Hicks Canyon Wash Improvements Project, CIP 381901

Draft Initial Study/ Mitigated Negative Declaration

SCH # _____
August 2023

Prepared for:

City of Irvine
1 Civic Center Plaza
Irvine, CA 92606

Prepared by:

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Acronyms and Abbreviations

AB	Assembly Bill
amsl	above mean sea level
AQMP	Air Quality Management Plan
BMP	best management practice
BUOW	burrowing owl
BUOW	burrowing owl
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CH_4	methane
City	City of Irvine
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	Orange County
CRHR	California Register of Historical Resources
DOC	California Department of Conservation
DTSC	Department of Toxic Substances Control
FTA	Federal Transit Administration
GHG	greenhouse gas
GWP	global warming potential
IRWD	Irvine Ranch Water District
LF	linear feet
LST	localized significance threshold
MBTA	Migratory Bird Treaty Act
MRZ	Mineral Resource Zone
MT	metric tons

Acronyms and Abbreviations (cont.)

N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NCCP/HCP	Natural Community Conservation Plan and Habitat Conservation Plan
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OCFA	Orange County Fire Authority
OCPW	Orange County Public Works
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PPV	peak particle velocity
PRC	Public Resources Code
ROG	reactive organic gas
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SLF	Sacred Lands File
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRA	source receptor area
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
VdB	vibration decibels
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WTKI	white-tailed kite

1.0 Introduction

1.1 Initial Study Information Sheet

1.	Project title:	Hicks Canyon Wash Improvements Project
2.	Lead agency name and address:	City of Irvine 1 Civic Center Plaza Irvine, CA, 92606
3.	Contact person and phone number:	Uyenly Bui, Senior Civil Engineer (949) 724-7559
4.	Project location:	Hicks Canyon Wash corridor from Culver Drive to 1,650 feet east of Yale Avenue, south of Meadowood, and north of Irvine Boulevard
5.	Project sponsor's name and address:	City of Irvine
6.	General plan designation:	Recreation
7.	Zoning:	Recreation

8. Description of project:

The Hicks Canyon Wash Improvements Project (project) site is an approximately 13.5-acre site, generally located 1.25 miles east of Interstate 5 and 0.6 mile south of State Route 261 in the City of Irvine (City), Orange County (County), California (Figure 1, *Regional Location*). Specifically, the project site consists of an approximately 1.2-mile segment of the Hicks Canyon Wash corridor extending from Culver Drive at the western boundary to 1,650 feet east of Yale Avenue (Eastwood Village), at the eastern boundary. The limits of the project site are depicted on Figure 2, *Aerial Photograph.*

The project proposes to regrade and landscape along the channel slopes through Hicks Canyon Wash in compliance with the 100-year flow management practices in order to prevent further erosion of the channel, stabilize the channel banks, and protect adjacent residential properties along the southern edge of the channel. The project would also extend the five existing storm drains to connect to the existing 120-inch diameter pipe, thereby allowing the existing 120-inch diameter pipe to convey additional flows (Figures 3a-d, *Proposed Project*).

Construction of the proposed project is anticipated to take 10 months, beginning in April 2024. Equipment used during construction would include a backhoe, loader, dump truck, water truck, and small bulldozer. During some construction activities, a cement truck would be required, and pickup trucks would be used to haul material off-site.

Channel Clearing and Recontouring

With the proposed project, the length of the Hicks Canyon Wash would be cleared of excess vegetation, silt, and existing, abandoned concrete structures along the channel bottom. A total of 4.56 acres of vegetation would be removed through clearing and grubbing. This would also include the removal of all

existing eucalyptus trees and decayed trunks from Hicks Canyon Wash and areas adjacent to the channel. The second component of the project proposes to recontour the channel to achieve a maximum slope of 2:1 on either side for a total elevation change of approximately 10 feet between the base of the channel and the height of the bank on either side. There would be a raw cut of 4,933 cubic yards and a raw fill of 2,359 cubic yards, resulting in 2,574 cubic yards of export. Fill materials would also be applied to fill areas within Hicks Canyon Wash affected by the removal of the existing concrete structures and eucalyptus trees/trunks and associated root structures.

Extending Storm Drains

Each of the five existing storm drains would be extended to connect to the existing 120-inch diameter pipe to the north of Hicks Canyon Wash. At each storm drain extension, the channel bottom would be excavated to access the existing drainpipe. An additional pipe segment would be installed and connected to the 120-inch diameter pipe using a junction structure and concrete collar and attached to the existing storm drain pipe. The proposed grading would include creating a compacted fill berm over each pipe extension to provide a trail or access crossing.

Landscaping

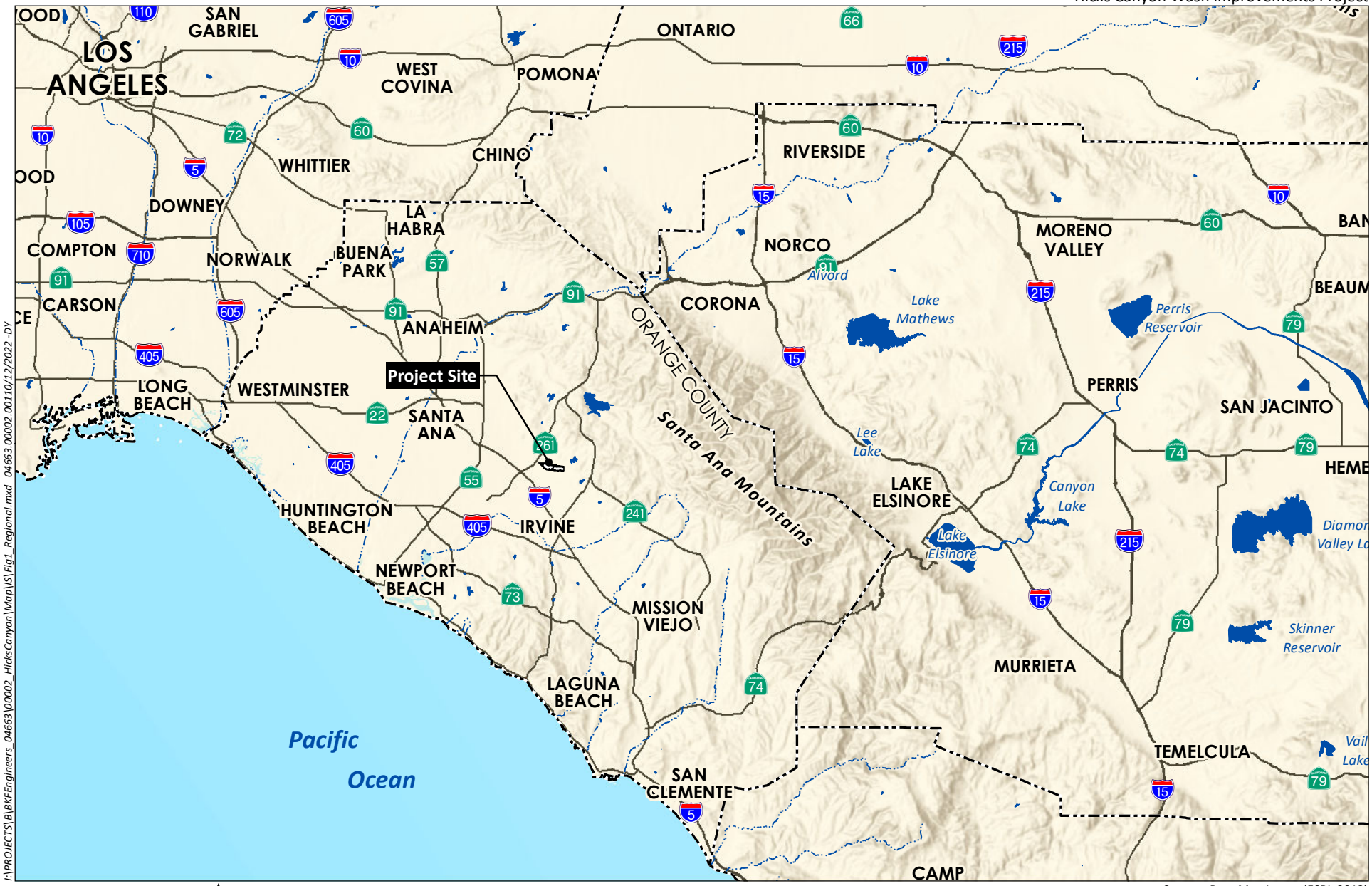
Landscaping would be minimal and is intended to provide stabilization to the re-graded slopes. The channel banks and bottom would be planted with a combination of vegetation types consisting of a variety of native riparian species as well as a temporary irrigation system to facilitate the establishment of the new landscaping. The sides of the channel would be planted with riparian vegetation that transitions into a dirt aggregate along the access and pedestrian roads. An earthen fill would be installed over the storm drain extensions and along the access road.

9. Surrounding land uses and setting:

The project site is bordered by residences to the north and south; Culver Drive and Hicks Canyon Community Park to the west; and the residential community of Eastwood Village to the east.

The linear project site includes, beginning on the north, a paved bike path known as Hicks Canyon Trail, an unpaved, a decomposed-granite path called Hicks Canyon Horse and Hiking Trail, the natural Hicks Canyon Wash (the Wash) within the San Diego Creek Watershed, and a dirt access road on the south bank of the channel. The channel flows southwesterly into Peters Canyon Wash 1.45 miles downstream, which is a tributary to San Diego Creek 4.5 miles downstream. San Diego Creek empties into Upper Newport Bay and ultimately drains into the Pacific Ocean, approximately 12 miles to the southwest of the project site. Topography of the area is mostly flat, with elevations ranging from approximately 169 feet above mean sea level (amsl) at the western end to approximately 324 feet amsl near the eastern boundary.

The Wash is comprised of two conveyances consisting of an existing, subsurface 120-inch cast-in-place-concrete-pipe to the north and a parallel earthen-sloped channel to the south. The 120-inch pipe begins at an inlet approximately 725 feet east of Portola Parkway. It continues to the west along Hicks Canyon Wash where it joins with Orange County Public Works' (OCPW's) Hicks Canyon Channel (Facility Number F27) west of the project site.



