DRAFT

County of Santa Cruz

Guidelines for Biological Resources Assessments and Related Documents

Prepared by:
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April 20, 2012

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Guidelines for Biological Consultants

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Adopted by the Board of Supervisors on:

XXXX XX, 2012

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I. INTRODUCTION

The Standard Guidelines for Biological Resources Assessments (herein after referred to as the Guidelines) are intended to provide biological consultants with information on the necessary steps to conduct biological surveys, prepare biological reports, and prepare mitigation and monitoring plans for projects that require a permit from the County of Santa Cruz Planning Department (County). The Guidelines were developed by the County in order to streamline the submittal and review of all types of biological resources assessments and to ensure consistency of quality among these reports.

The primary objectives of the Guidelines are to:

1. Ensure quality, accuracy and completeness of biological survey work, biological resources assessments, mitigation and monitoring plans, and revegetation/restoration plans prepared for projects that require a County permit;
2. Ensure that all biological resources assessments submitted to the County provide adequate information to make appropriate planning decisions and to make determinations regarding conformance with applicable regulations, including the California Environmental Quality Act (CEQA);
3. Aid in staff's efficient and consistent review of documents and associated maps from different biological consultants; and,
4. Increase the efficiency of the environmental review process and avoid unnecessary delays.

The Guidelines should be followed for the preparation of all biological resources assessments submitted to the County. The Guidelines provide guidance for evaluating adverse environmental effects that a proposed project may have on biological resources. These Guidelines should be consulted during the evaluation of any biological resource pursuant to CEQA. Specifically, this document addresses the following questions listed in the California Environmental Quality Act (CEQA) Guidelines, Appendix G, IV. Biological Resources, IX. Land Use and Planning, and XVII. Mandatory Findings of Significance:

IV. Biological Resources – Would the project:

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

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

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

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

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

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

IX. Land Use and Planning – Would the project:

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

XVII. Mandatory Findings of Significance

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

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

II. PROCESS OVERVIEW

Once the County receives an application, Environmental Planning staff reviews the project location to determine whether or not a biological resources assessment is needed. Although planning staff may identify specific biological species or habitats of concern, the County occasionally relies upon the expertise of qualified biologists to provide recommendations for any issues or additional studies that may need to occur, based on their expertise and fieldwork, to the County project planner (example: County staff recommends a botanical survey and the biologist conducting the work finds there are potential impacts to a wetland.)

The County and/or other regulatory agencies may require additional fieldwork as the project progresses if deemed necessary, but biologists should attempt to identify and address all possible resources on and near the project site. Any questions or discussion about the level of survey and reporting effort should be coordinated with the County planner or appropriate regulatory agency before and/or during the survey work and biological resources assessment preparation.

III. REPORT REQUIREMENTS

The County has prepared a report template that identifies the required content for a Biological Resource Assessment (refer to Appendix A). Biologists are encouraged to utilize the template when preparing their reports. However, if a consultant chooses to use a different format, it is incumbent upon the consultant to ensure that all the required components are included in the report.

The County submittal requirement includes:

1. Submit one copy of the biological report to the applicant and two hard copies and one electronic (on CD or DVD) copy of the report to the County. Indicate in the report if it is a preliminary report and will be amended after additional surveys are conducted.

2. If the County requires additional information, submit the required information as soon as possible to prevent project delays. Include the Assessor's Parcel Number (APN) and County-assigned project application number on any additional information that is submitted and reference your or any other previous documents.

3. It is recommended that all biological resource assessments submitted to the County be conducted by a biologist that is on the County's list of Qualified Consultants. Biologists will be required to sign the following statement,

   "*As a County-approved biologist, I hereby certify that this Biological Resources Assessment was prepared according to the Guidelines established by the County of Santa Cruz Planning Department and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief; and I further certify that I was present throughout the site visit(s) associated with this report.*"

All biologists that participated in the fieldwork and/or prepared the document should sign this statement.

IV. BIOLOGICAL SURVEY PROCESS

The biological survey process identifies the key steps that should be conducted for all biological surveys. Additional resources for biological consultants include the

Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants, prepared by the U.S. Fish and Wildlife Service (USFWS) http://www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/botanicalinventories.pdf (January 2000); *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*, prepared by the California Department of Fish and Game (CDFG) http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf (revised June 2, 2001); and CDFG and USFWS protocol surveys and guidelines for specific species. These documents are periodically updated and the most current version should be used. All are available on the CDFG and USFWS websites.

