

**Determination of
Biologically Equivalent or Superior Preservation
Report**

[Insert Project Name]

[Permittee Name]

[Permittee Contact]

[Applicant Name]

[Applicant Contact]

[Consultant Name]

[Consultant Contact]

DATE

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DBESP Report

Determination of Biologically Equivalent or Superior Preservation (DBESP) Report

Welcome to the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP; Plan) DBESP Report Template! The guidance in this template is meant to assist proposed discretionary projects that are completing the Joint Project Review (JPR) process and have impacts to MSHCP resources, therefore requiring a DBESP Report. All projects are unique, and while it is not always possible to anticipate all issues prior to submittal of the Joint Project Review (JPR) documents, this template is intended to provide general guidance to assist the Applicant's biologist with the DBESP process. Please note that all DBESP Reports should follow the structure of this template. If a more comprehensive Biological Resources Technical Report (BTR) has been prepared for your project, this DBESP Report template should still be included either as its own chapter or as a separate document.

DBESP Goals: The goal of the DBESP Report is to demonstrate that the proposed mitigation is biologically equivalent or superior in replacement of the impacted resource. This is completed by describing the functions and values of the resource prior to and following project and mitigation implementation.

DBESP Process: RCA has 14 calendar days following receipt of a complete application (electronic copies) and full deposit¹ to issue comments requesting additional information or to issue JPR Findings to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), collectively referred to as the "Wildlife Agencies". The Wildlife Agencies, following receipt of the DBESP, have 60 working days to issue comments requesting additional information or provide concurrence.

- If comments are issued, it is not acceptable to provide a Response to Comments in lieu of fully revised supporting documentation. A completed report is required for the JPR record. A Response to Comments may be provided *in addition* to a fully revised DBESP Report.
- Once a complete, revised submittal is received by either the RCA or the Wildlife Agencies, the 14-day or 60-day clock, respectively, may start over.

Applicants are encouraged to coordinate early by attending one or more pre-application meetings with the Riverside Conservation Authority (RCA), Wildlife Agencies comprised of the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), and Regional Water Quality Control Board

¹ Note that Public Projects are not required to provide a deposit.

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(RWQCB) to discuss riparian/riverine issues, regulated waters issues, and/or mitigation options. If mitigation is agreed to during this early coordination effort, the Applicant may be granted a 30-day DBESP review instead of the typical 60-day review. Contact Kristin Staudenmaier at RCA (kristins@wrcrca.org) in order to request a time slot at a pre-application meeting.

Applicable Plan criteria for the proposed project can be determined with use of the RCA MSHCP Information App:

<http://wrcrca.maps.arcgis.com/apps/webappviewer/index.html?id=a73e69d2a64d41c29ebd3acd67467abd>

Figure Requirements: Maps and graphics should depict all development and avoidance/conservation areas, clearly labelled as such. Appropriate survey buffers should also be included.

GIS Data: GIS shapefiles should always be provided if any of the following apply:

- The JPR is not intended to cover the entirety of the APN(s) in which the project is located.
- The project involves any off-site improvements or staging areas.
- The project proposes any avoidance and/or conservation areas
- The project is a non-County action.

Note that RCA cannot begin to review the DBESP without GIS shapefiles (if applicable).

DBESP Report Template: For ease of use, guidance in this document has been provided in distinct bullet points, but please ensure to provide a standard, high-quality reporting document that demonstrates command of the subject matter using clear, concise text.

When a discretionary project is located within Criteria Cells and is therefore going through the Joint Project Review (JPR) process, the DBESP report should only follow the headings within this template as applicable to MSHCP-related project impacts. If a specific heading relative to a section in the DBESP is not applicable to the proposed project, please indicate that it does not apply.

Note that when a project is located outside of Criteria Cells, but still requires a DBESP, other MSHCP Consistency Analysis information unrelated to the DBESP may be required to be included in a document prepared pursuant to the California Environmental Quality Act (CEQA). Furthermore, this information required to demonstrate consistency with the MSHCP may also be requested separately by the Wildlife Agencies if not adequately included in the CEQA document. For example, even if the DBESP is not relative to impacts to riparian/riverine

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resources, a discussion regarding Section 6.1.2 resources is still required in the CEQA document and subject to review by the Wildlife Agencies.

