Appendix B
Supplemental Site Surveys and Comparative Scoping Analysis

Mission Canyon Stream Habitat Restoration Project

Initial Study/Mitigated Negative Declaration

Mission Canyon Stream Restoration Project

Supplemental Site Surveys and Comparative Scoping Analysis

October 2022

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REPORT PURPOSE, ORGANIZATION AND SUMMARY

The purpose of this Supplemental Site Survey and Comparative Scoping Analysis report (Report) is to present the results of Southern California Edison's (SCE) scoping exercise and analysis of alternatives considered to identify the revised proposed project scope for the Mission Canyon Stream Habitat Restoration Project (Notification No. 1600-2020-0149-R5) (Project). Through this Project scoping exercise, SCE updated its evaluation of existing site conditions and compared various methods for removing the sidecast material[1] that resulted from SCE's road grading activities in the Mission Canyon area of Santa Barbara County, California, in December 2019, and identified impacts anticipated to result from each method. As a result, SCE identified the Project scope that would result in the maximum benefit to the environment—defined herein as the Project scope that would safely remove the largest volume of sidecast material without causing additional harm to environmental resources—which was selected by SCE to be the Proposed Project.

SCE conducted its Project scoping exercise in two parts. In Part 1, Supplemental Site Surveys, a team of resource experts conducted additional surveys to further characterize the current site conditions within the sidecast areas that were previously identified during prior surveys and assessments[2]. A larger team of technical resource experts then evaluated, in the field, various methods for removing sidecast to determine the pros and cons of each method. In Part 2, Comparative Scoping Analysis, SCE identified extraction methods for its Proposed Project and evaluated the potential environmental impacts of the four removal methods included in the Proposed Project scope (Part 2.A of this Report). Part 2 also compared the Proposed Project scope to a project (the Full Sidecast Removal Project) that removes all sidecast material (Part 2.B of this Report), as well as to other sidecast removal methods considered by SCE but not selected for use by the Project (Part 2.C of this Report).

As described in this Report, SCE determined that the Proposed Project would optimize the removal of sidecast material while protecting the environment with the incorporation of the following scope adjustments:

- Use of helicopter support to air lift materials from remote sections of the Project;
- Use of manual removal methods to extract all materials deposited off Tunnel Trail road where vehicle access is also limited; and,
- Reconstruction of roadside berms, where needed, following sidecast removal on adjacent slopes.

SCE's Proposed Project[3] involves the removal of nearly 100 percent of all sidecast material, except where potential constraints would preclude the removal of some material in discrete areas to avoid undesirable conditions. The identified constraints implicate safety considerations associated with access road width and slope stability. On the other hand, the Full Sidecast Removal Project would extract all of the sidecast material despite these safety-related constraints and would disregard the resulting undesirable conditions.

[1] For purposes of this assessment, "sidecast materials" excludes materials repurposed as building materials (e.g., for berms).

[2] A full accounting of site surveys and assessments conducted prior to the supplemental site assessment is included in the Mission Creek Habitat Restoration Plan (Creek HRP).

[3] The Proposed Project scope is not fully described in this document but, rather, is described in detail in the Creek HRP.

The Proposed Project aligns with the goal to minimize further environmental harm and maximize sidecast removal using methods determined to be effective, safe, and result in low levels of impacts to the sensitive resources within Mission Canyon.

PART 1. SUPPLEMENTAL SITE SURVEYS

A. SURVEY LOCATION

The Project is located within the Mission Canyon area of unincorporated Santa Barbara County (County), California (*Exhibit 1: Regional Vicinity*). The Project occurs on two parcels, one of which is owned by the City of Santa Barbara (Assessor's Parcel Number [APN] 153-270-009), and one that is owned by a private party (APN 153-270-028). The Project is within Township 5 North, Range 27 West, Sections 33 and 32 of the U.S. Geological Survey (USGS) Santa Barbara 7.5-minute quadrangle map (*Exhibit 2: Project Site on USGS Map*). Mission Creek flows for 16 miles from its headwaters directly to the Pacific Ocean and is an intermittent stream that is mapped as Freshwater Forested/Shrub Wetland and Riverine in the U.S. Fish and Wildlife Service National Wetland Inventory.

The Project is located along approximately 1.12 miles of Spyglass Ridge Road in road sections referred to as Road Areas Gate 1 through 9 and approximately 0.70 mile of the Mission Canyon Catway along road sections referred to as Trail Road Areas 1 and 2. In addition, the Project is located within the streambed and associated banks at Mission Creek in areas referred to as Creek Sites 1 through 4, Creek Site 7, and Sidecast 3 Rock Outliers, and unnamed Mission Creek tributaries within Mission Canyon in areas referred to as Road Area 1, Road Area 2, and Road Areas 5-9, respectively. The total Project area encompasses 3.87 acres of Mission Creek and adjacent upland sidecast areas; refer to *Exhibits 3a-e: Project Site with Sidecast Areas and Approximate Depths of Sidecast*. Regional access to the Project site is provided via State Route 192 (SR 192, also known as Foothill Road). Local access to the Project site is provided via Spyglass Ridge Road/Tunnel Road.

The Mission Creek Site is located on the main stem of Mission Creek, which is an intermittent stream that meanders through the foothills of the Santa Ynez Mountains, through the County and City of Santa Barbara, and eventually drains to the Pacific Ocean. The Project area is in the Mission Creek – Frontal Santa Barbara Channel hydrologic unit (HUC12: 180600130203). Located within Road Areas 1, 2, and 5-9 are portions of unnamed tributaries west and east of Mission Creek. The unnamed tributaries are ephemeral drainages that provide flow to Mission Creek.

The Project area is surrounded on all sides by the open space areas of the Santa Ynez Mountains and Los Padres National Forest. Spyglass Ridge Road provides recreational hiking opportunities and connects to other hiking paths throughout Mission Canyon.

B. SURVEY METHODS

SCE conducted the Supplemental Site Surveys in two steps. The first step was to conduct a Supplemental Sidecast Survey to further characterize the sidecast areas by collecting detailed information on the composition and distribution of sidecast material within individual mapped areas. For accuracy of visual evaluations, some sidecast areas were divided into subareas, within line of sight, to gather information. The results of the Supplemental Sidecast Survey were then used to inform technical experts during the second step, the Project Scoping Survey. With updated information on the sidecast distribution, composition, and the presence of nearby sensitive resources, the technical resource experts evaluated

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

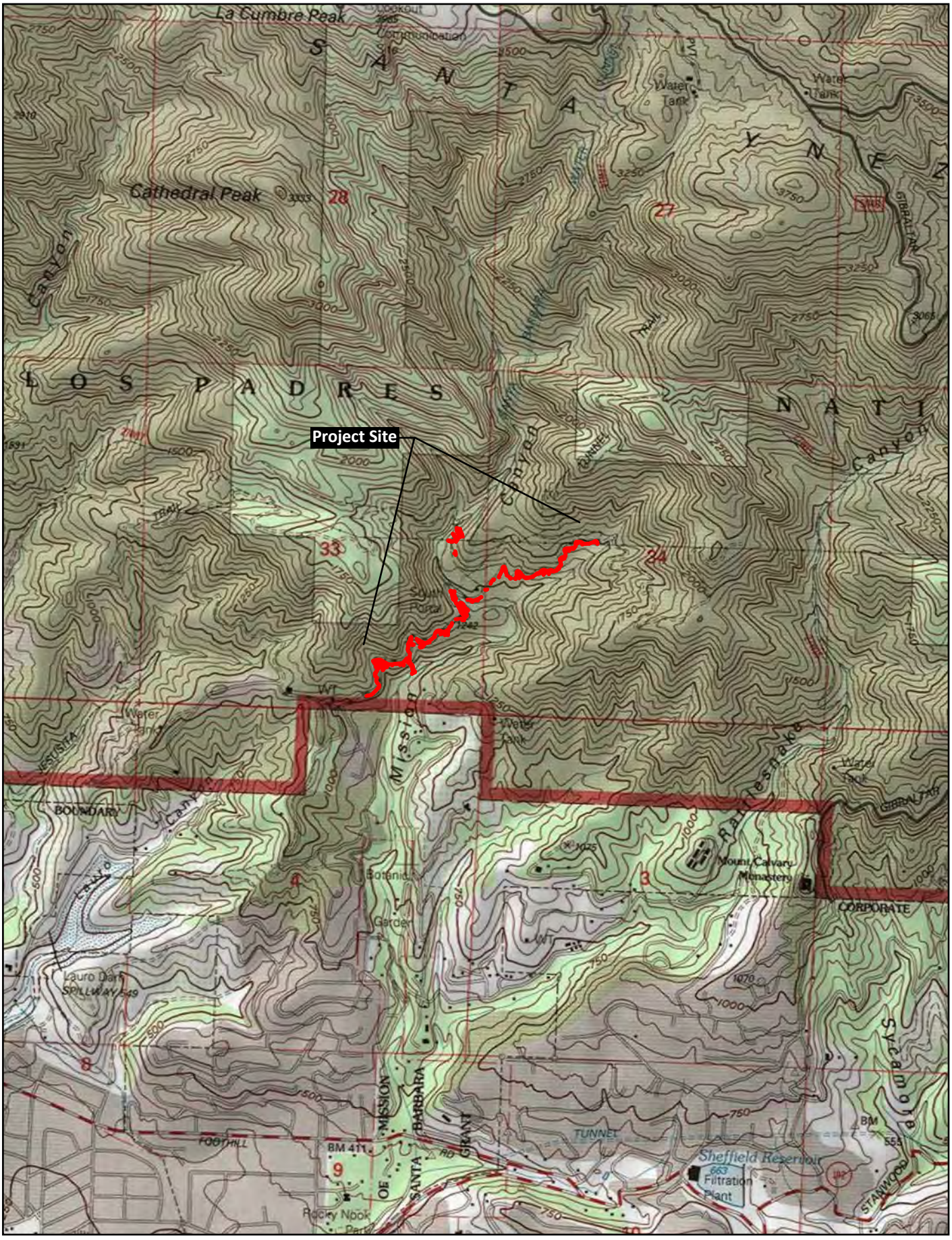
HELIX Environmental Planning

0 5 10 Miles

Source: Base Map Layers (ESRI, 2013)

Regional Location

Figure 1



MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

HELIX Environmental Planning

0 1,000 2,000 Feet

Source: Base Map Layers (ESRI, 2013)

USGS Topography

Figure 2

appropriate sidecast removal strategies by sidecast area. This section describes the methods for each survey.

1. Supplemental Sidecast Survey Method

The Supplemental Sidecast Survey was performed by an International Society of Arboriculture (ISA) certified arborist/botanist, a restoration ecologist, and field personnel trained in high-incline rigging to rappel downslope to collect detailed sidecast depth data.

The surveyors first evaluated sidecast areas for limits to line-of-sight for visual assessments and established subareas within a mapped sidecast area where necessary for survey accuracy. The subareas were marked on a field map and labeled (e.g., sidecast area 2, subarea 2.1). The surveyors then assessed the composition of sidecast deposited over the sidecast area or subarea and classified the composition of sidecast material into size categories (e.g., large rock >24" diameter, medium rock 12" to 24", small rock and 4" to 12", and fines materials <4" diameter). Surveyors estimated the percentage of the total area consumed by each size category into six cover classifications (0-1%, >1-5%, >5-25%, >25-50%, >50-75%, and >75%). Surveyors also classified the distribution of the sidecast materials observed within a sidecast area or subarea into categories (e.g., scattered boulders, evenly distributed, accumulated in sections, or not present).

Native vegetation cover was also assessed, and the percentage of the total area within a sidecast area or subarea was classified into one of the six cover classifications described above. The presence of sensitive plant species and impacted native trees occurring within the sidecast area was also noted.

The survey also recorded depth measurements for each of the sidecast areas or subareas. These measurements were collected at a selected sample point that best represented the sidecast area or subarea. At each sample point, the depth of the sidecast deposit was measured using a hand trowel and ruler to dig a small pit through the loose sidecast deposits to what appeared to be the original soil surface. The original soil surface could be differentiated from sidecast materials by the differences in color (sidecast was lighter), composition (sidecast was more granular), and compaction (sidecast deposits were less compacted). The overall slope angle to the nearest road was also measured using a handheld slope clinometer.

2. Project Scoping Survey Method

The Project Scoping Survey was a field-based evaluation of alternative construction methodologies performed by a team of technical experts across disciplines to determine the Project scope with maximum benefit to the environment.

The Project Scoping Survey was conducted on August 16 and 17, 2022, by the following technical experts representing various disciplines with detailed qualifications and experience (additional detail in Appendix B, *Comparative Scoping Analysis Team: Experience and Qualifications*):

- Hydrology: Jim Burton P.E. QSD/P; Todd Bear, D. Env., EcoKai Environmental, Inc.
- Native vegetation and sensitive plant habitats: Peter Tomsovic; Justin Fischbeck, CERP; HELIX Environmental Planning, Inc.
- Fisheries and Fish Habitat: Greg Davis; Tom Keegan, HELIX Environmental Planning, Inc.

- Waters and Waterways: Richard Beck, CEP, PWS, CERP, CPESC, Michael Baker International
- Storm Water and Water Quality: Andrew Price, PE, QSD/P, Michael Baker International; Lucy Cortez, CPESC, CESSWI, QSD/P, SCE
- Engineering and Geology: Matthew Harrell PG, CEG, QSP/QSD, Ninyo & Moore; Sean Richards PG, CEG; Javier Izaguirre DEWM, SCE
- Safety: Dan Wallace, PMP, American Integrated Services
- Construction Contractor: Josh Whittaker, American Integrated Services
- Air Operations: Jack Matiasevich, Operations Senior Advisor, SCE Aircraft Operations
- CEQA checklist: Phuong Trinh, SCE Environmental

The Project Scoping Survey consisted of a field examination at each sidecast area in which various sidecast removal methods were discussed among the group of technical resource experts. The team reviewed the general conditions of each sidecast area, and the sidecast composition/distribution information noted in the Supplemental Sidecast Survey. The construction contractor then described a sidecast removal method, explaining in detail the logistics, timelines, equipment, labor force, and other factors needed during the implementation of the specific method. The construction contractor estimated the efficacy of removal for each method (i.e., the overall percentage of sidecast deposits that could be removed). Technical resource experts then evaluated how the methodology may affect resources by advising the team on the benefits and potential impacts warranting consideration for their respective resources associated with the sidecast removal method described.

Following group discussion, a survey form for each construction method was circulated to each technical resource expert who rated the expected severity of impacts (high, moderate, low, or no impacts likely) to their discipline of expertise. Resource experts noted concerns, necessary measures to offset impacts, and a brief explanation for their rating. Sidecast methods having a moderate or high rating of impact for any technical resource area, or if constraints to full removal were identified (e.g., safety concern), then an alternative removal method was introduced by the construction contractor, and the process was repeated. Conversely, if the removal method discussed yielded only low or no impacts likely and would result in the full removal of the sidecast materials, no further methods were considered for that sidecast area. This process was repeated for each sidecast area until a preferred methodology was identified for each area.

SCE also conducted a supplemental engineering assessment to review existing road conditions and distinct areas where the outer edge of the berms were built upon sidecast material that was placed at the edge of the roadway in 2019. The assessment was conducted to evaluate potential impacts that could result from the full removal of sidecast materials. The assessment was based on the information shown in Exhibits 3a-e and focused on Road Areas 5-9. A vehicle tracking analysis was performed using a model to determine the constraints (critical/pinch points) of the existing access road on the turning radius of SCE utility maintenance vehicles. For this analysis, an SCE Transmission Bucket Truck was used in the vehicle tracking model. The sidecast removal areas identified on Exhibits 3a-e were overlayed onto the vehicle tracking model results to identify any constraints. Access road elevational cross-sections were sampled at larger sidecast removal areas and key critical points. The critical points were identified in areas where SCE

maintenance vehicles require multiple point turns to maneuver safely and areas where the full removal of the sidecast material has the potential to narrow the road beyond the minimum width necessary to provide safe access for maintenance vehicles. SCE conducted a site visit to field-verify measurements based on the vehicle tracking model results and cross-sections using sidecast removal depths (Exhibits 3a-e).

C. SURVEY RESULTS SUMMARY

This section summarizes the results of the Supplemental Sidecast Survey and the Project Scoping Survey. Detailed survey results are presented in the figures and tables referenced in the respective sections below.

1. Supplemental Sidecast Survey Results

The Supplemental Sidecast Survey was performed on August 9 and 10, 2022. During this survey, detailed data was collected on the distribution of sidecast within a mapped area, as well as the composition of the materials themselves was collected. Depth measurements were collected from 39 sample points. Representative sidecast sample points were collected only in areas where sidecast was observed and best represented the sidecast deposits in that location. Across all 39 sidecast deposit sample points, the average sidecast depth was 2.1 inches, with a maximum depth of 5 inches and a minimum depth of zero inches (Exhibits 3a-e). Due to the steepness of the slopes along the road and safety considerations, sidecast depth and overall slope angle were not measured at sidecast areas Creek Site 1 and Creek Site 4; Road Area 2 was not sampled due to the composition type of the sidecast materials (medium and small rock), and sidecast depth was not collected at Sidecast 03 Rock Outliers where only a few scattered rocks exist and most of the area has no sidecast present.

Some sidecast areas were divided into smaller areas or “subareas” for purposes of the site assessment. A total of 43 sidecast subareas were surveyed. Sidecast was found to be accumulated unevenly (accumulated in portions) in 24 subareas, whereas sidecast was evenly distributed in 19 subareas. No sidecast was observed in one subarea (Creek Site subarea 7.1). While the percentage of sidecast size class varied across all subareas, large rock (>24” in diameter) was observed in 29 sidecast subareas; medium rock (>12” and <24” in diameter) was observed in 23 sidecast subareas; small rock (>4” and <12” in diameter) was observed in 16 sidecast subareas; and fines (<4” in diameter) was observed in 37 sidecast subareas. Impacted trees were observed in 15 sidecast subareas, while sensitive plant species were observed in 8 sidecast subareas. The results of this Supplemental Sidecast Survey will be used to revise sidecast volume estimates, currently underway.

Representative photos and sidecast composition data for each sidecast area are provided in Appendix A, *Map Book of Mission Creek Sidecast Areas and Analysis*.

2. Project Scoping Survey Results

The Project Scoping Survey assembled a team of cross-resource technical experts (listed above in Part 1, Section B.2) to collectively investigate a range of techniques for the extraction of sidecast materials. The survey generated substantive, fluid discussions evaluating possible alternative methods to achieve the goals of the Project. As a result, SCE is incorporating three Project scope adjustments to optimize the removal of sidecast material while protecting the environment.