V. REPORT ACCEPTANCE PROCEDURES

In order to ensure that all approved biologists comply with the County's recommendations for biological reports, the quality of work and consultant qualifications will be reviewed on an as needed basis. The County maintains the list of qualified biologists as a courtesy to applicants and biologists, however, the list is not exhaustive, and biologists not appearing on the list may submit reports on behalf of applicants. The purpose of the guidelines is to provide a clearly defined process for submittal of environmental documents necessary for the County to complete a CEQA review. By not following the guidelines, biologists may be unnecessarily delaying their client's projects and adding additional burden to County staff.

The following summarizes how this process will work:

After a biological report is submitted, it is reviewed for adequacy of meeting the County's guidelines. If a report is deemed to not meet all of the County's guidelines, the Resource Planner will prepare an "incomplete" letter. If the report meets the County's guidelines, an acceptance letter will go to both the biologist and the applicant. An "incomplete" letter will identify which areas need to be revised in the report for resubmittal.

One important note: if a biologist decides to not follow the County guidelines, they need to provide an explanation for the variation. For example, many biologists prefer to search a five-mile radius rather than using the nine-quadrangle search as recommended in the County's guidelines and by the California Native Plant Society. This is acceptable if the biologist provides information on how they ensured they are considering all possible sensitive resources that may occur on the property, including additional research that they may have conducted.

VI. EXISTING REGULATIONS AND STANDARDS

Several Federal, State and local regulations have been established to protect and conserve biological resources. The descriptions below provide a brief overview of the most appropriate regulations and their respective requirements.

Federal Endangered Species Act

[http://www4.law.cornell.edu/uscode/16/ch35.html]

Enacted in 1973, the Endangered Species Act (ESA) provides for the conservation of threatened and endangered species and their ecosystems. The Act prohibits the "take" of threatened and endangered species except under certain circumstances and only with authorization from the U.S. Fish and Wildlife Service (USFWS) through a permit under Section 4(d), 7 or 10(a) of the Act. Under the Endangered Species Act, "take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Migratory Bird Treaty Act

[http://www4.law.cornell.edu/uscode/16/ch7schII.html]

Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the U.S. and Great Britain, the U.S. and Mexico, the U.S. and Japan, and the U.S. and Russia.

Bald and Golden Eagle Protection Act

[http://www4.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_5A_20_II.html]

When first enacted in 1940, the Act prohibited the take, transport or sale of bald eagles, their eggs or any part of an eagle except where expressly allowed by the Secretary of Interior. The Act was amended in 1962 to extend the prohibitions to the golden eagle.

Federal Water Pollution Control Act (Clean Water Act), 1972

[http://www4.law.cornell.edu/uscode/33/ch26.html]

The Federal Water Pollution Control Act was first passed by Congress in 1948. The Act was later amended and became known as the Clean Water Act. The Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States. It gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The Act makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions. Clean Water Act 404 permits are issued by the U.S. Army Corps of Engineers for dredge/fill activities within wetlands or non-wetland waters of the U.S. Clean

Water Act 401 certifications are issued by the Regional Water Quality Control Board for activities requiring a federal permit or license which may result in discharge of pollutants into waters of the U.S.

California Environmental Quality Act (CEQA)

[http://ceres.ca.gov/ceqa/stat/]

California Environmental Quality Act requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. CEQA does not specifically define what constitutes an "adverse effect" on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact.

California Fish and Game Code

[http://law.justia.com/california/codes/fgc.html]

The California Fish and Game (CFG) Code regulates the taking or possession of birds, mammals, fish, amphibians and reptiles, as well as natural resources such as wetlands and waters of the state. It includes the California Endangered Species Act (CESA; Sections 2050-2115) and Streambed Alternation Agreement regulations (Section 1600-1616), as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife.

