Statement/Supplement to the Subsequent Environmental Impact Report, referred to herein as the Supplement, has been prepared by the San Diego Association of Governments (SANDAG), in cooperation with the Federal Transit Administration (FTA), for the Mid-Coast Corridor Transit Project in San Diego, San Diego County, California. The proposed project would extend the San Diego Trolley Blue Line from the Santa Fe Depot in Downtown San Diego to the University Towne Centre Transit Center in University City, providing continuous service from the San Ysidro Transit Center at the U.S.–Mexico international border to University City. SANDAG is serving as lead agency under the California Environmental Quality Act (CEQA), and the FTA the lead agency under the National Environmental Policy Act. The Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) (SANDAG, 2013a) for the project was completed and distributed for a 60-day review and comment period from May 17 through July 17, 2013.

On November 15, 2013, the SANDAG Board of Directors approved the Refined Build Alternative for evaluation in the Final SEIS/SEIR. The development of the Refined Build Alternative is described in the Mid-Coast Corridor Transit Project Final Refined Build Alternative Report (SANDAG, 2014). Refinements were developed based on consideration of a summary of the comments received on the Draft SEIS/SEIR, additional coordination with agencies and stakeholders, and further evaluation of the project design. All refinements were either beneficial (i.e., impacts are reduced or eliminated) or impact-neutral (i.e., no new impacts would occur or no previously identified impacts would become more severe). The Refined Build Alternative approved by the SANDAG Board of Directors on November 15, 2013, was amended by the SANDAG Board of Directors on May 9, 2014, to retain the Interstate 5 crossing south of Nobel Drive at the location in the Build Alternative as evaluated in the Draft SEIS/SEIR.

1.2 Purpose and Scope of this Document

The FTA’s “Environmental Impact and Related Procedures” (23 Code of Federal Regulations [CFR] part 771) regulation prescribes the policies and procedures of the FTA for implementing the National Environmental Policy Act of 1969. This regulation states (Section 771.130, Supplemental environmental impact statements) that a draft Environmental Impact Statement (EIS), final EIS, or SEIS may be supplemented at any time. An EIS will be supplemented whenever the FTA determines that changes to the proposed action would result in specific environmental impacts that were not evaluated in the EIS or that new information or circumstances relevant to environmental concerns and bearing on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS. Consistent with 23 CFR 771.130(f), this Supplement addresses issues of limited scope, such as the extent of proposed mitigation for a limited portion of the overall project.

Guidelines for the implementation of CEQA are provided in the State CEQA Guidelines in the California Code of Regulations, Title 14, Chapter 3, Sections 15000 et seq. CEQA
Guidelines Section 15088.5, subdivision (a) provides that “[a] lead agency is required to recirculate an EIR when significant new information is added to the EIR after…public review …but before certification….Examples of “significant new information” requiring recirculation include a “new significant environmental impact” or a “substantial increase in the severity of an environmental impact.” “If the revision is limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified” and “may request that reviewers limit their comments to the revised chapters or portions of the recirculated EIR” (Section 15088.5, subdivisions (c) and (f)(2)).

This Supplement is a limited-scope document that evaluates a previously unidentified impact to San Diego fairy shrimp (*Branchinecta sandiegonensis*), a federally listed endangered species, and discusses the proposed mitigation. It supplements Chapter 4.0, Sections 4.8, 4.17, and 4.19 of the *Mid-Coast Corridor Transit Project Draft SEIS/SEIR* (SANDAG, 2013a) as well as Sections 4.7, 5.1.2, 5.2.2, 5.3.2, 6.2, 7.1.1, 7.2.2, and 7.3.1 of the *Mid-Coast Corridor Transit Project Biological Resources Technical Report* (SANDAG, 2013b) and Sections 5.7, 6.6, and 7.2 of the *Mid-Coast Corridor Transit Project Construction Impacts Technical Report* (SANDAG, 2013c) (these reports are available on the project website at www.sandag.org/midcoast). This document provides for review and comment of an impact that was not evaluated in the Draft SEIS/SEIR. Impacts to this federally listed endangered species require consultation with the U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the federal Endangered Species Act.

Potential impacts to the San Diego fairy shrimp are described for a No-Build Alternative and the Refined Build Alternative that was approved by the SANDAG Board of Directors on November 15, 2013 (and amended on May 9, 2014) for evaluation in the Final SEIS/SEIR. The Refined Build Alternative is described in the *Mid-Coast Corridor Transit Project Final Refined Build Alternative Report* (SANDAG, 2014). The project alignment under the Refined Build Alternative at the location of the potential impacts to the San Diego fairy shrimp is the same as the Build Alternative evaluated in the Draft SEIS/SEIR. The No-Build Alternative in this Supplement also is the same as that presented in the Draft SEIS/SEIR.

1.3 Environmental Review Process

This Supplement is being made available for a 45-day review and comment period. Comments should be limited to the analysis contained in this Supplement only. Responses to comments received on this Supplement will be provided with the Final SEIS/SEIR for the project.

1.4 Next Steps

SANDAG, in coordination with the FTA, will prepare responses to comments received on this Supplement and complete the Final SEIS/SEIR and associated documents. The FTA will continue Section 7 consultation with the USFWS, which will conclude with the USFWS issuing a Biological Opinion. FTA will issue a Notice of Availability of the Final SEIS in the *Federal Register*. SANDAG will submit a Notice of Completion of the Final SEIR to the State Clearinghouse and will hold a public hearing to certify the document.
The FTA may issue a single Final SEIS and Record of Decision pursuant to Public Law 112-141, 126 Statute 405, Section 1319(b) unless the FTA determines statutory criteria or practicability considerations preclude issuance of the combined document pursuant to Section 1319. In that case, FTA would issue a Final SEIS followed by the Record of Decision.
2.0 PURPOSE AND NEED

The Purpose and Need for the Mid-Coast Corridor Transit Project is presented in Chapter 1.0 of the *Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report* (SANDAG, 2013a). As stated in that chapter, the purpose of the proposed project is to provide for the implementation of transit improvements that improve transit service in the Mid-Coast Corridor between Downtown San Diego, Old Town, and University City. Although the Mid-Coast Corridor is currently served by transit, the existing transit system does not offer the level of service needed to meet the region’s goals for mobility, accessibility, reliability, and efficiency, as defined in the *2030 San Diego Regional Transportation Plan: Pathways for the Future* (SANDAG, 2007). The COASTER commuter rail service passes through the corridor, but its stations are widely spaced and it does not have a station in close proximity to the University of California, San Diego or University Towne Centre. The existing San Diego Trolley (Trolley) Blue Line currently terminates at the Old Town Transit Center. While transit mobility and accessibility to northern portions of the corridor are provided by express and local buses, the speed and reliability of bus service are constrained by roadway congestion, and many transit riders are required to transfer in Downtown San Diego or at the Old Town Transit Center to reach destinations in University City. With congestion projected to increase in the future, the level of service, reliability, and efficiency of the transit system will all decrease.

To meet the region’s goals most effectively, the Mid-Coast Corridor needs a transit system that is better able to serve the major travel destinations of the University of California, San Diego and the University Towne Centre Transit Center in University City. This transit system must provide a frequency of service, speed, and reliability that would better serve existing transit riders and attract new riders. The project, which extends the Trolley Blue Line north and connects with the other Trolley lines using an exclusive right-of-way for transit, would shorten travel times, improve reliability, and reduce the number of transfers required for travel to destinations in University City. This would improve service for existing riders and attract new riders. In addition, one-seat rides (trips that do not require a transfer) would be available from the U.S.–Mexico international border to University City, and between communities in South San Diego County, Downtown San Diego, and University City, making transit an attractive alternative to travel by automobile.
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3.0 ALTERNATIVES CONSIDERED

Chapter 2.0 of the Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) (San Diego Association of Governments [SANDAG], 2013a) documents the development of alternatives and the description of the No-Build Alternative and the Build Alternative that were evaluated in the Draft SEIS/SEIR. This section provides a summary of the No-Build and Build Alternatives. Additionally, this section describes the Refined Build Alternative, which reflects refinements made to the Build Alternative subsequent to the Draft SEIS/SEIR comment period. The Refined Build Alternative was approved by the SANDAG Board of Directors on November 15, 2013, for evaluation in the Final SEIS/SEIR and was amended on May 9, 2014.