HELIX
Environmental Planning

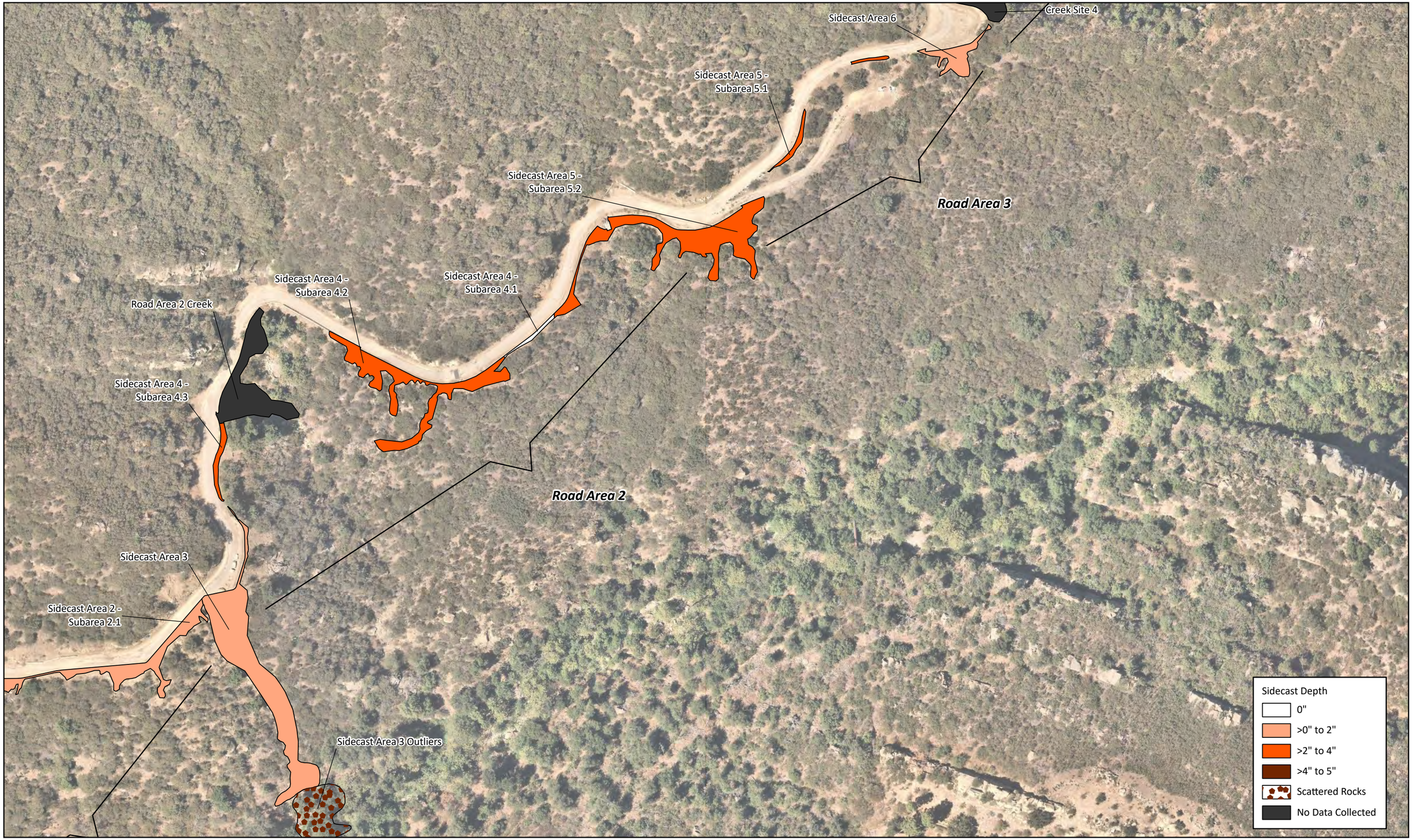
0 25 50 100
Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Project Site with Sidecast Areas and Approximate Depths of Sidecast

Exhibit 3a



HELIX Environmental Planning

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Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Project Site with Sidecast Areas and Approximate Depths of Sidecast

Exhibit 3b

HELIX Environmental Planning

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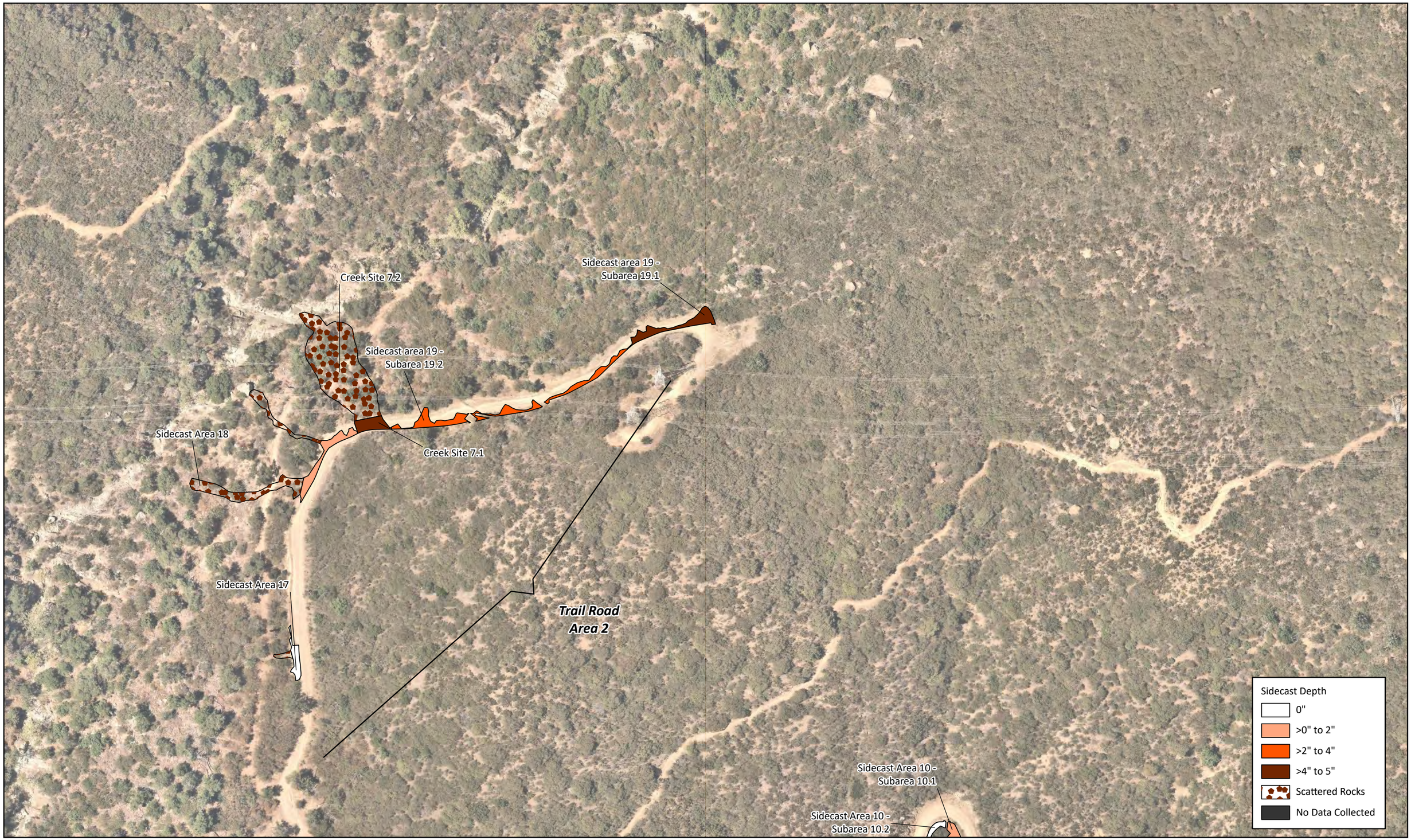
Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Project Site with Sidecast Areas and Approximate Depths of Sidecast

Exhibit 3c



HELIX Environmental Planning

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Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Project Site with Sidecast Areas and Approximate Depths of Sidecast

Exhibit 3d

HELIX Environmental Planning

0 25 50 100 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Project Site with Sidecast Areas and Approximate Depths of Sidecast

Exhibit 3e

For most sidecast areas, road accessibility yielded concurrence from experts that manual removal combined with a suction method and light use of machinery would result in the low impacts and high efficacy desired. In contrast, the remote, steep, and inaccessible deposits at the Sidecast 03 (SC 03) and Sidecast 03 Outliers (SC 03 Outliers) locations (to which the experts hiked out to investigate closely) instigated substantially more discussion and evaluation of multiple methods. In fact, prior to conducting the Project Scoping Survey, deposits at these locations had been considered too difficult to remove. One of the most significant findings of the survey was identifying the safe and low-impact method using helicopter support to air lift materials from these areas and deposit them at a nearby material staging area. Therefore, the first scope adjustment involves the use of helicopter support to air lift materials from remote sections of the Project.

Another significant finding was the feasibility of the manual removal of all materials deposited at Creek Site 7 and Sidecast areas 17-19. Informed by the Supplemental Sidecast Survey results and observations while on-site, the resource technical experts were able to evaluate the sidecast material deposits closely, and the contractor was able to present a safe and low-impact method for removal. Therefore, the second scope adjustment involves the use of manual removal methods to extract all materials deposited off Tunnel Trail road where vehicle access is also limited.

A third finding was the recognition that sidecast removal could necessitate the reconstruction of berms in areas where the outer edge of the berms were built upon sidecast material that was deposited at the edge of the roadway in 2019. This finding led to the supplemental engineering evaluation described in Part 1, Section B.2 performed by SCE to review the existing road conditions and potential impacts that could result from the full removal of sidecast at the identified locations. Therefore, the third scope adjustment involves reconstruction of roadside berms where needed following sidecast removal on adjacent slopes.

Supplemental Site Surveys results are presented in this Report as follows: sidecast removal methods selected as the Proposed Project are presented in Part 2, Section A below, and detailed in Table 2, *Project Scoping Survey, Proposed Project- Potential Impacts by Resource*; sidecast removal methods evaluated but not selected are presented in Part 2, Section C and detailed in Table 3, *Project Scoping Survey, Project Alternatives Considered-Potential Impacts by Resource*.

PART 2. COMPARATIVE SCOPING ANALYSIS

A. PROPOSED PROJECT

SCE's Proposed Project[4] involves the removal of nearly 100 percent of all sidecast material, except where potential constraints would preclude removal of some material in discrete areas to avoid undesirable conditions.

The Proposed Project employs four methods to extract sidecast materials deposited during the 2019 road widening activities. These methods were carefully evaluated through the process described in Part 1 of this report and selected to achieve maximum extraction of sidecast material without causing harm to sensitive environmental resources, while maintaining a safe working environment and protecting public safety long term. Once removed, sidecast material will be transferred to an approved location where soil will be stockpiled and loaded into small-scale "bobtail" dump trucks and transported along a designated

4 The Proposed Project scope is not fully described in this document but, rather, is described in detail in the Creek HRP.

route to be disposed of at a local landfill. Some material may be processed and repurposed on-site for berm reconstruction, where needed.

The following description of the Proposed Project is intended as a summary for the purposes of this Comparative Scoping Analysis and is focused on extraction methods. The Proposed Project description is presented in the Creek HRP in full detail (including but not limited to a full description of sidecast removal, site restoration, and monitoring activities) for evaluation under the California Environmental Quality Act and other permitting actions.

1. Sidecast Removal Methods

The primary method identified for sidecast removal is the combination of manual or hand removal, and removal using vacuum or guzzler trucks (Hand and Guzzler Removal technique). The benefits of this method include the low-level impact of using technicians to access steep slopes and environmentally sensitive areas and the high efficacy for extracting the sidecast using this methodology. The Hand and Guzzler Removal technique will be used in conjunction with machinery staged on the road to facilitate the removal of the larger rock. In addition to the Hand and Guzzler Removal technique, the Project Scoping Survey identified two additional low-impact removal techniques expected to result in the full removal of sidecast in locations away from the road. These removal techniques are Hand Removal and Helicopter Removal. A summary and map of the sidecast removal methods, and locations where those methods are employed, are listed in Table 1, *Proposed Project Sidecast Removal by Sidecast Deposit Location*, Exhibits 4a-e, *Proposed Project: Method of Sidecast Removal by Sidecast Area*, and are also described below. Through the implementation of these combined removal methods, SCE believes that sidecast deposit removal will be maximized; therefore, SCE anticipates the removal of nearly 100 percent of all the material sidecasted during the 2019 road widening activities, potentially excepting only minor areas where constraints to full removal may exist, as identified by SCE (see Part 2, Section A.2 below).

Table 1: Proposed Project Sidecast Removal by Sidecast Deposit Location

Sidecast Location	Method of Sidecast Removal
Sidecast Areas 1-2, 4-16	Excavator with Hand and Guzzler
Creek Sites 1-4, Road Areas 1-2	Forklift with Hand and Guzzler
Sidecast 3, Sidecast 3 Outliers	Helicopter Removal
Creek Site 7, Sidecast 17-19	Hand Rock Removal

Excavator with Hand and Guzzler Removal

Sidecast deposits, occurring along Road Areas 1 through 4, consist of thin layers of finer soil material intermixed with rocks and scattered boulders accumulated along the base of vegetation. These materials will be removed manually by technicians in combination with vacuum or guzzler trucks and a small excavator. This method will be performed in sidecast areas (SC) 1 through 6 (see Exhibits 4a-e) and is expected to result in the full removal of the sidecast material at these locations.

This combination method includes the removal of small rocks and soil particles by technicians using small hand tools (shovels, rakes, and picks) to break up and sort material. Technicians will feed sidecast materials less than 3” in diameter into a vacuum hose connected to a guzzler truck, which will be staged on the roadways above the work area. Materials that can be collected through the hose will be pulled into the guzzler and transported to an approved staging location. Technicians will lift manageable rock portions upslope by hand or use a small, tracked excavator fitted with a thumb bucket, positioned on the roadway,

to extract boulders from slopes. The excavator may also be used to lift rocks bolted to a chain with shackles and position them onto the road for staging.

Forklift with Hand and Guzzler

The majority of sidecast deposits occurring within Mission Creek and in tributaries located at Road Areas 1 and 2 consist of a mixture of small and moderately sized rocks with finer soil material and scattered boulders. These materials will be removed using the Hand and Guzzler Removal method described above in combination with a long-reach forklift to extract material. This method will be performed in Mission Creek sites 1 through 4, as well as Road Area 1 and 2 removal sites (see Exhibits 4a-e) and is expected to result in the full removal of the sidecast material at these locations; however, potential constraints to the slopes within Creek Sites 2, 3 and 4 were noted by SCE, as described in Part 2, Section A.2 below.

This combination method includes the removal of small rocks, and soil particles using the Hand and Guzzler technique described above. For large materials, technicians will manually break rocks and boulders into manageable pieces using sledgehammers or, where necessary, drill and inject an expandable grout to allow them to break into smaller pieces overnight. These rocks will then be manually loaded into baskets and lifted by a long-reach forklift positioned in the roadway. The material will then be transported to an approved staging location, where it will be transferred to trucks and hauled off-site for disposal.

Helicopter Removal

In one area of sidecast deposit, SC 03 and SC 03 Outliers, located within Road Area 1 (see Exhibits 4a-e), large boulders and smaller rock and soil material are positioned approximately 300 feet from the roadside with no footpath or road access. Due to these limitations, SCE proposes to remove the material using the Helicopter Removal method to relocate the material to an approved staging area. Various methods were evaluated to extract the material from this location. The Helicopter Removal method was selected as the least impactful to resources and is expected to remove all the sidecast material at this location.

This method includes the use of a helicopter such as a light utility Bell 429 with a lift capacity of 1,500 to 2,000 pounds fit with enclosed steel baskets. The steel baskets can be covered with a safety net and lined to secure the rocks. Alternatively, the rocks can be placed into load bags and then loaded into the steel baskets. Rock will be manually broken using sledgehammers or, where necessary, may be drilled and injected with expandable grout to allow the rock to break into manageable pieces overnight. Rock will be transferred into rock sacks by ground crews and staged for the aerial operation to minimize flight time. The helicopter will hover approximately 100 to 150 feet in the air while ground crews fill the basket with rock sacks. Once full, the pilot will relocate the material to an approved staging location within the Project area where groundcrews will unload the steel basket. A landing zone and refueling location, such as the Santa Barbara Airport, must be located within 10 to 15 minutes of flight time from the Project Area.

Excavator with Hand and Guzzler Removal

Sidecast deposits occurring along the roadside slopes of Road Areas 5 through 9 consist of boulders and rocks intermixed with the roadside berms and deposits immediately downslope of the roadside. The sidecast in SC 7 through SC 16 in Road Areas 5 through 9 (see Exhibits 4a-e) will be removed using a tracked excavator in addition to the Hand and Guzzler Removal techniques described above. This method is expected to remove nearly 100 percent of the sidecast material at these locations, except as noted below.

This combination method includes the removal of small rocks, and soil particles using the Hand and Guzzler Removal technique described above. For larger materials, this method uses a small, tracked excavator staged in the road to pull sidecast from the berm and road shoulder into the roadbed. The material will then be transported to an approved staging location where it will be sorted. Berms will be reconstructed following the removal of sidecast in areas where the outer edge of the berms were built upon sidecast material that was deposited at the edge of the roadway in 2019. Suitable sidecast material may be processed and used to reconstruct the roadside berms. A tracked excavator fitted with a thumb bucket may also be used to extract boulders from slopes.

Potential constraints to the removal of sidecast material in Road Areas 6 through 9 were identified by SCE and are described in Part 2, Section A.2 below. In those areas, roadside berms will only be tamped.

Hand Rock Removal

Sidecast deposits at Creek Site 7, and SC 17-19 are located on Trail Road Area 2 (see Exhibits 4a-e) and consist of scattered rocks intermixed with existing vegetation. The sidecast rocks are dispersed within the mapped area and distinguishable from other naturally present rocks. These areas are only accessible by foot; however, the low volume and manageable size of the rocks allow for manual removal using the Jesusita Trail to access the sidecast areas. The Hand Rock Removal method was selected as the least impactful to resources and is expected to remove all sidecast material at this location.

This method employs technicians using high incline rigging for fall protection, who will manually remove the sidecast rock and transfer it up the slope by hand. Large rocks will be broken into smaller manageable pieces using hand tools before removal. Smaller rock or rock fragments may be transferred into rock sacks for easier removal and carried out utilizing frame packs and manual means. Rock will be staged on the side of the roadway, where it will be collected using a small loader or comparable equipment and transported to an approved staging area where the material can be hauled away for disposal.

2. Constraints to Sidecast Removal

The Project Scoping Survey and supplemental engineering surveys revealed potential constraints to full removal of sidecast material in discrete locations; however, it is anticipated that even with these constraints, there still would be nearly 100 percent removal. The identified constraints implicate safety considerations associated with access road width and slope stability. As discussed below, any constraint to full removal is not a result of the methods but rather the need to avoid undesirable conditions potentially resulting from the removal of the sidecast itself.

The areas of potential constraints related to access road width are along slopes adjacent to five road bends within Road Areas 6 through 9 within sidecast areas SC 10, SC 11, SC 12, SC 14, and SC 15 (see Constraint Areas shown on Exhibits 4a-e). If SCE conducts full removal of sidecast material in these areas, it could have the potential to narrow the road width to below the tolerance levels necessary to provide safe access for utility or emergency vehicles.

Roadway berms for vehicle safety were erected during the 2019 road widening/maintenance activities. The majority of berms were built directly upon the preexisting road surface while, in a minority of areas, berms were built upon sidecast material that was placed at the edge of the roadway in 2019. In order to remove the sidecast material supporting the outer edge of the berms in these locations, the berms and sidecast would need to be removed, and the berms would need to be reconstructed within the preexisting road prism, thereby narrowing the current width of the roadway in these locations. Therefore, in these

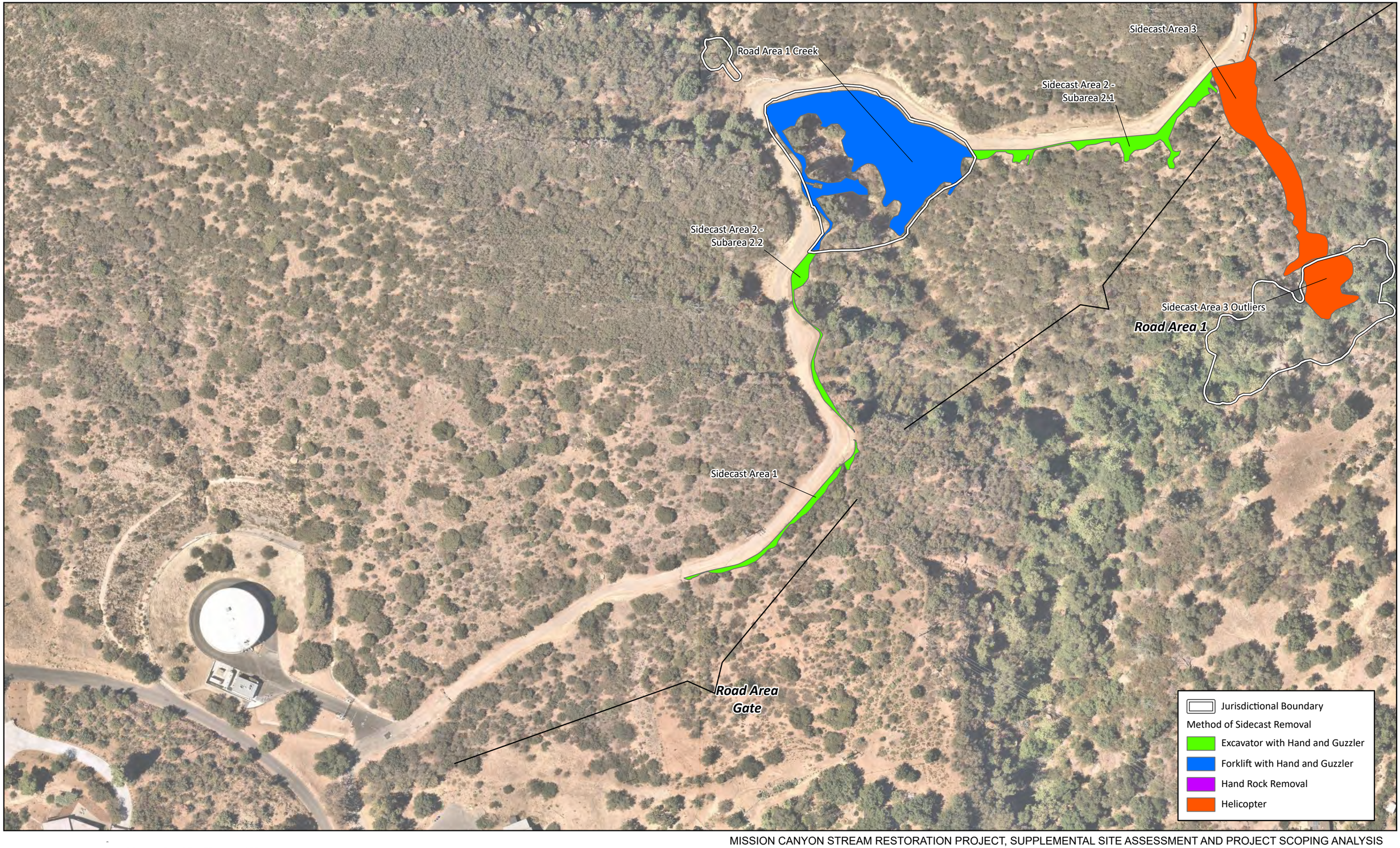
five potential areas of constraint, the focus will be on the maximum removal of all sidecast material from the 2019 incident while not compromising safe access to SCE facilities. Decisions to fully remove or leave discrete areas of sidecast material in place to maintain safe road width will be determined in the field by qualified professionals as subsurface conditions are revealed during sidecast excavation. Post-construction documentation of any sidecast material left in place will be recorded and provided to regulatory authorities, as warranted. While these constraint circumstances pertain to a small scope of the overall removal work, SCE will implement the construction process to monitor road width and maximize removal, where safe and feasible[5].

SCE has also identified four areas with potential constraints related to slope stability within Creek Sites 2, 3, and 4 (see Constraint Areas shown on Exhibits 4a-e). These four areas occur along the upper slopes of the sidecast areas and outside of the streambanks of the creek. The steep slopes in these locations enhance the possibility that the complete removal of sidecast material could lead to localized surface instability and sloughing of the existing soils beneath, either during the removal process or during future rain events. Therefore, in these four potential areas of constraint, the focus will be on the maximum removal of all sidecast material from the 2019 incident while not creating an unstable slope. While constraint circumstances precluding full sidecast removal are not anticipated at these locations, SCE recognizes the possibility and will monitor the slopes during the construction process and maximize removal, where safe and feasible.