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1 EXECUTIVE SUMMARY

This is an overview of the proposed project in relation to the MSHCP mitigation requirement for which the DBESP is being prepared. This should include a description of the resource that the DBESP intends to cover and a summary of the proposed mitigation.

2 INTRODUCTION

2.1 Project Area

- Provide consistent, valid project Assessor Parcel Numbers (APNs).
- All project acreages should be clearly and consistently reported throughout the DBESP Report and should match acreages listed in all JPR documents and the JPR Application form. The project description should include project acreages for both on-site and off-site features, as well as any proposed staging areas. *Note that if the proposed project does not include off-site improvements or staging areas, this should be clearly stated.* If the proposed project does include these features, they need to be depicted on all project figures and included in the GIS data with submission.
- Impact acreages should be clearly and consistently reported among all JPR documentation and the JPR Application form. Impacts should be separated as permanent and temporary, and separated by habitat type. Tables are often the most concise way to present this information. The spatial distribution of impacts should be depicted in a project figure and included in GIS data submitted as part of the JPR submittal package.
- All proposed avoidance or conservation areas need to be depicted on project figures, clearly labeled as such, and provided in the GIS data.

2.2 Project Description

- The project description should include, but is not limited to, the type of proposed project, the type of activities that will occur on site, where project activities will occur within the project site, whether detention basins or other water quality features are proposed (this is relevant to downstream drainage/hydrology concerns for downstream existing or described conservation areas), road improvements, and on- and off-site locations of all features relative to the project site.
- As mentioned above, the inclusion of a site plan is required, but it is important to also include a qualitative description within this section.

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- For larger projects or projects with an extended construction period, please include an estimated time and duration construction activities will occur. This is also relevant to sensitive species or habitat on site that may be temporarily impacted.
- If a separate Consistency Analysis report has been prepared, and is provided with the DBESP, the project description information in the DBESP need only be summarized.
- This section must also demonstrate why an avoidance alternative is not feasible.

2.3 Existing Conditions

The DBESP Report should only include biological resource information mapping for the resource that is being mitigated. Please see the MSHCP Consistency Analysis report template for guidance regarding the appropriate information to include in methods and results for the mitigated resource.

3 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

3.1 Methods

Include a description regarding when, where, and how the riparian/riverine resources were defined and evaluated in the field. Note that the MSHCP defines “riverine” differently than “riparian.”

If a project site is evaluated to have suitable nesting habitat for riparian bird species (including least Bell’s vireo [LBVI; *Vireo bellii pusillus*], southwestern willow flycatcher [SWFL; *Empidonax traillii extimus*], or yellow-billed cuckoo [YBCU; *Coccyzus americanus*]) then protocol-level focused surveys are required if the habitat cannot be avoided.

- Surveys must include an evaluation of off-site suitable habitat, if accessible, in the event that the 100-meter permanent setback applies to the project. Evaluation of off-site habitat is also required where applicable pursuant to the Migratory Bird Treaty Act. Note that MSHCP does not ever provide take for impacts to nesting birds.
- If focused surveys for riparian birds were conducted, include when and where surveys were conducted. Also include the followed methodology. Surveys should be conducted according to accepted USFWS protocols specific for each species (LBVI—USFWS 2001; SWFL—USFWS 2000; YBCU—USFWS 2015).
- Note that a pre-construction survey is not sufficient to rule out presence. A pre-construction survey is valuable to determine distance of exclusion buffers, observations of nesting

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behavior, status of existing nests, etc., but absence of riparian birds can only be concluded by completing the required protocol-level surveys.

Describe the criteria used to determine whether there are vernal pools on the project site, and how they were delineated. The following should be considered: the watershed supporting vernal pool hydrology, length of time the area exhibits upland and wetland characteristics (inundated or not), evidence for the persistence of wetness using historic information (e.g., aerials), vegetation, soils, drainage characteristics, uses to which the site has been subjected, and weather and hydrologic records.