3.1 No-Build Alternative

The No-Build Alternative is evaluated in the context of the existing transportation facilities and services in the Mid-Coast Corridor (as characterized in 2010) and other future facilities and services identified in the Revenue Constrained Scenario of the 2030 Regional Transportation Plan (2030 RTP) (SANDAG, 2007). Figure 3-1 identifies the location of the major transportation projects included in the 2030 RTP within the Mid-Coast Corridor and assumed to exist in the No-Build Alternative. The No-Build Alternative also assumes other San Diego Trolley (Trolley) system improvements, including 7.5-minute service frequencies during peak (i.e., 6:00 to 9:00 a.m. and 3:00 to 6:00 p.m.) and off-peak midday (i.e., 9:00 a.m. to 3:00 p.m.) periods on the Trolley Blue Line.

Because the No-Build Alternative provides the background transportation network against which the Build Alternative’s impacts are identified and evaluated, the No-Build Alternative excludes the Mid-Coast Corridor Transit Project but does include continuation and enhancement of bus Route 150 (as show in Figure 3-1) that is planned for elimination in the 2030 RTP when the Mid-Coast Corridor Transit Project becomes operational. The route would operate in the proposed high-occupancy vehicle lanes on Interstate (I-) 5 from the Old Town Transit Center (OTTC) north to Nobel Drive.

3.2 Build Alternative

The Build Alternative evaluated in the Draft SEIS/SEIS would extend the Trolley Blue Line from Santa Fe Depot in Downtown San Diego to the University Towne Centre (UTC) Transit Center in University City. The project would use the existing Trolley tracks for approximately 3.5 miles, from the Santa Fe Depot to north of the OTTC and south of the San Diego River. The Trolley Blue Line trains would share the existing tracks with the Trolley Green Line trains. The project also would include construction of 10.9 miles of new double track that would extend from south of the San Diego River to the terminus at the UTC Transit Center.
Figure 3-1. No-Build Alternative Transportation Improvements
The new extension would follow the Los Angeles–San Diego–San Luis Obispo (LOSSAN) tracks within existing Metropolitan Transit System and City of San Diego right-of-way from the Santa Fe Depot to north of the I-5/State Route 52 interchange. The alignment would then leave the LOSSAN right-of-way and parallel the east side of the I-5 corridor traveling north partially within California Department of Transportation right-of-way and partially on private property. South of Nobel Drive, the alignment would transition to an aerial structure and cross over to the west side of I-5. From Nobel Drive, the alignment would continue north along the west side of I-5 to the University of California, San Diego (UCSD) West Campus, cross back over to the east side of I-5, and proceed along Voigt Drive to Genesee Avenue, and then south in the median of Genesee Avenue to the UTC Transit Center.

The Build Alternative included 8 new stations (3 at grade and 5 elevated); 5 park-and-ride facilities with 1,070 parking spaces; 14 new and 4 upgraded traction power substations (TPSSs); and 36 new low-floor light rail transit (LRT) vehicles. No new maintenance facilities would be needed. New stations would be located at Tecolote Road, Clairemont Drive, Balboa Avenue, Nobel Drive, UCSD West, UCSD East, Executive Drive, and the UTC Transit Center.

The Build Alternative included two options—one provided for an optional at-grade station at the Veterans Administration (VA) Medical Center and the other provided for an alternative design for the proposed Genesee Avenue aerial alignment in University City. Figure 3-2 shows the project alignment and station locations, as well as the VA Medical Center Station Option and the Genesee Avenue Design Option.

With the extension of the Trolley Blue Line, continuous service would be provided from the San Ysidro Transit Center at the U.S.–Mexico international border to University City. The service would be provided every 7.5 minutes during peak and off-peak periods in 2030.

### 3.3 Refined Build Alternative

Refinements were proposed to the Build Alternative based on comments received on the Draft SEIS/SEIR, additional analysis of impacts identified in the Draft SEIS/SEIR, and coordination with agencies and stakeholders. The proposed refinements included the addition of the VA Medical Center Station; refinements to the LRT alignment, stations, TPSSs, and construction staging areas; and further engineering refinements. The Genesee Avenue Design Option was proposed to be eliminated from further consideration. These refinements are discussed in the following sections.

The Refined Build Alternative was approved by the SANDAG Board of Directors on November 15, 2013, and amended on May 9, 2014. The Refined Build Alternative would include 9 new stations (4 at grade and 5 elevated); 5 park-and-ride facilities with 1,170 parking spaces; 14 new and 2 upgraded TPSSs; and 36 new low-floor LRT vehicles. Figure 3-3 shows the project alignment and station locations.
Figure 3-2. Build Alternative

Source: SANDAG, 2012
Figure 3-3. Refined Build Alternative

Source: SANDAG, 2014
3.3.1 Addition of Veterans Administration Medical Center Station Option

The option for an additional station at the VA Medical Center was evaluated in the Draft SEIS/SEIR. Inclusion of this station in the Refined Build Alternative was recommended based on station ridership, improved access to hospital and medical facilities, and favorable public comment. No adverse or significant environmental impacts were identified for the VA Medical Center Station in the Draft SEIS/SEIR. The VA Medical Center Station is included in the Refined Build Alternative approved by the SANDAG Board of Directors on November 15, 2013.

3.3.2 Elimination of the Genesee Avenue Design Option

The option for incorporating straddle bents in place of center columns to support the aerial structure along Genesee Avenue west of Regents Road was developed and evaluated for the purpose of reducing right-of-way acquisitions. As stated in the Draft SEIS/SEIR, the option would result in significant and unavoidable visual impacts along Genesee Avenue, would adversely affect the character of the community, and would not result in a substantial reduction in property acquisition. Elimination of the Genesee Avenue Design Option reduces visual and community character impacts and addresses public comments opposing the use of straddle bents. The Genesee Avenue Design Option is excluded from the Refined Build Alternative approved by the SANDAG Board of Directors on November 15, 2013.

3.3.3 Refinements to LRT Alignment

The refinements to the LRT alignment under the Build Alternative include changes to the design of the crossing of I-5 south of Nobel Drive and a shift in the Voigt Drive alignment in the vicinity of Scripps Memorial Hospital La Jolla (Scripps Hospital), west of I-5.

- I-5 Crossing South of Nobel Drive—The Build Alternative in the Draft SEIS/SEIR included straddle bents to support the aerial structure over the northbound and southbound lanes on I-5. A refinement to the Build Alternative was developed that improves the visual aesthetics of the aerial structure through the elimination of the straddle bents. Several comments on the Draft SEIS/SEIR expressed opposition to the use of straddle bents along the alignment. The elimination of the straddle bents at the I-5 crossing improves aesthetics and is included in the Refined Build Alternative.