3. Potential Impacts by Resource Area

Experts in the areas of hydrology/geomorphology, native vegetation and sensitive plant habitat, fish and fish habitat, waters and waterways, stormwater and water quality, engineering and geology, as well as safety, participated in the Project Scoping Survey and comparative analysis. The resource experts were asked to rate each removal method on how it would impact resources within their respective areas of expertise. The four removal methods included in the Proposed Project scope were rated as low or not likely to impact their resource area by most evaluators. Moderate ratings were identified for native vegetation and sensitive plant habitats at SC 16 in Road Area 9 due to the presence of Santa Barbara honeysuckle (*Lonicera subspicata* var. *denudata*) and the expected disturbance to native vegetation re-establishing within sidecast piles. Moderate ratings were also identified for stormwater and water quality in all areas due to the nature of all removal methods to disturb soils during the removal process. Measures to offset any impacts to these and other resources, such as sensitive species revegetation, erosion control, and soil stabilization best management practice (BMP) measures, will be integrated into the Proposed Project. Resource expert assessments are detailed in Table 2, *Scoping Analysis, Project Description and Potential Impacts by Resource.*

[5] "Feasible" is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Cal. Code Regs. Tit. 14, § 15364.



HELIX Environmental Planning

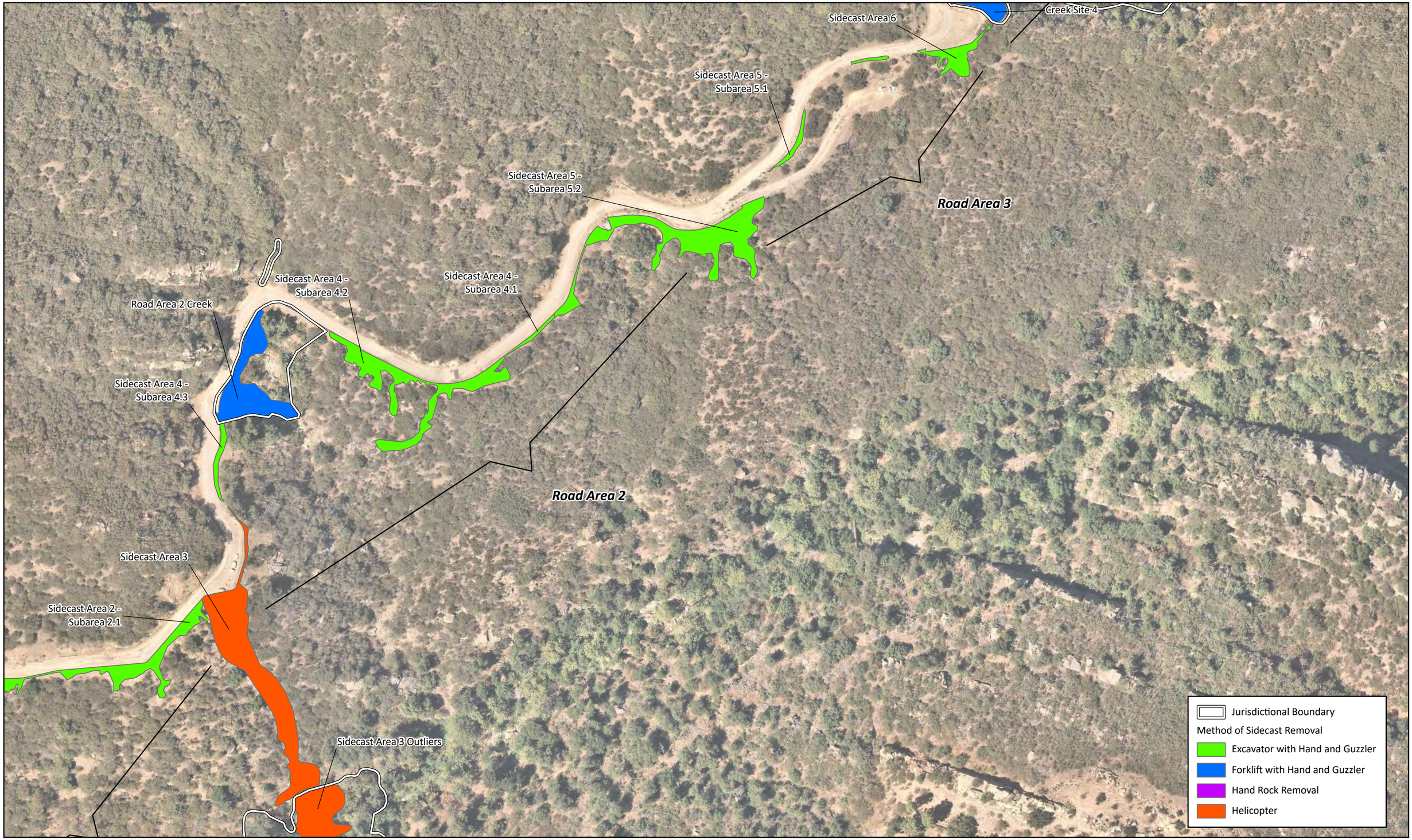
0 25 50 100 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Proposed Project: Method of Sidecast Removal by Sidecast Area

Exhibit 4a



HELIX Environmental Planning

0 25 50 100 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Proposed Project: Method of Sidecast Removal by Sidecast Area

Exhibit 4b

HELIX Environmental Planning

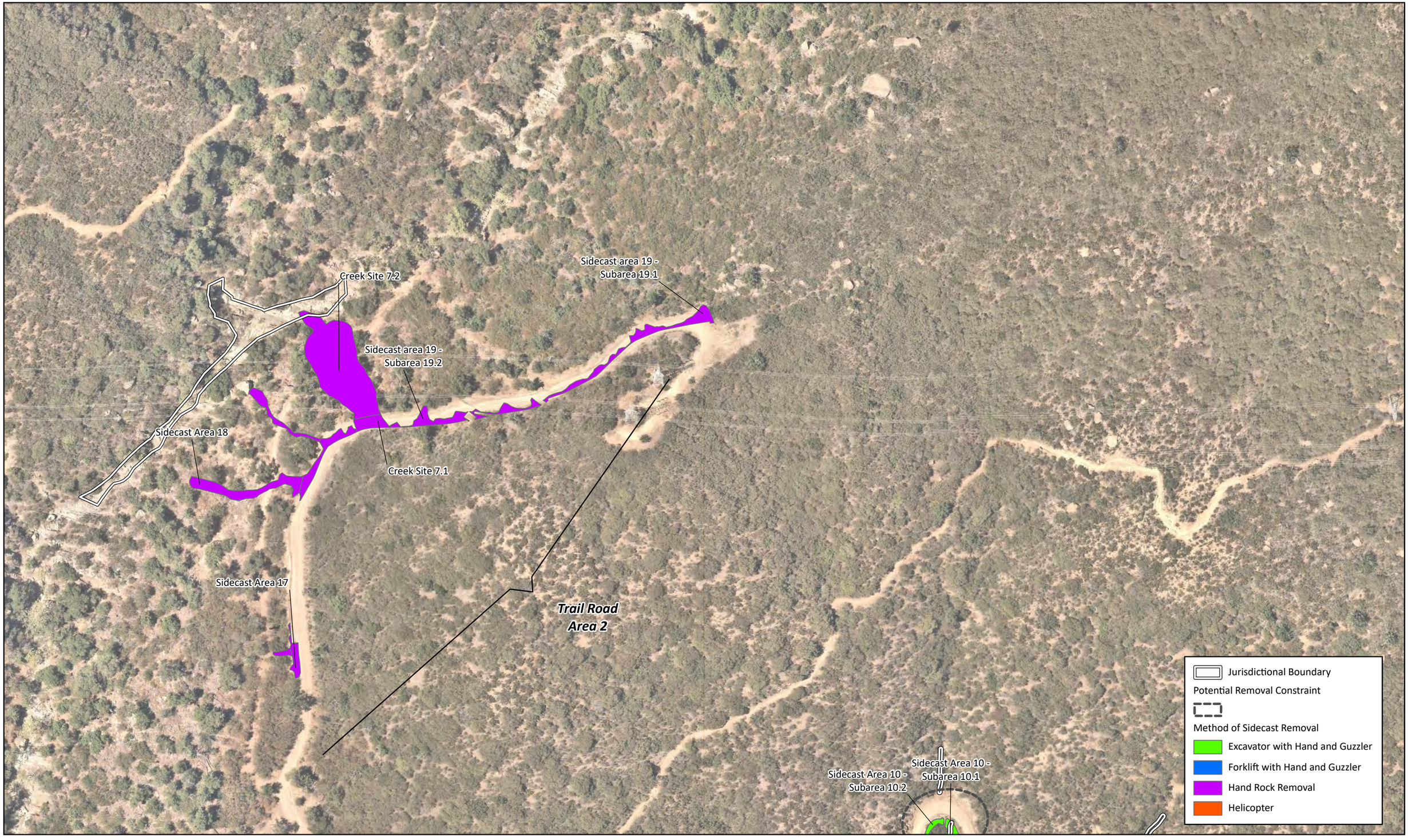
0 25 50 100 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Proposed Project: Method of Sidecast Removal by Sidecast Area

Exhibit 4c



HELIX Environmental Planning

0 25 50 100 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Proposed Project: Method of Sidecast Removal by Sidecast Area

Exhibit 4d

HELIX Environmental Planning

0 25 50 100 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Proposed Project: Method of Sidecast Removal by Sidecast Area

Exhibit 4e

Table 2: Project Scoping Survey, Proposed Project- Potential Impacts by Resource

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Hydrology	Not likely	Low potential for impact - no veg removal & no expected sediment or rock migration to the creek during removal activities.	Not likely	Limited removal & not hydrologically connection to creek. Removed rock will not reach or impact creek. Sediment transport/erosion control w/BMPs during removal.	Not likely	Low potential for impact - no vegetation removal and no expected sediment or rock migration to the creek during removal activities.	Not likely	Removal of material from the creek and adjacent slopes is likely to improve overall stream hydrology and natural sediment transport function of the drainage. Incidental small rockslides or sluffing of material during removal will be immediately addressed to mitigate any potential adverse impact and would likely occur at levels natural for the drainage.	Not likely	Helicopter removal from the slope after hand removal is not likely to impact the hydrology of the creek. Sidecast material is expected to be contained to localized areas and removed without slope impacts.	Low	BMPs to include working only during the dry season, slope erosion control, and designating work areas away from the stream minimizing rock movement downslope while aircraft is lifting loaded baskets. BMP utilization will also minimize movement of upslope material.	Not likely	Limited material present, hand removal via pre-established trail.

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Native Vegetation/ Sensitive Plant Habitat	Low	Temporary impacts to herbaceous cover should quickly recover following sediment removal. Minimal cover currently exists. Woody resprouts would likely not be impacted	Not likely	Minor vegetation impacts where herbs and shrubs are growing through sidecast. Overall vegetation cover is low. Some scattered sensitive species can be avoided. Few Santa Barbara Honeysuckle in area, particularly SC 15, but impacts are not anticipated.	Moderate	Some impacts to SBHS and associated vegetation. 100% removal includes veg impacts where vegetation is re-establishing on top of sidecast. SBHS established in sidecast	Low	Impacts to vegetation would be low. Manually breaking up of rocks could fall onto establishing vegetation, but would then be promptly removed, minimizing any long-term impacts. Guzzler removal would likely have no impacts to vegetation.	Low	Some minor impacts to vegetation as trails are created to haul out locations. Impacted areas may be revegetated following construction	Low	Minor trimming of tree canopy anticipated to clear a small laydown area where sidecast materials may be stockpiled for aerial removal. Trimmed canopy is expected to naturally recover	Not likely	Hand removal - minimal impacts to native vegetation. Few Plummer's baccharis in area, however no impacts to the species is expected since sidecast consists of a few scattered boulders.

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Fish and Fish Habitat	Not likely	Site is hydrologically disconnected from creek	Not likely	Site is hydrologically disconnected from creek	Not likely	Site is hydrologically disconnected from creek	Low	Treatment involves near 100% removal of sidecast materials from stream channel and adjacent uplands. Removal of sidecast materials within the creek sites will reestablish/expose the native streambed, which could result in a temporary flush in sediment following the first storm event after implementation, however it would be at a level negligible to the background inputs from the watershed. Impacts to fisheries habitat/passage are not expected	Low	Access trails & sidecast removal could result in minor flushes of sediment following implementation but @ a level that would be negligible over background inputs to watershed. No significant impacts to fish/fish habitat or passage are expected	Low	Minimal disturbance to fish habitat anticipated aside from incidental disturbance around sediment removal. See above under hand removal for description of similar effects due to slight relocation of habitats. Low potential for passage impacts.	Not likely	Treatment involves removal of rock cobble & boulders from stream channel and adjacent area. Impacts to fisheries/habitat/passage are not expected

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Waters and Waterways	Moderate	Loose rocks & soils could tumble below. Workers will stay ~10' left or right of operating equipment 100% tie offs while in hillside & use buddy system	Not likely	Limited removal area (small size), little to no vegetation. Impacts unlikely w/BMPs incorporated. NOTE: SC11 jurisdictional; but no impact (work under tree)	Not likely	no impacts anticipated due to distance from CDFW/ACOE jurisdiction and removal methods. Long-term slope stabilization and BMPs to be deployed	Low	Road Areas 1 and 2, as well as Creek Sites 1 through 4, have areas that fall under the jurisdiction of the USACE, CDFW, and RWQCB. While the removal will have some temporary impacts (potential incidental fallback for rock material), the impacts can be reduced by the removal approach (guzzler and hand removal) and deployment of recommended Best Management Practices. Thinning and removal of vegetation is not anticipated.	Not likely	Aerial removal to not impact watershed. Implement BMPs as directed to limit erosion & fall back	Low	Temporary work zone in ACOE/CDFW jurisdiction. Limited impacts to riparian canopy could occur for basket lift	Not likely	Few boulders (sparse) in CDFW/ACOE jurisdiction. Impacts not anticipated due to small number of rocks and approval to carry off-site

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Stormwater/ Water Quality	Moderate	Foot traffic will cause minimal disturbance. Erosion and sediment control BMPs will be required for disturbed walk way areas.	Moderate	Large amounts of sediment removal exposing barren slopes. Extensive erosion and sediment control BMPs will be required, especially for stabilization measures.	Moderate	Assuming large boulder removals and berm establishment (compaction, etc.) Stabilization measures required (i.e., BMPs) for disturbed areas. Moderate impact severity without stabilization measures, risks may be offset if extensive soil stabilization BMPs are implemented on denuded areas following removal. Long term stabilization with vegetation will be necessary of exposed slopes.	Moderate	Assuming removals are performed during dry conditions, and necessary stabilization measures are implemented, and post removal soil stabilization BMP are implemented on denuded areas following removal. Long term stabilization with vegetation will be necessary.	Moderate	Vegetation removal will be required to conduct this work leaving barren slopes with a potential of sediment discharge. Soil stabilization BMPs will be required for removal areas. Removal of rock will have the potential for erosion and soil stabilization BMP measures should be implemented to offset risk of sediment transport. Moderate impact severity without stabilization measures, risks may be offset if extensive soil stabilization BMPs are implemented on denuded slopes following removal. Long term stabilization with vegetation will be necessary of exposed slopes.	Low/ Moderate	Foot traffic expected to cause low level of disturbance. Extensive soil stabilization BMPs on exposed slopes following removal. Long term stabilization with vegetation will be necessary of exposed slopes.	Low	Foot traffic is expected with minimal disturbance. Rocks are smaller, so smaller footprints of bare soil expected. Will evaluate the work area post construction for erosion and sediment control BMPs, if needed

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Engineering and Geology	Not likely	Minor, loose debris removal likely minimal impact to existing slope.	Moderate	Based on review of working road limits and projected daylight of removals, some areas will require partial berm restoration. Other areas will require reshaping of the existing berms and tamping in-place.	Moderate	Full berm restoration to the standard dimension is likely with partial restoration in select areas.	Low/ Not Likely	Impact not likely to the existing berms and slopes depending on material removal thickness. Lower impact areas may require reshaping berms to restore dimensions.	Not likely	Hand removal to staging areas. Minor, loose debris removal likely minimal impact to existing slope.	low/not likely	Foot traffic impacts are minimal, slope impacts are not likely.	Not likely	Loose debris removal likely minimal impact to existing slope.
Safety	Low	Loose rock and soils could tumble below. Workers will stay approximately 10' left or right of operating equipment, 100% tie-off while on hillside and use buddy system.	Moderate	Workers to stay approximately 10'-20' left or right of heavy equipment. Ties off at all times when on slope, utilize buddy system. Maintain eye contact with operator, stay clear of excavator swing radius. Level D+ PPE (steel toe boots, long sleeves, eye/ear/hand/head protection as needed with fall protection on hillsides. Tyvek suits and respiratory	Moderate	Workers to stay approximately 10'-20' left or right of heavy equipment. Ties off at all times when on slope, utilize buddy system. Maintain eye contact with operator, stay clear of excavator swing radius. Level D+ PPE (steel toe boots, long sleeves, eye/ear/hand/head protection as needed with fall protection on hillsides.	Low	Fall protection measures will be in place to ensure worker safety	Moderate	A clear and unobstructed flight path is needed, so the trail would need to be shut down, notices would need to be sent/posted, and controls would need to be in place to ensure no hikers are present during the operation. Fire mitigation would be necessary at a landing zone. There would also be a central landing zone for all equipment. The canopy does not appear to be a concern as there are enough open areas. AirOps safety training would be required for ground crews. Loose soils & rock	Moderate	Same as SC03	Moderate	Hand work w/tools protect hands with gloves. Be aware of sledgehammer swing radius. Lift heavy items carefully & use legs

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
				protection excluded)		Tyvek suits and respiratory protection excluded)				create overhead fall hazards. Make sure workers stay 20' left or right of equipment & lines. Remain tied off at all times & use buddy system. Poison oak in area, only long sleeve shirts and full-length pants should be worn. Stay left or right of load while it is being winched up hill to avoid other falling rock. Maintain distance from excavator/stay out of swing radius.				

	Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Excavator with Hand and Guzzler		Forklift with Hand and Guzzler		Helicopter Removal		Helicopter Removal		Hand Removal	
	Road Areas 1-4 (SC 1 through 6)		Road Areas 5-9 (SC 7 through 15)		Road Area 9 (SC 16)		Creek Sites 1-4 and tributaries located at Road Areas 1 and 2		SC03		SC 03 Outliers		Creek Site 7 and SC 17-19	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
CEQA Checklist	Low	None, assuming slope is stabilized, and habitat restoration and revegetation is implemented.	Low	None, assuming slope is stabilized, and habitat restoration and revegetation is implemented.	Low	None, assuming slope is stabilized, and habitat restoration and revegetation is implemented.	Low	None, assuming slope is stabilized, and habitat restoration and revegetation is implemented.	Moderate	CEQA item: Noise. The closest sensitive receptor is located within 600 ft of this location. Use of a helicopter at this distance would likely exceed the County's 65 dB significance threshold for noise. Although no noise attenuation measures are available, limiting the few days of helicopter use to weekdays between 8 am and 5 pm would mitigate this impact to less than significant.	Moderate	CEQA item: Noise. The closest sensitive receptor is located within 600 ft of this location. Use of a helicopter at this distance would likely exceed the County's 65 dB significance threshold for noise. Although no noise attenuation measures are available, limiting the few days of helicopter use to weekdays between 8 am and 5 pm would mitigate this impact to less than significant.	Low	None, assuming slope is stabilized, and habitat restoration and revegetation is implemented.

SCE's Proposed Project scope, described herein, aligns with the Project goal to do no further environmental harm. Methods were selected according to their consistency with this goal and ability to achieve maximum extraction of sidecast material and minimize impacts to sensitive environmental resources and maintain safe conditions. As stated previously, SCE anticipates the full removal of all sidecast material during the 2019 road widening activities, with the exception only for the potential constraints noted above. While SCE recognizes the possibility of these constraints limiting the full removal of materials, the Project design does not intend to leave material in place if it can be safely and feasibly removed in these areas. Furthermore, SCE will endeavor to remove all material, and material within these areas of constraint would remain solely to protect road access or slope stability. Therefore, compensatory mitigation for material left in place has not been integrated into the Project scope, as environmental impacts are not anticipated to result from leaving minor amounts of sidecast materials in place at the identified discrete locations (i.e., such areas would either be incorporated into road safety features or revegetated as part of the Proposed Project).

SCE has integrated comprehensive habitat restoration actions as well as sensitive plant and tree mitigations into the Proposed Project scope. The habitat restoration and sensitive plant and tree mitigation scope are designed to offset impacts resulting both from the road grading activities in 2019, as well as potential impacts from the sidecast removal activities of the Stream Restoration Project. The restoration and mitigation Project scope is described in detail in the Creek HRP (*draft revision in prep*).

B. FULL SIDECAST REMOVAL PROJECT

As compared to the Proposed Project, the Full Sidecast Removal Project assumes the extraction of all sidecast material despite the identified safety-related constraints and would disregard the resulting undesirable conditions.

1. Sidecast Removal Method(s)

The sidecast removal methods for the Full Sidecast Removal Project would be in kind to those proposed in the Proposed Project described in Part 2, Section A above.

2. Constraints to Sidecast Removal

The Full Sidecast Removal Project would proceed with full removal of all sidecast material despite potential constraints identified by SCE in certain locations (see Part 2, Section A.2).

3. Potential Impacts by Resource Area

The Full Sidecast Removal Project would extract sidecast from all deposit areas, including those noted by SCE as having potential constraints to full removal. The potential impacts of removing sidecast from the constraint areas are as follows.