California Endangered Species Act

[http://law.justia.com/california/codes/2009/fgc/2050-2069.html]

The California Endangered Species Act (CESA) generally parallels the main provisions of the Federal Endangered Species Act (ESA) and is administered by the California Department of Fish and Game (CDFG). The CESA prohibits take of any species that the California Fish and Game Commission determines to be threatened or endangered. CESA allows for take incidental to otherwise lawful development projects upon approval from CDFG. Under the California Fish and Game Code, "take" is defined as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

California Native Plant Protection Act

[http://law.justia.com/california/codes/fgc/1900-1913.html]

The Native Plant Protection Act (NPPA) of 1977 (Fish and Game Code Section 1900-1913) directed the Department of Fish and Game (CDFG) to carry out the Legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The NPPA gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and to protect endangered and rare plants from take.

Porter-Cologne Water Quality Control Act

[http://law.justia.com/california/codes/wat/13000-13002.html]

This Act provides for statewide coordination of water quality regulations. The Act established the California State Water Resources Control Board as the statewide authority and nine separate Regional Water Quality Control Boards to oversee water quality on a day-to-day basis at the regional/local level.

Natural Community Conservation Planning (NCCP) Act of 1991

[http://law.justia.com/california/codes/fgc/2800-2835.html]

The NCCP Act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. The California Department of Fish and Game is the principal state

agency implementing the NCCP Program. NCCP Plans developed in accordance with the Act provide for comprehensive management and conservation of multiple wildlife species and identify and provide for the regional or area-wide protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth.

California Oak Woodland Conservation Act

[http://law.justia.com/california/codes/fgc/1360-1372.html]

In 2001, the California Legislature passed the California Oak Woodland Conservation Act. This act established the Oak Woodland Conservation Program, administered by the Wildlife Conservation Board (WCB), which was designed to provide $10 million to help local jurisdictions protect and enhance their oak woodland resources. It offers landowners, conservation organizations, and cities and counties an opportunity to obtain funding for projects designed to conserve and restore California's oak woodlands. It authorizes the WCB to purchase oak woodland conservation easements and provide grants for land improvements and oak restoration efforts. While the Program is statewide in nature, it is designed to address oak woodland issues on a regional priority basis. The Program provides a mechanism to achieve sustainable ranching and farming operations, along with healthy oak woodlands.

Western Bat Working Group

(WBWG) (1998). According to the CDFG Special Animals List, species designated as 'High Priority' by WBWG are defined as "imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats" (CDFG 2008b).

Local Regulations and Standards

General Plan Chapter 5; Conservation and Open Space

[http://www.sccoplanning.com/pdf/policy/1994GeneralPlan/chapter5.pdf]

The Conservation and Open Space Element of the General Plan provides guiding principles for the conservation of biotic resources. The goals, objectives, policies and programs of this chapter recognize the need to balance conservation and preservation of natural and cultural resources with their productive use and stewardship. Appendix B of the General Plan consists of lists of special status plants and animals and their habitats, and is attached to this document for reference. These lists are not comprehensive, as species may be added or removed from the various lists over time, and the County General Plan lists may not reflect the most up to date versions.

County Code Title 16; Environmental and Resource Protection

[http://www.codepublishing.com/ca/santacruzcounty/]

The purpose of these regulations is to preserve and enhance the environment of the County of Santa Cruz by providing for the adoption of County Environmental Review Guidelines setting forth regulations and procedures implementing the California Environmental Quality Act (CEQA) and State Environmental Impact Report Guidelines promulgated pursuant thereto. Chapters 16.30 and 16.32 deal specifically with riparian and wetland protection and sensitive habitats and are typically the focus of biotic reports and assessments, however, depending upon the scope of a project, any of the chapters in Title 16 may be relevant.

APPENDIX A

REQUIRED CONTENTS FOR BIOLOGICAL RESOURCES ASSESSMENTS

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REQUIRED CONTENTS FOR BIOLOGICAL RESOURCES ASSESSMENTS

REQUIRED REPORT CONTENTS

A. Cover Page

The cover page should include the following information:

- Original report date
- Revision report date (if applicable)
- County application number
- Applicant name and contact information
- Assessor Parcel Number(s)
- Physical address of the property, if applicable
- Reporting Biologist- Include name, title, company, and contact information. In addition, please include the following statement along with your signature and the date: "As a County approved biologist, I hereby certify that this Biological Resources Assessment was prepared according to the Guidelines established by the County of Santa Cruz Planning Department and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief; and I further certify that I was present throughout the site visit(s) associated with this report."