- If vernal pools or other suitable fairy shrimp habitats are located within the project site then fairy shrimp surveys must be conducted pursuant to *USFWS Survey Guidelines for the Listed Large Branchiopods* (May 31, 2015) which includes six listed fairy shrimp species, including those species covered under the MSHCP Section 6.1.2.
- Fairy shrimp can be found in non-vernal pool features such as stock ponds, ephemeral pools, road ruts, human-made depressions, or other depressions that may pond water. As such, these features are not exempt from evaluation as fairy shrimp habitat and the possible need for focused surveys is still applicable. Discuss all factors that support presence or absence of fairy shrimp such as describing soils, ability of any features to hold water long enough to support fairy shrimp, topography, etc.
- Note that disking and disturbed conditions of the site cannot be used as a sole basis for determining absence of MSHCP resources, including fairy shrimp. This is especially true when poorly drained soils or soils known to support fairy shrimp are present.
- Where any of the above conditions occur, two seasons of fairy shrimp surveys are required. While the MSHCP Covered fairy shrimp objectives require one wet or dry season survey, USFWS Permit TE-088609-0, Special Term and Condition #2 states that “[i]n the event of a discrepancy, the special terms and conditions of this permit included herein, the IA, and MSHCP, including its associated volumes (exclusive of the IA) and the errata letter to the MSHCP from the County of Riverside dated May 21, 2004, are the controlling documents in the above order regarding the conditions and authorizations of this permit.” Consequently, all projects must demonstrate that they have followed the USFWS protocol in western Riverside County. As such, the survey protocol requires a second survey where the first survey produced negative results. Without the two seasons of fairy shrimp surveys, or without concurrence from USFWS that having only one seasonal survey is acceptable, a project cannot be determined consistent with MSHCP Section 6.1.2 requirements for fairy shrimp.

3.2 Results/Impacts

While other MSHCP resources may demonstrate that they are avoiding at least 90% of the long-term conservation value (LTCV) of the resource, any impact to riparian/riverine or vernal pool resources requires mitigation through a DBESP.

Section 6.1.2 of the MSHCP states, "If an avoidance alternative is selected, measures shall be incorporated into the project design to ensure the long-term conservation of the area to be avoided, and associated functions and values, through the use of deed restriction, conservation easement, or other appropriate mechanisms. If an avoidance alternative is not feasible, a practicable alternative that minimizes direct and indirect effects to riparian/riverine areas and vernal pools and associated functions and values to the greatest extent possible shall be selected. Those impacts that are unavoidable shall be mitigate such that the lost functions and values as they related to covered species are replaced as set forth below under the [DBESP]."

Include a quantification of unavoidable impacts to riparian, riverine, or vernal pool resources associated with the project. This description should include both direct and indirect effects.

3.3 Mitigation and Equivalency

3.3.1 *Direct Effects*

Demonstrate that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative without these measures. This should be based on the following factors:

- Effects on conserved habitats
- Effects on planning area species
- Effects on linkages and functions of the MSHCP Conservation Area

Documentation must address how mitigation will replace permanently lost functions and values, potentially lost connectivity to downstream resources, temporal loss, and on-site restoration. Functions and values of the existing condition should be compared with the expected functions and values following compensation.

- While proposing mitigation ratios is acceptable, and discussing mitigation relative to "no net loss" is helpful, mitigation must ultimately be discussed in the context of biological equivalency or superiority as compared to avoidance of the resources.

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Restoration should be discussed in terms of type: preservation, enhancement, rehabilitation, and re-establishment.

- The mitigation option of restoration needs to include specific criteria that will be used to determine long-term mitigation success. How does the proposed project intend to restore the area? What entity will be responsible for maintenance? How long will monitoring be conducted? What metrics will be used to determine success (native vegetation cover, non-native vegetation cover, etc.)?
- Include a commitment that a Restoration Plan and Habitat Mitigation and Monitoring Program (HMMP) will be reviewed and approved by the RCA and Wildlife Agencies prior to project implementation.
- Note that the preservation of resources on a site that is already being set aside for conservation to fulfill Reserve Assembly requirements is not considered biologically equivalent or superior unless the proposed project will provide biological lift to said habitat by enhancing or restoring it to a higher function and value than its existing condition.

3.3.2 Indirect Effects

Include a written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, and minimization and/or compensation through restoration or enhancement.