Potential constraints exist along slopes adjacent to five road bends within Road Areas 6 through 9. The current road width in these areas is at minimum tolerance for vehicle safety. In these five locations, it is believed the outer edge of the berms were built upon sidecast material placed at the edge of the roadway in 2019. Should sidecast material be fully removed in these five areas, it is possible this action could narrow the road width below safety tolerance levels. Insufficient road width at road bends would increase the risk of vehicle incidents by not providing a sufficient road surface for a vehicle to safely turn. Not only

would the narrow road sections potentially restrict or delay SCE's response to maintenance or emergency operations on facilities up the road, but they may also restrict or delay response by other emergency vehicles of comparable size (e.g., fire trucks). Safe access is needed not only for SCE operations and maintenance crews but also for other utilities and local agencies such as the City of Santa Barbara Water Department, Santa Barbara County Fire, and the Los Padres National Forest. Construction of retaining walls or similar structures may become necessary in narrowed road areas to reconstruct a safe road width to preserve safe access. Alternatively, if feasible, the necessary road width may be regained by cutting further into the upland slopes to widen the road; however, this would cause additional impacts, as further discussed below.

Construction of retaining walls or cutting further into the slope in order to maintain a safe road width would generate both new and likely considerable impacts to native habitat, stormwater/water quality, waters and waterways, visual resources, and recreation within the Project area, such as:

- Native vegetation: Construction of a retention wall or cutting into vegetated hillside slopes would require the removal of native vegetation and create a permanent disturbance area.

- Storm Water/ Water Quality: Construction of a retaining wall or cutting into hillside slopes would cause soil disturbance and introduce sources of erosion.

- Waters and Waterways: Construction of retaining walls or cutting into hillside slopes would disturb natural features currently functioning to direct flow from above the road down the canyon. Additional engineering methods to dissipate the altered flows may be required resulting in more impacts to the natural features. Visual Resources: The presence of retaining wall structures or, alternatively, additional cuts into the slope would result in undesirable changes to the visual aesthetics of the access road and the natural character of the canyon visible to viewers both along the trail and from nearby residential properties. Should upland slope cuts be considered to widen the road, it is very likely that areas of the slope would be disturbed due to the nature of the steep slopes of the existing upland areas. Although some surface treatments to alter the color of artificial structures, such as Natina©, can offset visual impacts, changes to the visual aesthetics of the canyon would be permanent.

- Recreation: Construction of a retention wall or cutting into hillside slopes would increase the construction period and require extended trail closures to safeguard the public while completing the work.

SCE has identified four areas with potential constraints to full sidecast removal within Creek Sites 2, 3, and 4. In these four areas of potential constraint, it is possible some sidecast material may need to remain in place if it is essential to slope stability or to maintain the general grade of the slope. The natural conditions of the slopes in these areas are steep and unstable, with frequent rockslides into the creek. It is possible that the presence of sidecast material in these four areas is helping to stabilize the slopes and currently prohibiting natural material from falling into the drainage. A Full Sidecast Removal Project would extract all of this sidecast material and potentially destabilize sections of the slopes above Mission Creek and the adjacent roadway.

Destabilized slopes above Mission Creek could generate new and potentially significant impacts to hydrology, fish and fish habitat, stormwater/water quality, and waters and waterways, as well as visual resources, such as:

- Hydrology: If the sidecast is determined as supporting slope stability and is removed anyway, the eventual uncontrolled release of newly destabilized native material into the drainage has the potential to change stream hydrology, cause bed and bank erosion in areas downstream, and impede natural stream flow and function.

- Fish and Fish Habitat: In the event of the deposit of newly disturbed native material in the creek, a temporary but minor obstruction could occur from the mobilization of fine sediments, which could result in scour and pool creation. In addition, a temporary flush of sediment (i.e., first flush) could temporarily increase water temperature and turbidity.

- Storm Water/ Water Quality: If confirmed to be supporting slope stability, the removal of sidecast in these four areas has the potential to increase sediment loads from newly destabilized native material to the drainage during rain events and further increase long-term slope instability. Removal of this sidecast material would require engineering measures to stabilize the affected sections of the banks and roadway. Extensive BMPs would be required to help control sediment loads, although the long-term risk of sediment discharges is expected to persist due to slope steepness.

- Waters and Waterways: Potential slope instability, leading to fallback of newly destabilized native material into Mission Creek and jurisdictional areas could occur if slope stability is compromised by material removal. Material fall-back would need to be mitigated by implementing slope stabilization measures and BMPs to protect waters from discharge.

- Visual Resources: Engineering measures and BMPs needed to stabilize affected sections of the banks and roadways could temporarily or permanently change the natural character of the canyon, and negatively impact the aesthetic experience of viewers both along the trail and from nearby residential properties.

In the Full Sidecast Removal Project scenario, sidecast material would not be left behind following the implementation of the Project, and, as such, compensatory mitigation for remnant sidecast materials would not be included. However, the Full Sidecast Removal Project scenario would likely result in other impacts to environmental resources, including impacts that would permanently alter the canyon views and displace natural resources. These impacts would be greater than the impacts resulting from the Proposed Project, which would avoid such impacts by leaving sidecast in place in discrete locations if constraints to full removal are confirmed during construction. The Full Sidecast Removal Project scenario would need to include proportional mitigation to offset impacts to resources, some of which would need to be implemented in a different location (potentially outside of the Project area) due to the permanence of the on-site impact. Overall, the Full Sidecast Removal Project scenario would likely be more impactful to native vegetation, hydrology, fish and fish habitat, stormwater and water quality, waters and waterways, visual resources, and recreation when compared to the Proposed Project if the identified constraints to full sidecast removal are confirmed during Project construction.

C. SIDECAST REMOVAL METHODS NOT SELECTED

SCE's evaluation of sidecast removal methods was completed in separate levels of review. The review started broadly through a competitive contractor selection process in 2020. A wide range of sidecast removal method ideas was presented by the prospective contractors, including but not limited to: the construction of roads either into the creek down the slope, or by way of a catwalk accessible from the

road; the use of a crane lifting rock sacks; or use of a small excavator or skid steer in the creek to load larger rock pieces into a fabricated sled positioned on the slope and pulled up using a vehicle with a heavy-duty winch. Pulley systems, fabricated sleds, access roads, and the use of excavation and extraction machinery were all considered in various capacities. These methods were eliminated from further consideration on the basis that all approaches would result in disturbance to the streambed and/or canyon slopes, and at least one proposal was determined to be unreliable in effectiveness. The construction of roads to allow access for grading equipment is the safest and most effective approach to removing all sidecast material and re-enforcing unstable slopes below the road. However, SCE determined this approach would cause unacceptable impacts to the streambed or creek contours in addition to the resulting tree and vegetation removal. The proposed use of a fabricated sled system was determined to be infeasible due to the limited road width and would require equipment in the streambed that would result in impacts to the stream and cause downstream sedimentation.

Hand and Guzzler Removal was selected as the proposed primary method to remove sidecast because it would minimize impacts to resources and maximize the effectiveness of the removal. This method ultimately was determined to be the most environmentally sound, comprehensive, and safest strategy presented to SCE for use in most sidecast areas. However, Hand and Guzzler Removal cannot be used for some sidecast areas that are not accessible from the road; consequently, a broader range of methods needed to be evaluated in order for maximum sidecast removal to be achieved.

As a secondary level of review, in follow up to the 2020 scoping review, SCE's team of technical resource experts conducted the Project Scoping Survey in 2022 (described in Part 1, Section B.2 above) to investigate additional alternative sidecast removal techniques considered to be feasible, effective, and have a low level of impact. Primarily, alternative sidecast removal methods were reviewed for areas with limited road access, including SC 03, SC 03 Outliers, Creek Site 7, and Sidecast Areas 17 and 18. All other sidecast areas were then reviewed to refine the sidecast removal techniques selected for each area and identify any resource concerns and prospective solutions.

Several methods were considered by the team, a subset of which were reviewed and discussed at length as part of the field review. Removal methods considered and not selected for further consideration are briefly described below. Evaluation ratings and comments by the resource experts for methods ultimately not selected are presented in Table 3.

Table 3: Project Scoping Survey, Project Alternatives Considered-Potential Impacts by Resource

	Hand Removal SC03 Outliers		Hand & Winch Removal SC03 Outliers		Leave In Place (No Removal) SC03 Outliers		Hand & Guzzler Removal/Hand & Winch Removal (combination) SC03	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Hydrology	Not likely	Vegetation will be trimmed during for temporary trail development from terrace to creek. so as not to No impediment to creek flow - hydrologic & sediment transport function of the creek will not be changed.	Low w/mitigation	Mitigation to protect the slope during removal could include plywood or HDPE plates. Dislodged material, if any, will also need to be removed if flow channels are impacted, slope restoration will be required & BMPs for stormwater erosion deployed.	Not likely	Potential risk of sidecast material movement is considered low. If the material were to move, anticipate minimal impacts, if any, to stream hydrology. Individual rocks of specific concern could be grouted in place, as needed.	Moderate	Some potential for slope erosion & sediment transport downslope toward the creek. Rock material movement downslope will need to be removed to avoid potential stream impacts. Slope restoration and erosion control measures would mitigate higher potential impacts.
Native Vegetation/ Sensitive Plant Habitat	Low	Trimming of vegetation and creation of minor foot trails are anticipated. No anticipated impacts to roots. Low impact severity can be mitigated through revegetation practices upon completion.	Moderate	Vegetation may need to be cleared along corridors where materials may be winched upslopes. Soil compaction is likely along hauling routes that would need to be recontoured and decompacted following sidecast removal. All disturbed areas may be revegetated following sidecast removal activities.	Not likely	Vegetation is naturally recovering. No impacts to existing veg.	Low	Temporary impacts to herbaceous cover should quickly recover following sediment removal. Minimal cover currently exists. Woody resprouts would likely not be impacted

Hand Removal SC03 Outliers			Hand & Winch Removal SC03 Outliers		Leave In Place (No Removal) SC03 Outliers		Hand & Guzzler Removal/Hand & Winch Removal (combination) SC03	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Fish and Fish Habitat	Low	Temporary disturbance to in-channel debris for laborer access. Potential slight adjustments to the stream channel are possible. Movement of substrates may cause slight in channel modifications, the impact is low, as habitats from these substrates will still be present. Alterations to fish passage are not likely.	Low	Temporary disturbance to in-channel debris for laborer access. Potential slight adjustments to the stream channel are possible. Movement of substrates may cause slight in channel modifications, the impact is low, as habitats from these substrates will still be present. Alterations to fish passage are not likely. Low potential for passage impacts.	Moderate	In the event of disposition of sidecast material in creek temporary obstruction could occur which would result in scour and pool creation. In addition, a temp. flush of sediment could increase water temp/turbidity, but not to a significant level and not likely discernable over background levels.	Low	Sediment delivery to site would be minimized w/the implementation of BMPs and revegetation efforts. Any incidental sediment transport is not expected to be significant compared to background impacts to watershed. Thus, impacts to fish/fisheries, including passage are also expected to be minimal due to relocation of smaller gravel/cobble sediments during above average flow events
Waters and Waterways	Moderate	Moderate to low impacts w/in CDFW jurisdiction. Anticipated impacts largely tied to cutting/thinning of riparian vegetation. No fill impacts anticipated to ACOE.	Low	Temporary work zone to break rock in ACOE/CDFW jurisdiction. Potential for fall back of material in creek. CDFW impacts to native vegetation along removal path.	Not likely	No additional impacts anticipated. Slope revegetation underway. Work zone and temporary impacts would not occur. Rock in creek would remain but appears de minimis. No trail impacts would occur.	Low	Potential for fill discharge is low due to removal approved and distance from jurisdiction. Deploy BMPs as recommended

	Hand Removal SC03 Outliers		Hand & Winch Removal SC03 Outliers		Leave In Place (No Removal) SC03 Outliers		Hand & Guzzler Removal/Hand & Winch Removal (combination) SC03	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Stormwater/ Water Quality	Moderate	Moderate impacts anticipated from creation of trail through creek area. Removal of rock and sidecast material from terraced area above creek will have potential for erosion therefore soil stabilization BMP measures should be implemented. Extensive soil stabilization BMPs are warranted on exposed slopes following removal. Long term stabilization with vegetation will be necessary of exposed slopes.	High	Scouring to slopes is expected. Full vegetation removal is expected along path, which could create a concentrated flow path and lead to scouring of the slopes. Extensive Soil stabilization BMPs will be required for scour path. Removal of rock and sidecast material from terraced area above creek will have potential for erosion therefore soil stabilization BMP measures should be implemented to offset risk of sediment transport. Potentially high impact severity without stabilization measures may offset risks if extensive soil stabilization BMPs are implemented on exposed slopes following removal. Long term stabilization with vegetation will be necessary of exposed slopes.	Not likely	No impacts. Area is fully vegetated and stabilized.	High	Vegetation removal will be required to conduct this work leaving barren slopes with a potential of sediment discharge. Soil stabilization BMPs will be required for removal areas. Removal of rock will have the potential for erosion and soil stabilization BMP measures should be implemented to offset risk of sediment transport. Moderate impact severity without stabilization measures, risks may be offset if extensive soil stabilization BMPs are implemented on denuded slopes following removal. Long term stabilization with vegetation will be necessary of exposed slopes.

	Hand Removal SC03 Outliers		Hand & Winch Removal SC03 Outliers		Leave In Place (No Removal) SC03 Outliers		Hand & Guzzler Removal/Hand & Winch Removal (combination) SC03	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
Engineering and Geology	low/not likely	Minimal impacts on footpath. Minimal to no impacts to slopes. Impacts are dependent on means and methods used and route in which sidecast material is removed.	High/ Moderate	Moderate to high impacts to slope are expected, depending on contractor means & methods. Disturbance to surface may cause localized scour and/or sloughing	Not likely	No impact to slope stability	Low	Minor, loose debris removal likely minimal impact to existing slope.
Safety	Moderate	Foot access over rocks carry loads. Potential for cuts to hands by hand tools, wear cut resistant gloves. Work areas will need to be clear of personnel if larger trees or limbs are felled. Poison oak in area, only long sleeve shirts and full-length pants should be worn.	Moderate	Risk of rock particles or material falling on personnel, ensure all workers are clear from winch route, min. 50 yards to sides. Loose soils will need to be identified and ensure works stay off when going up & down the hillside	Low	None	Moderate	Loose soils & rock create overhead fall hazards. Make sure workers stay 20' left or right of equipment & lines. Remain tied off at all times & use buddy system. Poison oak in area, only long sleeve shirts and full-length pants should be worn. Stay left or right of load while it is being winched up hill to avoid other falling rock.

Hand Removal SC03 Outliers			Hand & Winch Removal SC03 Outliers		Leave In Place (No Removal) SC03 Outliers		Hand & Guzzler Removal/Hand & Winch Removal (combination) SC03	
Resource Area	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**	**Rating**	**Comment**
CEQA Checklist	Moderate	CEQA item: Recreation. The hand removal through the creek would extend the schedule by several days, possibly weeks to complete manual removal safely and completely. The extended schedule to accommodate this removal method would result in an extension of trail closure period.	Moderate	CEQA item: Visual Resources. This method would require removal of vegetation and would create an open slope and scarring visible from both the trail and across the Canyon.	Not likely	None	Moderate	CEQA item: Visual Resources. This method would require removal of vegetation and would create an open slope and scarring visible from both the trail and across the Canyon.

Alternate Method 1: Hand and Winch Removal System (Sidecast Area 3 and Sidecast Area 3 Outliers)

The Hand Removal and Winch Removal method was considered for Sidecast Area 3 (SC 03) and SC 03 Outliers, where the sidecast deposits are located down a steep slope more than 250 feet from the road. Sidecast materials would be manually broken into manageable pieces and loaded into rock sacks. The sacks would then be placed on frame packs where they would be hand carried upslope to areas accessible for connection to a winch or pulley system. The sleds would be attached to the cable of a winch system operated by a vehicle staged in the road and pulled upslope to the road. Materials would be collected and hauled away. This sidecast removal method could easily transport larger quantities of sidecast materials, when compared to other methods. However, it was not selected due to the potential impacts noted by Hydrology and Stormwater/Water Quality resource experts.

- Hydrology: potential for sediment movement and transport toward the creek, vegetation would be removed from steep slopes during removal activities, creating an open slope, with high flow velocities and erosion.

- Storm Water/Water Quality: following removal, slopes will be barren, requiring full stabilization measures. Extensive sediment/ and erosion controls will be required. There are stormwater concerns with the capacity to achieve long-term stabilization.

- Visual Resources: This method would require the removal of vegetation and would create an open slope and scarring visible from both the trail and across the Canyon.

Alternate Method 2: Hand Removal and Hike Out (Sidecast Area 3 Outliers)

The sidecast deposits at SC 03 Outliers consist of a few large rocks near the bottom of Mission Canyon and adjacent to Mission Creek. Hand removal of rocks in this area was considered, as rocks could be broken apart into manageable pieces (50 pounds or less) using sledgehammers and expanding joint compound, loaded into backpacks, and hiked out by technicians along approximately 2,000 linear feet adjacent to Mission Creek to Spyglass Ridge Road. There is no established trail, so this method would require the creation of a footpath along the Creek, and the use of a trail near local residential structures. While this method would avoid impacts from machinery and could remove large materials in proximity to the creek, it would introduce a new impact footprint and would likely require vegetation disturbance, removal of woody debris, and manipulation of unstable rocks within the creek for safety. This method was not selected due to potential impacts noted by SCE's Fish/Fish Habitat, Storm Water/Water Quality, Waters and Waterways, and Safety resource experts.

- Fish/Fish Habitat: This method would generate temporary disturbance to riparian vegetation and may require removal of in-channel debris, for laborer access. Potential slight adjustments to the stream channel are possible. Movement of substrates may cause slight in-channel modifications; however, the impact is low, as habitats from these substrates will still be present. Alterations to fish passage are not likely.

- Stormwater/Water Quality: Moderate impacts would be anticipated from the creation of a trail through the creek area, assuming vegetation roots remain along the footpath up to the established foot trail, and work is completed during a dry season.

- Waters and Waterways: Moderate impacts would be anticipated within CDFW jurisdiction, largely tied to cutting/thinning of riparian vegetation.

- Safety: Anticipated hazards would include the risk of injury resulting from slips, trips, and falls while carrying a load, and poison oak throughout the creek area.

Alternate Method 3: Pack Mules (Creek Site 7 and Sidecast Areas 17 and 18)

Pack mules were considered as a method for removal at sidecast areas located up Trail Road 2, where vehicle access is limited. These areas are Creek Site 7 and Sidecast Areas 17 and 18 (SC 17 and 18). This method includes the removal of small rocks, boulders, and soils by use of technicians raking, sorting, and digging up materials, then placing the material into bags (no more than 45 pounds each) to be loaded into pack saddles on mules. An animal handler would lead the team of mules up the Jesusita Trail to a designated staging area for offload. The use of mules (or other pack animals) was not selected for the Project due to several factors, including:

- Logistical challenges for animal housing near the Project Area, animal safety, and daily transportation.

- Disturbance to the trail resulting from animals traversing for ingress and egress.

- Daily manure produced from pack animals could introduce unwanted non-native seeds into the Mission Canyon ecosystem.

This method was not evaluated by resource experts during the Project Scoping Survey because the Hand Removal method was identified as the preferred technique, and no further evaluation of pack mule use was warranted after considering the factors listed above.

D. CONCLUSION

The scoping exercise and analysis described in this Report were important steps in developing the revised scope for the Proposed Project. As previously noted, the objective was to evaluate various techniques and identify methods that would result in safely removing the largest volume of sidecast material possible without causing additional harm to environmental resources. SCE achieved this objective by identifying two new methods to extract materials in certain locations that were previously thought to be unremovable.

The evaluation of methods revealed that removing the material from the SC 03 and SC 03 outlier sidecast areas by helicopter is by far the least impactful and most effective method for remote and inaccessible areas where Hand and Guzzler Removal is not feasible. This method will facilitate the full removal of material from this location. The SC 03 and SC 03 Outlier sidecast area is in proximity to the fish pool habitat within Mission Creek. The ability of the Project to extract this material will avoid the potentially reduced depth or loss of pools used by *Oncorhynchus mykiss* to move within the reach and to refugia sites along Mission Creek if sidecast material were left on the banks and were to later move downgradient into the creek. Additionally, it will avoid the possible increased sediment loads that could result from the possible downgradient movement if sidecast were left on the banks, which could reduce habitat quality. The brief duration of flight time and focus on manual methods to load materials for removal will minimize

disturbance to the public and protect against the potential loss of spawning gravel, instream cover, food resources, and decreased fish passage for *O. mykiss* and other aquatic resources.