- Voigt Drive Alignment—Under the Build Alternative in the Draft SEIS/SEIR, the LRT alignment in the vicinity of Scripps Hospital would be located on the north side of Voigt Drive. Comments from Scripps Hospital on the Draft SEIS/SEIR identified the location of sensitive medical equipment that could be susceptible to vibration and electromagnetic interference (EMI) in the XiMed medical office building located on the south side of the hospital campus, which is closest to the alignment. The comments requested that an alignment south of Voigt Drive, away from the XiMed building, be considered and evaluated. Further analysis of electromagnetic field impacts on the XiMed building determined that the project could affect the equipment located in the XiMed building even with the proposed mitigation at the source evaluated in the Draft SEIS/SEIR. Based on these findings and the comments from Scripps Hospital, a refinement to the Build Alternative was developed that shifts the
LRT alignment to the south side of Voigt Drive. With this shift, the project-related EMI at the XiMed building would be substantially reduced to the extent that mitigation of electromagnetic fields at the source (i.e., through design of the project) would be sufficient to avoid adverse effects to sensitive medical equipment. The refinement to the Voigt Drive alignment was reviewed with UCSD and Scripps Hospital, and is included in the Refined Build Alternative.

3.3.4 Refinements to Stations

The refinements to stations include changes to the configuration of the Clairemont Drive Station park-and-ride lot and removal of the pedestrian ramps, reconfiguration of the parking structure at the Nobel Drive Station, relocation of the UCSD East Station to accommodate the change in alignment on Voigt Drive, and acquisition of parking spaces at the UTC Transit Center instead of construction of a parking structure for transit patrons. The stations at Tecolote Road, Balboa Avenue, UCSD West, and Executive Drive as defined in the Draft SEIS/SEIR are included in the Refined Build Alternative without substantial changes. No comments were received that would affect the UCSD West Station or the Executive Drive Station.

- Clairemont Drive Station—Under the Build Alternative in the Draft SEIS/SEIR, bus transfers at the Clairemont Drive Station would be accommodated by on-street bus stops on Clairemont Drive east of Morena Boulevard. Pedestrian ramps were provided for access to the station from Clairemont Drive to Morena Boulevard. Comments on the Draft SEIS/SEIR noted that the on-street bus stops on Clairemont Drive would be inconvenient for passengers transferring to and from the Trolley. The refinement to the Clairemont Drive Station included in the Refined Build Alternative provides for bus transfers within the Clairemont Drive Station parking lot. The relocation of the bus transfer location eliminates the need for pedestrian ramps from Clairemont Drive to Morena Boulevard and makes transfers between a bus and Trolley more convenient. Transit passengers transferring between a bus and the Trolley would be able to cross Morena Boulevard at the existing signalized crosswalk at Ingulf Street located at the southern end of the station platform.

- Nobel Drive Station—Under the Build Alternative in the Draft SEIS/SEIR, the Nobel Drive Station provided for a 600-space joint-use parking structure to be constructed at the La Jolla Village Square shopping center. Coordination with the property owner and further engineering refinements resulted in a change in the layout of the parking structure, which would include replacement parking spaces and 260 transit parking spaces. The existing surface parking lot also would be reconfigured with construction of the parking structure. These modifications do not result in new or increased impacts.

- UCSD East Station—A refinement to the location of the UCSD East Station was necessary to accommodate the shift in the LRT alignment to the UCSD campus on the south side of Voigt Drive to avoid potential EMI impacts. With the shift in the LRT alignment, the station was relocated to the east to accommodate the alignment and avoid conflict with the planned future UCSD track and field facility. The station location would accommodate the planned realignment of Campus Point Drive. The refinement does not result in new or increased impacts.
UTC Transit Center—The UTC Transit Center platform would be located in the center of Genesee Avenue, south of Esplanade Court/UTC Driveway. Under the Build Alternative in the Draft SEIS/SEIR, the station was proposed to include 260 transit parking spaces in a joint-use parking structure at the Westfield UTC shopping center. The parking structure would be constructed by Westfield as part of the planned expansion of the shopping center. The transit parking spaces would be constructed as an additional level on the parking structure. Comments received on the Draft SEIS/SEIR indicated concerns regarding the timing of the parking structure construction by Westfield and commitment of funds by SANDAG. Design of the shopping center parking structure is currently underway, with construction scheduled to begin in mid-2014, prior to the scheduled date of the Record of Decision for the project. Because SANDAG cannot commit funds for construction prior to the Record of Decision, the 260 transit parking spaces would be provided by acquisition of parking spaces from the Westfield UTC shopping center. This change does not result in new or increased impacts.

3.3.5 Refinements to Traction Power Substations

The Build Alternative presented in the Draft SEIS/SEIR was anticipated to require 18 TPSSs, including 3 replacement substations on existing sites between Santa Fe Depot and the OTTC and 15 new substations. Refinements to the number and location of the TPSSs were made based on the results of a load-flow analysis, which analyzed the power distribution system required for operation of the LRT system.

The load-flow analysis identified a requirement for 16 TPSSs, 2 fewer than the Build Alternative presented in the Draft SEIS/SEIR. The TPSSs proposed at the OTTC and on Anna Street north of the San Diego River were determined to be unnecessary based on the results of the load-flow analysis. Other refinements to the TPSS locations include the following:

- Relocation of the substation at the Wright Street Yard to the south within the Metropolitan Transit System property
- Relocation of the substation at Baker Street to the Clairemont Drive Station parking lot
- Relocation of the substation within the City Yard site north of Balboa Avenue
- Relocation of the substation on Charmant Drive to the west side of I-5 within the California Department of Transportation right-of-way at the southern end of the La Jolla Village Square shopping center property
- Relocation of the substation on Voigt Drive from north of the UCSD baseball field to east of I-5 and south of Voigt Drive
- Relocation of the substation at Genesee Avenue and La Jolla Village Drive to the east of Genesee Avenue to the San Diego Gas & Electric substation facility on Fez Street

3.3.6 Refinements to Construction Staging Areas

The Build Alternative in the Draft SEIS/SEIR included 15 construction staging areas. Some of these were located at future park-and-ride lots, station areas, existing parking
lots, or portions of vacant private property. Comments were received on three of the identified staging areas that noted a conflict between the use of the property as a staging area and future approved development. By eliminating these areas as staging areas, these conflicts and any associated short-term impacts (e.g., loss of off-street parking) were avoided. Refinements were made to the number and location of construction staging areas based on comments received on the Draft SEIS/SEIR or due to refinements to the LRT alignment. The following four construction staging areas were eliminated:

- The site on Charmant Drive on the east side of I-5
- The site at the parking lot of Scripps Hospital located east of I-5 and north of Voigt Drive
- The site on the Monte Verde property at La Jolla Village Drive and Genesee Avenue
- The site on the Westfield UTC shopping center property

To address the shift in the alignment from the north to the south side of Voigt Drive, an additional construction staging site was identified. This site is on the UCSD parking lot located east of I-5 and south of Voigt Drive, where the new TPSS would be located. All other staging area sites identified in the Draft SEIS/SEIR are retained under the Refined Build Alternative.

3.3.7 Other Engineering Refinements

Other engineering refinements, as a result of further engineering studies, include changes in retaining walls and bridges. The most notable change in the Refined Build Alternative is the elimination of two retaining walls and the addition of two bridges north of La Jolla Colony Drive near the La Paz condominiums.
Chapter 4.0 – Environmental Analysis, Consequences, and Mitigation

4.0 ENVIRONMENTAL ANALYSIS, CONSEQUENCES, AND MITIGATION

This chapter evaluates the impact of the No-Build and Refined Build Alternatives on a new location of the federally endangered San Diego fairy shrimp (Branchinecta sandiegonensis) recently detected in the study area during the 2013-2014 wet season focused survey. The Mid-Coast Corridor Transit Project Section 7 Consultation Biological Assessment, included as Appendix B, provides specific information regarding federally listed threatened and endangered species. For additional information on other biological resources in the study area, refer to the Mid-Coast Corridor Transit Project Biological Resources Technical Report (San Diego Association of Governments [SANDAG], 2013b) and the Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement and Subsequent Environmental Impact Report (SEIS/SEIR) (SANDAG, 2013a).