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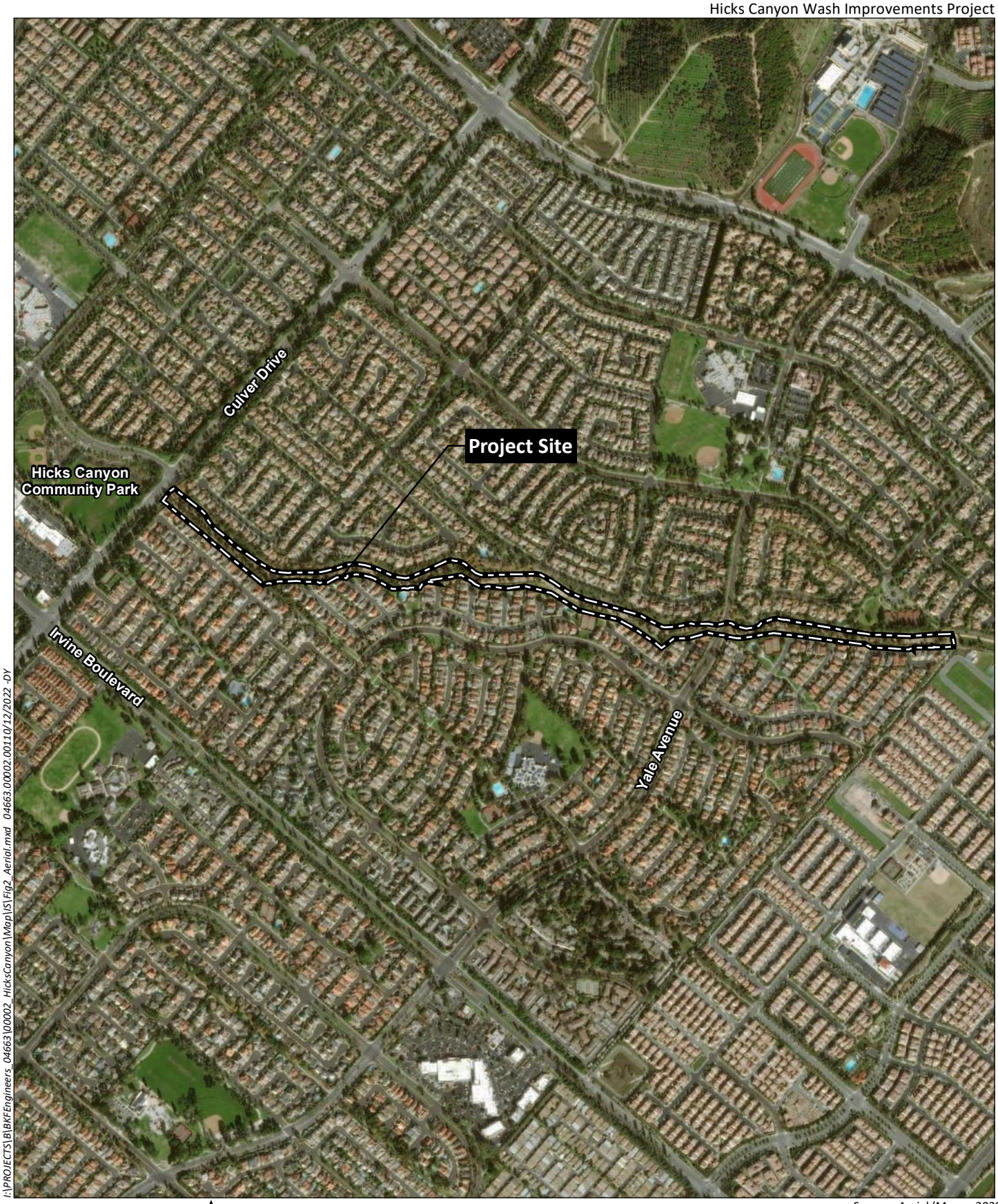
Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



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Source: Aerial (Maxar, 2020)

HELIX Environmental Planning

Aerial Photograph

Figure 2

Hicks Canyon Wash Improvements Project

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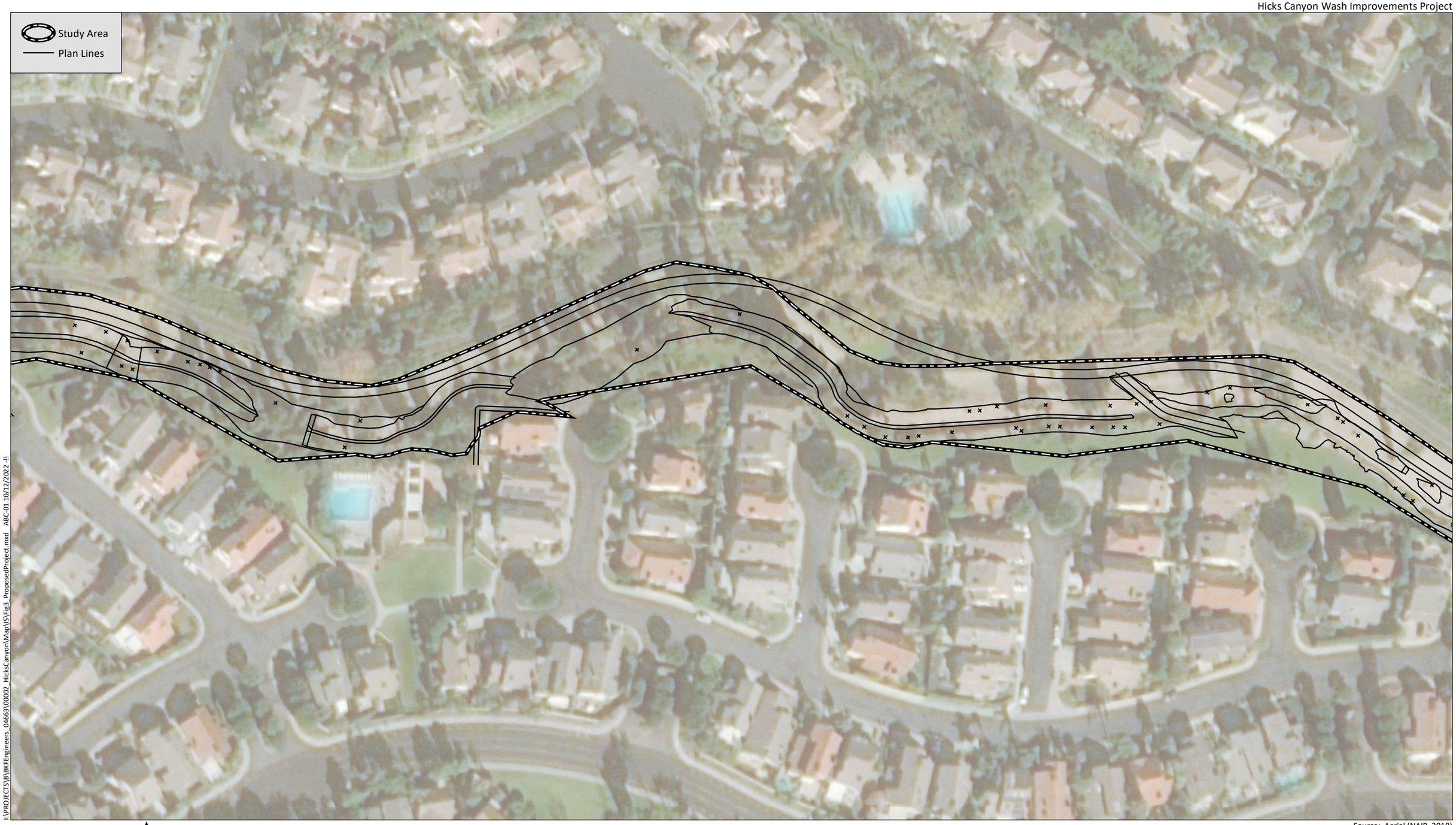
Source: Aerial (NAIP, 2018)

HELIX Environmental Planning

Proposed Project

Figure 3a



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Source: Aerial (NAIP, 2018)

HELIX Environmental Planning

Proposed Project

Figure 3b

Hicks Canyon Wash Improvements Project

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Source: Aerial (NAIP, 2018)

HELIX Environmental Planning

Proposed Project

Figure 3c

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Source: Aerial (NAIP, 2018)

HELIX Environmental Planning

Proposed Project

Figure 3d

The earthen channel begins approximately 1,650 feet east of Yale Avenue and travels to the west where it joins OCPW's Hicks Canyon Channel (Facility Number F27). In the project site, Hicks Canyon Wash is an earthen trapezoidal channel with five storm drains and their inlets. The Wash is experiencing erosion along the channel banks and accumulation of sediment along the channel bottom. The storm drain inlets are silted in and are virtually ineffective. The channel bottom varies from approximately 3 feet to 8 feet wide, with a depth of approximately eight feet. The channel banks vary in steepness.

The five existing storm drains include one 18-inch diameter pipe, two 30-inch diameter pipes, one 36-inch diameter pipe, and one 60-inch diameter pipe. These drains are intended to convey water into the channel to drain effectively. The first storm drain, the 60-inch diameter pipe, is located approximately 100 feet east of Culver Drive, where the channel curves northward. The second storm drain (18-inch diameter) is located approximately 200 feet east of the first, and the third (18-inch diameter) is located approximately 200 feet east from the second. The fourth storm drain (30-inch diameter) is located approximately 1500 feet further upstream, where the Hicks Canyon Trail and Hicks Canyon Hiking and Riding Trail are connected by an earthen berm. The fifth final storm drain (30-inch diameter) is located approximately 627 feet further east, where the two paths are connected once again.

The Hicks Canyon Wash Trail, and the Horse and Hiking Path, run alongside each other on the north side of the Wash, while a dirt access road generally follows the Wash to the south. The paved and unpaved paths meet at several points along the length of the channel, where there are built-up crossings to allow pedestrians, bikers and horses to cross over the channel.

While the project site is generally dominated by ornamental landscaping, isolated vegetated pockets of riparian herb and southern willow scrub exist. The banks of the Wash support ornamental trees, which are dominated by stands of eucalyptus trees.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement:

    - Santa Ana Regional Water Quality Control Board (RWQCB)
    - California Department of Fish and Wildlife (CDFW)
    - United States Army Corps of Engineers (USACE)

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

HELIX contacted the Native American Heritage Commission (NAHC) on October 4, 2021 for a Sacred Lands File (SLF) search and list of Native American contacts for the project area. The results of the SLF search were positive. On January 18, 2023, the City sent letters inviting interested tribes to consult on the project in accordance with Assembly Bill (52). The Juaneno Band of Mission Indians and Gabrieleno Band of Mission Indians responded to this letter requesting consultation with the City. The City held meetings with these tribes, who requested Native American monitoring during ground-disturbing activities. The City provided the text for mitigation measure CUL-1 to the tribes and incorporated a requirement to contact the tribes if the archaeological monitor identifies cultural material during monitoring. AB 52 consultation has now concluded.

1.2 Environmental Factors Potentially Affected

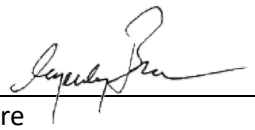
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology and Soils	☐ Greenhouse Gas Emissions	☐ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☒ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

1.3 Determination

On the basis of this initial evaluation:

☐	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
☒	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
☐	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

8-3-23

Date

Uyenly Bui

Printed Name

City of Irvine

For

2.0 Environmental Initial Study Checklist

The lead agency has defined the column headings in the environmental checklist as follows:

A. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

B. "Less Than Significant with Mitigation Incorporated" applies where the inclusion of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." All mitigation measures are described, including a brief explanation of how the measures reduce the effect to a less than significant level. Mitigation measures from earlier analyses may be cross-referenced.

C. "Less Than Significant Impact" applies where the project does not create an impact that exceeds a stated significance threshold.

D. "No Impact" applies where a project does not create an impact in that category. "No Impact" answers do not require an explanation if they are adequately supported by the information sources cited by the lead agency which show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project specific screening analysis).

The explanation of each issue identifies the significance criteria or threshold used to evaluate each question; and the mitigation measure identified, if any, to reduce the impact to less than significance. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [CEQA Guidelines Section 15063(c)(3)(D)]. Where appropriate, the discussion identifies the following:

a) Earlier Analyses Used. Identifies where earlier analyses are available for review.

b) Impacts Adequately Addressed. Identifies which effects from the checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and states whether such effects were addressed by mitigation measures based on the earlier analysis.

c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Incorporated," describes the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

I. Aesthetics

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c)	In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

a) Have a substantial adverse effect on a scenic vista?