- It is important to also consider and evaluate noise impacts to adjacent riparian/riverine resources and provide appropriate measures to attenuate these impacts. This may include committing to only constructing outside of nesting season, the use of sound walls that are installed outside of nesting season, etc.
- Applicant should also evaluate whether hydrology in the area is expected to change with project implementation. Will this change (caused by the project) result in cutting off the hydrologic support to the riparian, riverine, or vernal pool resource?

4 NARROW ENDEMIC PLANT SPECIES MITIGATION (SECTION 6.1.3)

4.1 Methods

Refer to Table 6-1 in the MSHCP for habitat characteristics and the appropriate blooming period for all species included under the Narrow Endemic Plant Species Survey Area (NEPSSA) policy.

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Include methodology used to determine whether focused surveys were necessary (i.e., results of habitat assessment). Include when and where the assessment occurred. If a habitat assessment yields suitable habitat for NEPS then focused surveys during the appropriate season are required.

- Focused surveys must be conducted in accordance with accepted botanical survey protocols including USFWS (2002) and CDFW (2009). This discussion should include whether the focused surveys were conducted during the appropriate blooming period for each target species, as stated in Table 6-1 of the Plan. Were surveys conducted during a drought year or during a year of above-average rainfall? If surveys were conducted outside of the appropriate blooming period or during a drought year, were reference populations checked to assure the validity of the survey?

4.2 Results/Impacts

This section must describe the long-term conservation value (LTCV) of the habitat for the NEPSSA species. If Applicant cannot avoid at least 90% of the LTCV of the habitat, a DBESP is required.

- Provide solid support for how the 90% and 10% determinations were made.
- Explain why impacts cannot be avoided.
- Address how mitigation will replace lost functions and values of habitat for the impacted plant species.

Include a quantification of unavoidable direct impacts to NEPSSA species associated with the project, documenting whether the 90% threshold has been met. For NEPSSA species, this would include a quantitative and qualitative discussion of the population size of NEPSSA species found on-site. In addition, include a qualitative discussion of indirect impacts to NEPS species associated with the project.

4.3 Mitigation and Equivalency

4.3.1 Direct Effects

Demonstrate that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative without these measures. This should be based on the following factors:

- Effects on habitat with LTCV to NEPSSA species

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- Effects on the populations of the NEPSSA species
- Effects on linkages and functions of the MSHCP Conservation Area

Documentation must address how mitigation will replace permanently lost functions and values, potentially lost connectivity to downstream resources, temporal loss, and on-site restoration. Functions and values of the existing condition should be compared with the expected functions and values following compensation. Mitigation must ultimately be discussed in the context of biological equivalency or superiority as compared to avoidance of the resources.

Restoration should be discussed in terms of on-site restoration or off-site restoration/translocation based on the life history of the species impacted, including but not limited to, collection/salvage measures for topsoil, seed, seed bank, and/or plant material.

- The mitigation option of restoration needs to include specific criteria that will be used to determine long-term mitigation success. How does the proposed project intend to restore the area? What entity will be responsible for maintenance? How long will monitoring be conducted? What metrics will be used to determine success (native vegetation cover, non-native vegetation cover, etc.)? Please include a commitment that a Restoration Plan and Habitat Mitigation and Monitoring Program (HMMP) will be reviewed and approved by the RCA and Wildlife Agencies prior to project implementation.
- Note that the preservation of resources on a site that is already being set aside for conservation to fulfill Reserve Assembly requirements is not considered biological equivalent or superior unless the proposed project will provide biological lift to said habitat by enhancing or restoring it to a higher function and value than its existing condition.

4.3.2 Indirect Effects

Include a written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, and minimization and/or compensation through restoration or enhancement.

Applicant should also evaluate whether hydrology in the area is expected to change with project implementation. Will this change (caused by the project) result in cutting off the hydrologic support to the NEPSSA species?

5 MITIGATION AND EQUIVALENCY (SECTION 6.3.2)

5.1 Criteria Area Species Survey Area - Plants

Note that there are no survey areas for these designated plant species outside of the MSHCP Criteria Area.

5.1.1 Methods

Refer to Table 6-1 in the MSHCP for habitat characteristics and the appropriate blooming period for all Criteria Area Species Survey Area (CASSA) plants.