B. Executive Summary/Synopsis

The executive summary is one of the most significant parts of any biological resources assessment report. It should **not** be an abstract of the report, an introduction, a preface, or a random collection of report highlights. There should be no new information provided in the executive summary. Rather, the executive summary should stand alone as a condensed version of the entire biological resources assessment. It should inform the reader about all aspects of the project site, the proposed action, existing and proposed land uses, habitat types, sensitive species, impacts identified, and reference to recommended mitigation measures. The length of the executive summary depends directly on the nature and complexity of the biological resources within the survey area. The purpose of the executive summary is to provide a quick reference for the public and the decision makers. Therefore, the language should be less technical than that used in the remainder of the report.

C. Introduction

This section of the report should include a detailed description of the development proposal and the size and location of the construction footprint and the entire disturbance envelope. The description of the development proposal should cover the **whole of the project**. This includes the immediate action being pursued as well as any reasonably anticipated future development plans. For example, for grading permit applications the project is not just the immediate grading, but also the end result for which the land will be graded. Another example is a Tentative Map that proposes to subdivide property. The project in question is not just the increase in the number of lots, but the ultimate outcome of commercial or residential development.

The introduction should include the following minimum requirements:

- Development Proposal Description – Also referred to as the Disturbance Envelope. Describe all physical alterations that will occur to the existing site. Describe all proposed structures,

their size, location, and purpose. Be sure to include all ancillary features (e.g., staging areas, septic location and leach field, road improvements, utility improvements/installations, etc.).

- Construction Footprint Size – Also referred to as the Building Envelope. State the size of the area proposed for development including such things as the buildable lot, fire hazard clearance areas, access roads, and fire department turn around areas. **Note:** The construction footprint size will be smaller than the survey area size because it does not take into account areas of potential indirect impacts.
- Existing and Proposed Land Use Designations
- Site Plans
- Maps: Location, topographic, and vegetation communities; should also show where sensitive species (rare endangered, threatened or unique species) were found

D. Methodology

This is possibly the most crucial portion of the work conducted by biologists. This section of the report should be based on the biological survey process as identified in Appendix B below.

Although the methods section may seem like a "boilerplate" item when preparing the report, it is often unique to the project area and provides important details regarding the biologists' work and level of assessment. All reports submitted to the County should include the details listed below.

- Research conducted – California natural diversity database (CNDDB), Biological Open Source/Biological Innovation for Open Society (BIOS), other reports, museum records, etc.
- References including any relevant personal communications
- Survey Details – this should include type of survey(s), date of survey(s), duration of each survey, names of biologists, weather conditions (including drought conditions if applicable), and how the area was covered (e.g., 25 feet transects, entire property, etc).
- Description of how the vegetation communities were mapped. Note: vegetation communities should always be mapped, regardless of whether sensitive species are located.
- Survey Purpose – State if this is a preliminary biological resources assessment, a follow up spring botanical survey, protocol-level survey, oak tree survey, wetland delineation, California long-toed salamander habitat evaluation, etc.
- Survey Area - Description of the area, regional location, boundaries of the survey (how much area beyond the footprint was surveyed?), environmental setting (habitat type(s)) and soil type(s).

E. Results

A main goal of this section of the report is to answer the following questions from the CEQA checklist:

Will the project:

- Result in a loss of unique or special status species or their habitats?
- Reduce the extent, diversity or quality of native or other important vegetation?
- Impact wetland or riparian habitat?
- Introduce barriers to movement of resident or migratory fish or wildlife species, or factors that could hinder the normal activities of wildlife?

During the process of conducting the research and fieldwork for a project, biologists should keep these questions in mind. Biological resources assessments should provide sufficient information to allow these questions to be answered by the County and other Responsible Agencies.

The following topics should be addressed in the results section of the biological resources assessment report:

- Results of background research relevant to the project area
- Plant communities – what types were found, what was the quality, and how much of each?
- Habitat communities – this is not always the same as plant communities
- Physical features
- Wetlands, drainages, and/or riparian areas (if not covered in above items)
- Species (Endangered, Threatened, Rare, Locally Important) and Nests
- Special status species summary and table (observed and potential)
- Include blooming period for plants and nesting/breeding period for wildlife
- Include a copy of completed CNDDB forms submitted to CDFG if sensitive species were found
- Habitat Connectivity
- Mapped riparian corridors or drainages
- Stream crossing structures
- Barriers to connectivity
- Any correspondence from regulatory agencies and/or local experts, if applicable

F. Impact Assessment and Mitigation

This section of the report shall identify any potential adverse impacts to sensitive biological resources and recommend mitigation to avoid, minimize, or compensate for these impacts, as appropriate.