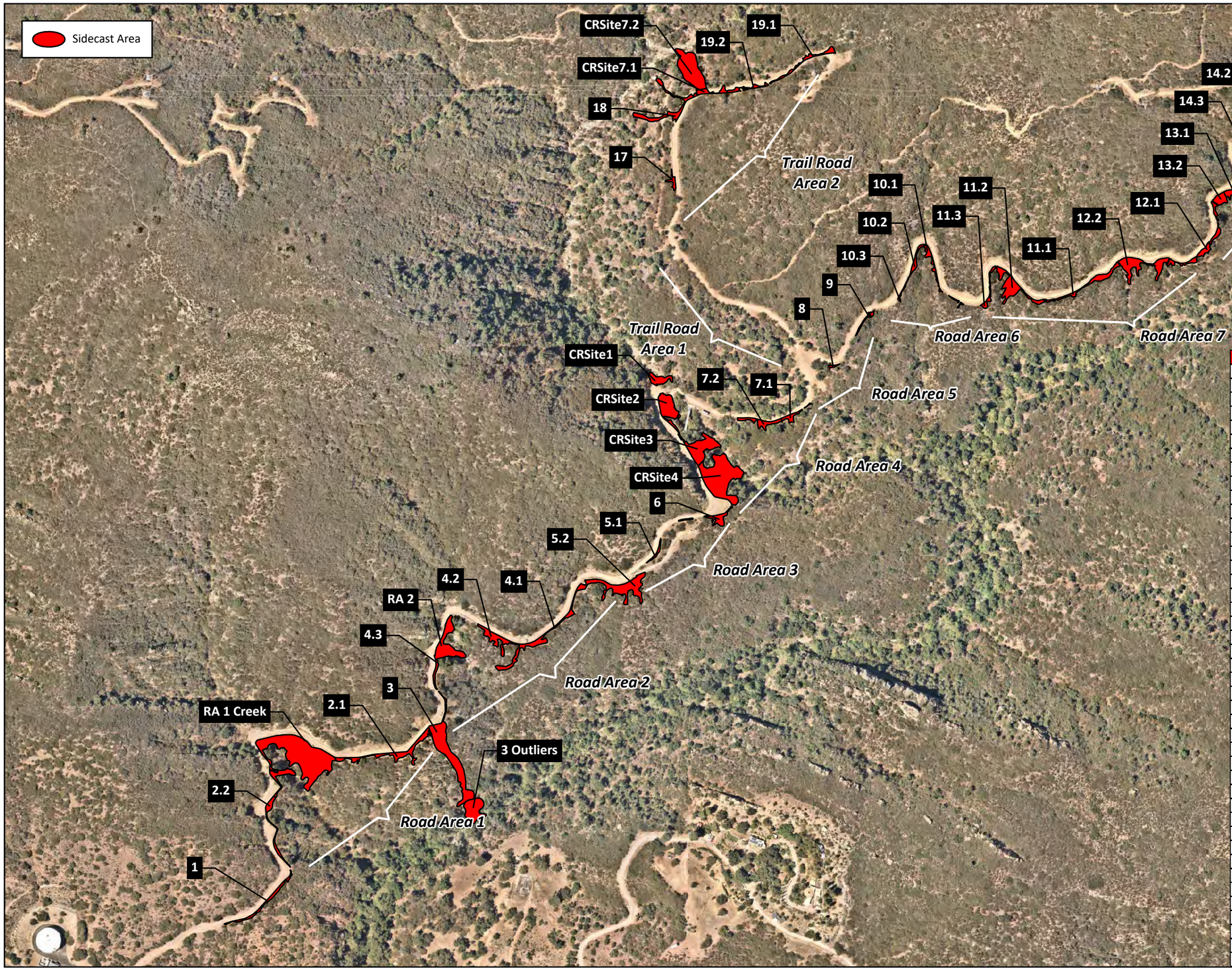
The second method to use Hand Removal to extract materials from sidecast areas Creek Site 7, SC 17, and 18 was also added to the Proposed Project scope. This method to remove the scattered boulders and limited fines will be less impactful than other methods considered for sidecast removal at these locations, such as using pack mules, and is expected to fully remove materials from these areas.

As shown through the comparison between the Proposed Project and the Full Sidecast Removal Project scenarios, SCE determined that the Proposed Project would be the least impactful of the two Project options. While the Proposed Project notes potential constraints to full removal in certain locations, it will remove nearly 100 percent of the sidecast materials. In contrast, the Full Sidecast Removal Project scenario could result in greater impacts to resources by extracting all materials despite the noted constraints when compared to the Proposed Project, which would avoid these potential impacts.

In conclusion, SCE's Proposed Project, as described in detail in the Creek HRP, provides for safe and highly effective methods to fully restore the Mission Canyon areas affected by the 2019 road widening activities in a manner that is least impactful to environmental resources. The revisions to the scope discussed in this Report ensure the Proposed Project would optimize the removal of sidecast material while protecting the environment.

Appendix A

Map Book of Mission Creek Sidecast Areas and Analysis



Sidecast Abbreviation	Sidecast Area	Map Book Page
1	Sidecast Area 1	Page 2
2.2	Sidecast Area 2 - Subarea 2.2	Page 3
RA 1 Creek	Road Area 1 Creek	Page 4
2.1	Sidecast Area 2 - Subarea 2.1	Page 5
3	Sidecast Area 3	Page 6
3 Outliers	Sidecast Area 3 - Outliers	Page 7
4.3	Sidecast Area 4 - Subarea 4.3	Page 8
RA 2 Creek	Road Area 2	Page 9
4.2	Sidecast Area 4 - Subarea 4.2	Page 10
4.1	Sidecast Area 4 - Subarea 4.1	Page 11
5.2	Sidecast Area 5 - Subarea 5.2	Page 12
5.1	Sidecast Area 5 - Subarea 5.1	Page 13
6	Sidecast Area 6	Page 14
CRSite4	Creek Site 4	Page 15
CRSite3	Creek Site 3	Page 16
CRSite2	Creek Site 2	Page 17
CRSite1	Creek Site 1	Page 18
7.2	Sidecast Area 7 - Subarea 7.2	Page 19
7.1	Sidecast Area 7 - Subarea 7.1	Page 20
17	Sidecast Area 17	Page 21
18	Sidecast Area 18	Page 22
CRSite7.1	Creek Site 7.1	Page 23
CRSite7.2	Creek Site 7.2	Page 24
19.2	Sidecast Area 19 - Subarea 19.2	Page 25
19.1	Sidecast Area 19 - Subarea 19.1	Page 26
8	Sidecast Area 8	Page 27
9	Sidecast Area 9	Page 28
10.3	Sidecast Area 10 - Subarea 10.3	Page 29
10.2	Sidecast Area 10 - Subarea 10.2	Page 30
10.1	Sidecast Area 10 - Subarea 10.1	Page 31
11.3	Sidecast Area 11 - Subarea 11.3	Page 32
11.2	Sidecast Area 11 - Subarea 11.2	Page 33
11.1	Sidecast Area 11 - Subarea 11.1	Page 34
12.2	Sidecast Area 12 - Subarea 12.2	Page 35
12.1	Sidecast Area 12 - Subarea 12.1	Page 36
13.2	Sidecast Area 13 - Subarea 13.2	Page 37
13.1	Sidecast Area 13 - Subarea 13.1	Page 38
14.3	Sidecast Area 14 - Subarea 14.3	Page 39
14.2	Sidecast Area 14 - Subarea 14.2	Page 40
14.1	Sidecast Area 14 - Subarea 14.1	Page 41
15	Sidecast Area 15	Page 42
16.2	Sidecast Area 16 - Subarea 16.2	Page 43
16.1	Sidecast Area 16 - Subarea 16.1	Page 44

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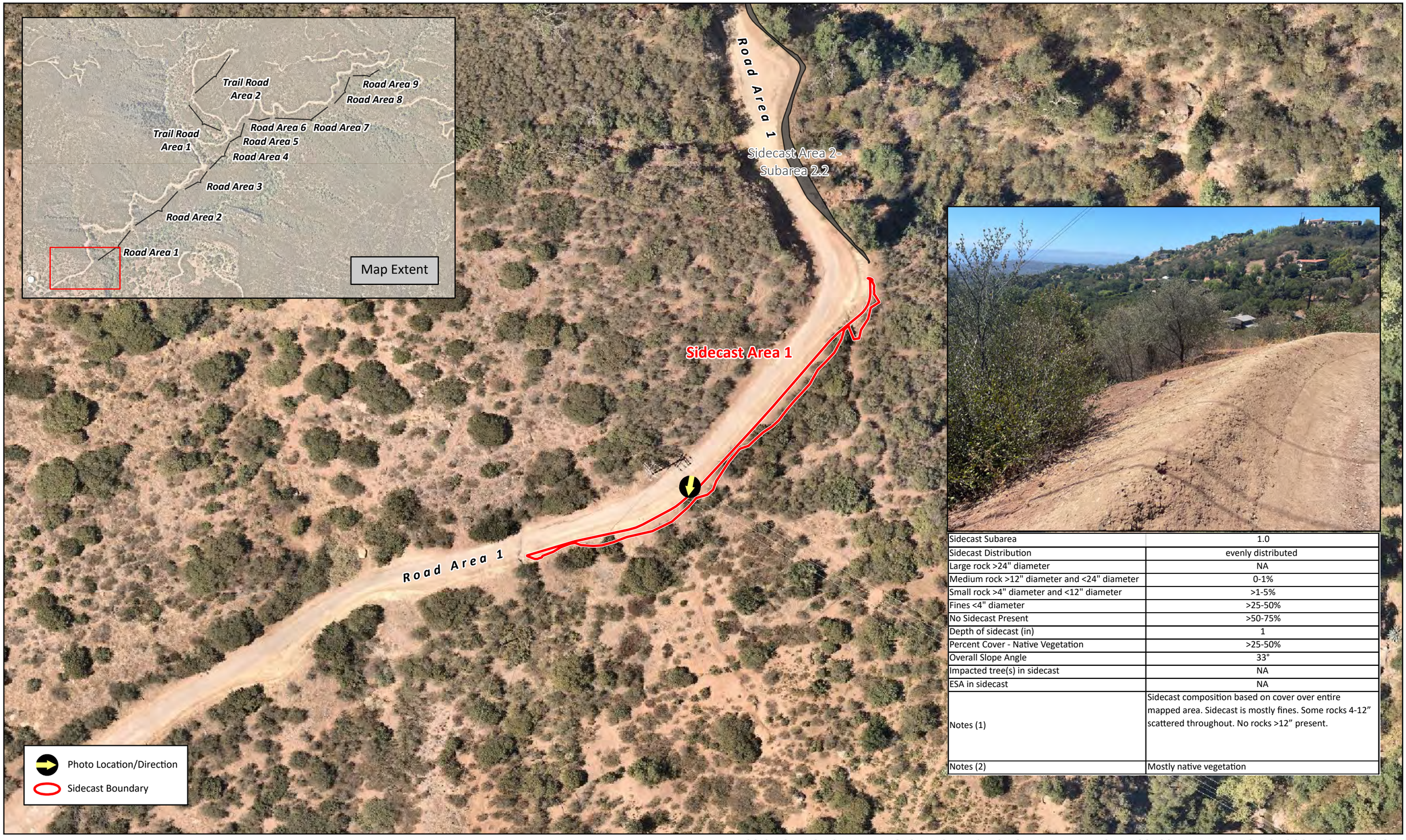
0 75 150 300 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Map Book Overview



Sidecast Subarea	1.0
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	0-1%
Small rock >4" diameter and <12" diameter	>1-5%
Fines <4" diameter	>25-50%
No Sidecast Present	>50-75%
Depth of sidecast (in)	1
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	33°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast is mostly fines. Some rocks 4-12" scattered throughout. No rocks >12" present.
Notes (2)	Mostly native vegetation

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 1

Road Area 1 Creek

Sidecast Area 2- Subarea 2.1

Road Area 1

Sidecast Area 2 - Subarea 2.2

Sidecast Subarea	2.2
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>50-75%
No Sidecast Present	>25-50%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	13
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Very steep slopes, some accumulations of larger rocks >6" at base of shrubs, most of sidecast is fines and rocks <4".
Notes (2)	NA

Road Area 1

Sidecast Area 1

Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

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Source:

Sidecast Area 2 - Subarea 2.2

Road Area 1

Road Area 1 Creek

Sidecast Area 2-
Subarea 2.2

Sidecast Subarea	RA 1 creek
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>5-25%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>25-50%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	12
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Most of sidecast is fines <4". Larger rocks >24" within drainage area.
Notes (2)	NA

Sidecast Boundary

Photo Location/Direction

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Subarea	2.1
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>50-75%
No Sidecast Present	>25-50%
Depth of sidecast (in)	1
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. One section about 100ft long with dense vegetation. Remaining area is bare. Several large rocks 3-4’ present. Most of sidecast is small, <6”. Mostly fines.
Notes (2)	NA

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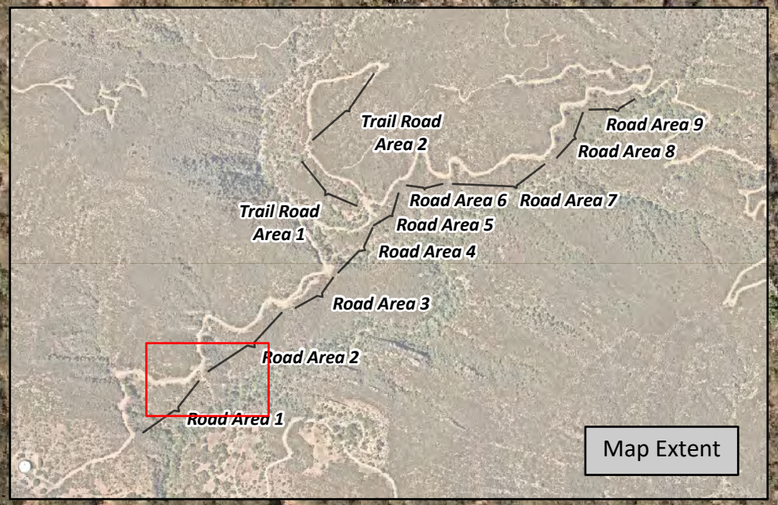
0 12.5 25 50 Feet

Source:

Sidecast Area 2 - Subarea 2.1



Sidecast Area 4- Subarea 4.2

Sidecast Area 4- Subarea 4.3

Sidecast Area 3

Road Area 2

Road Area 1

Sidecast Area 2- Subarea 2.1

Road Area 1 Creek

Sidecast Area 3- Outliers

Sidecast Subarea	3.0
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>50-75%
No Sidecast Present	>5-25%
Depth of sidecast (in)	1
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	Trees are far downslope not surveyed
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Mostly bare ground. Most of large material appears to have fallen far downslope. Sidecast <4" throughout the area. One Peruvian pepper tree about 20 m downslope.
Notes (2)	Depth varies.

Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

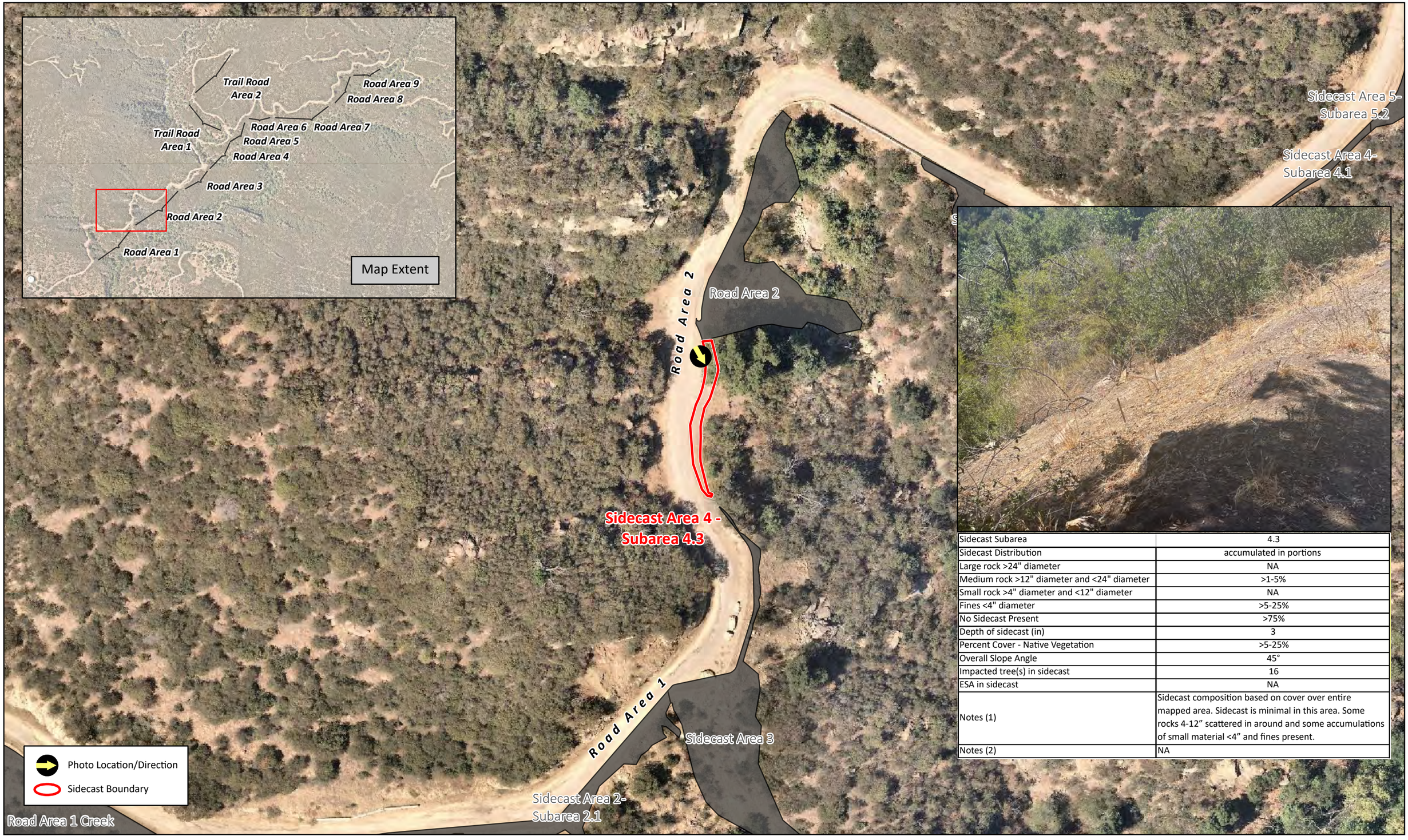
Sidecast Subarea	3 Outliers
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>1-5%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	NA
No Sidecast Present	>75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>75%
Overall Slope Angle	NA
Impacted tree(s) in sidecast	254
ESA in sidecast	NA
Notes (1)	A few scattered medium rocks at toe of slope and two large rocks >4' in diameter. Most of area has no sidecast present.
Notes (2)	No data collected on sidecast depth

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 3 Outliers



Sidecast Subarea	4.3
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	>1-5%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>75%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	16
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast is minimal in this area. Some rocks 4-12" scattered in around and some accumulations of small material <4" and fines present.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

MISSION CANYON STREAM RESTORATION PROJECT, SUPPLEMENTAL SITE ASSESSMENT AND PROJECT SCOPING ANALYSIS

Sidecast Area 4 - Subarea 4.3

Road Area 2

Road Area 2

Sidecast Area 4- Subarea 4.3

Sidecast Area 3

Sidecast Subarea	Road Area 2
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>5-25%
Medium rock >12" diameter and <24" diameter	>25-50%
Small rock >4" diameter and <12" diameter	>25-50%
Fines <4" diameter	>5-25%
No Sidecast Present	>5-25%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	NA
Impacted tree(s) in sidecast	17, 18, 19, 20
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Most of sidecast is small to medium rocks with few large rocks. All sidecast is within within jurisdictional drainage area.
Notes (2)	No data collected on sidecast depth

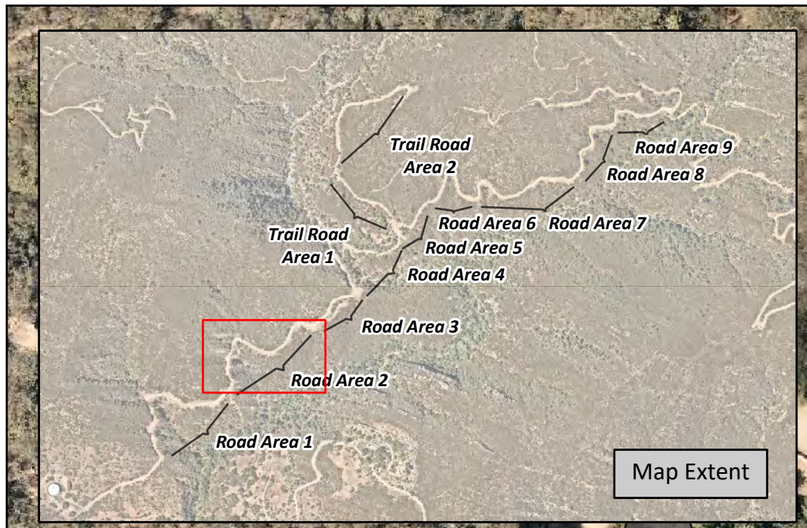
Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Road Area 2

Sidecast Area 5- Subarea 5.2

Sidecast Area 4 - Subarea 4.2

Road Area 2

Road Area 2

Sidecast Area 3

Photo Location/Direction

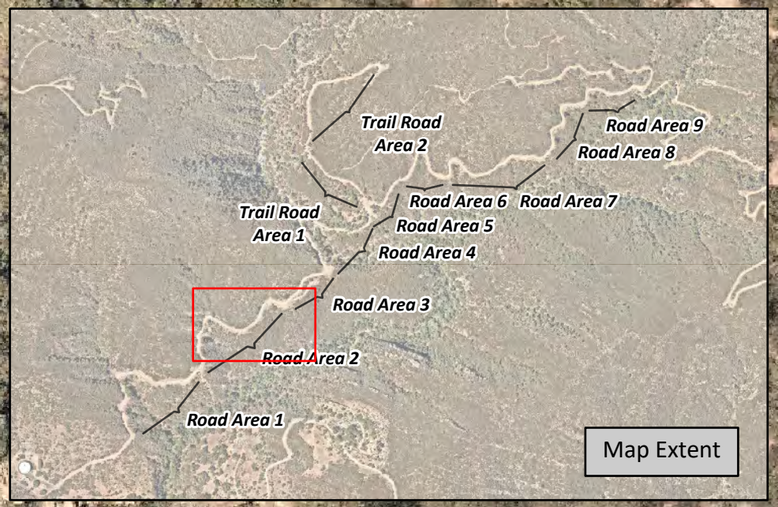
Sidecast Boundary

Sidecast Subarea	4.2
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>50-75%
Depth of sidecast (in)	2.5
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Most of area is bare ground, large accumulations of material towards the downslope side of the sidecast at the base of shrubs- about 40ft sq.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Sidecast Subarea	4.1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	>1-5%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>25-50%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	52°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Some larger rocks accumulated at the base of shrubs below where mapped. Accumulations of fine material <4" and fines throughout.
Notes (2)	Not much sidecast present, small accumulation at vegetation line downslope. Mostly native vegetation