Include methodology used to determine whether focused surveys were necessary (i.e., results of habitat assessment). Include when and where the assessment occurred. If a habitat assessment yields suitable habitat for CASSA plants then focused surveys during the appropriate season are required.

- Focused surveys must be conducted in accordance with accepted botanical survey protocols including USFWS (2002) and CDFW (2009). This discussion should include whether the focused surveys were conducted during the appropriate blooming period for each target species, as stated in Table 6-1 of the Plan. Were surveys conducted during a drought year or during a year of above-average rainfall? If surveys were conducted outside of the appropriate blooming period or during a drought year, were reference populations checked to assure the validity of the survey?

5.1.2 Results/Impacts

This section must describe the long-term conservation value (LTCV) of the habitat for the CASSA plants. If Applicant cannot avoid at least 90% of the long-term conservation value LTCV of the CASSA plant habitat, a DBESP is required.

- Provide solid support for how the 90% and 10% determinations were made.
- Explain why impacts cannot be avoided.
- Address how mitigation will replace lost functions and values of habitat for the impacted plant species.

Include a quantification of unavoidable direct impacts to CASSA plant species associated with the project, documenting whether the 90% threshold has been met. For CASSA plant species, this would include a quantitative and qualitative discussion of the population size of plant species found on-site. In addition, include a qualitative discussion of indirect impacts to CASSA plant species associated with the project.

5.1.3 Mitigation and Equivalency

5.1.3.1 Direct Effects

Demonstrate that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative without these measures. This should be based on the following factors:

- Effects on habitat with LTCV to CASSA plants
- Effects on the populations of the CASSA plants
- Effects on linkages and functions of the MSHCP Conservation Area

Documentation must address how mitigation will replace permanently lost functions and values, potentially lost connectivity to downstream resources, temporal loss, and on-site restoration. Functions and values of the existing condition should be compared with the expected functions and values following compensation.

- While proposing mitigation ratios is acceptable, and discussing mitigation relative to “no net loss” is helpful, mitigation must ultimately be discussed in the context of biological equivalency or superiority as compared to avoidance of the resources.

Restoration should be discussed in terms of on-site restoration or off-site restoration/translocation based on the life history of the species impacted which may include collection/salvage measures for plants or seed banks (e.g., top soil salvage, collection of seed, or collection of plant material).. Restoration should be discussed in terms of on-site restoration or off-site restoration/translocation based on the life history of the species impacted, including but not limited to, collection/salvage measures for topsoil, seed, seed bank, and/or plant material.

- The mitigation option of restoration needs to include specific criteria that will be used to determine long-term mitigation success. How does the proposed project intend to restore the area? What entity will be responsible for maintenance? How long will monitoring be conducted? What metrics will be used to determine success (native vegetation cover, non-native vegetation cover, etc.)? Please include a commitment that a Restoration Plan and Habitat Mitigation and Monitoring Program (HMMP) will be reviewed and approved by the RCA and Wildlife Agencies prior to project implementation.

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- Note that the preservation of resources on a site that is already being set aside for conservation to fulfill Reserve Assembly requirements is not considered biological equivalent or superior unless the proposed project will provide biological lift to said habitat by enhancing or restoring it to a higher function and value than its existing condition.

5.1.3.2 Indirect Effects

Include a written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, and minimization and/or compensation through restoration or enhancement.

Applicant should also evaluate whether hydrology in the area is expected to change with project implementation. Will this change (caused by the project) result in cutting off the hydrologic support to the riparian, riverine, or vernal pool resource?

5.2 Criteria Area Species Survey Area - Burrowing Owl

5.2.1 Methods

- All surveys must be conducted in accordance with the *MSHCP Burrowing Owl Survey Instructions* (RCA 2006). Methodology should be separated into methodologies for Step I (habitat assessment), Step II-A (focused burrow survey), and Step II-B (focused burrowing owl surveys), as applicable. Provide dates, survey times, and weather conditions. A table is often the most concise way to present this information.
 - If other methodologies are followed (e.g., CDFW 2012), provide further justification regarding why the survey methods implemented yielded optimal results even when the accepted protocol was not followed. **(Note that this approach is not recommended. It is strongly encouraged to follow the *MSHCP Burrowing Owl Survey Instructions*).**
- Include criteria used to determine whether focused surveys were necessary (i.e., results of Step I habitat assessment). Include when and where the assessment occurred. If a habitat assessment yields suitable habitat for burrowing owl then focused surveys during the appropriate season are required.
- Focused survey dates should be spread out throughout the survey window (March 1–August 31). It is recommended that surveys be separated by at least 2 weeks. Visits should be spaced not less than 1 week apart, nor should all four visits be conducted back to back early or late in the season when BUOW may not be present.
- Focused surveys must be conducted within all suitable habitat within 500 feet of the project site, where access is granted.