1. Sufficiency of Biological Data

In some cases the information within the biological resources assessment may not be sufficient to definitively determine impacts to certain resources. Determining the impacts to some resources may require additional seasonal field surveys, coordination with other regulatory agencies, or a specialized investigation. This section of the document shall clearly identify any deficiencies in the existing biological data and shall make recommendations for further action (**Note:** Additional survey work should not be included as a mitigation measure).

2. Impacts

The robustness of the impact analysis will vary depending on the biological resources found onsite and the intensity of the proposed development. In general, types of impacts include: direct (primary), indirect (secondary), short-term, long-term, and cumulative.

Use the following as a guide in the analysis of impacts:

- Discuss impacts specific to the project proposed by the applicant, but keep the discussion generic enough to allow the County flexibility of analysis in the event changes in project description occur.
- Address the questions in the CEQA checklist (as identified above); however, CEQA significance determinations will ultimately be made by the County and any other Responsible Agencies.

- Consider all phases of development including grading, construction, occupation, and/or operation.
- Identify all possible disturbances (both **on-site and off-site**). Examples include: alteration of drainage, erosion, sedimentation, noise, introduction of exotic plants and animals, and other potential disturbances, which may become evident during project review.
- Quantify impacts whenever possible (e.g. "project will result in the elimination of 3.5 acres of riparian habitat").
- Evaluate impacts the development may have on the habitats, and whether the development will be consistent with long-term viability of the habitats.
- Discuss the adequacy of setbacks from the habitat area(s).
- Discuss the potential for incidental take of rare/threatened/endangered species.
- Consider cumulative impacts.

3. Mitigation Measures

Mitigation measures should be developed for those potentially significant project impacts for which adequate data (including mapped data) was gathered during the biological impact assessment. If sufficient information is not available this should be noted in the "Sufficiency of Biological Data" section above.

By definition, a mitigation measure should:

- Avoid the impact altogether;
- Minimize impacts by limiting the magnitude;
- Rectify impacts by repairing, rehabilitating, restoring;
- Reduce or eliminate the impact over time; or,
- Compensate for the impact by replacing or providing substitute resources.

The measures above should be considered in the order presented. If an impact can be avoided, it should be. If it cannot be avoided, then efforts should be made to minimize the impacts.

Use the following as a guide in the development of mitigation measures:

- Identify the maximum feasible mitigation measures (other than "no project") to protect the resources and suggestions for monitoring and evaluating the effectiveness of the mitigation measures.
- Address the "Who, What, Where, Why and When" (See below)
- Why – State the objective of the mitigation measure and why it is recommended.
- What – Explain the specifics of the mitigation measure and how it will be designed and implemented. Identify measurable performance standards by which success of the mitigation can be determined.
- Who – Identify the agency, organization, or individual responsible for implementing the measure.
- Where – Identify the specific location(s) of the mitigation measure(s).
- When – Identify the appropriate timing for mitigation implementation (i.e., prior to issuance of grading and/or construction permit).
- Consider a range of possibilities, including: avoidance, fencing, open space easements, clustering development, and off-site mitigation if necessary.

- Strive for solutions that work toward regional protection of the resources, including: combining open space easements with adjacent ownerships, maintenance of open space corridors.
- Develop a Mitigation Monitoring and Reporting Program (MMRP) when necessary (refer to Appendix C, Guidelines for Mitigation, Monitoring and Reporting Plans).
- Recommend conditions of approval for the restoration of damaged habitats, where feasible (refer to Appendix D, Guidelines for Revegetation/Restoration Plans).

G. Photos

Color photos shall be taken during survey efforts. It may be appropriate to include photos from multiple site visits to show the change in season and available habitat.

- Photos should be included in each report.
- Digital photos shall be clearly labeled and provided on the CD submitted to the County.