No Impact. The City's Land Use Element identifies the scenic view corridors within the City as some of the main north-south roads, including Culver Drive adjacent to the project site. The project site is not elevated and is located between residences. Upon completion, the project site would appear similar to pre-project conditions, which are relatively level with the road, such that the channel does not interrupt scenic vistas. No impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. There are no state scenic highways located at or near the project site (California Department of Transportation [Caltrans] 2022). As discussed above in item I.a, the project is adjacent to Culver Drive, which is designated as a scenic highway in the City's Land Use Element. The segment adjacent to the western edge of the project site is designated for urban character. The project would involve removal of eucalyptus trees and root structures along the Wash and revegetation of the Wash with riparian vegetation upon completion of construction. The aesthetic quality would be similar to existing conditions and would not substantially damage scenic resources. As there is no state scenic highway from which the project would be visible, there would be no impact to scenic resources within a state scenic highway. No impact would occur.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant Impact. With a population of 307,670 as of 2020, the City is considered an urbanized area under the CEQA definition provided in Public Resources Code (PRC) 21071 (U.S. Census Bureau 2020). Therefore, impacts in this item are considered relative to conflicts with applicable zoning and other regulations governing scenic quality. The proposed project would maintain existing trails, revegetate the channel, and provide greater slope stability within the Wash. The project would not conflict with zoning and other regulations governing scenic quality. Impacts would be less than significant.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No Impact. The project does not propose the installation of new sources of light or glare. Therefore, the project would not have an adverse effect on the area's day or nighttime views and no impact would occur.

II. Agriculture and Forestry Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non- forest use?	☐	☐	☐	☒

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The project site is designated as Urban and Built-up Land by the California Department of Conservation's (DOC's) Important Farmland Finder (DOC 2022). There is no Farmland on the project site, thus implementation of the project would not result in a conversion to a non-agricultural use. No impact would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The project site is not zoned for agricultural use and is not currently being used for agricultural activities. According to the City's CEQA Manual, there are no Williamson Act contracts on lands within the City (City 2020a). The project would not conflict with agricultural zoning or a Williamson Act contract and no impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. PRC Section 12220(g) defines forest land as having the ability to support ten-percent native tree cover and allow for the management of at least one forest resource. Timberland is defined as land that is available for and capable of growing a commercial crop of trees. The project site contains ornamental trees dominated by eucalyptus trees and would not be defined as forest land or timberland. Therefore, no impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. As discussed above in item II.c, the project site would not be categorized as forest land. Therefore, the project would not result in the loss or conversion of forest land to a non-forest use and no impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The project would maintain conditions similar to existing conditions and introduce minimal native vegetation to the channel banks. As no Farmland or forest land exists on the project site, the project would not cause conversion of these lands to other uses. No impact would occur.

III. Air Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

The following discussion is primarily based on air quality modeling, the results of which are attached to this Initial Study as Appendix A.

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The project is located within the South Coast Air Basin (SCAB), which includes Los Angeles, San Bernardino, Riverside, and Orange counties. Air quality in the SCAB is regulated by the South Coast Air Quality Management District (SCAQMD). As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), County transportation commissions, and local governments, as well as cooperates with all federal and state government agencies. The SCAQMD develops rules and regulations; establishes permitting requirements for stationary sources; inspects emissions sources; and enforces such measures through educational programs or fines, when necessary.

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of Air Quality Management Plans (AQMPs). An AQMP establishes a program of rules and regulations directed at attaining the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The regional plan applicable to the proposed project is the SCAQMD's AQMP. The latest AQMP was adopted in March of 2017 (SCAQMD 2017).

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, economy, community development, and environment. Regarding air quality planning, SCAG has prepared the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range transportation plan that uses growth forecasts to project trends over a 20-year period to identify regional transportation

strategies to address mobility needs (SCAG 2020). These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on projections originating with county and city General Plans.

The two principal criteria for determining conformance to the AQMP are (1) whether a project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards; and (2) whether a project would exceed the assumptions in the AQMP (SCAQMD 1993).

With respect to the first criterion, the analyses described under response III.b, below, demonstrate that the project would not generate short-term or long-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

With respect to the second criterion, the proposed project is grading an existing channel and extending existing storm drains and would not result in population or employment increases and, therefore, would not exceed the growth projections assumptions in the AQMP. As such, proposed project-related emissions are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Accordingly, the proposed project would be consistent with the emissions projections in the AQMP, thus resulting in a less than significant impact.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact. In accordance with CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. If a project is not consistent with the AQMP, which is intended to bring the SCAB into attainment for all criteria pollutants, that project can be considered cumulatively considerable. Additionally, if the mass regional emissions calculated for a project exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable state and national ambient air quality standards, that project can be considered cumulatively considerable. The SCAQMD thresholds of significance for construction and operational air emissions are shown in Table 1, *SCAQMD Criteria Air Pollutant Emission Thresholds*.

Table 1
SCAQMD CRITERIA AIR POLLUTANT EMISSION THRESHOLDS

Criteria Pollutant	Emission Threshold (pounds per day) Construction	Emission Threshold (pounds per day) Operation
Volatile Organic Compounds (VOC)	75	55
Oxides of Nitrogen (NO_X)	100	55
Carbon Monoxide (CO)	550	550
Particulate Matter (PM_{10})	150	150
Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_X)	150	150
Lead	3	3

Source: SCAQMD 2019

Construction Impacts

The emissions generated from construction activities would include dust (particulate matter 10 microns or less in diameter [PM_{10}] and particulate matter 2.5 microns or less in diameter [$PM_{2.5}$]), primarily from fugitive sources such as soil disturbance and vehicle travel over unpaved surfaces, and combustion emissions of air pollutants (reactive organic gas [ROG], nitrogen oxides [NO_X], PM_{10}, $PM_{2.5}$, carbon monoxide [CO], and sulfur oxides [SO_X]), primarily from operation of heavy-duty off-road equipment.

The project's construction emissions were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0 (California Air Pollution Control Officers Association [CAPCOA] 2021). CalEEMod is a computer model used to estimate air pollutant emissions resulting from construction and operation of land development projects throughout the state of California. CalEEMod was developed by CAPCOA with the input of several air quality management and pollution control districts.

Construction emission calculations assumed the implementation of standard dust control measures as required by SCAQMD Rule 403, including watering two times daily during grading, ensuring that all exposed surfaces maintain a minimum soil moisture of 12 percent, and limiting vehicle speeds on unpaved roads to 15 miles per hour (SCAQMD 2005). Project-specific input was based on general project information, assumptions provided by the project engineers, and default model settings to estimate reasonably conservative conditions. Construction was assumed to occur over 10 months, commencing in April 2023, and require the use of a backhoe, loader, dump truck, water truck, bulldozer, and cement truck. Project construction is now assumed to begin in April 2024; however, air quality modeling at the earlier date is more conservative given technological advances and regulations that increase in strictness over time. All construction was assumed to occur within a single phase with all equipment conservatively assumed to be used each day. In total, 3,000 cubic yards of soil export was anticipated. The results of the calculations for project construction are shown in Table 2, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SCAQMD thresholds.

Table 2
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Phase	Pollutant Emissions (pounds per day)					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Grading (2023)	2.1	18.0	15.0	<0.1	3.7	2.2
Grading (2024)	2.1	17.3	14.9	<0.1	3.6	2.2
Maximum Daily Emissions	**2.1**	**18.0**	**15.0**	**<0.1**	**3.7**	**2.2**
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod; Appendix A
VOC = volatile organic compound; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; SCAQMD = South Coast Air Quality Management District

As shown in Table 2, construction emissions would not exceed SCAQMD thresholds and construction emission impacts would be less than significant.

Operational Impacts

The project proposes improvements to an existing channel and trail and would only generate emissions during construction in the near term. Long-term emissions associated with trail use would not be altered from pre-project conditions due to project implementation. Therefore, the project's operational criteria pollutant and ozone precursor emissions would not result in a cumulatively considerable net increase of any criteria pollutant. No impact would occur during project operation.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact.

Criteria Pollutants

Impacts to sensitive receptors would have the potential to occur as a result of criteria pollutant and toxic air contaminant (TAC) emissions during construction. The localized effects from the on-site portion of daily construction emissions were evaluated at sensitive receptor locations potentially impacted by the project according to the SCAQMD's Localized Significance Thresholds (LST) method (SCAQMD 2009). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard; they are developed based on the ambient concentrations of that pollutant for each Source Receptor Area (SRA). The LST methodology is recommended to be limited to projects of five acres or less and to avoid the need for complex dispersion modeling. For projects that exceed five acres, such as the proposed project, the five-acre LST look-up values can be used as a screening tool to determine which pollutants require detailed analysis. This approach is conservative as it assumes that all on-site emissions would occur within a five-acre area and over-predicts potential localized impacts (i.e., more pollutant emissions occurring within a smaller area and within closer proximity to potential sensitive receptors). If a project exceeds the LST look up values, then the SCAQMD recommends that project-specific localized air quality modeling be performed.

The project is in SRA 20, Central Orange County Coastal, and sensitive receptors are located within 25 meters (82 feet) of the project site. Therefore, the LSTs being applied to the project are based on

SRA 20, receptors located within 25 meters, and a disturbed area not to exceed 5 acres to provide a conservative analysis as noted above. Consistent with the LST guidelines, when quantifying mass emissions for localized analysis, only emissions that occur on-site are considered. Emissions related to off-site delivery/haul truck activity and construction worker trips are not considered in the evaluation of construction-related localized impacts, as these do not contribute to emissions generated on a project site. As shown in Table 3, *Maximum Localized Daily Construction Emissions*, localized emissions for all criteria pollutants would remain below their respective SCAQMD LSTs and impacts to sensitive receptors would be less than significant.

Table 3
MAXIMUM LOCALIZED DAILY CONSTRUCTION EMISSIONS

	Pollutant Emissions (pounds per day)			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum On-site Daily Emissions	17.7	14.5	3.5	2.2
SCAQMD LSTs	*197*	*1,711*	*14*	*9*
Significant Impact?	***No***	***No***	***No***	***No***

Source: CalEEMod; Appendix A; SCAQMD 2009
NO_X = nitrogen oxides; lbs = pounds; CO = carbon monoxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter; SCAQMD = South Coast Air Quality Management District; LST = Localized Significance Threshold

Toxic Air Contaminants

The greatest potential for TAC emissions during construction would be related to diesel particulate matter associated with heavy equipment operations during earth-moving activities. SCAQMD does not consider diesel-related cancer risks from construction equipment to be an issue due to the short-term nature of construction activities. Construction activities associated with the proposed project would be sporadic, transitory, and short term in nature, lasting approximately 10 months. The closest sensitive receptors to the project site are the residential units located adjacent to the project site. The assessment of cancer risk is typically based on a 30-year exposure period. Because exposure to diesel exhaust would be well below the 30-year exposure period, construction of the proposed project is not anticipated to result in an elevated cancer risk to exposed persons. As such, project-emission impacts during construction would be less than significant.

As relates to long-term operations, the project would not notably increase the number or frequency of truck trips or associated emission in the immediate area compared to existing conditions. Therefore, the project would not result in a notable increase in the concentration of TACs that could adversely affect sensitive populations, including residents living adjacent to the project site. As such, operational impacts would also be less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. The project could produce odors during proposed construction activities resulting from heavy diesel equipment exhaust; however, standard construction practices such as limiting idling time and maintaining equipment would minimize the odor emissions and their associated impacts. The increase of construction odors would be minimal and any odors emitted during construction would be temporary, short-term, and intermittent in nature, and would cease upon the

completion of the respective phase of construction. Therefore, odor impacts from construction of the project would be less than significant due to the duration of exposure.