5.2.2 Results/Impacts

This section must describe the long-term conservation value (LTCV) of the occupied habitat for burrowing owl. If burrowing owl are detected during focused surveys and avoidance is not possible, a DBESP is required. Please defend why impacts cannot be avoided.

If BUOW are confirmed present and applicant is considering passive or active relocation, this would require preparation of a *Burrowing Owl Protection and Relocation Plan*, review, approval, and coordination with RCA and Wildlife Agencies, including State banding permit office and Federal MBTA office (for active relocation only). Note that addressing burrowing owl impacts generally requires extensive coordination, and in some cases may result in avoidance being more feasible.

Include a quantification of unavoidable impacts to occupied burrowing owl habitat associated with the project, documenting whether the 90% threshold has been met. This description should include both direct and indirect effects.

Documentation must address how mitigation will replace lost functions and values of occupied habitat for burrowing owl.

5.2.3 Mitigation and Equivalency

5.2.3.1 Direct Effects

Demonstrate that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative without these measures. This should be based on the following factors:

- Effects on habitat with LTCV to burrowing owl
- Effects on populations of burrowing owl
- Effects on linkages and functions of the MSHCP Conservation Area

Documentation must address how mitigation will replace permanently lost functions and values, temporal loss, and on-site restoration. Functions and values of the existing condition should be compared with the expected functions and values following compensation, and equivalency must be demonstrated.

Eviction or passive relocation is acceptable if suitable conserved habitat and natural or artificial burrows are within 75–100 meters. If adjacent or nearby suitable habitat is not conserved, eviction may still be acceptable. Eviction without regard to nearby suitable habitat and available

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refuge should not be the standard CEQA mitigation. Coordinate with RCA and CDFW on all evictions. Permittees are not solely responsible for approving passive and active relocation.

In accordance with Objective 5, if the project site (including adjacent areas) supports three or more pairs of burrowing owl, is greater than 35 acres of suitable habitat and is non-contiguous with MSHCP conservation land, at least 90% of the area with LTCV will be conserved on-site.

Note that if burrowing owl are not detected during focused surveys, documentation should still include a written commitment to conduct pre-construction surveys for BUOW not more than 30 days prior to the initiation of ground disturbance. If BUOW have colonized the project site prior to the initiation of construction, the project proponent should immediately inform RCA and the Wildlife Agencies, and will need to prepare a *Burrowing Owl Protection and Relocation Plan* for approval by RCA and the Wildlife Agencies prior to initiating ground disturbance.

5.2.3.2 Indirect Effects

Include a written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, and minimization and/or compensation through restoration or enhancement.

It is important to also consider and evaluate noise impacts to occupied burrowing owl habitat and provide appropriate measures to attenuate these impacts. This may include committing to only constructing outside of nesting season, the use of sound walls that are installed outside of nesting season, etc.

5.3 Criteria Area Species Survey Area - Mammals

5.3.1 Methods

- Include methodology used to determine whether focused surveys were necessary (i.e., results of habitat assessment). Include when and where the assessment occurred. If a habitat assessment yields suitable habitat for mammals included under MSHCP Section 6.3.2, then focused surveys are required.
- There is no official survey protocol (assessment and trapping) in the MSHCP; however, the MSHCP Biological Monitoring Program has developed and refined a survey protocol that should be used as a guide to assess if adequate Los Angeles pocket mouse (*LAPM*; *Perognathus longimembris brevinasus*) and San Bernardino Kangaroo Rat (SBKR; *Dipodomys merriami parvus*) surveys have been conducted (see LAPM and SBKR Survey

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Reports at the MSHCP website; <http://wrc-rca.org/about-rca/monitoring/monitoring-surveys/>).