The Biological Assessment covers the analysis of impacts to all federally listed threatened and endangered species for the Refined Build Alternative; however, the impacts to the threatened and endangered species, except for the San Diego fairy shrimp, are consistent with the discussion in the Draft SEIS/SEIR. As such, the environmental analysis in this Supplemental Environmental Impact Statement/Supplement to the Subsequent Environmental Impact Report is limited to the potential impact to the San Diego fairy shrimp in Basin II.

At the time the Draft SEIS/SEIR was prepared, and based on the results of wet season focused surveys conducted in 2010-2011 and 2011-2012, San Diego fairy shrimp had been observed in only one location within the study area (referred to as Basin BB), which was to the west of the existing Los Angeles–San Diego–San Luis Obispo Rail Corridor Agency (LOSSAN) tracks and outside the project impact area. Accordingly, the analysis in Chapter 4.0, Sections 4.8, 4.17, and 4.19 of the Draft SEIS/SEIR concluded that no long-term, construction, or cumulative impacts to San Diego fairy shrimp would occur as a result of the project. However, an ongoing wet season focused survey conducted in 2013-2014 to support regulatory permitting with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife identified San Diego fairy shrimp in a new location, which is within the project impact area.

Formal consultation with USFWS under Section 7 of the federal Endangered Species Act was initiated by the Federal Transit Administration and SANDAG on June 12, 2014. Documentation of correspondence with USFWS regarding San Diego fairy shrimp is provided in Appendix A.

4.1 Surveys and Impact Assessment

4.1.1 Surveys

The survey area for biological resources, including the San Diego fairy shrimp, generally included all areas within 500 feet of the alignment from the Old Town Transit Center north to the University Towne Centre Transit Center\(^1\). Figure 4-1 shows the areas surveyed for vernal pool branchiopods.

\(^1\) Exceptions to the 500-foot survey areas are further described in Chapter 4.0, Section 4.8.1.2 of the Draft SEIS/SEIR (SANDAG, 2013a).
Figure 4-1. Fairy Shrimp Survey Area

Sources: DigitalGlobe, 2008; SANDAG, 2014
Wet season focused surveys were conducted according to the *Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods* (USFWS, 1996). In accordance with the survey guidelines, a complete survey for vernal pool branchiopods consists of sampling for two full wet season surveys within a 5-year period or two consecutive seasons of one wet season survey and one dry season survey. Following the first major rain event of the wet season, the study area was visited approximately every 2 weeks, until all inundated basins were observed dry. With any subsequent rains, ground surveys were reinitiated. All suitable basins (i.e., inundated greater than 3 centimeters) were sampled for the presence of vernal pool branchiopods. The survey included areas adjacent to the existing tracks from Rose Canyon in the north to Tecolote Road in the south (refer to the *Mid-Coast Corridor Transit Project Biological Resources Technical Report* [SANDAG, 2013b]).

Protocol-level sampling for the 2010–2011 wet season was initiated approximately 2 weeks following the major rain event on February 4, 2011, and was completed on June 6, 2011. A total of 42 basins were present. Protocol-level sampling for the 2011–2012 wet season was initiated on November 17, 2011, and was completed on July 23, 2012. A total of 54 basins were present, including the 42 basins that were surveyed the previous year. Protocol-level sampling for the 2013–2014 wet season was initiated on October 18, 2013, and was determined to be complete in May 2014. A total of 8 basins were present within the survey area, of which one (Basin MMM) was not present during previous surveys. In total, 55 basins were identified during the course of the surveys. A schedule of the 2013-2014 survey season is presented in Table 4-1.

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<th>Date</th>
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</tr>
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<td>PML</td>
<td>January 2, 2014</td>
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<td>PML</td>
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</tr>
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<td>PML</td>
<td>February 26, 2014</td>
</tr>
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</tr>
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</tr>
<tr>
<td>12</td>
<td>PML</td>
<td>April 30, 2014</td>
</tr>
</tbody>
</table>

Source: Dudek, 2014

Note: PML = Paul Lemons

Surveys for the 2013-2014 wet season were conducted by Dudek biologist Paul Lemons (PML; Permit # TE051248). All identified basins within the survey area (see Figure 4-1) were evaluated during each site visit to determine inundation levels, and sampling was performed where appropriate. Daily precipitation was monitored for weather station...
Protocol-level sampling was performed within all basins that were deemed suitable for use by fairy shrimp and any depressions meeting the USFWS inundation requirement (ponding at least 3 centimeters deep). The locations of detected basins sampled were recorded using a Global Positioning System unit and were alphabetically labeled.

During each survey all depressions were inspected for depth, surface area of water, air and water temperature, level of disturbance, and presence of aquatic wildlife. An aquarium net was passed through every basin that met the USFWS inundation requirement. All portions of ponded water were surveyed from the bottom to the surface.

Samples were collected, when needed, using the aquarium net and a 40 milliliter glass vial. Specimens were stored in the vial with water collected from where the specimen was found. Specimens were taken to the laboratory within 24 hours of collection and placed in a 90 percent ethyl alcohol solution for preservation. Each specimen was inspected thoroughly using a dissecting microscope. Eriksen and Belk (1999) was used to determine the species of each specimen collected.

4.1.2 Impacts Assessment

The assessment of impacts to San Diego fairy shrimp includes an evaluation of the project’s long-term direct and indirect, construction (short-term) direct and indirect, and cumulative effects. For the purposes of evaluating these effects, long-term impacts and construction effects are analyzed for both the occupied habitat (i.e., occupied basin area) and the associated basin watershed. This section provides definitions of the potential effects that could occur. Impacts to San Diego fairy shrimp are described in Section 4.3. The California Environmental Quality Act significance determination is described in Chapter 5.0. Cumulative impacts are described in Chapter 6.0.

In Section 4.3 the impacts on San Diego fairy shrimp were analyzed under the No-Build and Refined Build Alternatives in the Mid-Coast Corridor. The No-Build, Build, and Refined Build Alternatives are described in Chapter 3.0 of this document. As stated in Section 1.1 of this document, the Refined Build Alternative is the same as the Build Alternative in the location of San Diego fairy shrimp basin (Basin II) identified during the 2013-2014 wet season surveys.

4.1.2.1 Long-Term Impacts

Direct Impacts

Long-term, direct impacts refer to the permanent loss of vegetation, land covers, and plant and animal species within a designated impact footprint and direct impacts to biological resources that would result from ongoing project operations.

Direct impacts typically occur during vegetation clearing, grading, or excavation associated with project implementation. Direct impacts to wildlife refer to loss of habitat and/or loss of, or harm to, individuals that can be immediately attributed to the project. Loss of, or harm to, individuals may vary by wildlife species, but the result is a net loss of
a portion of a species population. For example, equipment used for excavation or grading can cause direct wildlife mortality. For San Diego fairy shrimp, direct impacts to habitat include the permanent loss of all or a portion of an occupied basin. During the dry season, direct, physical disturbances to the soil in an occupied basin could result in the loss of, or harm to, San Diego fairy shrimp cysts that exist in the soil. During the wet season, direct, physical disturbances to an occupied basin could cause adult fairy shrimp to be crushed or buried by sediment.

Indirect Impacts

The Council on Environmental Quality defines indirect impacts as “effects which are caused by the [proposed] action and are later in time or farther removed in distance, but are still reasonably foreseeable…” (40 Code of Federal Regulations 1508.8). Indirect impacts also may affect areas within or outside of the defined project area (e.g., outside the construction disturbance zone), including undeveloped areas outside the project area.