No changes to the operational activities at the project site are proposed. After project construction, project operation would return to pre-project conditions. Long-term operation of the project would not result in a change to existing odors in the project vicinity, and there would be no impact.

IV. Biological Resources

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

The discussion below is based on a Biological Technical Report prepared by HELIX Environmental Planning, Inc. (HELIX 2022a), attached to this Initial Study as Appendix B.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated. Five vegetation communities or land uses were mapped on the project site: cottonwood stand, southern willow scrub, parks and ornamental planning, disturbed land, and urban land. Table 4, *Impacts to Vegetation and Land Uses*, shows the existing cover and extent of project impacts that would occur within each vegetation community or land use type.

Table 4
IMPACTS TO VEGETATION AND LAND USES

Vegetation Community	Existing (acres)	Temporary Disturbance (acres)	Permanent Impact (acres)
Cottonwood Stand	0.03	0.00	0.00
Southern Willow Scrub	0.05	0.00	0.05
Parks and Ornamental Plantings	5.97	0.12	2.03
Disturbed	7.27	0.05	2.47
Urban	0.18	0.00	0.01
TOTAL	**13.5**	**0.17**	**4.56**

A total of 21 rare plant species were recorded within the El Toro and Tustin quadrangles; 19 were considered to not have a potential to occur based on geographic range, elevation range, and/or lack of suitable habitat. The remaining two species, southern tarplant and mud nama, were presumed absent based on the focused rare plant survey conducted in August 2021 (HELIX 2022a; Appendix B). No permanent impacts or temporary disturbances are proposed to these two species and the project would not result in impacts to sensitive plant species.

A total of 36 sensitive animal species were recorded within the El Toro and Tustin database search; however, 31 of these species were considered to have no potential to occur on the project site due to a lack of suitable habitat. (CDFW 2021). Of the remaining five species, two species have a low potential to occur, one is not expected to be found on the site, one is presumed present, and one species is presumed absent. These species are discussed in further detail below.

Low-quality and limited (0.08 acre) suitable habitat is present within the project site for white-tailed kite (WTKI); therefore, the species is assumed to have low potential to occur in the project site. Although the habitat onsite does not support the structural diversity preferred by this species for nesting, suitable nesting habitat for WTKI is present in the nearby open space, upstream of Hicks Canyon Wash. Therefore, a potentially significant indirect impact to WTKI could occur during construction. Mitigation measure BIO-1 requires construction to occur outside of the nesting season (February 15 through August 31) to the greatest extent feasible to avoid potential indirect impacts to this species. However, if construction must occur within the nesting season, additional avoidance and minimization measures would be required as outlined in mitigation measure BIO-1. Implementation of mitigation measure BIO-1 would bring the project into compliance with the Migratory Bird Treaty Act (MBTA) and reduce impacts to WTKI to a less than significant level.

Low-quality and limited (0.08 acre) suitable habitat is present within the project site for coastal whiptail; therefore, the species is assumed to have low potential to occur in the project site. Permanent impacts

are proposed to 0.05 acre of low-quality suitable habitat for coastal whiptails. Coastal whiptail is a Covered Species under the Orange County Central and Coastal Subregion Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) and the City, as a participating entity of the NCCP/HCP, is provided take authorization of the species. Therefore, no additional mitigation is required for potential impacts to coastal whiptail.

Southern California legless lizard is not expected to occur within the project area, as it supports low-quality suitable habitat within the cottonwood stand and sandy wash. The species prefers loose soils with plant cover, and the majority of the project site is disturbed and lacks vegetation cover. Therefore, no impacts to Southern California legless lizard are expected to occur.

Yellow warbler is presumed present at the project site, as it was observed during a field survey on May 18, 2021, foraging within the eucalyptus trees on site (HELIX 2022a). Since the species is present within the project site, a significant impact to tallow warbler could occur. Mitigation measure BIO-1 requires construction to occur outside of the nesting season (February 15 through August 31) to the greatest extent feasible to avoid potential indirect impacts to this species. If construction must occur within the nesting season, additional avoidance and minimization measures would be required as outlined in mitigation measure BIO-1. Implementation of mitigation measure BIO-1 would bring the project into compliance with the MBTA and impacts to yellow warbler would be less than significant.

Burrowing owl (BUOW) is presumed absent from the project site based on negative focused survey results from 2021 (HELIX 2022a). Therefore, no direct or indirect impacts to BUOW are anticipated. Since the project site supports suitable BUOW habitat, a take avoidance survey is required prior to ground disturbance in accordance with CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012). Mitigation measure BIO-2 requires this take avoidance survey and, if BUOW are observed, avoidance of active nests and/or relocation of BUOW.

No impacts to rare plant species would result from the project. The project has the potential to result in impacts to WTKI and yellow warbler if construction occurs during the nesting season (February 15 through August 31). With the implementation of BIO-1, potential impacts to the species would be avoided. The project may also impact coastal whiptail habitat; however, take of this species is provided by the NCCP/HCP and no mitigation is required. Based on the presence of suitable BUOW habitat, mitigation measure BIO-2 is required to prevent take of the species. Impacts would be less than significant with implementation of mitigation measures BIO-1 and BIO-2.

Mitigation

BIO-1 **Nesting Birds**. Construction activities (i.e., earthwork, clearing, and grubbing) shall occur outside of the general bird nesting season for migratory birds, which is February 15 through August 31 for songbirds and January 15 to August 31 for raptors.

If construction activities (i.e., earthwork, clearing, and grubbing) must occur during the general bird nesting season for migratory birds and raptors (January 15 and August 31), the City shall retain a qualified biologist to perform a pre-construction survey of potential nesting habitat within the study area to confirm the absence of active nests belonging to migratory birds and raptors afforded protection under the MBTA and California Fish and Game Code. The pre-construction survey shall be performed no more than seven days prior to the commencement of construction activities. The results of

the pre-construction survey shall be documented by the qualified biologist and submitted to the City.

If the qualified biologist determines that no active migratory bird or raptor nests occur, the activities shall be allowed to proceed without any further requirements. If the qualified biologist determines that an active migratory bird or raptor nest is present, no impacts within 300 feet (500 feet for raptors) of the active nest shall occur until the young have fledged the nest and the nest is confirmed to no longer be active, or as determined by the qualified biologist. The biological monitor may modify the buffer or propose other recommendations in order to minimize disturbance to nesting birds.

BIO-2 **Burrowing Owl**. In compliance with the CDFW *Staff Report on Burrowing Owl Mitigation* (2012), a take avoidance survey shall be conducted on the study area within 14 days prior to ground disturbance to determine the presence of BUOW. If the take avoidance survey is negative and BUOW is confirmed absent, then ground-disturbing activities shall be allowed to commence, and no further mitigation would be required.

If BUOW are observed during the take avoidance survey, active burrows shall be avoided by the project in accordance with the CDFW's Staff Report (2012). The City shall inform CDFW within 48 hours of any BUOW observations. A Burrowing Owl Protection and Relocation Plan (plan) shall be prepared by a qualified biologist, which must be sent for approval by CDFW prior to initiating ground disturbance. The plan shall detail avoidance measures that shall be implemented during construction and passive or active relocation methodology. Relocation shall only occur outside of the nesting season (September 1 through January 31).

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated. The project site supports riparian habitat and sensitive natural communities totaling 0.08 acre, including southern willow scrub (0.05 acre) and cottonwood stand (0.03 acre). Although temporary disturbance to parks and ornamental plants (0.12 acre) and disturbed (0.05 acre) would occur to allow construction access to the work area and stage equipment, no temporary impacts to riparian habitat and sensitive natural communities would occur. As shown in Table 4, permanent onsite impacts would occur in order to ensure proper function and channel stability, which includes extending the existing storm drains, as well as re-contouring the channel and slopes, in order to prevent further erosion of the channel, stabilize the channel banks, and protect adjacent residential properties along the southern edge of the channel. This would include impacts to 0.05 southern willow scrub.

Southern willow scrub is considered a sensitive community pursuant to CDFW; therefore, impacts to this habitat are presumed to be regulated under CDFW jurisdiction and are potentially significant. Mitigation measure BIO-3 would require the project to provide mitigation for permanent impacts to 0.05 acre of southern willow scrub. Temporary disturbance areas would be returned to pre-project conditions and impacts would be less than significant.

Mitigation

BIO-3 **Jurisdictional Resources.** Prior to impacts to jurisdictional resources, the City shall obtain regulatory permits from USACE, RWQCB, and CDFW (collectively, the "Resource Agencies"). Temporary impacts to jurisdictional resources shall be returned to pre-project contours once the project has been completed. Compensatory mitigation for permanent impacts to jurisdictional resources shall be required as part of subsequent Section 404, Section 401, and Section 1602 permitting requirements. Permanent impacts to jurisdictional resources shall be mitigated through on-site enhancement, restoration, and/or creation of jurisdictional streambed at a ratio no less than 1:1. The following minimization measures will be implemented during construction:

- Use of standard Best Management Practices (BMPs) to minimize the impacts during construction.
- Construction-related equipment will be stored in developed areas, outside of drainages.
- Water quality BMPs will be implemented throughout the project to capture and treat potential contaminants.
- To avoid attracting predators during construction, the project shall be kept clean of debris to the extent possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site.
- Employees shall strictly limit their activities, vehicles, equipment, and construction material to the proposed project footprint, staging areas, and designated routes of travel.
- Exclusion fencing should be maintained until the completion of construction activities.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant with Mitigation Incorporated. Based on the results of the jurisdictional delineation, one major drainage feature was observed on the project site, Hicks Canyon Wash. The project site supports 1.14 acres (5,158 linear feet [LF]) of USACE waters of the U.S., including 1.04 acres of non-wetland waters and 0.10 acre of wetland waters; a total of 1.29 acres (6,236 LF) of RWQCB waters of the state, including 1.19 acres of non-wetland waters and 0.10 acre of wetland waters; and 6.65 acres of CDFW jurisdictional streambed and habitat. No special aquatic features were observed in the project site. The total acreage of jurisdictional features and the anticipated impacts to these features are listed in Table 5, *Impacts to State and Federal Waters.*

Table 5
IMPACTS TO STATE AND FEDERAL WATERS

Jurisdiction	Existing (acres)[1]	Grouted riprap (acres)[1]	Temporary Disturbance (acres)[1]	Permanent Impacts (acres)[1]
CDFW	6.65	0.19	0.17	3.84
USACE	1.14	0.03	0.00	0.86
RWQCB	1.29	0.03	0.00	0.85 (non-wetland) 0.10 (wetland)

[1] Acreage is rounded to the nearest hundredths.
CDFW = California Department of Fish and Wildlife; USACE = United States Army Corps of Engineers; RWQCB = Regional Water Quality Control Board

The project would result in permanent impacts to approximately 3.84 acres of CDFW waters of the state and associated riparian vegetation, which excludes 0.19 acre of grouted riprap, within Hicks Canyon Wash (see Table 5). Temporary disturbance is also proposed to 0.17 acre of CDFW non-wetland waters of the state. During construction, in accordance with mitigation measure BIO-3, a qualified biologist would assist the contractor in determining the least damaging access route and staging areas to avoid injury to native species. Impacts to CDFW jurisdiction, including southern willow scrub, require the issuance of a Section 1602 Stream Alteration Agreement from the CDFW, as described in measure BIO-3. Compensatory streambed mitigation for permanent impacts to CDFW jurisdiction will be required as part of subsequent Section 1602 permitting requirements. Temporary disturbance areas would be returned to pre-project conditions.