5.3.2 Results/Impacts

This section must describe the long-term conservation value (LTCV) of the occupied habitat for mammals. If mammals are detected during focused surveys and avoidance of at least 90% of the LTCV is not possible, a DBESP is required.

- Provide solid support for how the 90% and 10% determinations were made.
- Explain why impacts cannot be avoided.
- Address how mitigation will replace lost functions and values of habitat for the impacted plant species.

Include a quantification of unavoidable impacts to occupied mammal habitat associated with the project, documenting whether the 90% threshold has been met. This description should include both direct and indirect effects.

Documentation must address how mitigation will replace lost functions and values of occupied habitat for CASSA mammals.

5.3.3 Mitigation and Equivalency

5.3.3.1 Direct Effects

Demonstrate that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative without these measures. This should be based on the following factors:

- Effects on habitat with LTCV to mammals
- Effects on populations of mammals
- Effects on linkages and functions of the MSHCP Conservation Area

Documentation must address how mitigation will replace permanently lost functions and values, temporal loss, and on-site restoration. Functions and values of the existing condition should be compared with the expected functions and values following compensation. Mitigation must ultimately be discussed in the context of biological equivalency or superiority as compared to avoidance of the resources.

5.3.3.2 Indirect Effects

Include a written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, and minimization and/or compensation through restoration or enhancement.

5.4 Criteria Area Species Survey Area - Amphibians

5.4.1 Methods

- Include methodology used to determine whether focused surveys were necessary (i.e., results of habitat assessment). Include when and where the assessment occurred. If a habitat assessment yields suitable habitat for amphibians included under MSHCP Section 6.3.2, then focused surveys are required.
- Focused surveys must be conducted in accordance with accepted survey protocols including those for arroyo toad (USFWS 1999), California red-legged frog (USFWS 2005), and mountain yellow-legged frog (USFWS protocol pending; MSHCP Mountain Yellow-Legged Frog [*Rana muscosa*] Survey Report 2005 describes a general protocol).

5.4.2 Results/Impacts

If any amphibian included under Section 6.3.2 is found, full avoidance is required; therefore a DBESP would not generally be needed. Note that full avoidance means that the hydrology supporting the amphibians is also being avoided, directly and indirectly.

In rare circumstances, on a case-by-case basis, and depending on the status of the species, impacts and mitigation may be allowable through coordination with RCA and the Wildlife Agencies. In the event that impacts/mitigation would be allowed, the DBESP would follow the standards for other Criteria Area Species.

6 DELHI SANDS FLOWER-LOVING FLY

6.1 Methods

- If Delhi soil types are mapped within the MSHCP baseline data on the proposed project, 2 years of focused surveys for the Delhi Sands flower-loving fly (DSFLF) are required.
- Surveys are to be conducted according to accepted USFWS protocol (2004); surveys are conducted two times per week from July 1 to September 20 for 2 consecutive years under suitable conditions.

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- Include a description of the followed methodology, including when and where the assessment or focused surveys occurred.

6.2 Results/Impacts

This section must describe the long-term conservation value (LTCV) of the occupied habitat for DSFLF. If this species is detected during focused surveys and avoidance of at least 90% of the LTCV is not possible, a DBESP is required.

- Provide solid support for how the 90% and 10% determinations were made.
- Explain why impacts cannot be avoided.
- Address how mitigation will replace lost functions and values of habitat for the impacted plant species.

Include a quantification of unavoidable impacts to occupied DSFLF habitat associated with the project, documenting whether the 90% threshold has been met. This description should include both direct and indirect effects.

Documentation must address how mitigation will replace lost functions and values of occupied habitat for DSFLF.

6.3 Mitigation and Equivalency

6.3.1 Direct Effects

Demonstrate that although the proposed project would not avoid impacts, with proposed design and compensation measures, the project would be biologically equivalent or superior to that which would occur under an avoidance alternative without these measures. This should be based on the following factors:

- Effects on habitat with LTCV to DSFLF
- Effects on populations of DSFLF
- Effects on linkages and functions of the MSHCP Conservation Area

Documentation must address how mitigation will replace permanently lost functions and values, temporal loss, and on-site restoration. Functions and values of the existing condition should be compared with the expected functions and values following compensation. Mitigation must ultimately be discussed in the context of biological equivalency or superiority as compared to avoidance of the resources.