Indirect impacts may result from the proximity of development to biological resources following construction. Examples of typical long-term indirect impacts associated with development include light, noise, the introduction or spread of exotic and/or invasive plants and animals, increased human activity, trampling, vandalism, trash, urban runoff, and shading. Long-term indirect impacts can alter essential behaviors and cause stress in wildlife, increase predation of native species, and degrade habitat.

4.1.2.2 Short-Term Construction Impacts

Short-term or temporary impacts to biological resources that occur during construction can be direct or indirect. Short-term construction activities would impact biological resources until construction activities have ceased or, in some instances, until vegetation communities or other affected resources are reestablished or restored.

Construction of the overall project is estimated to take up to 4.5 years to complete. However, the estimated duration of construction activities in the vicinity of the occupied basin is not known at this time.

Direct Impacts

Direct construction impacts would be associated with construction access and ground improvements. Specifically, direct construction impacts would occur within the limits of work during clearing and grubbing and grading operations and from falsework and ground improvements. These activities would displace the resources dependent upon the existing vegetation community or land cover. This impact is considered temporary for locations where no permanent structures or other permanent disturbance would occur that would preclude restoration of the affected areas to pre-construction conditions. If construction impacts involve direct, physical disturbance to a species’ habitat and restoration to pre-construction conditions is not possible, then the impacts are considered permanent.

Indirect Impacts

Indirect construction impacts on adjacent biological resources located outside the limits of construction work typically include noise, vibration, dust, lighting, increased human activity (e.g., construction workers), erosion and sedimentation, pollutants, and chemical
spills. These kinds of impacts can cause behavioral disruptions and stress in wildlife and degrade habitat adjacent to construction areas.

4.1.2.3 Cumulative Impacts

Cumulative impacts refer to the combined environmental effects of the project and other past, present, and reasonably foreseeable projects that would take place generally within the same geographic area. In some cases, the impact from a single project may not be adverse, but when combined with other projects, the cumulative impact may be substantial.

4.2 Affected Environment

For the purposes of this report, the affected environment includes the ephemeral basin within the project impact area where San Diego fairy shrimp were detected (Basin II), as well as surrounding areas within approximately 500 feet (Figure 4-2). The occupied ephemeral basin, Basin II, is located within the exiting Metropolitan Transit System (MTS) right-of-way to the east of the existing LOSSAN tracks approximately 2,800 feet south of Clairemont Drive and 2,500 feet to the north of Tecolote Road. Photographs of Basin II inundated and dry are provided in Figure 4-3 and Figure 4-4, respectively.

Although San Diego fairy shrimp occur in Basin II, the ephemeral basin does not contain vernal pool plant indicator species. As stated in the San Diego Municipal Code Land Development Code—Biology Guidelines (City of San Diego, 2012), road ruts and other seasonal depressions that are not vernal pools may contain wildlife associated with vernal pools, such as fairy shrimp, but will not contain vernal pool plant indicator species. Seasonal depressions not containing vernal pool indicator plant species are usually not considered vernal pools by the City of San Diego. In addition, the ephemeral basin is not considered an aquatic resource under the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act; the California Department of Fish and Wildlife pursuant to Section 1602 of the California Fish and Game Code; the Regional Water Quality Control Board pursuant to Section 401 of the federal Clean Water Act; or the City of San Diego pursuant to their Environmentally Sensitive Lands Regulations. The ephemeral basin is located within the Coastal Zone and meets the California Coastal Act definition of an Environmentally Sensitive Habitat Area due to the presence of a rare wildlife species; therefore, the basin is a coastal resource regulated by the California Coastal Commission.

4.2.1 Study Area and Surrounding Land Uses

Land uses in the affected environment consist of transportation uses. Morena Boulevard occurs within 100 feet east of Basin II. The existing MTS and California Department of Transportation (Caltrans) rights-of-way, along with a portion of the Interstate 5 north freeway, occur within 100 feet to the west. Additional land uses adjacent to the affected environment include single- and multifamily residential and commercial uses.

2 An ephemeral basin is one that appears after a rain event and dries up shortly after the conclusion of the rain event. According to the USFWS criteria, a pool/swale (or basin) is considered to be inundated when it holds greater than 3 centimeters of standing water 24 hours after a rain event (USFWS, 1996).
Figure 4-2. Affected Environment
Figure 4-3. Basin II Inundated

Source: SANDAG, 2014
Note: Photo taken March 10, 2014 by P. Lemons
4.2.2 Soils

Soils in the affected environment consist of Huerhuero-Urban land complex, 2 percent to 9 percent slopes, as shown on Figure 4-5. The Huerhuero series consists of moderately well-drained loams formed in sandy marine sediments. The surface layer is brown and pale brown, strong acid and medium acid loam approximately 12 inches thick. The subsoil is brown, moderately alkaline clay becoming mildly alkaline clay loam and sandy loam with depth. This series occurs on slopes that range from 2 to 9 percent. This complex occurs on marine terraces at elevations that range from sea level to 400 feet. The landscape has been altered through cut and fill operations and leveling for building sites; the slope was 2 to 9 percent prior to cut and fill operations. The material exposed in the cuts consists of unconsolidated sandy marine sediments. The materials in the fill are a mixture of loam and clay loam and sandy marine sediments.
Figure 4-5. Soils Map

Source: U.S. Department of Agriculture, 2010; SANDAG, 2014; San Diego Geographic Information Source, 2011
4.2.3 Drainages/Hydrology

The limits of the ephemeral basin containing San Diego fairy shrimp on March 10, 2014 (Basin II), at the time the species was observed, measured approximately 76 feet long by 5.5 feet wide, with a total area of approximately 425 square feet and a maximum depth of approximately 10 inches. Soils in this area belong to hydrologic soil group D (as defined by the Natural Resource Conservation Service), which provide poor infiltration. Surface water in this area has a short period of infiltration before it begins to sheet flow as runoff. Refer to Figure 4-3 and Figure 4-4 for photographs of Basin II inundated and dry, respectively.

Specifically, Basin II is located within a low point of an existing graded earthen drainage ditch west of Morena Boulevard, east of the existing LOSSAN Main Track 1 and approximately 150 feet north of the intersection of Morena Boulevard and Napier Street (Figure 4-6). The low point (or maximum ponding depth) is approximately 2 feet, and the basin is approximately 2,950 cubic-feet (0.039 acre-feet) in volume.

Basin II lies within an existing low point along a drainage ditch flowing to the south to a 48-inch culvert. Figure 4-6 provides a profile of the drainage ditch taken from project topography. Based upon project topography and field investigation, the Basin II watershed is 0.71 acre. The source of runoff to Basin II consists solely of accumulated precipitation (storm-water runoff) from the 0.71-acre watershed. There are no storm drain pipe discharges that provide an additional source of runoff to Basin II. Accumulated storm-water runoff within the Basin II watershed collects at the low point (elevation 13 feet) until such time that the water-surface elevation tops the southerly watershed boundary (elevation 15 feet) and continues flowing southerly to the 48-inch culvert.

Based upon an evaluation of average rainfall and evapotranspiration, this area would not typically pond for prolonged (monthly) periods of time. Instead, this area ponds due to individual rain events and likely dries within 1 to 2 weeks due to evaporation and infiltration. Extended ponding may occur if another storm event producing runoff occurs within the following 1 to 2 weeks.