The project would result in permanent impacts to approximately 0.86 acre of USACE waters of the U.S., which excludes 0.03 acre of grouted riprap, within Hicks Canyon Wash (see Table 5). The project would not result in any temporary disturbance to USACE waters of the U.S. Impacts to USACE jurisdiction would require a Section 404 Letter of Permission from USACE. The project will mitigate for permanent impacts to waters of the U.S. Compensatory streambed mitigation for permanent impacts to USACE jurisdiction will be required as part of subsequent Section 404 permitting requirements.

Hicks Canyon Wash is considered a jurisdictional streambed pursuant to Section 401 of the Clean Water Act as regulated by RWQCB. The project would result in permanent impacts to 0.95 acre of RWQCB waters of the state, which excludes 0.03 acre of grouted riprap. Permanent impacts to 0.95 acre of waters of the state would include 0.85-acre of non-wetland waters and 0.10 acre of wetland waters (see Table 5). The project would not result in any temporary disturbance to the RWQCB waters of the state. Impacts to RWQCB jurisdiction would require a Section 401 Water Quality Certification from RWQCB. The project would mitigate for permanent impacts to waters of the U.S. in accordance with compensatory streambed mitigation for permanent impacts to RWQCB jurisdiction to be required as part of subsequent Section 401 permitting requirements.

The project has the potential to result in significant impacts to waters of the state under CDFW and RWQCB jurisdiction in addition to waters of the U.S., jurisdictional to USACE. Permanent impacts to these waters would be mitigated in accordance with the relevant permitting process, as described above and in mitigation measure BIO-3. Incorporation of this measure and associated compensatory mitigation would reduce impacts to a less than significant level.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant with Mitigation Incorporated. The project site is not identified as being part of a local or regional corridor or linkage and currently has no direct connectivity to two or more large blocks of habitat. The project site is constrained by existing development to the north, south, and west. The project site does support native upland vegetation, but has a few small patches of native riparian vegetation, which provide habitat for local wildlife movement and migratory birds passing through the project site. Some reptiles, small mammals, and occasionally larger mammals may access the project site from undeveloped land to the east (Loma Ridge, Limestone Regional Park, or Santiago Canyon). Birds may fly over existing development to access the project site for foraging and/or nesting. Therefore, the project site provides habitat for local wildlife movement, but does not serve as a regional wildlife corridor.

Wildlife movement through Hicks Canyon Wash downstream of the project site is much more restricted as Hicks Canyon Wash is urbanized and discontinuous, with developed areas bisecting the channel. Although vegetation will be removed from Hicks Canyon Wash, these areas will be replanted with native riparian vegetation following construction. Therefore, while implementation of the project may result in some temporary disturbance to local wildlife movement from construction noise, implementation of the project would have a less than significant impact related to wildlife movement.

The project site has the potential to support songbird and raptor nests due to the presence of shrubs, ground cover, and trees. Project activities could disturb or destroy active migratory bird nests, including eggs and young. Disturbance to or destruction of migratory bird eggs, young, or adults is in violation of the MBTA and would be considered a potentially significant impact. The nesting season is generally defined as February 15 through August 31 for songbirds and January 15 to August 31 for raptors. Mitigation measure BIO-1 would require construction activities occur outside of the breeding season or, if work is to occur during the breeding season, surveys to avoid potential nests and ensure the project complies with MBTA regulations. With implementation of mitigation measure BIO-1 listed above, impacts related to migratory species would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation Incorporated. Section 5-7-410 of the Irvine Municipal Code requires a permit to remove any significant tree on public or private land. Significant trees are defined in Irvine Municipal Code Section 5-7-404 as all trees located within public or private landscapes and all trees in a eucalyptus windbreak or any tree included in a remnant of a eucalyptus windbreak. The project is expected to remove significant trees and is therefore subject to a tree removal permit. To obtain a tree removal permit, an application must be submitted to the City Community Development/Public Works Department. The application package must include the application form, a copy of the site plan showing the locations of the trees to be removed, a brief written narrative, a vicinity map showing access to the trees, and tree removal plans. In accordance with mitigation measure BIO-4, the City will ensure consistency with the City's tree ordinance, which would reduce direct impacts to City-protected trees. With issuance of a tree removal permit prior to tree removal, the project would not conflict with any local policies or ordinances protecting biological resources and impacts would be less than significant.

Mitigation

BIO-4 **Tree Removal Permit.** Prior to impacting any trees within the project, the City will confirm compliance with the City of Irvine Tree Removal Ordinance (Section 5-7-410 of the City's Ordinance No. 16-04).

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. The project site falls within the Orange County Central and Coastal Subregion NCCP/HCP, specifically within the Central subarea of the NCCP/HCP (County 1996). Rather than addressing sensitive species on an individual basis, the NCCP/HCP focuses on the conservation of California sagebrush and adjacent habitats. Project activities would not conflict with the conservation goals of the Central and Coastal Subregion NCCP/HCP. In addition, the project site is not located within any reserves identified by the NCCP/HCP; therefore, the project would not conflict with the conservation goals of the plans and no impact would occur.

V. Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

The discussion below is based on a Cultural Resources Survey prepared by HELIX Environmental Planning, Inc. (HELIX 2022b), attached to this Initial Study as Appendix C. In addition, a Historic Resource Evaluation Report was prepared by HELIX (2023) and is attached to this Initial Study as Appendix D.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less than Significant Impact. HELIX staff requested a record search of the California Historical Resources Information System at the South Central Coastal Information Center (SCCIC) on October 1, 2021. The records search covered a one-mile radius around the project area and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. A review of the California Historical Resources and the state Office of Historic Preservation historic properties directories, and Local Register was also conducted. The results of the records search were received on December 7, 2021 and identified one prehistoric archaeological site partially within the project area. As discussed further below, no historic archaeological resources that would be impacted by the proposed project were identified.

Throughout the creek area, numerous constructed concrete, pipe, and rock features were observable, consisting of pipes, drainages, retaining walls, dams, and bridges. Although some of these features were likely constructed at the same time as the surrounding residential developments (1980 and later), others appear to be historic (over 50 years old) and associated with older agricultural uses surrounding the project area. The three existing bridges, storm drains, and other pipe infrastructure were determined to be non-historic features.

Gunite and concrete channel walls, concrete dams, and a creek crossing with cobblestone retaining walls were evaluated further for their potential to be considered historic resources. The gunite walls were determined to be from the pre-1964 period but were all significantly damaged. A fragment of concrete retaining wall remains and is believed to have been constructed in 1939. Three dams were built in 1939 and one has an unidentifiable construction date; however, none of these dams are currently in use. The cobblestone creek crossing near Edenbrook Lane was likely built February 2, 1922 by the San Joaquin Fuit Company. These resources were evaluated for their potential historical significance under the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) criteria. As the resources do not appear to be associated with significant contributions to history, significant persons in the past, distinctive artistic character, or information regarding prehistory or history, the structures within the project area are not eligible for listing in the NRHP or CRHR. Therefore, these resources do not qualify as historic resources under CEQA and no adverse change in their significance would result from project implementation. Impacts would be less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less than Significant with Mitigation Incorporated. The SCCIC has a record of nine previously recorded cultural resources within a one-mile radius of the project, one of which is located partially within the project area. In general, the sites recorded within the one-mile search radius consist of prehistoric artifact scatters, as well as historic resources consisting of canals, ranch and packing house structures, and refuse deposits. One multi-component site is recorded as a light lithic scatter and a small historic refuse scatter.

The resource that has been documented partially within the project area is P-30-000513 (CA-ORA-513), which is a prehistoric site identified and recorded in 1976. Located along the southern edge of Hicks Canyon Wash, it consists of a light artifact scatter that covers less than 5,000 square feet. Artifacts identified included chert cores, debitage, and shell, though the shell may have been introduced by the agricultural activities present at the time and in the past. The site has not been re-recorded and has likely been destroyed by the residential development that occurred at the end of the twentieth century. Later reports have not identified the site and have concluded it was destroyed.

During the cultural resource study's intensive pedestrian survey, a single fragment of marine shell was identified within the recorded boundaries of the archaeological site. No other cultural materials were observed and development was present throughout most of the site boundary. Furthermore, sediments indicate large amounts of disturbance or imported fill. It is likely that the majority of the site has been destroyed, as was noted in previous reports.

Based on the results of the current study and the prior development that has occurred within the identified archaeological site, no significant archaeological resources are expected to be affected by the

project. However, the NAHC provided that the SLF search was positive and that the area is sensitive for cultural resources. Additionally, the project site is located within alluvial soils, where there is a potential for buried cultural resources, along with the presence of imported fill soils which may have further buried resources. Therefore, project activities have the potential to result in significant impacts to archaeological resources. Mitigation measure CUL-1 requires an archaeological monitoring program be implemented during grading or other ground disturbing activities (i.e., trenching for utilities). With implementation of this mitigation measure, impacts would be less than significant.

Mitigation

CUL-1 **Cultural Resources Monitoring and Discovery.** Prior to the issuance of grading permits, the City of Irvine shall obtain the services of qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications for Archeology as defined at 36 CFR (Code of Federal Regulations) Part 61, Appendix A (Professional Archeologist). A monitoring plan shall be prepared by the archaeologist and implemented upon approval by the City. No archaeological or Native American monitoring is required during clearing/grubbing of existing landscape. The City's qualified archaeological monitor shall be present full time during initial excavation activities to assess the level of past disturbance and the potential for buried cultural resources to remain in the project area, given the past disturbance within and surrounding the channel. The qualified archaeologist will assess the nature and significance of the find and make recommendations in consultation with the City. If determined necessary, further monitoring shall continue until grading is complete or until the qualified archaeologist determines, based on field observations, that there is no likelihood of encountering intact archaeological cultural resources. Alternatively, monitoring shall be reduced from full time to part time or spot-checking if determined appropriate by the qualified archaeologist based on monitoring results. If potential tribal cultural resources are encountered during ground disturbance activities, the Construction Contractor shall stop work in the area of the discovery and the City's qualified archaeologist under contract with the City will immediately contact the Tribal Representative.

The archaeological monitor shall have the authority to halt any activities adversely impacting potentially significant cultural resources until they can be formally evaluated. If cultural materials are discovered during grading or excavation, the construction contractor shall divert all earthmoving activity within and around the immediate discovery area until a qualified archaeologist in consultation with the Native American monitor or tribe can assess the nature and significance of the find. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. To the extent feasible, project activities shall avoid these deposits. Where avoidance is not feasible, the archaeological deposits shall be evaluated for their eligibility for listing on the California Register of Historical Resources. If the deposits are not eligible, avoidance is not necessary. If the deposits are eligible, adverse effects on the deposits must be avoided, or such effects must be mitigated.

The qualified archaeologist shall make recommendations on the treatment and disposition of the deposits. For example, if archaeological resources are recovered, they shall be offered to a repository with a retrievable collection system and an educational and research interest in the materials, such as the Bowers Museum or any other willing

repository capable of accepting and housing the resource. If no museum or repository willing to accept the resource is found, the resource shall be considered the property of the City and may be stored, disposed of, transferred, exchanged, or otherwise handled by the City at its discretion. The final recommendations on the treatment and disposition of the deposits shall be developed in accordance with all applicable provisions of California Public Resource Code Section 21083.2 and State CEQA Guidelines Sections 15064.5 and 15126.4. The City of Irvine shall follow all recommendations made by the archaeologist. The archaeologist shall prepare a final report describing all identified and curated resources (if any are found) and submit the report to the City.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant Impact. The project site is not located on a known cemetery. In the event that human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 would be followed and impacts would be less than significant.