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 6

Sidecast Area 5- Subarea 5.1

Road Area 3

Sidecast Area 5 - Subarea 5.2

Road Area 2

Sidecast Area 4- Subarea 4.1

Sidecast Area 4- Subarea 4.2

Photo Location/Direction

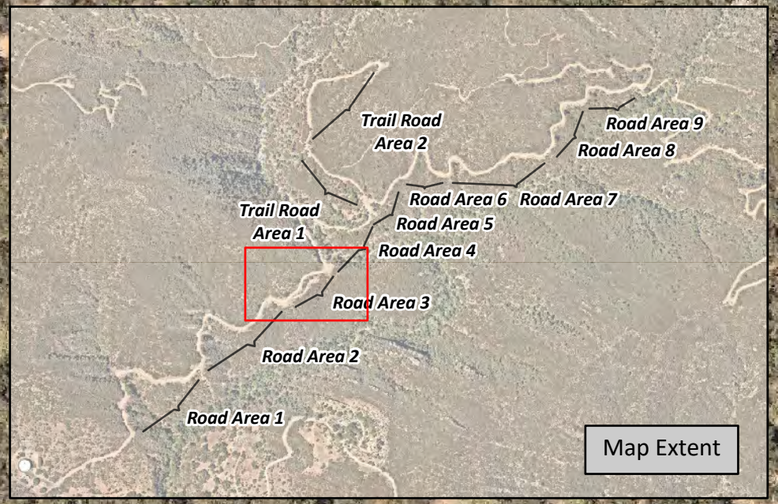
Sidecast Boundary

Sidecast Subarea	5.2
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>5-25%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	NA
No Sidecast Present	>75%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>1-5%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	21
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Area is mostly bare ground. Sidecast <4" throughout but larger rocks 4-20" accumulated at base of shrubs. Some larger rocks >24 scattered throughout (45-50 sqft total).
Notes (2)	Side cast accumulated along vegetation line.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Creek Site 3

Creek Site 4

Sidecast Ar

Sidecast Area 5 - Subarea 5.1

Road Area 3

Road Area 2

Sidecast Area 5- Subarea 5.2

Photo Location/Direction

Sidecast Boundary

Sidecast Area 4- Subarea 4.1

Sidecast Subarea	5.1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>50-75%
No Sidecast Present	>25-50%
Depth of sidecast (in)	4
Percent Cover - Native Vegetation	>1-5%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Most of sidecast is fines and <4". One ceanothus m. And one malosma in northern sidecast, less than 5 percent of total area.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

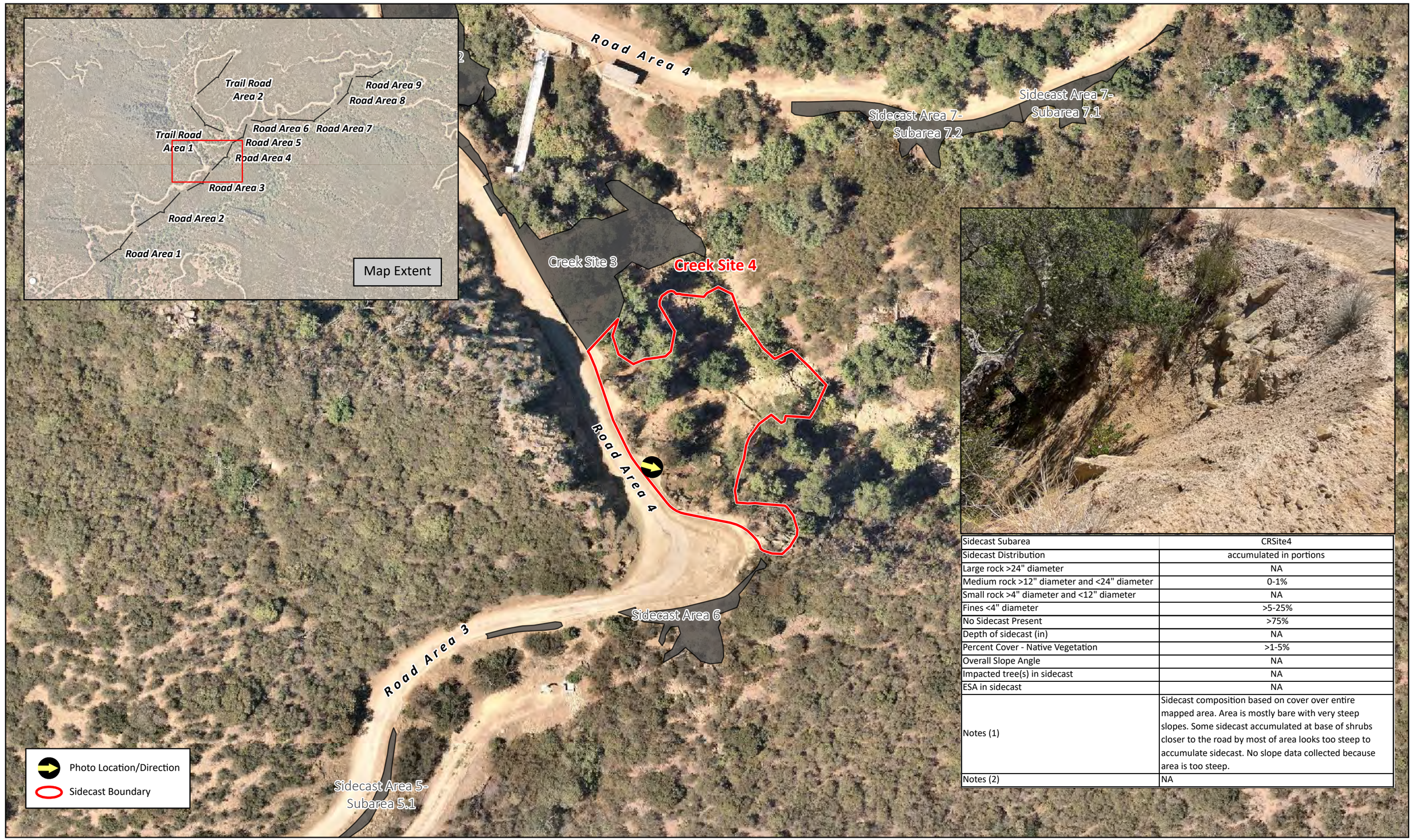
Source:

Sidecast Subarea	6.0
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>25-50%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>25-50%
Depth of sidecast (in)	1.5
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	50°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Vegetation cover is low. Fines and rocks <4" present throughout, rocks >6" up to 20" accumulated at the most downslope portion of the area.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

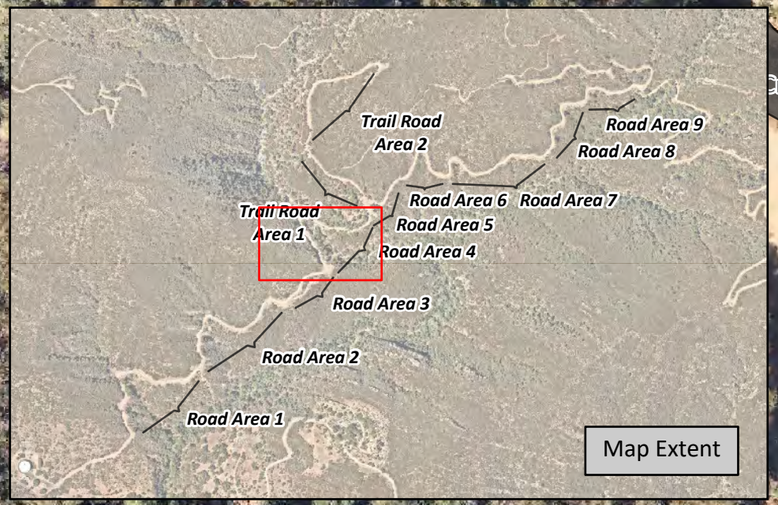


Sidecast Subarea	CRSite4
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	0-1%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>1-5%
Overall Slope Angle	NA
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Area is mostly bare with very steep slopes. Some sidecast accumulated at base of shrubs closer to the road by most of area looks too steep to accumulate sidecast. No slope data collected because area is too steep.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

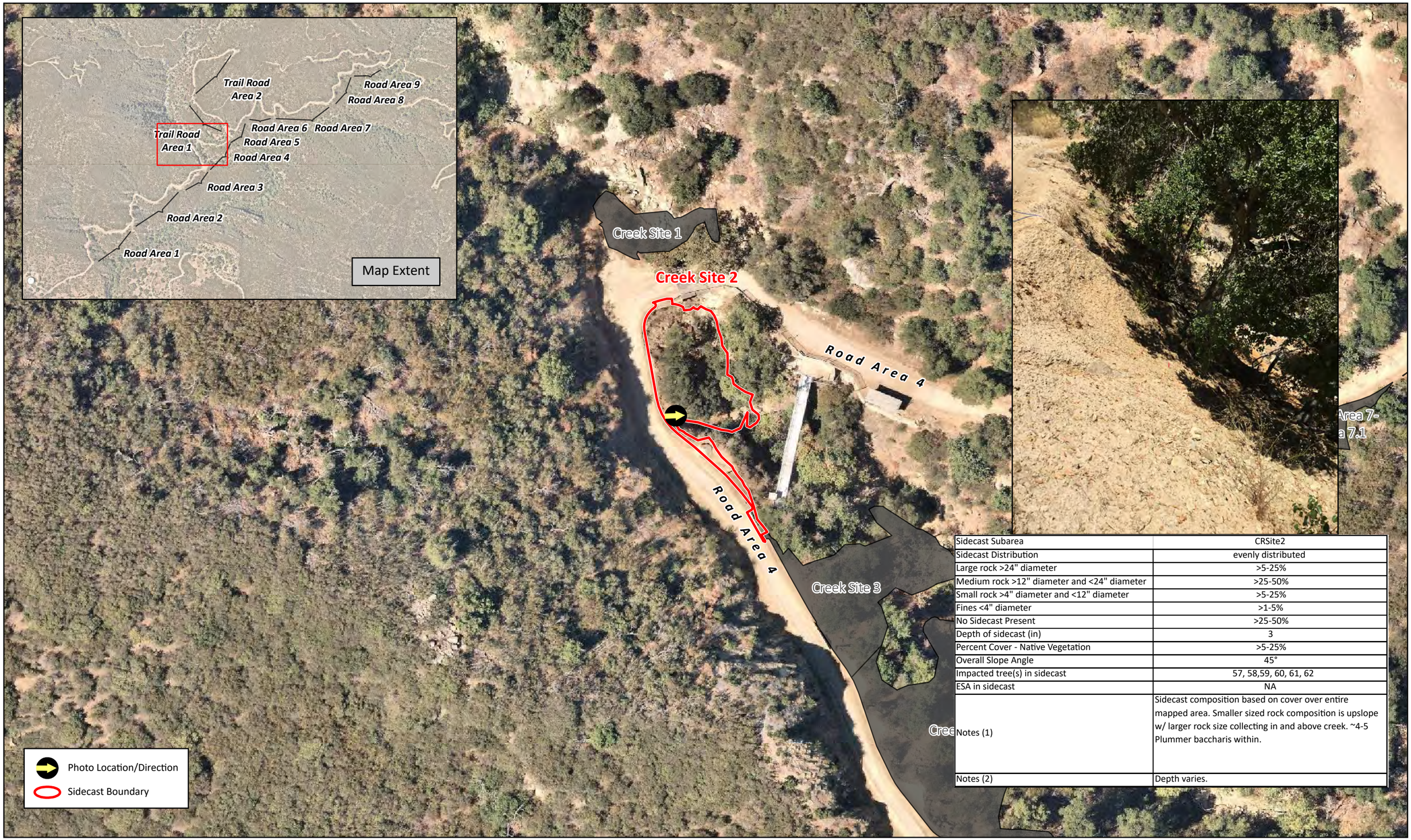


Sidecast Subarea	CRSite3
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>5-25%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>25-50%
Depth of sidecast (in)	1
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	60°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Lots of sidecast in this area and distributed throughout. Accumulations of rock about 40 percent of area. 3-4 large boulders 3-5' against trees.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



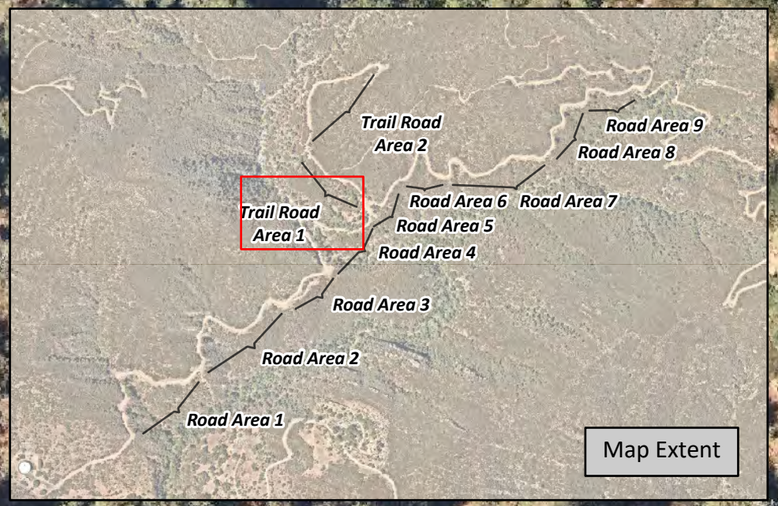
Sidecast Subarea	CRSite2
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>5-25%
Medium rock >12" diameter and <24" diameter	>25-50%
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>1-5%
No Sidecast Present	>25-50%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	57, 58,59, 60, 61, 62
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Smaller sized rock composition is upslope w/ larger rock size collecting in and above creek. ~4-5 Plummer baccharis within.
Notes (2)	Depth varies.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Creek Site 2



Creek Site 1

Road Area 4

Creek Site 2

Road Area 4

Creek Site 3

Creek Site 4

Photo Location/Direction

Sidecast Boundary

Sidecast Subarea	CRSite1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>25-50%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	NA
No Sidecast Present	>50-75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	NA
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Most sidecast appears to be large boulders, covered with netting. No soil data collected because area is mostly large boulders with some fines in between.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Road Area 5

Road Area 4

Creek Site 2

Sidecast Area 7 - Subarea 7.2

Sidecast Area 7- Subarea 7.1

Road Area 4

Creek Site 3

Creek Site 4

Sidecast Subarea	7.2
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>25-50%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>25-50%
Depth of sidecast (in)	5
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Some rocks up to 5’ present. Rocks 20-36” in piles throughout area. Area up to 90% sidecast.
Notes (2)	Depth varies.

Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Subarea	7.1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	0-1%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>1-5%
No Sidecast Present	>75%
Depth of sidecast (in)	5
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	195, 196
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast <4" (including sand) throughout, some large boulders (3-4') at base of vegetation.
Notes (2)	Depth varies.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 7 - Subarea 7.1

Sidecast Area 18

Road Area 4

Sidecast Area 17

Trail Road Area 2

Trail Road Area 1

Sidecast Subarea	17.0
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>5-25%
No Sidecast Present	>50-75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	30°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast is minimal and within 2m of road, about 15 percent of area. A few scattered larger rock downslope. Most of the area is berm, sidecast is
Notes (2)	Sensitive species present in sidecast. Sidecast is mainly the berm in this area.

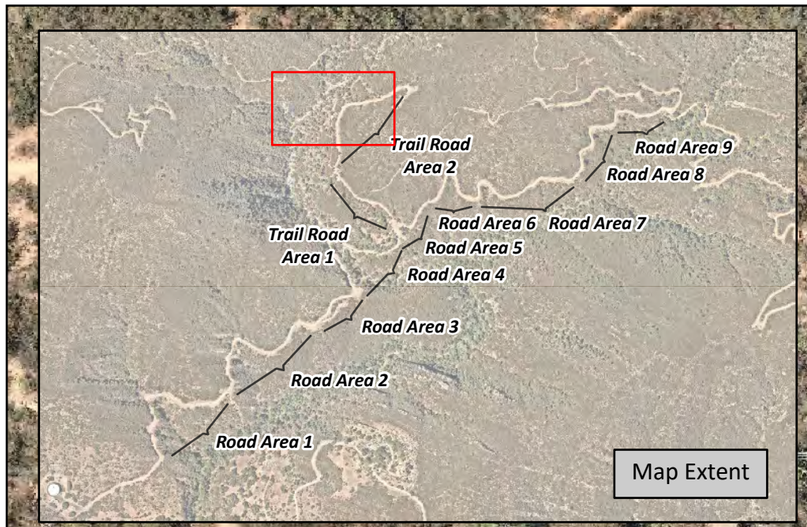
Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Sidecast Area 18

Creek Site 7.2

Creek Site 7.1

Trail Road Area 2

Sidecast Area 17

Sidecast Subarea	18.0
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	>25-50%
Fines <4" diameter	>5-25%
No Sidecast Present	>50-75%
Depth of sidecast (in)	2
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	35°
Impacted tree(s) in sidecast	109
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast is minimal and within 2m of road with a few scattered larger rock downslope. Baccharis plummarae near tree #109. Sidecast fines <4" throughout. Some scattered boulders (2' or greater) present.
Notes (2)	Sensitive species present in sidecast. Sidecast is mainly the berm in this area.

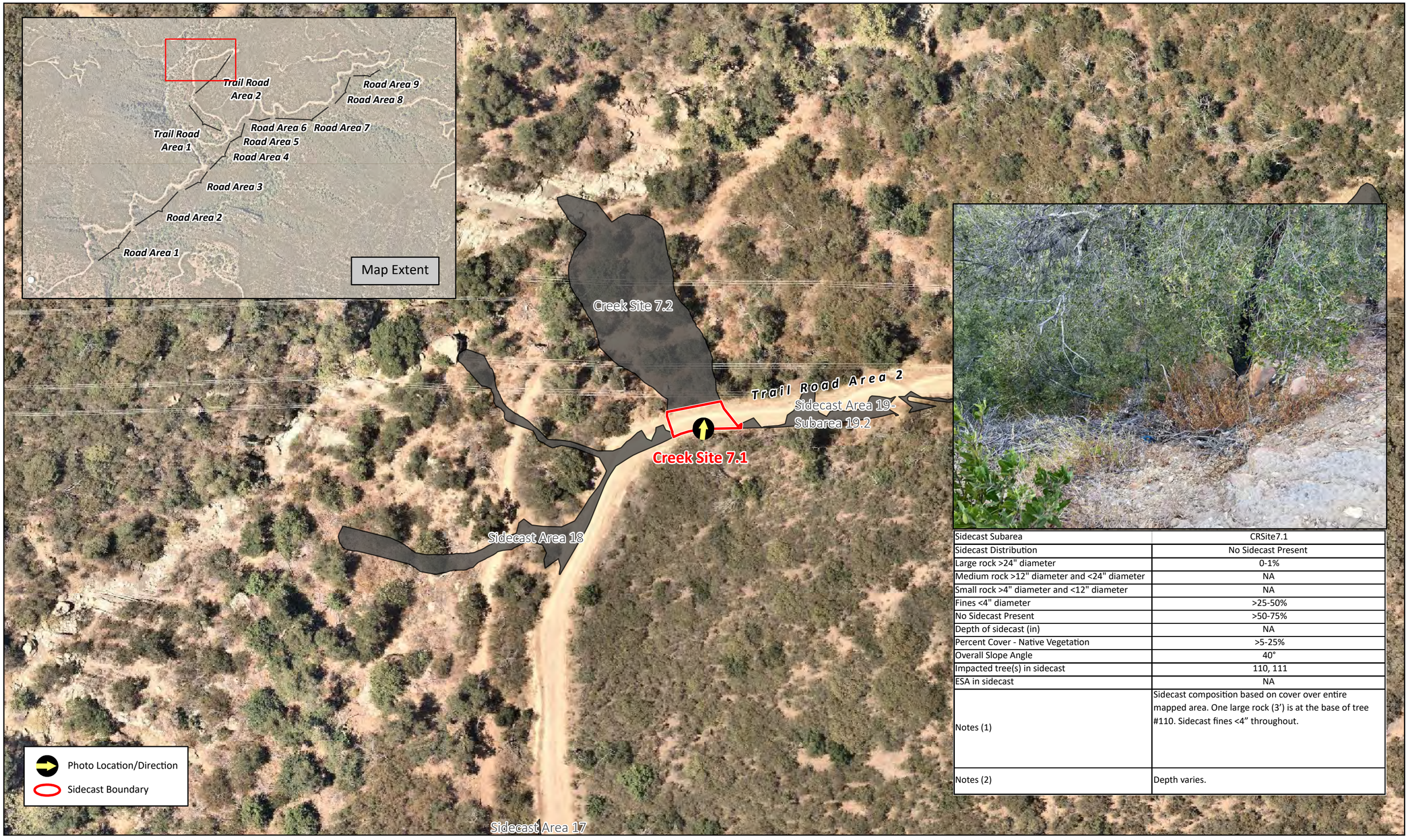
Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