Two other ephemeral basins (Basin GG and Basin JJ) within the affected environment (defined as the area within 500 feet of Basin II) were sufficiently inundated to be surveyed for vernal pool branchiopods during the 2010-2011 wet season, while a third ephemeral basin (Basin KK) was sufficiently inundated to be surveyed during the 2010-2011 and 2011-2012 wet seasons. These basins were not sufficiently inundated to be surveyed during the 2013-2014 wet season. No vernal pool branchiopods or vernal pool plant indicator species have been observed in these basins.

4.2.4 Vegetation Communities and Land Covers

The affected environment includes four vegetation communities and land covers: disturbed habitat, eucalyptus woodland, ornamental, and urban/developed. Except for eucalyptus woodland, which is categorized as a non-native woodland community, these communities can be categorized as “Disturbed and Developed Areas,” as
Vegetation communities and land covers are considered Tier IV in the San Diego Municipal Code Land Development Code—Biology Guidelines (City of San Diego, 2012), meaning they have limited habitat value. No native vegetation communities occur in the affected environment.

Disturbed habitat refers to areas that are not developed yet lack vegetation or are sparsely vegetated, and generally are the result of severe or repeated mechanical perturbation. Disturbed habitat in the affected environment includes areas without vegetation or areas composed of ruderal, non-native species, including sweet fennel (Foeniculum vulgare), crowndaisy (Glebionis coronaria), black mustard (Brassica nigra), sacred thorn-apple (Datura wrightii), and blue jacaranda (Jacaranda mimosifolia). Evidence of grading or other human disturbance is common.

Eucalyptus woodland is not recognized by Holland (1986) but is recognized by Oberbauer et al. (2008). This “naturalized” vegetation community is fairly widespread in Southern California and is considered a woodland habitat. It typically consists of monotypic stands of introduced Australian eucalyptus trees. The understory is either depauperate or absent owing to shade and the possible allelopathic (toxic) properties of the eucalyptus leaf litter.

Ornamental refers to areas where non-native ornamental species and landscaping have been installed. Ornamental is not described by Holland (1986) and is included in disturbed habitat in Oberbauer et al. (2008). Ornamental areas are not typically regulated by environmental resource agencies unless they include jurisdictional wetlands. Other agencies, such as Caltrans or local governments, may require that disturbed or damaged ornamental plantings be replaced to restore aesthetics or function, such as screening or erosion control. Ornamental plantings occur throughout the affected environment and are common adjacent to the freeway and within the freeway median. These areas are dominated by planted non-native iceplant (Carpobrotus spp.), peppertree (Schinus spp.), acacia (Acacia spp.), and other non-native planted shrubs and trees.

Urban/developed land consists of buildings, structures, homes, parking lots, paved roads, and maintained areas. These areas do not support native vegetation. Urban/developed land occurs throughout the affected environment and includes the existing LOSSAN tracks, Morena Boulevard, and developed areas to the east, and the Interstate 5 freeway.

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3 Tiers represent the sensitivity status of upland vegetation as defined by the City of San Diego, with Tier I being most sensitive and Tier IV being least sensitive. Wetland vegetation communities do not have a tier classification and are considered sensitive.
Figure 4-6. Basin II Hydrology

Source: SANDAG, 2014
4.2.5 San Diego Fairy Shrimp

San Diego fairy shrimp (Figure 4-7) is a small aquatic crustacean typically restricted to vernal pools and other non-vegetated ephemeral basins 2 to 12 inches in depth. The San Diego fairy shrimp occurs in the Great Central Valley and Coastal Mesa Systems (Eriksen and Belk 1999). The geographic range of the species extends from coastal Orange and San Diego Counties in southern California and in northwestern Baja California, Mexico (USFWS, 2007). This species is usually observed from January to March when seasonal rainfall fills vernal pools and initiates cyst (egg) hatching (USFWS, 2008). This species may also occasionally occur in ditches and road ruts. The shrimp hatch from cysts when cool water (5-20° Celsius for hatching) fills the pool and are mature in 10-20 days in the field (Eriksen and Belk, 1999). At maturity, mating takes place and cysts are dropped. Water characteristics of pools where this species is found include moderate pH (6.5-8) and alkalinity (40-55 parts per million); total dissolved solids (mean of 75 parts per million, as measured by conductivity) are low (Eriksen and Belk, 1999).

Three males and one female San Diego fairy shrimp were collected from Basin II on March 10, 2014, and were positively identified in the lab on March 13, 2014. Refer to Section 4.2.3 for a description of Basin II on March 10, 2014. The habitat surrounding the basin is developed land. Water pools in this area as a result of graded slopes from the LOSSAN tracks as well as graded slopes from Morena Boulevard (Figure 4-2). In accordance with USFWS protocol requirements, notification was sent via e-mail to the USFWS on March 18, 2014, within 10 days of positive identification (Appendix C).

4.3 Environmental Impacts, Avoidance Analysis, and Mitigation

The following sections describe impacts on San Diego fairy shrimp in Basin II under the No-Build and Refined Build Alternatives, consideration of impact avoidance and minimization through design modifications, and mitigation measures.

4.3.1 No-Build Alternative

Under the No-Build Alternative, the Mid-Coast Corridor Transit Project would not be constructed and bus Route 150 service would be continued and enhanced. Physical changes associated with the No-Build Alternative would not result in direct or indirect impacts to San Diego fairy shrimp.

4.3.2 Refined Build Alternative

Implementation of the Refined Build Alternative would result in long-term and construction (short-term) impacts to the San Diego fairy shrimp in Basin II and the watershed in which it occurs. As described in Section 4.2.3, Basin II is located in an...
existing graded earthen drainage ditch west of Morena Boulevard, east of the existing LOSSAN Main Track 1, and approximately 150 feet north of the intersection of Morena Boulevard and Napier Street (see Figure 4-6). Basin II would be directly impacted through grading and/or filling associated with at-grade track construction to accommodate installation of the new Trolley tracks.

The Trolley alignment as presented in the Draft SEIS/SEIR Plan Set would be located directly over the basin (Figure 4-8). At this location, the MTS right-of-way is approximately 10 feet from the curb line and Basin II is located entirely within the MTS right-of-way. The new Trolley tracks in the vicinity of the basin would be constructed at grade with new stations located approximately 0.5 mile north and 0.85 mile south of the basin at Clairemont Drive and Tecolote Road, respectively.

**Figure 4-8. Refined Build Alternative at Basin II**

Source: SANDAG, 2014

4.3.2.1 Impact Avoidance Analysis

As described in detail below, SANDAG evaluated whether impacts to San Diego fairy shrimp within Basin II could be avoided through design modifications. Both direct and indirect impacts to Basin II could adversely affect the San Diego fairy shrimp within the basin. Impacts to the basin watershed would result in indirect impacts to Basin II. The evaluation concluded that even with design modifications, long-term direct and indirect impacts to the basin watershed would be unavoidable, resulting in long-term indirect impacts to Basin II, and direct impacts to Basin II also would occur during construction. Therefore, adverse impacts to San Diego fairy shrimp could not be completely avoided.

The evaluation identified design modifications that would be needed to avoid direct and indirect impacts to Basin II, including avoiding direct impacts to the basin watershed. To
accomplish this, the Trolley tracks proposed under the Refined Build Alternative would need to be realigned to avoid placing the Trolley tracks immediately over Basin II and the basin watershed. Realignment of the Trolley tracks in this area would be challenging and constrained due to existing facilities on each side of the Trolley tracks.

To the east, a 72-inch trunk line sewer is located just outside of the MTS right-of-way (Figure 4-9) and is roughly parallel to the tracks. The sewer line flows at 0.15 percent slope and its relocation is not feasible. Thus, it is not feasible to avoid impacts to Basin II by shifting the Trolley tracks to the east.