VI. Energy

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact. Project construction would result in the consumption of energy resources through the use of construction equipment and worker vehicles. Construction activities would be temporary and would last approximately 10 months. The construction contractor would be required to use equipment that is properly maintained and compliant with applicable regulations related to energy efficiency. No inefficient or unnecessary construction methods are proposed such that excessive energy resources would be consumed during Project construction. During Project operation, no new energy resources would be required. Therefore, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy resources and impacts would be less than significant.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. During construction, the construction contractor would be required to use equipment that complies with applicable regulations related to energy-efficient operations. The Project would not require energy resources during operation. Therefore, the project would not conflict with state or local plans for renewable energy or energy efficiency and no impact would occur.

VII. Geology and Soils

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

No Impact. The Alquist-Priolo Earthquake Zoning Act was enacted to help identify areas subject to severe ground shaking and prohibit the placement of most structures for human occupancy across the traces of active faults; thereby mitigating the hazard of fault ruptures. The project site is not located within an Alquist-Priolo Earthquake Fault Zone or on a known fault (DOC 2021). No impact would occur.

ii. Strong seismic ground shaking?

Less than Significant Impact. The project site is not located within a fault zone but may experience ground shaking as a result of being withing the seismically active region of Southern California. According to the City's Seismic Element, the project site is in Seismic Response Area 2 (SRA-2), which is characterized by dense soils and deep groundwater, such that the main hazard is ground motion. The project would not construct residences or other structures where people would be exposed to adverse effects if there were ground shaking at the site. Impacts would be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact. Liquefaction is most likely to occur where there are loose soils and high groundwater that may liquefy during an earthquake. The project's location in SRA-2 indicates that it has dense soils and deep groundwater, which carry a remote possibility for liquefaction. In addition to liquefaction being highly unlikely to occur, the project does not propose habitable structures that would expose people to adverse effects related to liquefaction. Impacts would be less than significant.

iv. Landslides?

No Impact. According to the Earthquake Hazards Map, the project site is not located in a landslide hazard zone (DOC 2021). The project site and its vicinity are relatively flat and would not be at risk of landslides due to the lack of slopes. No impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. Construction of the proposed project would expose soils that could be subject to erosion if exposed to rain, winds, or other storm events. In order to comply with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Order 2009-0009-DWQ, as amended), a Notice of Intent and Stormwater Pollution Prevention Plan (SWPPP) would be submitted to the RWQCB. The SWPPP would include applicable BMPs to reduce erosion and the loss of topsoil. A grading permit from the City would also be required for the project and would include further measures to prevent impacts related to erosion.

Under current conditions the Wash is experiencing erosion of the channel banks. Upon completion of the project, further channel erosion would be prevented by the proposed slope stabilization activities, including re-landscaping the Wash. Adherence to permitting conditions and the SWPPP would prevent

substantial soil erosion and topsoil loss while implementation of the project would reduce these impacts overall. Impacts would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less than Significant Impact. The project is located in SRA-2, which has dense soils and deep groundwater that are not expected to result in landslides, spreading, subsidence, liquefaction, or collapse. Implementation of the project would stabilize channel banks overall. Impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less than Significant Impact. According to the United States Department of Agriculture (USDA) Web Soil Survey for the project site, the site is underlain by Mocho sandy loam (USDA 2021). This soil may have some expansion potential, however, there would be no structures constructed as part of the project that may lead to risks to life or property due to expansive soils. Impacts would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The project does not propose the installation of a septic tank or alternative wastewater disposal system. No impact would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation Incorporated. Information from an updated Paleontological and Cultural Resources Assessment that was completed as part of the City's General Plan Update is included in the City's CEQA Guidelines. This update indicates that the project site is located in an area of moderate paleontological sensitivity (City 2020a). Areas within the moderate sensitivity zone contain sedimentary rocks with limited histories of producing significant fossils. The limited histories may reflect the lack of fossils or lack of systematic exploration of exposures of these rock units (City 2015). The project site has previously been graded and filled with imported soils; therefore, there is limited potential for paleontological resources to be intact within the portion of the project site that consists of fill. To ensure no significant impacts to fossils occur, mitigation measures GEO-1 and GEO-2 would require a paleontological resource sensitivity training be conducted and the City be notified in the unanticipated event of a paleontological resource discovery. With implementation of these mitigation measures, impacts would be less than significant.

Mitigation

GEO-1 **Paleontological Resource Sensitivity Training.** Prior to the start of ground disturbing activities, a qualified paleontologist shall conduct pre-construction worker paleontological resources sensitivity training. The qualified paleontologist shall contribute to any construction worker paleontological resources sensitivity training either in person or via a training module. The training shall include information on what types of paleontological resources could be encountered during excavations, what to do

in case an unanticipated discovery is made by a worker, and laws protecting paleontological resources. All construction personnel shall be informed of the possibility of encountering fossils and instructed to immediately inform the construction foreman or supervisor if any bones or other potential fossils are unexpectedly unearthed in an area where a paleontological monitor is not present. The City shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

GEO-2 **Unanticipated Finds.** If paleontological resources (i.e., fossils) are discovered during ground-disturbing activities, the City will immediately be notified, and will ensure that their contractors shall stop work in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and develop appropriate treatment measures. Treatment measures will be made in consultation with the City.

VIII. Greenhouse Gas Emissions

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

The following discussion is primarily based on greenhouse gas (GHG) emissions modeling, the results of which are attached to this Initial Study as Appendix A.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact. GHGs include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs vary widely in the power of their climatic effect; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, since CH_4 and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). Carbon dioxide equivalent (CO_2e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

There are no established federal, state, or local quantitative thresholds applicable to the project to determine the quantity of GHG emissions that may have a significant effect on the environment. The California Air Resources Board (CARB), the SCAQMD, and various cities and agencies have proposed, or

adopted on an interim basis, thresholds of significance that require the implementation of GHG emission reduction measures. For the proposed project, the most appropriate screening threshold for determining GHG emissions is the SCAQMD proposed Tier 3 screening threshold (SCAQMD 2010), as recommended by the City (City 2020a). Therefore, a significant impact would occur if the proposed project would exceed the SCAQMD proposed Tier 3 screening threshold of 3,000 metric tons (MT) of carbon dioxide equivalent (CO_2e) per year.

Construction GHG emissions would be generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, and worker commuting trips. Construction GHG emissions were calculated using CalEEMod, as previously described. The estimated construction GHG emissions for the project are shown in Table 6, *Estimated Greenhouse Gas Emissions*. For construction emissions, SCAQMD recommends that the emissions be amortized (i.e., averaged) over 30 years and added to operational emissions. Averaged over 30 years, the proposed construction activities would contribute approximately 14.4 MT CO_2e emissions per year.

Table 6
ESTIMATED GREENHOUSE GAS EMISSIONS

Year	CO_2e (MT)
2024	384.5
2025	47.3
Total Emissions	**431.8**
Amortized Emissions	**14.4**
SCAQMD Threshold	*3,000*
Significant Impact?	***No***

Source: CalEEMod; Appendix A; SCAQMD 2010
CO_2e = carbon dioxide equivalent; MT = metric tons; SCAQMD = South Coast Air Quality Management District

The project proposes grading and improving an existing channel and would only generate emissions during construction in the near term. Because the project would not result in changes to occasional maintenance activities after project construction is complete, new GHG emissions would not result from project operation. As shown in Table 6, the amortized construction emissions would be 14.4 MT CO_2e per year and would not exceed the SCAQMD threshold of 3,000 MT CO_2e per year. Therefore, the proposed project would generate GHG emissions below the SCAQMD threshold and impacts would be less than significant.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. There are numerous state plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall state plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The initial goal of AB 32 was to reduce GHG emissions to 1990 levels by 2020. Senate Bill 32 requires further reductions of 40 percent below 1990 levels by 2030. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the low carbon fuel standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the project level is not addressed.

The SCAG RTP/SCS further specifies transportation and land use planning strategies that would reduce GHG emissions from the region. The RTP/SCS primarily focuses on prioritizing development in areas where amenities and public transit options are available. Project-level consistency with these regional goals is not addressed; however, the project would not prevent implementation of active transportation and sustainable development in the City.

The City is currently in the process of developing a Climate Action and Adaptation Plan, which would establish specific GHG emission goals and policies for projects in the City. Currently the Strategic Energy Plan contains goals and programs that will reduce the City's energy consumption and thereby GHG emissions. The Strategic Energy Plan has measures related to energy supply, buildings, and transportation and land use, none of which apply to the proposed project (City 2020b). Therefore, the project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. No impact would occur.

IX. Hazards and Hazardous Materials

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. The project would use hazardous materials typically associated with construction such as gasoline and diesel during short-term construction activities. All hazardous materials would be transported, used, and disposed of in accordance with regulations governing hazardous materials. Upon completion of construction activities, existing storm drains would be connected to a pipe and the existing stormwater channel would function as a natural channel. No hazardous materials would be associated with the project after construction is completed. With adherence to federal, state, and local regulations applicable to hazardous materials transport, use, and disposal, the project would not create hazards to the public or the environment. Impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact. During construction activities that involve the use of hazardous materials, the contractor would be required to store and use hazardous materials in accordance with applicable policies and standard practices to prevent accidental releases. The minimal presence of hazardous materials would further decrease the likelihood of a release into the environment. Hazardous materials would not be associated with the project upon completion of construction. Impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. There are multiple schools that are located roughly one-quarter mile from the project site (e.g., Hicks Canyon Elementary School, Santiago Hills Elementary School, Sierra Vista Middle School, and Canyon View Elementary School). However, as noted in items IX.a and IX.b, the project would not involve substantial quantities of hazardous materials and all hazardous materials would be stored and used in accordance with the necessary policies. Safe handling of these limited quantities of hazardous materials would not create hazardous conditions for nearby schools. Impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact. There are no sites on or within 1,000 feet of the project site that are included in the EnviroStor database maintained by the Department of Toxic Substances Control (DTSC 2022). There is one site listed near the project site on the State Water Resources Control Board's (SWRCB's) GeoTracker database, however the cleanup case has been closed since 1998 (SWRCB 2022). As there are no active cases listed in these hazardous materials site databases, there would not be impacts related to hazardous materials sites at the project site. No impact would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The project site is roughly 6 miles northeast of the nearest airport, John Wayne Airport. The project site is not within the safety, noise, or building height restriction contours for the John Wayne Airport and therefore would not create a noise or safety hazard related to the airport (City 2020a). No impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. The City adopted the City of Irvine Emergency Management Plan in 2004. The City is also a part of mutual aid agreements with the state and Southern California Cities and Counties. After construction is completed, the project site would be similar to its existing conditions and would not physically interfere with the Emergency Management Plan or emergency response within the City. It is not anticipated that construction staging would occur within roadways; therefore, construction activities would not interfere with emergency operations. In the event that construction staging is proposed within a roadway, the project would be required to comply with the City's standard conditions and regulations for encroachment permits. Adherence to these permit conditions would ensure emergency response and evacuation could occur in the event of an emergency. The project would not interfere with the Emergency Management Plan and impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less than Significant Impact. The California Department of Forestry and Fire Protection's (CAL FIRE's) map of Very High Fire Hazard Severity Zones (VHFHSZs) for Irvine shows that the project site is not in a VHFHSZ (CAL FIRE 2011). Vegetation in the channel would be cleared during the project and would further decrease the probability of a wildland fire associated with unmaintained vegetation. The project would not substantially alter the site from existing conditions and would not create a significant risk related to wildland fires. Impacts would be less than significant.