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6.3.2 Indirect Effects

Include a written description of project design features and mitigation measures that reduce indirect effects, such as edge treatments, landscaping, elevation difference, and minimization and/or compensation through restoration or enhancement.

7 REFERENCES

USFWS (United States Fish and Wildlife Service). 2000. Southwestern Willow Flycatcher Protocol Revision 2000. Sacramento, California: USFWS.
<https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/SWWFlycatcher.2000.protocol.pdf>

USFWS. 2001. Least Bell's Vireo Survey Guidelines. January 19, 2001. Sacramento, California: USFWS. https://www.fws.gov/cno/es/Recovery_Permitting/birds/least_bells_vireo/LeastBellsVireo_SurveyGuidelines_20010119.pdf

USFWS. 2015. A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-Billed Cuckoo. Prepared by M. Halterman, M.J. Johnson, J.A. Holmes, and S.A. Laymon. Sacramento, California: USFWS. April 2015.
https://www.fws.gov/southwest/es/Documents/R2ES/YBCU_SurveyProtocol_FINAL_DR_AFT_22Apr2015.pdf

SUPPORTING APPENDICES

Attach supporting documentation including all survey reports relevant to the DBESP, along with the Jurisdictional Delineation, if the DBESP is addressing Section 6.1.2 resources.

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OTHER TIPS FOR A COMPLETE AND ADEQUATE SUBMITTAL

- For the JPR process, it is very important to maintain a complete documented record of the project's consistency with the MSHCP. Therefore, Permittees/Applicants should submit JPR supporting documents, including the DBESP, that are accurate, adequate, and well-organized. Furthermore, if multiple documents are submitted for a JPR, ensure that each document is consistent with the others. Higher quality supporting documentation also facilitates more efficient JPR processing.
- Revisions to JPR supporting documents, including the DBESP, must be incorporated into the documents, not in a separate "responses to RCA comments" document. It is helpful to the reviewer to also get a "responses to RCA comments" document, but is not adequate if not also accompanied by revised JPR documentation.
- Be cognizant of using terminology such as "low potential to occur," "unlikely to occur," etc. Any potential to occur, regardless of how minimal, is still a potential and thus, surveys would then be required.
- Vague language is confusing and should not be used. Applicants should justify and support all conclusions using scientific, biological, or other technical information. Just stating "no suitable habitat" without supporting evidence is not adequate.
- Age of Surveys: To provide optimal survey results, surveys should not be greater than 1 to 2 years old. Exceptions to this include 1) fairy shrimp surveys that require two survey seasons within a 5-year period, 2) Delhi Sands Flower-loving Fly (2 years of surveys required; no updated future surveys needed), and 3) acceptance of "outdated" surveys discussed and agreed upon by RCA (e.g., riparian birds, NEPSSA/CASSA, burrowing owl). Note that although the MSHCP does not include a specific requirement for age of surveys, biologists should consider that wildlife moves and plants spread, and that concluding presence/absence is based on implementing optimal survey methodology and current site conditions.
- It is important for the proposed project to also evaluate whether the hydrology within the vicinity is expected to change as a result of project implementation. Discuss whether changes associated with the proposed project will cut off hydrology to vernal pools, other fairy shrimp habitat, riparian resources, amphibians, or special-status plant species within or adjacent to the project site. Note that this discussion is required even if the proposed project intends to avoid said resources.
- Given that one of the broad yet critical objectives of the MSHCP is to facilitate movement and maintain connectivity for wildlife, this should be considered during the

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JPR process, particularly relative for discussions related to the long-term conservation value of connected habitats for potentially impacted species.

- If you or others biological consultants have not yet attended the *MSHCP Training for Biological Consultants*, typically held at the end of each year (outside of survey season), we encourage you to do so. In late summer/early fall of each year, RCA will send out an email notice to biological firms/individual consultants for the training. Please feel free to forward the notice to others as needed.

This document template is subject to change and will be revised/improved as needed. It is the responsibility of the Permittees and/or biological consultants to check periodically for updates to this template.