**Figure 4-9. Avoidance Design at Basin II**

To realign the Trolley tracks to the west, the existing LOSSAN tracks would have to be moved to the west by 20 feet in the vicinity of Basin II. This would require realigning the LOSSAN tracks along approximately 1.75 miles, adjacent to the westerly MTS right-of-way. In addition, two existing crossovers, together with their associated overhead signals and signal cabinets located approximately 1,000 feet north of Basin II, would have to be relocated.

Even with the LOSSAN tracks shifted to the west, there is insufficient area within the MTS right-of-way to accommodate the Trolley tracks while completely avoiding the basin watershed. Thus, a retaining wall next to Basin II would also be required (Figure 4-9) due to the proximity of the Trolley tracks. The retaining wall and its footing could be designed to avoid encroaching into the basin, but would be within the basin watershed. The face of the retaining wall would be located about 2 feet from the edge of the basin.

Because of the proximity of the alignment to the westerly MTS right-of-way, a retaining wall would be required for approximately 1.25 miles to provide sufficient area for the relocated LOSSAN tracks. For more than one-half of the length of retaining wall, the wall footing would be located outside of the MTS right-of-way, requiring the relocation of...
existing gas, sewer, and fiber optics lines. A portion of these facilities may have to be relocated to Caltrans right-of-way, which would require additional coordination.

The realignment of the LOSSAN tracks would result in schedule impacts to existing rail operations. Relocation of the LOSSAN tracks and crossovers would require single-track operation under slow orders for approximately 2 miles for approximately 8 to 9 months. Single tracking of LOSSAN operation in this location, together with construction activities along the LOSSAN tracks in other locations of the corridor (as described in Chapter 3.0, Section 3.4.7.1 of the Draft SEIS/SEIR), would increase the magnitude of the construction impact to Amtrak and COASTER schedules.

Construction cost for this design modification would be approximately $15 million, in 2013 dollars. The costs associated with planning, permitting, design, and construction management is estimated at $5 million, for a total of $20 million. Escalation and finance costs add approximately 40 percent to the cost, making the total probable cost of this design modification approximately $28 million in year of expenditure.

These design modifications would avoid long-term, direct impacts to Basin II; however, the proximity of the retaining wall and the northbound Trolley tracks immediately behind it would directly affect the basin watershed, which would have significant long-term indirect impacts on the basin as a result of changes to hydrology. As a result, long-term adverse impacts to San Diego fairy shrimp could not be avoided.

With respect to construction impacts, establishing a buffer to protect the basin and its watershed from indirect impacts is not feasible due to the constrained width of the right-of-way and the intensive construction activities required (e.g., grading, placing ballast, and constructing retaining walls). The proximity of substantial soil-disturbing activities in the immediate vicinity of the basin would result in substantial indirect impacts due to dust, erosion, sedimentation, and chemicals or pollutants. The construction of the retaining wall within 2 feet of Basin II would require excavation, which would result in short-term direct construction impacts to the basin. Standard construction best management practices (BMPs) to control construction dust, erosion, and runoff, including pollutants and chemical spills, would be incorporated as part of the project design and would substantially reduce these impacts. Typical BMPs include reducing erosion through soil stabilization, watering for dust control, and installing perimeter controls (e.g., silt fencing, straw wattles, gravel bags). All project construction would be subject to the typical restrictions and requirements that address erosion and runoff, including the federal Clean Water Act, the National Pollution Discharge Elimination System, and preparation and implementation of a Stormwater Pollution Prevention Plan. Even with standard construction BMPs designed to minimize these impacts, substantial indirect impacts would still occur to the basin and its watershed due to the proximity of the basin to intensive construction activities.

In conclusion, the design modification would not avoid direct and indirect impacts to the San Diego fairy shrimp in Basin II, would add substantial cost to the project, would increase the duration of construction and associated impacts, and would result in other environmental impacts associated with relocating the LOSSAN tracks, constructing retaining walls, and relocating utilities. Based on this evaluation of the design modifications, avoiding direct and indirect impacts to San Diego fairy shrimp, Basin II,
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and the associated watershed is considered to be infeasible. As such, the design modifications were not carried forward and the potential long-term and construction (short-term) impacts of the project are analyzed for the Refined Build Alternative without the incorporation of the avoidance measures described above.

4.3.2.2 Long-term Impacts

With implementation of the Refined Build Alternative, San Diego fairy shrimp present in Basin II and the associated basin watershed would be directly impacted by the Refined Build Alternative through grading and/or filling associated with at-grade track construction in this location. The project would result in the loss of an ephemeral basin occupied by San Diego fairy shrimp as a result of improvements within the existing MTS right-of-way associated with new track construction. Basin II is located to the east of the existing tracks and measured approximately 76 feet long and 5.5 feet wide at the time San Diego fairy shrimp were observed, with an area of approximately 425 square feet and a maximum depth of 10 inches. In addition to the basin area itself, the basin watershed would also be directly impacted by grading and other improvements associated with new track construction. This impact would be considered adverse without mitigation.

Although 54 other ephemeral basins have been documented in the project study area during focused surveys for vernal pool branchiopods in the 2010-2011, 2011-2012, and 2013-2014 wet seasons, San Diego fairy shrimp have only been recorded in one other location (Basin BB) to the west of the existing LOSSSAN tracks and outside of the project impact footprint. As described in Chapter 4.0, Section 4.8.3 of the Draft SEIS/SEIR (SANDAG, 2013a) and Chapter 5.0 of the Mid-Coast Corridor Transit Project Biological Resources Technical Report (SANDAG, 2013b), San Diego fairy shrimp in Basin BB would not be adversely affected by the project. There are no new impacts to this basin.

Surveys to date have not detected San Diego fairy shrimp or vernal pool habitats in other ephemeral basins, ditches, or ruts within the project alignment; therefore, there is a low potential for the discovery of additional San Diego fairy shrimp locations in the future. With the incorporation of mitigation (described in Section 4.3.3), impacts associated with any future discoveries would be reduced.

4.3.2.3 Construction Impacts

Under the Refined Build Alternative, grading and filling associated with at-grade track construction would result in the permanent loss of San Diego fairy shrimp and the occupied Basin II. No additional short-term construction impacts would occur.

4.3.3 Mitigation Measures

Impacts to San Diego fairy shrimp would be mitigated through the following:

BIO5 Impacts to ephemeral basins occupied by San Diego fairy shrimp, including Basin II, would be mitigated at a 2:1 ratio through restoration and/or enhancement of vernal pools within west Otay Mesa on the 40-acre Anderprizes parcel, which was previously acquired for future mitigation of vernal pools and
which has been approved by the USFWS for mitigation of impacts to San Diego fairy shrimp, or within another approved mitigation area acceptable to the USFWS. Restoration would be conducted at a minimum 1:1 ratio to achieve a no-net-loss of San Diego fairy shrimp habitat; a combination of restoration and enhancement would make up the remaining mitigation. Restoration would be conducted in accordance with a vernal pool restoration plan to be developed by SANDAG and subject to approval by the USFWS prior to project construction.

The 40-acre Anderprizes parcel has sufficient mitigation areas to offset the impacts associated with the project. However, in the event that other mitigation locations are identified, mitigation at such sites also would include the implementation of a vernal pool restoration, enhancement, and/or preservation plan subject to the approval of USFWS prior to project construction. SANDAG would ensure that the mitigation areas would be conserved in perpetuity, including providing financial assurances and/or securing conservation easements, as necessary for USFWS approval.