X. Hydrology and Water Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. Result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?	☐	☐	☒	☐
iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact. Construction of the proposed project would expose soils that could be subject to erosion if exposed to rain, winds, or other storm events. A SWPPP would be submitted to the RWQCB to comply with the NPDES requirements and would include BMPs necessary to minimize pollutant discharge at the project site. As part of the permitting process, applicable BMPs for the project would be designated and may include BMPs such as sandbag use, stockpile management, and slope-stabilization procedures.

Under current conditions the Wash is experiencing erosion of the channel banks. Upon completion of the project, further channel erosion would be prevented by the channel clearing and slope stabilization activities. While the project would alter the discharge flow pattern, the project would not generate new runoff or pollutants that would result in degraded surface or ground water quality. Adherence to the SWPPP would prevent substantial water quality and discharge impacts. Impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The project would not require the use of groundwater supplies and would therefore not contribute to decreased groundwater supply. Implementation of the project would not increase impervious surfaces and groundwater recharge would not be affected. No impact would occur.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. Result in substantial erosion or siltation on- or off-site?

Less than Significant Impact. The existing channel is experiencing erosion, slope instability, and sediment accumulation. The project is expected to minimize erosion and siltation through channel clearing and slope stabilization activities. Final design and grading plans would be subject to City engineering review to ensure proper slope design for minimal erosion and siltation. Operational BMPs may also apply to ensure the project complies with the City's MS4 permit conditions and would further reduce impacts related to erosion or siltation. Impacts would be less than significant.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off- site?

Less than Significant Impact. The project would result in a substantial reduction of risk for flooding issues through the Wash. In its existing condition the Wash is ineffective for flood control conveyance. Implementation of the project would not increase impervious surface area at the site and would not increase the amount of surface runoff. The project would not result in flooding on- or off- site. Impacts would be less than significant.

iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff?

Less than Significant Impact. The project itself would not create runoff or introduce polluted runoff to the stormwater system. The project would connect five existing storm drains to an existing 120-inch diameter pipe to convey the stormwater flow. The hydraulic analysis of the 120-inch pipe was updated to reflect five new junctions with flows from the residential storm drain lines. A hydraulic analysis of the 60-inch pipe that outlets to the channel confirmed that the downstream connection to the 120-inch pipe will not adversely affect hydraulics in the 60-inch line (Appendix E). Capacity of the stormwater system would not be exceeded. Impacts would be less than significant.

iv. Impede or redirect flood flows?

Less than Significant Impact. The project would result in a substantial reduction of risk for flooding issues through the Wash. While the project site itself is not located within the 100-year floodplain, it is designated as a structure where 1-percent annual change flood discharge is contained (FEMA 2009). As such, the project would improve conditions in the Wash so that flood flows are conveyed more effectively. The project would not impede or redirect flood flows. Impacts would be less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less than Significant Impact. The project site is located roughly 11 miles inland and 2.5 miles away from an enclosed body of water, Rattlesnake Reservoir. Therefore, a tsunami or seiche event is unlikely to impact the project. However, the project conveys flood flows, as discussed above, and is located in the dam inundation zone for the Rattlesnake Canyon Reservoir (City 2020a). As there would be no pollutants stored at the project site long-term, there would not be a risk of release due to project inundation. During construction small quantities of common hazardous materials may be present at the site but would be used and stored in compliance with regulations such that there would not be a substantial risk of release in the event of a dam accident. Impacts would be less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less than Significant Impact. The Sustainable Groundwater Management Act of 2014 determined that the Orange County Groundwater Basin is a medium priority basin and must have a groundwater sustainability plan or similar alternative. Groundwater in Irvine is managed by the 2017 8-1 Basin Alternative under supervision of the Orange County Water District, Irvine Ranch Water District, and City of La Habra. The 8-1 Basin has been sustainably managed over the last 10-year reporting period and will continue to be a sustainable water source. The project would not require the use of groundwater supplies and would therefore not contribute to decreased groundwater supply or altered groundwater recharge. No conflicts with this plan would result from the project.

Water quality is governed by the Santa Ana RWQCB under the Water Quality Control Plan (Basin Plan), adopted in 1995 and last updated in 2019. The project would comply with water quality standards through the permitting process for a NPDES Construction General Permit and a MS4 Permit, which would include determinations of appropriate BMPs. The project would not result in water quality impacts conflicting with the Basin Plan. Impacts would be less than significant.

XI. Land Use and Planning

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Cause significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☒	☐	☐

a) Physically divide an established community?

No Impact. The project would be located within the existing Wash and would not introduce new linear features to the area such that a community would be divided. The existing residences on either side of the Wash would be maintained and would not be physically divided. No impact would occur.

b) Cause significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant with Mitigation Incorporated. The project site is zoned for Recreation and designated for Recreation in the Land Use Element. The project is consistent with the land use and zoning of the site and would maintain a site very similar to the existing conditions. The pipes that are proposed to connect storm drains and the 120-inch pipe would be fully covered and backfilled to provide a trail or access crossing connecting to the existing Hicks Canyon Trails. However, pursuant to Zoning Ordinance Section 1-1-6, the regulations of the Zoning Ordinance shall not apply to the project, as it is for public purposes. No changes to land use would occur due to project implementation.

As discussed in Section IV, mitigation measures BIO-1 through BIO-4 would be required to comply with plans and policies intended to protect biological resources such as nesting birds, jurisdictional waters, and significant trees. Mitigation measures GEO-1 and GEO-2 would protect paleontological resources. As evaluated in Section XIII, noise and vibration impacts would be less than significant and would not conflict with City policies. As analyzed throughout this Initial Study, all potentially significant environmental impacts would be mitigated to a less than significant level with the identified mitigation.

XII. Mineral Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less than Significant Impact. The project site is located on the border of areas categorized as Mineral Resource Zones (MRZs) 1 and 4 by the DOC in accordance with the Surface Mining and Reclamation Act (DOC 1994). MRZ-1 is an area where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence. MRZ-4 is an area where there is insufficient data to assign any other designation. Given that the project site is located between these zones it cannot be confirmed that no mineral resources are present, however it is unlikely that there are significant mineral deposits. Additionally, the proximity of adjacent residences on either side of the site would make a mining operation at the project site infeasible. Nonetheless, implementation of the project would not preclude mining operations and therefore would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Impacts would be less than significant.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The City does not designate mineral resource recovery sites in addition to the zones established by the DOC (City 2020a). Further discussion of the site's location related to DOC-designated mineral resources is contained in item XII.a above. The project would not result in the loss of availability of a locally important mineral resource recovery site. No impact would occur.

XIII. Noise

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. Municipal Code Title 6, Division 8, Chapter 2 (Noise) regulates noise generation in the City. Irvine Municipal Code Section 6-8-205.A states that construction activities may occur between 7:00 a.m. and 7:00 p.m. Mondays through Fridays, and 9:00 a.m. and 6:00 p.m. on Saturdays, excluding holidays. Project construction would occur within the permitted hours and would not conflict with the Municipal Code. For informational purposes, the noise levels generated by anticipated construction equipment at 25 feet, the shortest distance anticipated between construction activities and residences, are shown in Table 7, *Construction Equipment Noise Levels.* This analysis is conservative, as construction equipment would move throughout the project site during the construction period and would not be within 25 feet of any receptor for an extended period of time.

Table 7
CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Percent Operating Time	dBA L_{MAX} at 25 feet	dBA L_{EQ} at 25 feet
Backhoe	40	83.6	79.6
Front End Loader	40	85.1	81.2
Dump Truck	40	82.5	78.5
Concrete Mixer Truck	40	84.8	80.8
Dozer	40	87.7	83.7

Source: Roadway Construction Noise Model (U.S. Department of Transportation 2008)
L_{MAX} = maximum noise level; dBA = A-weighted decibel; L_{EQ} = equivalent sound level

Elevated noise levels resulting from construction activities would be temporary and the use of construction equipment would not occur in any one place along the Wash for the entire 10-month construction period. After construction of the project is completed, no increase in noise levels compared to pre-project conditions is expected. Recreational activities would resume and occasional maintenance activities such as planting and weeding would not general a substantial increase in ambient noise levels. Impacts would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact. The City CEQA Manual provides the Federal Transit Administration's (FTA's) criteria related to vibration annoyance and structural damage as screening criteria for projects in the City. The proposed equipment with the highest potential vibration source level would be a bulldozer, which generates 0.089 peak particle velocity (PPV) at 25 feet (FTA 2018). Building damage may occur when equipment generates 0.2 PPV at non-engineered buildings. This level of vibration would not occur at residential structures adjacent to the project site based on the minimum distance of 25 feet between residences and construction activities.

During the daytime hours, when project construction would occur, the FTA threshold for human annoyance is 78 vibration decibels (VdB). A bulldozer may generate vibration levels up to 87 VdB at 25 feet and would exceed this threshold (FTA 2018). However, a bulldozer would not be used at the same location throughout the construction period and would not be within 25 feet of any individual receptor for an extended period of time. Once the bulldozer is 50 feet away, the vibration level would be 78 VdB. Therefore, while vibration may occasionally be perceptible to nearby residents, it would be temporary and would not cause building damage. Therefore, no excessive vibration would occur due to the project and impacts would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is roughly 6 miles northeast of the nearest airport, John Wayne Airport. The project site is not within the noise contours for this airport and therefore would not expose people working on the project to excessive noise related to the airport (City 2020a). No impact would occur.

XIV. Population and Housing

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed project would involve improvements to the existing Hicks Canyon Wash to improve its function as a channel. The project would not induce population growth either directly, through creation of housing or work, or indirectly, through extensions to infrastructure. The surrounding area is already urbanized and improvements to the Wash would not remove a barrier to growth in the area. No impact would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would improve the existing Wash, which does not contain people or housing. Therefore, no people or housing would be displaced, and no replacement housing would need to be constructed. No impact would occur.

XV. Public Services

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Parks?	☐	☐	☐	☒
e) Other public facilities?	☐	☐	☐	☒

a) Fire protection?

No Impact. Fire protection in the City is provided by the Orange County Fire Authority (OCFA). The project site is in OCFA Division 2 and nearest to Fire Station 55, located roughly 1.5 miles from the site at 4955 Portola Parkway. The project would not substantially alter the site from existing conditions and would not require additional fire protection services or the expansion of facilities. No impact would occur.

b) Police protection?

No Impact. The City of Irvine Police Department provides police protection services throughout the City. The project site is within the Portola geographic unit. However, as a channel improvement project, the project would not include habitable structures, commercial facilities, or other amenities that would require police protection services. No impact would occur.

c) Schools?

No Impact. The project site is within the Irvine Unified School District, however as the project would have no impact on population, there would be no need for additional school facilities as a result of the project. No impact would occur.

d) Parks?

No Impact. The project would have no impact on population and would not result in the need for new or altered park facilities. The trails adjacent to the Wash would not be impacted in the long-term and would not require replacement facilities to be constructed elsewhere. Therefore, no environmental impact related to new or altered park facilities would result from the project. No impact would occur.

e) Other public facilities?