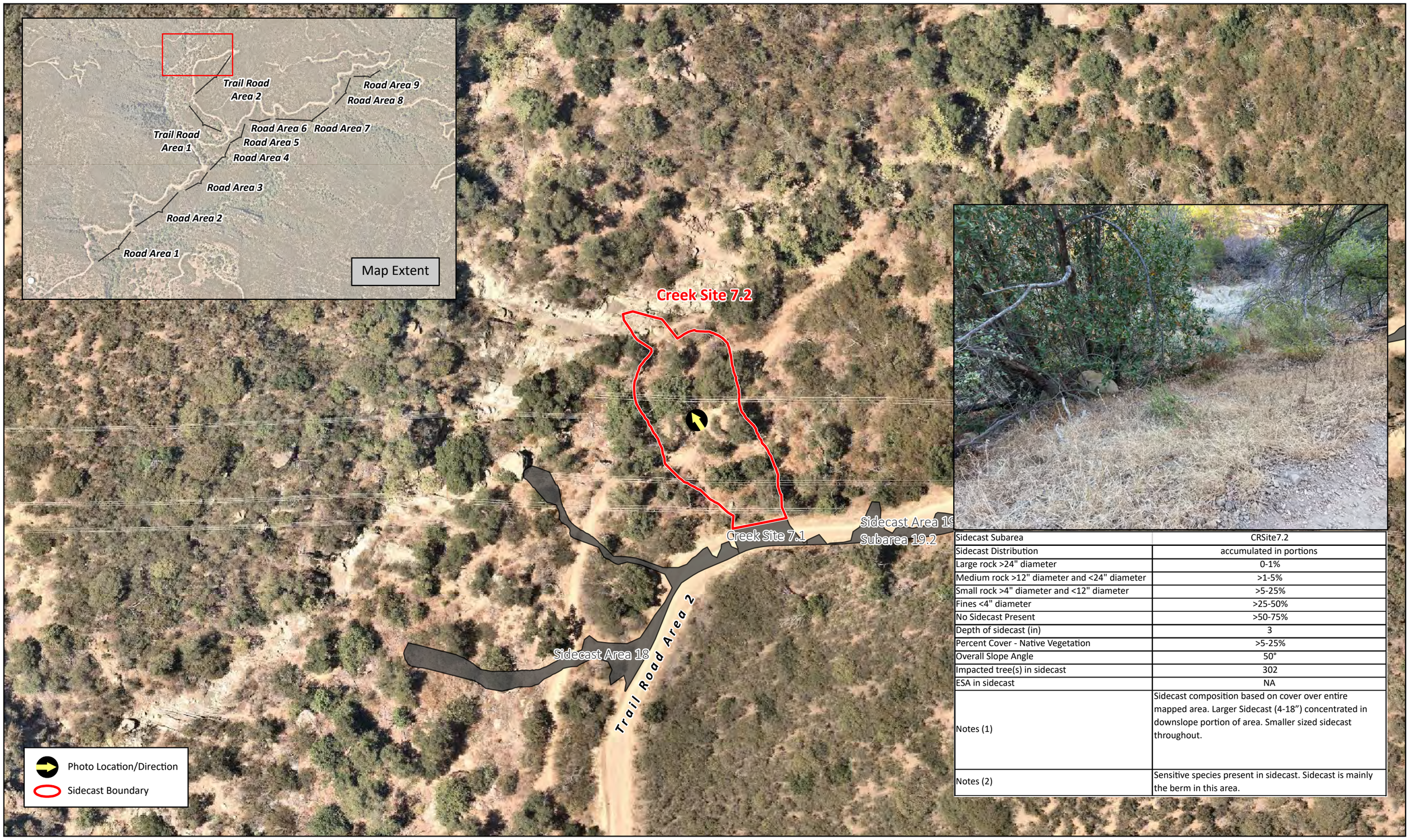


Sidecast Subarea	CRSite7.1
Sidecast Distribution	No Sidecast Present
Large rock >24" diameter	0-1%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>50-75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	110, 111
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. One large rock (3') is at the base of tree #110. Sidecast fines <4" throughout.
Notes (2)	Depth varies.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

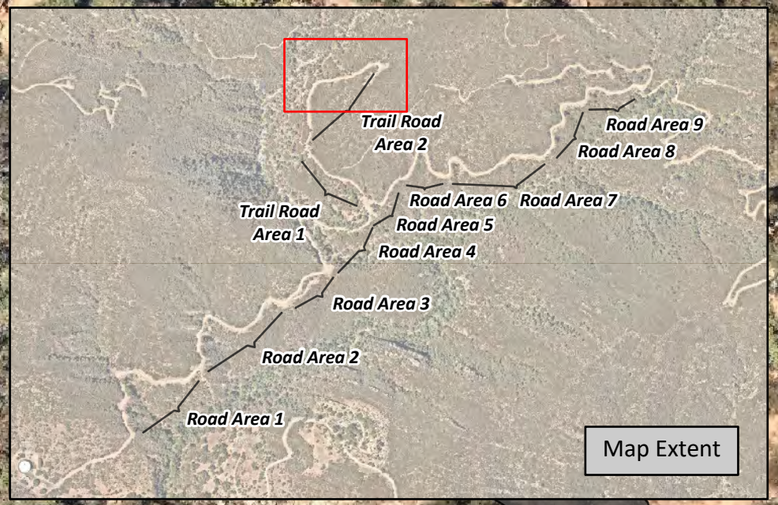


Sidecast Subarea	CRSite7.2
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	0-1%
Medium rock >12" diameter and <24" diameter	>1-5%
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>25-50%
No Sidecast Present	>50-75%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	50°
Impacted tree(s) in sidecast	302
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Larger Sidecast (4-18″) concentrated in downslope portion of area. Smaller sized sidecast throughout.
Notes (2)	Sensitive species present in sidecast. Sidecast is mainly the berm in this area.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Sidecast Subarea	19.2
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>50-75%
Depth of sidecast (in)	4
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	35°
Impacted tree(s) in sidecast	113, 114
ESA in sidecast	Several Lonicera subspicata var. denudata
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast is mostly fine materials (sand to <4") and even throughout. Some areas of larger material (4"-8") accumulated at the base of shrubs.
Notes (2)	NA

Creek Site 7.2
Sidecast Area 19 - Subarea 19.2
Creek Site 7.1
Sidecast Area 18
Trail Road Area 2
Photo Location/Direction
Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 19 - Subarea 19.2

Sidecast Area 19 - Subarea 19.1

Trail Road Area 2

Creek Site 7.2

Creek Site 7.1

Sidecast Area 19-Subarea 19.2

Sidecast Area 18

Photo Location/Direction

Sidecast Boundary

Sidecast Subarea	19.1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	1-5%
Medium rock >12" diameter and <24" diameter	50-75%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>5-25%
Depth of sidecast (in)	5
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. About 80% of the area is covered in sidecast. Rocks 4-24" are through and accumulate at the base of shrubs. Material <4" is found throughout the area
Notes (2)	Depth varies

HELIX Environmental Planning

0 12.5 25 50 Feet

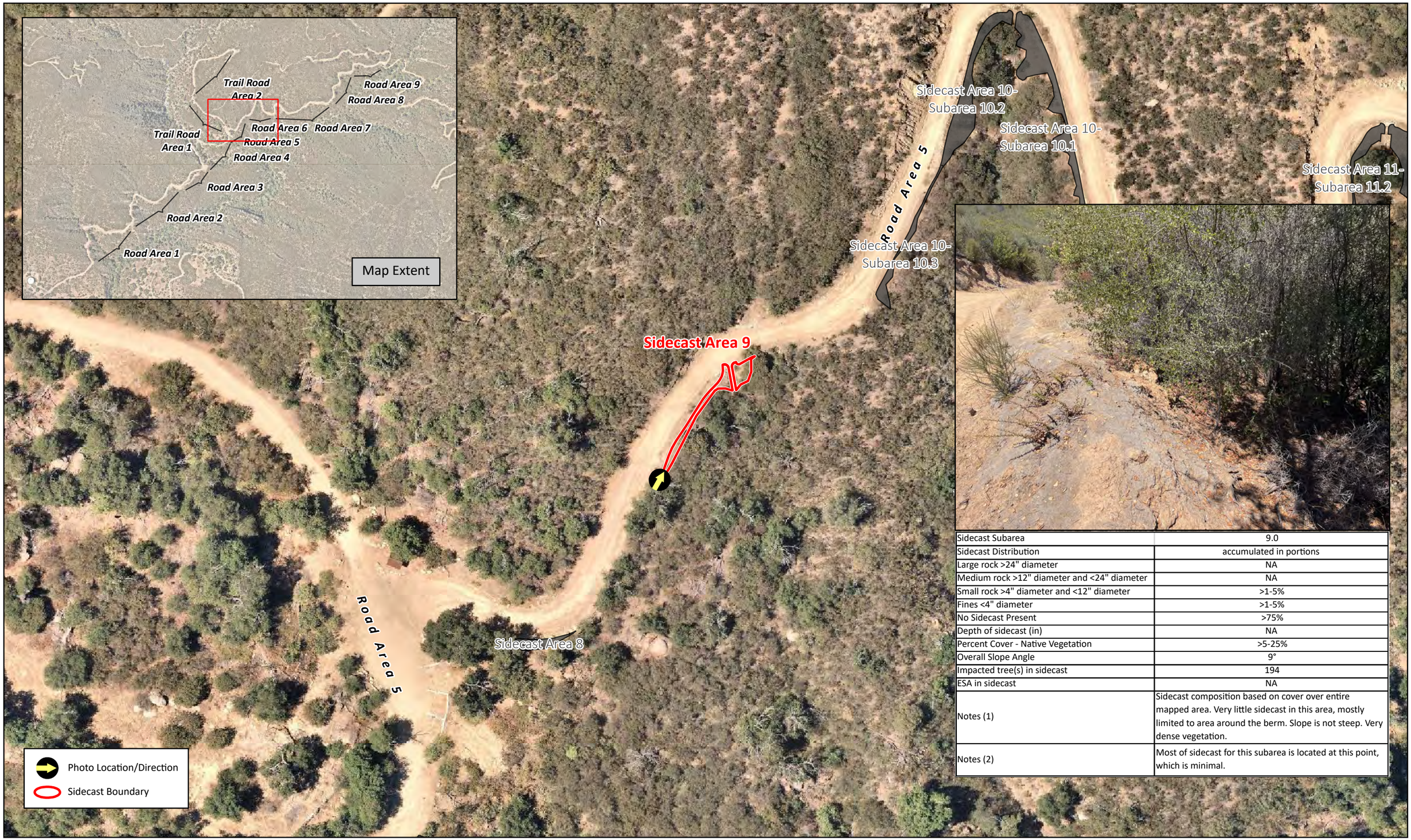
Source:

Sidecast Subarea	8.0
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>50-75%
Depth of sidecast (in)	2
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	35°
Impacted tree(s) in sidecast	68, 69
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast is mostly several large rocks 12-24”. Some smaller rocks (6-10”) scattered around trees
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Sidecast Subarea	9.0
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	>1-5%
Fines <4" diameter	>1-5%
No Sidecast Present	>75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	9°
Impacted tree(s) in sidecast	194
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Very little sidecast in this area, mostly limited to area around the berm. Slope is not steep. Very dense vegetation.
Notes (2)	Most of sidecast for this subarea is located at this point, which is minimal.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Subarea	10.3
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>25-50%
Depth of sidecast (in)	1
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sparse shrub cover, about 2-3" of <4" sidecast throughout, larger rocks 6-12" are resting at the base of shrubs.
Notes (2)	NA

Sidecast Area 10- Subarea 10.2
Sidecast Area 10- Subarea 10.1
Sidecast Area 10 - Subarea 10.3
Road Area 6
Road Area 5
Sidecast Area 9
Sidecast Area 8
Photo Location/Direction
Sidecast Boundary
0 12.5 25 50 Feet
Source:

Sidecast Area 10 - Subarea 10.2

Road Area 6

Sidecast Area 10- Subarea 10.1

Sidecast Area 10- Subarea 10.3

Road Area 5

Sidecast Area 9

Sidecast Subarea	10.2
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>1-5%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>50-75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Vegetation is more sparse, larger sidecast material present- most of area is covered with <4" sidecast with 6-7 18-24" rocks.
Notes (2)	NA

Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 10 - Subarea 10.1

Sidecast Area 10- Subarea 10.2

Road Area 6

Sidecast Area 10- Subarea 10.3

Sidecast Area 9

Road Area 5

Sidecast Area 1 Subarea 11.3

Sidecast Subarea	10.1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>25-50%
No Sidecast Present	>50-75%
Depth of sidecast (in)	2
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Evenly distributed sidecast <4", denser native cover.
Notes (2)	NA

Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 11 - Subarea 11.3

Sidecast Area 10- Subarea 10.1

Sidecast Area 10- Subarea 10.3

Sidecast Area 11- Subarea 11.2

Sidecast Area 9

Road Area 7

Road Area 6

Sidecast Subarea	11.3
Sidecast Distribution	evenly distributed
Large rock >24" diameter	0-1%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	NA
No Sidecast Present	>75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	35°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Mostly fines throughout, some accumulations at the base of shrubs.
Notes (2)	NA

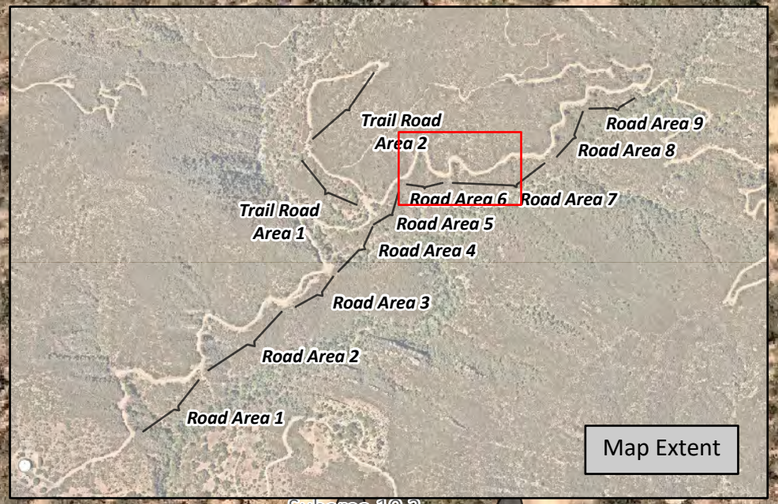
Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Subarea 10.2

Sidecast Area 10- Subarea 10.1

Sidecast Area 10- Subarea 10.3

Road Area 7

Road Area 6

Sidecast Area 11 - Subarea 11.2

Sidecast Area 11- Subarea 11.3

Sidecast Area 9

Photo Location/Direction

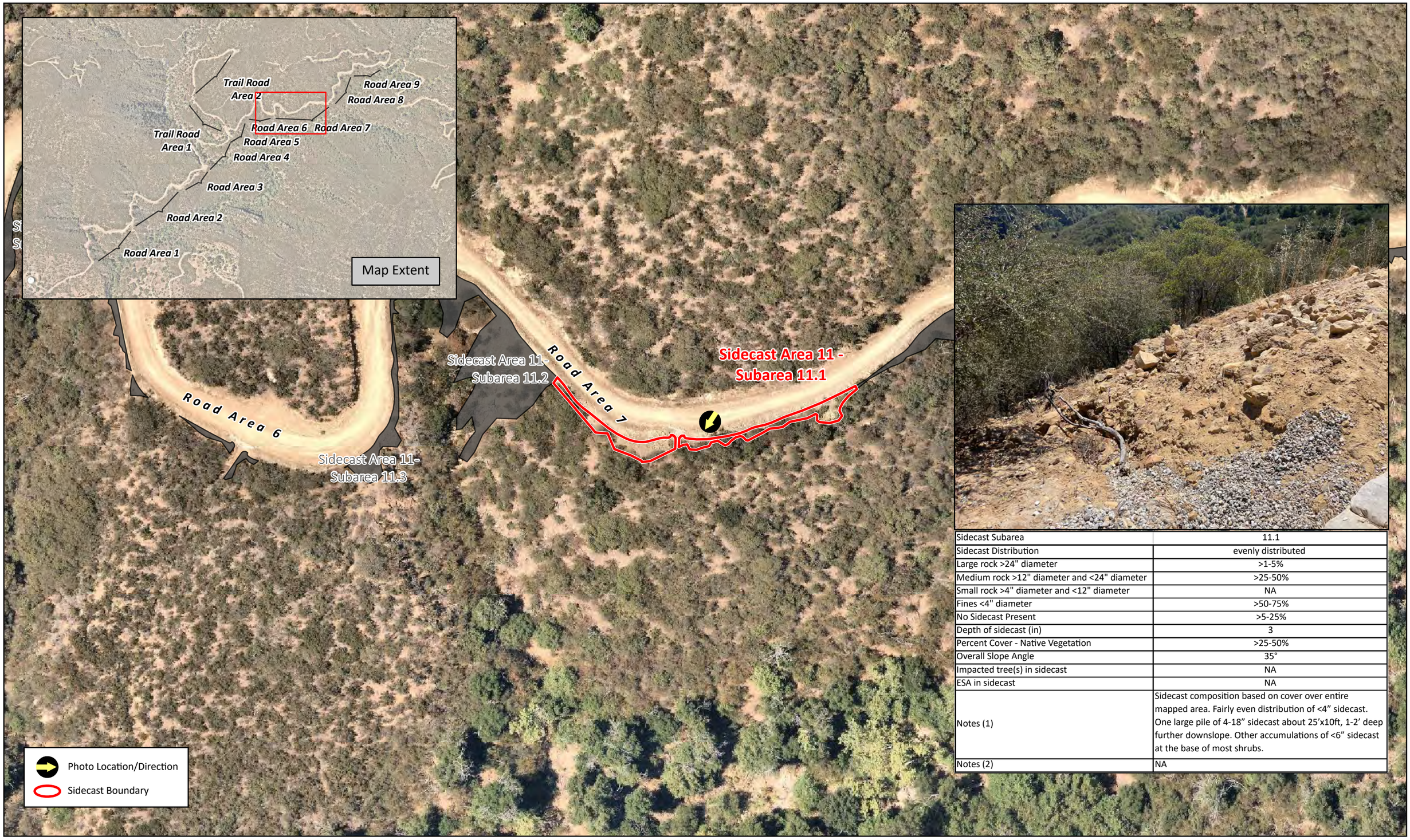
Sidecast Boundary

Sidecast Subarea	11.2
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>5-25%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>50-75%
Depth of sidecast (in)	2
Percent Cover - Native Vegetation	>1-5%
Overall Slope Angle	52°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. <4" sidecast throughout with some accumulations of 4-8" rocks. Most of Sidecast accumulated further downslope. Area mostly bare.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

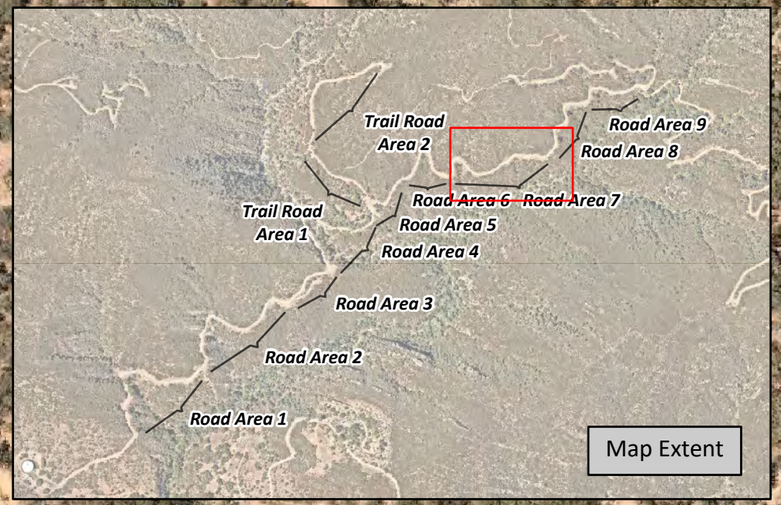


Sidecast Subarea	11.1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>25-50%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>50-75%
No Sidecast Present	>5-25%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	35°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Fairly even distribution of <4" sidecast. One large pile of 4-18" sidecast about 25'x10ft, 1-2' deep further downslope. Other accumulations of <6" sidecast at the base of most shrubs.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Sidecast Area 13- Subarea 13.1

Sidecast Area 13- Subarea 13.2

Sidecast Area 12 - Subarea 12.2

Sidecast Area 11- Subarea 11.3

Sidecast Area 11- Subarea 11.2

Road Area 7

Sidecast Area 11- Subarea 11.1

Sidecast Subarea	12.2
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	>25-50%
Small rock >4" diameter and <12" diameter	>25-50%
Fines <4" diameter	>25-50%
No Sidecast Present	>5-25%
Depth of sidecast (in)	1
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	40°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Smaller sidecast (<4" throughout). patches of larger rocks (4-12") throughout, some areas appear up to 1' deep
Notes (2)	NA

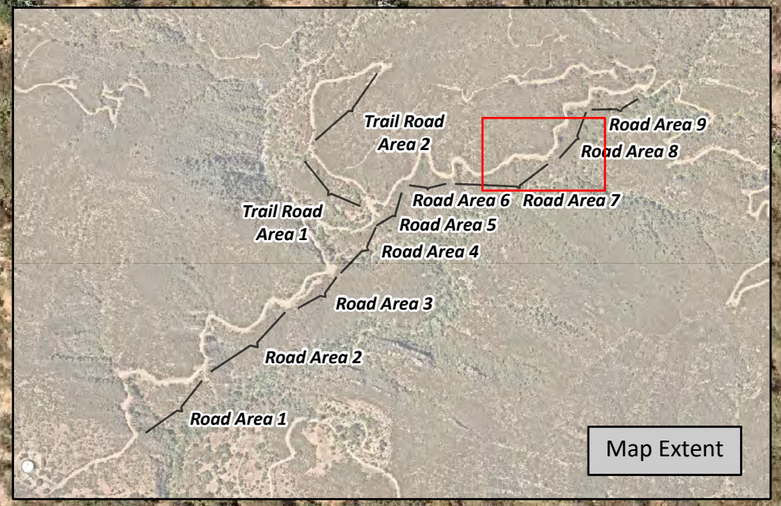
Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:



Sidecast Area 13- Subarea 13.1

Sidecast Area 13- Subarea 13.2

Sidecast Area 12 - Subarea 12.1

Road Area 8

Road Area 7

Sidecast Area 12- Subarea 12.2

Sidecast Area 11- Subarea 11.1

Photo Location/Direction

Sidecast Boundary

Sidecast Subarea	12.1
Sidecast Distribution	evenly distributed
Large rock >24" diameter	NA
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>50-75%
No Sidecast Present	>5-25%
Depth of sidecast (in)	2
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	50°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast <4" fairly evenly distributed. Some larger rocks 4-12" accumulate at the base of shrubs
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 12 - Subarea 12.1

Sidecast Subarea	13.2
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	NA
No Sidecast Present	>75%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	48°
Impacted tree(s) in sidecast	75, 76
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. One area 15'x4' of rocks 4"-12", about 8-12" deep. Some sidecast at the base of shrubs.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 13 - Subarea 13.2

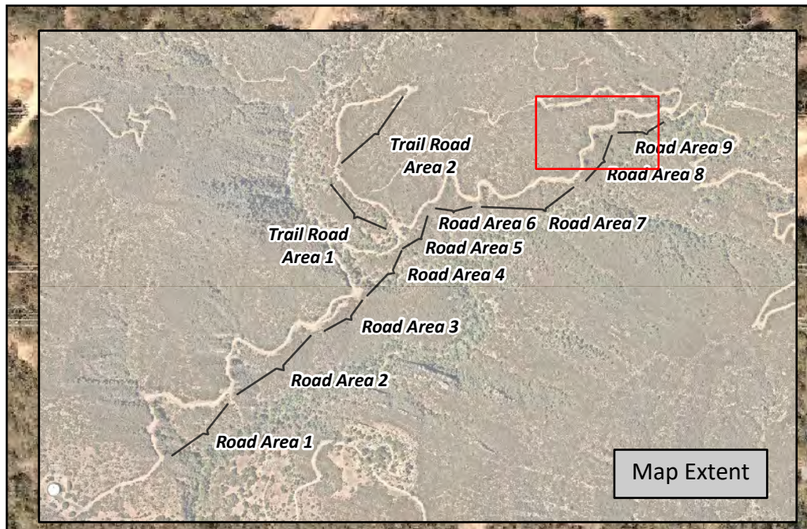
Sidecast Subarea	13.1
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>50-75%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	37°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. 3-4 Boulder >24", one 10x10' area of deeper sidecast, 1-2' deep. Some pockets of sidecast at the base of shrubs.
Notes (2)	Depth varies.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 13 - Subarea 13.1



Sidecast Area 14 - Subarea 14.3

Road Area 8

Road Area 9

Sidecast Area 14- Subarea 14.2

Sidecast Area 13- Subarea 13.1

Sidecast Area 13- Subarea 13.2

Sidecast Area 12- Subarea 12.1

Sidecast Subarea	14.3
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	0-1%
Medium rock >12" diameter and <24" diameter	>1-5%
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>25-50%
No Sidecast Present	>25-50%
Depth of sidecast (in)	2
Percent Cover - Native Vegetation	>1-5%
Overall Slope Angle	35°
Impacted tree(s) in sidecast	78
ESA in sidecast	Tree at the edge 78
Notes (1)	Sidecast composition based on cover over entire mapped area. Some accumulation of sidecast under tree, 6'x6', 6-8" deep of 4-12" rocks. Some patches are smaller sidecast closer to road
Notes (2)	NA

Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 14 - Subarea 14.3

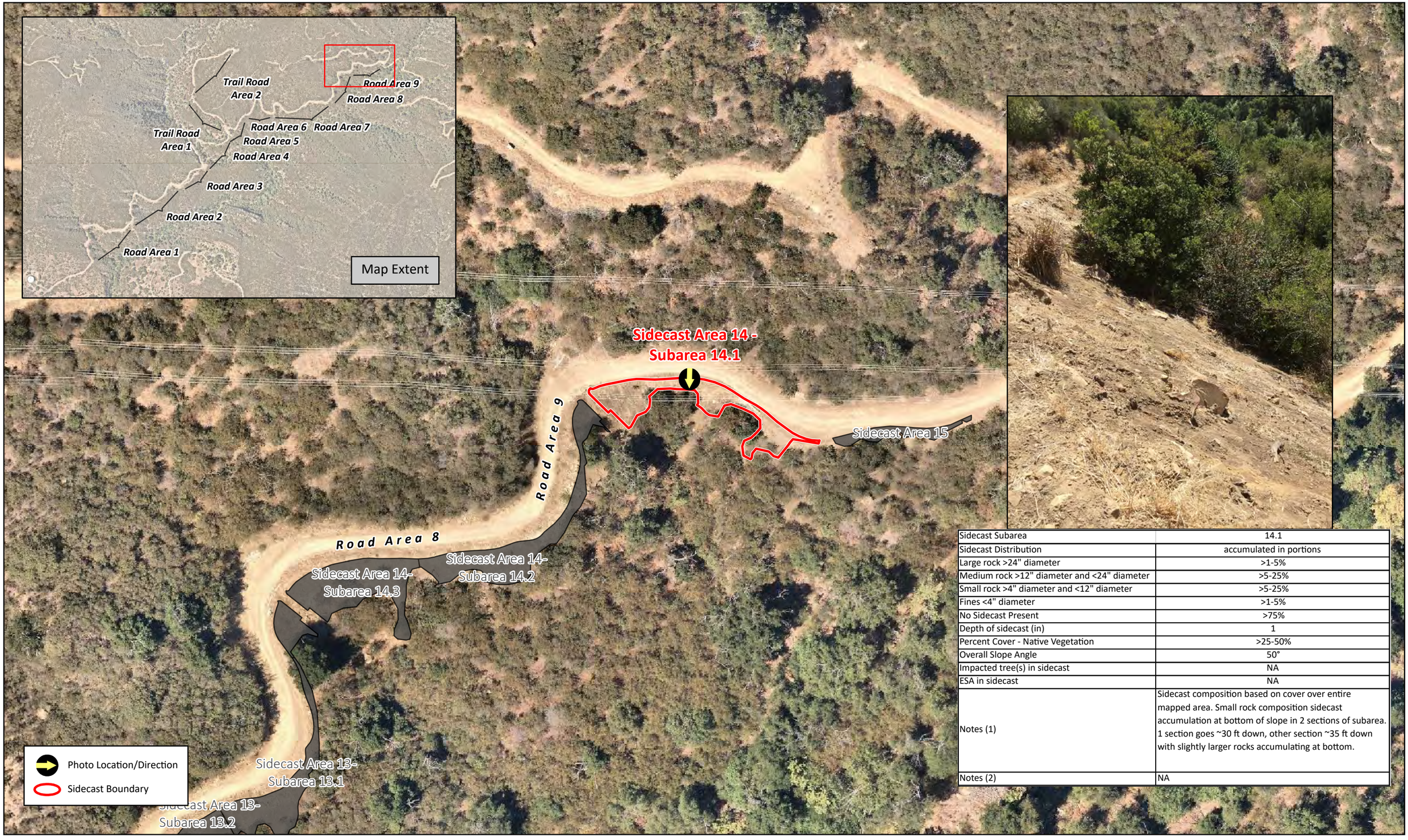
Sidecast Subarea	14.2
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	NA
No Sidecast Present	>50-75%
Depth of sidecast (in)	4
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	43°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Larger sidecast (rocks 4-12") accumulated at base of shrubs, 100' long X 3' wide, 6-8" deep, about 5-6 boulders 2-3' long, 1-2' wide.
Notes (2)	Depth varies.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 14 - Subarea 14.2



Sidecast Subarea	14.1
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>5-25%
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>1-5%
No Sidecast Present	>75%
Depth of sidecast (in)	1
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	50°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Small rock composition sidecast accumulation at bottom of slope in 2 sections of subarea. 1 section goes ~30 ft down, other section ~35 ft down with slightly larger rocks accumulating at bottom.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 16- Subarea 16.1

Sidecast Area 16- Subarea 16.2

Sidecast Area 14- Subarea 14.1

Sidecast Area 15

Road Area 9

Road Area 8

Sidecast Area 14- Subarea 14.2

Sidecast Area 14- Subarea 14.3

Photo Location/Direction

Sidecast Boundary

Sidecast Area 13- Subarea 13.2

Sidecast Subarea	15.0
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	0-1%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	>5-25%
Fines <4" diameter	>5-25%
No Sidecast Present	>50-75%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	5°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. 2 ft large boulders outside majority of Sidecast. 3'x10' area consisting of smaller Sidecast.
Notes (2)	NA

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 16 - Subarea 16.2

Sidecast Area 16- Subarea 16.1

Road Area 9

Sidecast Area 15

Sidecast Area 14- Subarea 14.1

Sidecast Area 14- Subarea 14.2

Sidecast Area 14- Subarea 14.3

Photo Location/Direction

Sidecast Boundary

Sidecast Subarea	16.2
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	>1-5%
Small rock >4" diameter and <12" diameter	>1-5%
Fines <4" diameter	0-1%
No Sidecast Present	>75%
Depth of sidecast (in)	NA
Percent Cover - Native Vegetation	>5-25%
Overall Slope Angle	50°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. Sidecast has wide random distribution mostly containing larger rocks but low Sidecast coverage.
Notes (2)	Large sidecast boulders below survey point.

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Sidecast Area 16 - Subarea 16.1

Sidecast Area 16- Subarea 16.2

Sidecast Area 14- Subarea 14.1

Road Area 9

Sidecast Area 15

Sidecast Area 14- Subarea 14.2

Sidecast Subarea	16.1
Sidecast Distribution	accumulated in portions
Large rock >24" diameter	>1-5%
Medium rock >12" diameter and <24" diameter	NA
Small rock >4" diameter and <12" diameter	NA
Fines <4" diameter	>5-25%
No Sidecast Present	>75%
Depth of sidecast (in)	3
Percent Cover - Native Vegetation	>25-50%
Overall Slope Angle	45°
Impacted tree(s) in sidecast	NA
ESA in sidecast	NA
Notes (1)	Sidecast composition based on cover over entire mapped area. 1 large Boulder 3'x2', several others about 2' long. One area of fine sidecast (2-4", up to 6-8").
Notes (2)	NA

Photo Location/Direction

Sidecast Boundary

HELIX Environmental Planning

0 12.5 25 50 Feet

Source:

Appendix B

Comparative Scoping Analysis Team: Experience and Qualifications

Appendix B
Comparative Scoping Analysis Team: Experience and Qualifications

Waters and Waterways: Richard Beck, CEP, PWS, CERP, CPESC, Michael Baker International

Richard Beck, PWS, CERP, CPESC. Mr. Beck is a Vice President with Michael Baker international. Mr. Beck is a Senior Regulatory Specialist and Professional Wetland Scientist. For over 20 years, Mr. Beck has conducted wetland delineation and other functional assessments associated with state and federal regulated waters. Mr. Beck also serves as President of the Society of Wetland Scientists' Western Chapter.

Hydrology: Todd Bear, D. Env., EcoKai Environmental, Inc.

Dr. Bear is a senior environmental engineer/scientist and biologist with over 20 years of experience in a wide variety of environmental projects, including riparian habitat surveying and monitoring, geomorphological characterizations of stream systems, and multiple ground water, surface water, and storm water monitoring projects. He also performs jurisdictional delineations in urban and remote waterways and wetlands, develops hydrological monitoring plans for construction projects near sensitive resources, performs biological resource surveys and risk assessments, and regulatory compliance and permitting under Sections 401, 402, and 404 of the Clean Water Act and Section 1600, *et seq*., of the California Fish and Wildlife Code.

Hydrology: Jim Burton P.E. QSD/P, EcoKai Environmental, Inc.

Mr. Burton is a Professional Engineer with over 30 years of experience in water resources evaluation, hydrogeological investigations, and compliance for projects with environmental and regulatory permitting requirements. He has extensive experience in the analysis of water quality, surface and groundwater hydrological characteristics, and field data collection. His experience also includes the management and implementation of mitigation and monitoring projects related to permit compliance and documentation for construction projects that are often in close proximity to sensitive natural resources. His technical experience includes the evaluation, planning, and implementation of projects balancing hydrologic and biological resources in compliance with local, state, and federal regulatory permit requirements. He has direct field management experience on large ground water and surface water monitoring programs and hydrogeological assessments for large development projects.

Air Operations: Jack Matiasevich, Operations Senior Advisor, SCE Aircraft Operations

Aircraft Management and Operations Senior Advisor with Southern California Edison, Jack Matiasevich is an accomplished pilot and has been incident- and accident- free for over 36,000 flight hours. For the past three decades, Jack has developed his skills in the utility, aerial firefighting, air ambulance, agriculture, and construction sectors. In his 10 years at Southern California Edison, Jack supports daily operations and maintenance, wildfire mitigation and fire restoration efforts including supporting human external cargo (HEG) operations. Jack was accepted into the Helicopters Association international (HAI) Board of Directors in 2018.

Storm Water and Water Quality: Lucy Cortez, CPESC, CESSWI, QSD/P, SCE

Lucy Cortez-Johnson has over 18 years of experience in environmental consulting, with 15 of those years directly related to Water Quality compliance of the Construction General Permit (CGP) and local ordinance stormwater permittees. As a Qualified SWPPP Developer (QSD), Qualified SWPPP Practitioner (QSP), and CGP Trainer of Record (ToR) Lucy's primary responsibilities include managing projects that have stormwater permittee requirements, including the preparation and implementation of Storm Water Pollution Prevent Plans (SWPPPs), Erosion and Sediment Control Plans (ESCPs) and Water Quality Management Plans (WQMP), while evaluating water quality risks and mitigating with BMPs during field implementation.

Fisheries and Fish Habitat: Greg Davis, HELIX Environmental Planning, Inc.

Greg Davis is a consulting biologist with seven years of experience working as a wetland scientist and botanist throughout California. He has extensive experience in planning, design, and construction oversight for salmonid habitat restoration/enhancement projects that include fish barrier removal, road decommissioning, in-stream large woody debris placement, riparian planting, and upslope sediment reduction. Additionally, Mr. Davis is familiar with special-status plant and wildlife species, as well as sensitive habitats that occur in California, and routinely conducts biological resources assessments, rare plant surveys, and wetland delineations.

Native Vegetation and Sensitive Plant Habitats: Justin Fischbeck, CERP; HELIX Environmental Planning, Inc.

Mr. Fischbeck leads the Restoration Practice at HELIX and has 24 years of experience with the restoration of native California habitats. He is the Responsible Managing Officer for HELIX's A General Engineering and C-27 Landscape contractor's licenses, as well as a restoration biologist by training. His areas of expertise include the creation of habitat for endangered or threatened species, creation of wetlands or waterways, and solutions to construction- or development-related water quality issues. His project experience includes habitat restoration, grading for restoration and waterway projects, sensitive species propagation and translocation, and programmatic invasive species control. He has served as principal-in-charge or project manager for a variety of restoration projects ranging from small on-site restoration efforts to large-scale restoration projects covering hundreds of acres.

Engineering and Geology: Matthew Harrell PG, CEG, QSP/QSD, Ninyo & Moore

Mr. Harrell has extensive experience in engineering geology involving public work improvements, pipelines, dams, and transportation redevelopment projects. His experience includes the exploration of varied geologic environments to evaluate geologic and seismic hazards. He is well versed in exploration techniques, including aerial photo interpretation, downhole logging, hollow stem and mud rotary drilling, air percussion, cone penetrometer, monitoring wells, fault trenching, and geophysical surveys. Mr. Harrell specializes in compressible soils, construction observation, earth retaining structures, environmental assessments and remediation, geologic hazard evaluations, geomorphology, geotechnical instrumentation, SWPPP Preparation and implementation, and provides expert witness services on litigation projects.

Engineering and Geology: Javier Izaguirre DEWM, SCE

Mr. Izaguirre has over 15 years of experience in Civil Engineering (Project Management, Grading and Drainage and Construction), of which more than 13 years have been with SCE. At SCE, he manages the engineering design for Major Capital Projects (Transmission), Small Civil Capital Projects (Transmission), Substation (Civil) Projects, Transmission Maintenance Projects. Mr. Izaguirre also provides support for Special Project/Emergencies and Construction.

Fisheries and Fish Habitat: Tom Keegan, HELIX Environmental Planning, Inc.

Mr. Keegan has over 36 years of experience as a fisheries scientist/ecologist. His technical expertise is focused on effects of altered stream flows and estuarine inflows to native fish species populations and their habitats, particularly special-status Steelhead (all California distinct population segments [DPSs] and including Southern Steelhead), Chinook Salmon (all California evolutionary significant units [ESUs]), Green Sturgeon, Delta Smelt, Longfin Smelt, Tidewater Goby, and Sierran trout/native fish populations. He manages technologic investigations of migratory fish (anadromous and resident) fish population dynamics and passage, impingement/ entrainment, aquatic habitat, benthic macroinvertebrate (BMI) Surface Water Ambient Monitoring Program (SWAMP) protocol bioassessments, special-status amphibian surveys, as well as effects assessments (e.g., altered flows and habitats, diversion/entrainment, contaminants).

Storm Water and Water Quality: Andrew Price, PE, QSD/P, Michael Baker International

Mr. Price is a licensed professional civil engineer with extensive experience in the field of erosion and sediment control. He serves as the lead Qualified Stormwater Pollution Prevention Plans (SWPPP) Designer (QSD) for Michael Baker International's Santa Ana Office and is responsible for inspections and/or oversight of 40+ active construction sites across Southern and Central California. He has written and reviewed SWPPPs, Erosion and Sediment Control Plans (ESCPs), Water Pollution Control Plans (WPCPs) for several of the State's largest agencies, utilities, and private developers. He has been involved in all phases of projects, including field reconnaissance, preliminary design, final design, and report preparation. He interacts regularly with Regional and State Waterboard staff for permit clarifications and responses to Notice of Violations (NOVs).

Engineering and Geology: Sean Richards PG, CEG, SCE

Mr. Richards has 20 years of experience in the southern California Geotechnical Industry. He is a California licensed Professional Geologist (PG) and Certified Engineering Geologist (CEG). Mr. Richards has been involved with geotechnical investigations, design, and construction from residential and commercial warehouses to potential Stadium sites. He has been part of feasibility reviews for large tunneling projects as well as proposed freeway extensions. At SCE, he works with small and large transmission projects, substation repairs, and extensions, as well as reviewing customer reports for interconnections and associated substations.

Native Vegetation and Sensitive Plant Habitats: Peter Tomsovic, HELIX Environmental Planning, Inc.

Mr. Tomsovic is a Restoration Ecologist and Senior Project Manager for HELIX's restoration practice. He has 24 years of experience in the environmental consulting industry and holds a California Department of Pesticide Regulations Qualified Applicators License (QAL). As a restoration ecologist, he has successfully designed, implemented, and managed hundreds of restoration projects throughout California ranging in size from 0.1-acre to over 600 acres. Mr. Tomsovic's project experience ranges across all habitat types, including desert, coastal sage scrub, oak woodland, riparian, tidal wetland, chaparral, grassland, vernal pool, and wetland habitats. He has also designed and implemented numerous species-specific restoration projects for listed plant and wildlife species, and prepared mitigation plans, long-term management plans, weed management plans, erosion control plans, and whole ecosystem restoration plans for federal, state, local, and private clients. Mr. Tomsovic served on the California Society for Ecological Restoration (SERCAL) Board of Directors and was formerly the organization's president.

CEQA checklist: Phuong Trinh, SCE Environmental

Ms. Trinh has over 15 years of experience in regulatory or environmental project management, of which more than 10 years have been with Southern California Edison. At SCE, Phoung manages environmental compliance on interconnection projects and provides California Environmental Quality Act support when discretionary approvals are needed. Her CEQA support experience ranges from the review of documents prepared for third-party projects to the preparation of supporting documents for SCE-led projects.

Safety: Dan Wallace, PMP, American Integrated Services

Mr. Wallace has over 13 years of combined experience in the commercial, residential and environmental construction industries. He has managed projects up to $23,000,000. As Project Manager, he is responsible for the overall direction, completion, and financial outcome of projects. He directs and supervises activities related to contract administration, change orders, submittals, procurement, project financial projections, and schedule requirements to ensure projects are completed safely, and within schedule and budget.

Construction Contractor: Josh Whittaker, American Integrated Services

Mr. Whittaker has over 25 years of experience in the construction/demolition industry serving public works, commercial, utility and power sectors, and oil and gas sectors. He is responsible for overseeing estimating, project management, technical quality, safety, client satisfaction, client follow-up, project budget, schedule, and overall success of all of AIS's Industrial Services, Demolition and Decontamination projects. He has extensive experience supervising all aspects of environmental remediation, construction, public works projects, and demolition projects, including various aspects of new construction, public works, utilities, street improvements, and bond release work. Understanding large-scale environmental construction, as well as various aspects of demolition and abatement allows, him a unique perspective when developing a work approach. His in-depth experience allows him to optimize the project's remediation construction approach to improve budget and schedule performance as well as to develop unique construction solutions.