As stated in Section 4.2.3, due to the presence of San Diego fairy shrimp, Basin II is a coastal resource subject to California Coastal Commission (CCC) regulation. Additional mitigation requirements may be identified by the CCC for impacts to Basin II during the permitting process for the Coastal Development Permit (CDP). The requirement for a CDP for the project is presented in the Draft SEIS/SEIR in Chapter 4.0, Sections 4.1.2 and 4.22, including the need to satisfy Coastal Act policies relating to habitat protection.

Regardless of any additional permit requirements for the CDP, with implementation of mitigation measure BIO5, impacts to the San Diego fairy shrimp would not be adverse.
5.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT DETERMINATION

Based on the California Environmental Quality Act (CEQA) Environmental Checklist (Appendix G of the CEQA Guidelines) and the City of San Diego CEQA Significance Determination Thresholds (City of San Diego, 2011), SANDAG has developed CEQA thresholds of significance for use in evaluating the impacts of the Mid-Coast Corridor Transit Project to the biological resources discussed below.

No Impact (No-Build Alternative). Under the No-Build Alternative, bus Route 150 would not result in short-term or long-term impacts to San Diego fairy shrimp. Thus, the analysis below focuses on the Refined Build Alternative.

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as being a candidate, sensitive, or special-status species in the Multiple Species Conservation Program (MSCP) or other local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service?

Significant Impact (Refined Build Alternative). The Refined Build Alternative would have significant impacts on the federally listed endangered San Diego fairy shrimp, both through long-term direct impacts on the species and through the loss of occupied habitat (i.e., Basin II). However, mitigation measures are proposed to reduce these impacts to below significance, as described in Section 4.3.3.

Would the project have a substantial adverse effect on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIIB Habitats, as identified in the San Diego Municipal Code Land Development Code—Biology Guidelines (City of San Diego, 2012) or other sensitive natural communities identified in local or regional plans, policies, or regulations, or by the CDFW or the USFWS?

No Impact (Refined Build Alternative). As described in Section 4.2.4, only Tier IV habitats occur in the affected environment, meaning these communities have limited habitat value and do not require mitigation under the San Diego Municipal Code Land Development Code—Biology Guidelines (City of San Diego, 2012).

Would the project have a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact (Refined Build Alternative). As stated in Section 4.2, the ephemeral basin is not considered an aquatic resource under the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act; the California Department of Fish and Wildlife pursuant to Section 1602 of the California Fish and Game Code; the Regional Water Quality Control Board pursuant to Section 401 of the federal Clean Water Act.

4 Impacts of less than 0.1 acre are not considered significant (City of San Diego, 2011).
5 Substantial adverse impacts on wetlands include any direct loss of wetlands. Total wetland impacts less than 0.01 acre are not considered significant, except for vernal pools or wetlands within the Coastal Zone (City of San Diego, 2011).
Clean Water Act; or the City of San Diego pursuant to its Environmentally Sensitive Lands Regulations.

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP, or impede the use of native wildlife nursery sites?

No Impact (Refined Build Alternative). Basin II does not function as a wildlife movement corridor or linkage.

Would the project conflict with the provisions of an adopted habitat conservation plan, natural conservation community plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP area or in the surrounding region?

Less-Than-Significant Impact (Refined Build Alternative). The project would be consistent with adopted plans, as discussed in Chapter 4.0, Section 4.8.3.2 of the Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SANDAG, 2013a).

Would the project introduce land use within an area adjacent to the Multi-Habitat Planning Area that would result in adverse edge effects?

No Impact (Refined Build Alternative). The improvements that would affect the San Diego fairy shrimp (Basin II) are not located adjacent to the Multi-Habitat Planning Area; therefore, no edge effects would occur within or adjacent to the affected environment.

Would the project introduce invasive species of plants into a natural open space area?

No Impact (Refined Build Alternative). The improvements that would affect the San Diego fairy shrimp in Basin II are not located adjacent to or within natural open space; therefore, there are no impacts to natural open space that would occur within or adjacent to the affected environment.
6.0 CUMULATIVE IMPACTS

This chapter evaluates the cumulative impacts of the No-Build and Refined Build Alternatives on the San Diego fairy shrimp. Cumulative impacts refer to the combined environmental effects of the project and other past, present, and reasonably foreseeable projects that would take place generally within the same geographic area.

6.1.1 No-Build Alternative

As described in the Mid-Coast Corridor Transit Project Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SANDAG, 2013a), Chapter 2.0 of this document, and in the Mid-Coast Corridor Transit Project Biological Resources Technical Report (SANDAG, 2013b), the No-Build Alternative assumes implementation of the planned transportation improvements committed to be implemented by 2030, as identified in the 2030 San Diego Regional Transportation Plan: Pathways for the Future (SANDAG, 2007) under the Revenue Constrained Scenario, except for the Mid-Coast Corridor Transit Project. The No-Build Alternative would include the continuation and enhancement of bus service by Route 150 operating between Downtown San Diego, the Old Town Transit Center, and University City. This would not result in any adverse impacts to San Diego fairy shrimp. As such, the No-Build Alternative would not result in or contribute to cumulative impacts to the San Diego fairy shrimp.

6.1.2 Refined Build Alternative

As stated in Chapter 5.0, Section 5.2.2 of the Mid-Coast Corridor Transit Project Biological Resources Technical Report (SANDAG 2013b), the majority of the projects included in the cumulative impact analysis are located within or adjacent to existing developed rights-of-way in urbanized areas. Regional growth and development is also expected to affect areas primarily within urbanized areas. The cumulative impact of the Refined Build Alternative on regional biological resources is expected to be limited. Future projects would undergo separate environmental review and would be permitted for construction consistent with federal, state, and local regulations, plans, and policies. These regulations, plans, and policies are in place to protect biological resources.

Although San Diego fairy shrimp was observed in the study area, the affected basin is located within the existing Metropolitan Transit System right-of-way in an otherwise developed area with limited long-term conservation value for the species. The hydrology of the occupied basin consists solely of accumulated precipitation (storm-water runoff) from the 0.71-acre watershed. With implementation of the proposed mitigation, habitat for San Diego fairy shrimp would be restored in areas with greater long-term conservation value. As such, the project would not result in or contribute to cumulative impacts on San Diego fairy shrimp within the corridor.
7.0 REFERENCES


DigitalGlobe. 2008. GIS data for the project area.


8.0 LIST OF PREPARERS

Federal Transit Administration (FTA) Region 9
- Raymond Sukys, Director, Office of Planning and Program Development
- Alexander Smith, Community Planner
- Mary Nguyen, Environmental Protection Specialist

San Diego Association of Governments (SANDAG)
- John Haggerty, P.E., Division Director of Rail Implementation
- Leslie Blanda, Project Manager, Environmental/New Starts/Planning

Project Management Consultant Team
- Tom Jenkins, P.E., Project Manager, InfraConsult/HDR, Inc.
- Adrianne Beazley, Environmental Manager/Technical Reviewer, LSA Associates, Inc.

Parsons Brinckerhoff
- Dennis Henderson, Environmental/New Starts Project Manager
- Reddy Chidananda, P.E., Engineering Project Manager
- Hadi Samii, P.E., Engineering Manager
- Matt Moore, P.E., CPESC, CPSWQ, Water Resources
- Kristin M. Carlson, AICP, Transportation and Final SEIS/SEIR Manager
- Jeannie Pham, Engineering and Right-of-Way
- Sharon Henderson, Document Production/Graphics
- Ed Reynolds, Editor

Dudek
- Paul Lemons, Biologist
- Thomas S. Liddicoat, Biologist
- Kamarul J. Muri, TWS, CNPS, Biology Manager
- Melissa Blundell, DFW SCP, Environmental Analyst
- Brock A. Ortega, Senior Biologist/Technical Reviewer
- Patricia C. Schuyler, CNPS, Environmental Analyst