No Impact. Other public facilities, such as libraries and community centers, would not be impacted by the project, as the project would not alter existing public facilities or induce population growth. No impact would occur.

XVI. Recreation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact. As there would be no increase in population as a result of the project, there would not be an increase in the use of existing parks or recreational facilities. During the approximately 10-month construction period of the project there may be short term closures of the portion of the Hicks Canyon Trail adjacent to the project site. However, these closures would only impact the portions of the trail directly adjacent to the project, which in total is roughly 1.2 miles. The rest of the Hicks Canyon Trail and other nearby trails would continue to be available during construction and would not be substantially deteriorated by a slight increase in use. Upon completion of the project, the trail would reopen and the project would not increase use of the Hicks Canyon Trail or other recreational facilities. Impacts would be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact. The focus of the project would be the grading and stabilization of the channel and connecting the storm drains to the existing 120-inch pipe. At each storm drain extension, the additional pipe segment that would be installed would be fully covered and filled to provide a trail or access crossing related to the existing Hicks Canyon Trail. The project would not create a new recreational facility and would not induce population growth such that the construction of additional recreational facilities would be required. The provision of trail crossings associated with the project has been analyzed throughout this Initial Study and would not result in adverse physical effects on the environment. Impacts would be less than significant.

XVII. Transportation

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☒	☐

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact. The project would not result in changes to transit or roadway circulation elements. The project would occur within the Wash, which contains the Hicks Canyon Trail that provides pedestrian and bicycle facilities. During construction, temporary closures of portions of the trail may be required; however, these would be temporary closures and are not in a location that would prevent access to any residences or other buildings. Pedestrian sidewalks and bike lanes are provided throughout the roadways surrounding the project site and would remain open during construction of the project. The project would also install trail components within the Hicks Canyon Trail. These project elements would provide pedestrian and bicycle access within the trail and would not conflict with circulation plans, ordinances, or policies. Impacts would be less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less than Significant Impact. CEQA Guidelines Section 15064.3 (b) includes the criteria for analyzing transportation impacts using vehicle miles traveled (VMT) based on project factors. Pursuant to the City's CEQA VMT Impact Analysis Guidelines, projects generating less than 250 weekday trips are exempt from further VMT analysis. The project would only generate trips during the construction phase and would not exceed 250 trips daily. Therefore, no further VMT analysis would be required and the project would be consistent with the CEQA and City guidelines related to VMT analysis. Impacts would be less than significant.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The project site would be similar to existing conditions, consisting of a natural channel, underground stormwater infrastructure, and trail crossings. Channel banks would be stabilized as a result of the project and the channel would be more effective in conveying flows. Alterations to the road

system would not occur. The project would not increase hazards due to design features or incompatible uses. No impact would occur.

d) Result in inadequate emergency access?

Less than Significant Impact. The existing access road on the south side of the channel would remain with implementation of the project, which would include installing an earthen fill along the access road. No other alterations to the circulation system would occur and the project would not result in inadequate emergency access. If construction equipment staging is required to interfere with roadways, the project would be required to obtain an encroachment permit and comply with City standards related to traffic control, which would ensure continued emergency access during construction. Impacts would be less than significant.

XVIII. Tribal Cultural Resources

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

The discussion below is based on a Cultural Resources Survey prepared by HELIX Environmental Planning, Inc. (HELIX 2022b), attached to this Initial Study as Appendix C.

a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

   i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

   ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than Significant with Mitigation Incorporated. The NAHC was contacted on October 4, 2021 for a SLF search and list of Native American contacts for the project area. The NAHC indicated in a response dated November 4, 2021 that the project area was positive for known sacred lands or Native American cultural resources. Therefore, project activities have the potential to impact tribal cultural resources. The NAHC recommended contact with the Juaneno Band of Mission Indians and the Juaneno Band of Mission Indians Acjachemen Nation – Belardes. They also attached a list of additional Native American tribes that may have knowledge of the cultural resources within the project area. Letters were sent by HELIX on November 11, 2021 to Native American representatives and interested parties identified by the NAHC. To date, no responses have been received. If any additional responses are received, they will be forwarded to City staff.

On January 18, 2023, the City sent letters inviting interested tribes to consult on the project in accordance with AB 52. The Juaneno Band of Mission Indians and Gabrieleno Band of Mission Indians responded to this letter requesting consultation with the City. The City held meetings with these tribes, who requested Native American monitoring during ground-disturbing activities. The City provided the text for mitigation measure CUL-1 to the tribes and incorporated a requirement to contact the tribes if the archaeological monitor identifies cultural material during monitoring. Consultation under AB 52 has concluded. As the project has potential to uncover unknown tribal cultural resources, implementation of CUL-1 would be required and would reduce potentially significant impacts related to tribal cultural resources to a less than significant level.

XIX. Utilities and Service Systems

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. No infrastructure related to wastewater, power, natural gas, or telecommunications would be required to be constructed or relocated as a result of the project. One element of the project is the alteration of stormwater drainages in order to connect five existing storm drains to an existing 120-inch diameter pipe north of the Wash with additional pipe segments. The project itself would not result in the generation of storm water but would construct infrastructure to accommodate existing flows. Environmental effects related to the storm drain improvements have been considered throughout this Initial Study and the project would not result in additional significant environmental effects beyond those identified and mitigated as previously identified. Overall, the connection of the storm drains to the pipe would improve the function of the Wash. Impacts would be less than significant.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact. The project would temporarily require small quantities of water for the establishment of landscaping on the channel banks. Water service would be provided to the project site by Irvine Ranch Water District (IRWD). The 2020 Urban Water Management Plan found that water demands for the region can be fulfilled through 2040 during normal, dry, and up to five consecutive dry years (IRWD 2021). Water demands by the project would be minimal and short-term. In the long-term, the project would be passive and would not require water supplies. Impacts would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. The project would not generate wastewater or lead to population growth, which would result in generation of additional wastewater. No impact would occur.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less than Significant Impact. Orange County Waste and Recycling owns, regulates, and operates three landfills to serve the solid waste disposal needs of the County. The City of Irvine disposes of the majority of its solid wastes at the Frank R. Bowerman Landfill in Irvine, which is anticipated to close in 2053. Regular operation of the project would not produce solid waste. Waste generated during the construction period is anticipated to be diverted as green waste or clean soil for reuse. In accordance with Municipal Code Section 6-7-1002, all non-hazardous excavated soil and land-clearing debris, 75 percent of all non-hazardous concrete and asphalt construction and demolition debris, and 65 percent of all other non-hazardous construction and demolition debris generated shall be delivered to a material recovery facility, or otherwise diverted from landfills. Therefore, the project would not exceed waste limits set by state or local standards or otherwise exceed the capacity of landfills. Impacts would be less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant Impact. As discussed above in item d, the majority of waste from the project would be organic and would be diverted from landfills and sent to an organic waste facility or stored as clean soils for future reuse. This would comply with the City's requirement for 100 percent of non-hazardous soils and green debris to be diverted from landfills. Any other waste generated during construction of the project would be diverted at the appropriate rate (75 percent for concrete or asphalt and 65 percent for all other non-hazardous construction debris). The project would not be an ongoing source of waste generation and therefore would not be subject to regulations related to regular solid waste generation or disposal. Impacts would be less than significant.

XX. Wildfire

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. See items IX.f and XVII.d. After construction is completed, the project site would be similar to its existing conditions and would not physically interfere with the Emergency Management Plan or emergency response within the City. The existing access road on the south side of the channel would remain with implementation of the project, which would include installing an earthen fill along the access road. No other alterations to the circulation system would occur and the project would not result in inadequate emergency access. If construction equipment staging is required to interfere with roadways, the project would be required to obtain an encroachment permit and comply with City standards related to traffic control, which would ensure continued emergency access is maintained during construction. Impacts would be less than significant.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less than Significant Impact. The project site is not in a VHFHSZ and does not have excessive slopes or other factors that would exacerbate fire risk (CAL FIRE 2011). The project would not construct habitable structures and therefore could not expose project occupants to impacts related to wildfire. Impacts would be less than significant.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The project would not require the installation or maintenance of infrastructure that would exacerbate wildfire impacts. No impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less than Significant Impact. The project does not contain design features that would expose people or structures to significant hazards. Implementation of the project is expected to increase slope stability and improve drainage through channel clearing, grading, and landscaping. Grading plans for the project are subject to the approval of the City's engineer and would be reviewed to ensure no significant risks are introduced as a result of the project. Impacts would be less than significant.

XXI. Mandatory Findings of Significance

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially

reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact. The Project has the potential to result in impacts to nesting birds, burrowing owl, jurisdictional waters, and significant City trees; however, implementation of mitigation measures BIO-1 through BIO-4 would reduce these impacts to a less than significant level. The project also has the potential to impact significant cultural and tribal cultural resources. Implementation of mitigation measure CUL-1 and completion of tribal consultation would ensure these impacts are reduced to a less than significant level. No significant historic resources are located in the project area. Therefore, the project would not substantially degrade the environment, decrease the number or habitat of special status plant or animal species, or eliminate major periods of California history. Impacts would be less than significant with mitigation incorporated.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?

Less than Significant Impact. CEQA Guidelines Section 15130 requires a discussion of the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects.

There are no known projects within a vicinity of the proposed project such that construction noise from the proposed project would contribute to cumulative noise impacts to any singular location. The project is anticipated to require a maximum of 14 workers during construction and would result in approximately 375 hauling trips throughout the 10-month construction period. This number of vehicle trips would not contribute to significant, cumulative transportation impacts as they would not all occur at one time and would occur only during the construction period.

As discussed under item III.b, the Project's construction emissions of criteria pollutants would not exceed the SCAQMD daily screening thresholds. Because emissions of these pollutants are below the screening-level thresholds, emissions would not be cumulatively considerable for the SCAB. Similarly, the Project would have a less than significant impact in relation to GHG emissions, which are inherently discussed in terms of cumulative impacts.

Impacts to biological resources would be reduced through mitigation measures BIO-1 through BIO-4 and would not be considered significant impacts at the Project level or in combination with cumulative projects, as no net loss of habitat or special status species would occur. Implementation of mitigation measures GEO-1 and GEO-1 would ensure the project would not contribute to the cumulative loss of paleontological resources.

All resource topics have been analyzed in accordance with the CEQA Guidelines and found to pose no impact, a less than significant impact, or a less than significant impact with mitigation. Potential cumulative projects that could be constructed in the vicinity of the Project would also be required to comply with existing applicable federal, state, and local regulations.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. The Project would not consist of any construction activities or operational components that would negatively affect any persons in the vicinity. In addition, all resource topics have been analyzed in accordance with the State CEQA Guidelines or associated thresholds and found to pose no impact, a less than significant impact, or a less than significant impact with mitigation incorporated. As discussed in Section 4.III, no violations of air quality thresholds would occur and no significant impacts to sensitive receptors related to pollutants would occur. As discussed in Section 4.IX of this Initial Study, there are no concerns from past activities at the Project site and no hazardous materials and/or wastes would be generated by the Project. As detailed in Section 4.XIII, the Project would not generate noise that would exceed local thresholds. Vibration has the potential to be generated in excess of FTA annoyance thresholds; however, these impacts would be temporary and would not result in damage to nearby structures. Consequently, the Project would not result in any environmental effects that would cause substantial adverse effects on human beings directly or indirectly.

3.0 References

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