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APPENDIX B

BIOLOGICAL SURVEY PROCESS FOR BIOLOGICAL RESOURCES ASSESSMENTS

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BIOLOGICAL SURVEY PROCESS FOR BIOLOGICAL RESOURCES ASSESSMENTS

BIOLOGICAL SURVEY PROCESS

The County is providing guidance because the fieldwork and survey methodologies being employed by biologists are crucial to an accurate and complete biological resource assessment of proposed projects. As detailed below, the biologists hired by applicants are responsible for conducting biological resource assessments. However, the biologists can assist the County in determining the level and number of surveys that should be conducted based on field conditions. It is the responsibility of the biologists to evaluate field conditions and provide a recommendation to the applicant and the County as to the fieldwork approach.

For example, a County planner may generate an initial request letter that identifies a potential for sensitive botanical species on the project site. However, when the biologist visits the site, s/he sees what appears to be an established wetland that eventually drains to an adjacent perennial stream. The biologist should contact the County planner to discuss these additional findings.

The following outlines the biological survey process:

1. After being contacted by an applicant to conduct field surveys, determine if you have the necessary knowledge, experience and permits to conduct the work. If you do not, refer the applicant to a biologist that has the appropriate experience. If you do have the necessary knowledge and experience and are not on the County's list of qualified consultants, you should submit your qualification information to the County for approval **before** conducting any field studies.
2. If you are retained by an applicant to conduct biological surveys, obtain from the applicant the Assessor's Parcel Number (APN), a detailed project description, County-assigned application number, if an application has been submitted, and the most recent set of site (project) plans.
3. Prior to a site visit, conduct a nine-quadrangle (7.5 minute/24,000 scale) search in the California Natural Diversity Database (CNDDB) for sensitive plant and animal species. The nine quadrangles should include the quadrangle including the project site and the eight surrounding quadrangles. The CNDDB search is the starting point to determine the potentially occurring sensitive species at the project site but is not definitive, and may be out of date or of too gross of a scale to be accurate for a given project. Use your personal biological expertise, results from previous biological reports, museum records, etc. to identify additional potential sensitive species for the project site. If you choose to vary from this protocol, provide an explanation of how you conducted your research to determine what sensitive species potentially occur in the project area.
4. Based on the information collected in step 3, prepare a list of potentially-occurring sensitive species in table format that includes the following:
    a. Species common name
    b. Species scientific name
    c. Species special status (federal, state, CNPS, CDFG, other)
    d. Habitat requirements and vegetation associations

e. Time of year when species is present, flowering, or identifiable, which determines the time of year when surveys should be conducted to identify those species. Many species have a small survey window and surveys should be conducted during the appropriate window.

f. Assessment of potential for species to be present on-site (e.g. red-legged frog is unlikely to occur because no water bodies or streams are located on-site and no permanent water bodies are located within one mile of project site," or "California red-legged frog is likely to occur because breeding habitat is present on-site in the creek and red-legged frogs sightings have occurred in the creek within ¼ mile of the project site."). When sensitive wildlife is being considered, address the potential for the site to provide important wildlife or migration corridors.

g. Assessment of life phase(s) present in project area and type of habitat present (e.g.; breeding, upland, migratory, etc.).

5. Using the table prepared in step 4, schedule field surveys to coincide with the time of year species are present, flowering, or identifiable in order to document presence/absence of sensitive species. Coordinate with the applicant about the need and timing for field surveys and the possible need for multiple surveys at different times of year. Biologists should determine the type of biological surveys and reporting appropriate for the project site. Applicants should be made aware that this might require an initial reconnaissance-level site assessment in addition to specific follow-up surveys that evaluate the potential impacts to particular sensitive species and/or habitats**. Please note that some projects will involve more than one survey.**

6. Meet with applicant at the project site. Have the applicant describe the project and show you the project site boundaries and impact area. Question the applicant about the proposed project, alternatives being considered, the location of leach fields, wells, utility lines, and any off-site improvements. Ask the applicant about Cal Fire requirements for road improvements and defensible space. For forested areas, or areas with “moderate” to “high fuel” vegetation, one should assume that all areas within 100 feet of proposed structures and 10 feet from existing/proposed roads will receive a Cal Fire recommendation for heavy “modification” or removal of such vegetation. This assumption should be included in all biological assessments when such conditions exist. Examine the entire project site using maps, aerial photographs, and site plans. Take notes on the physiographic setting, topography, drainage patterns, rock outcrops, cliffs, waterbodies, creeks, etc., on-site and adjacent land uses, and existing conditions. Vegetation classification can be done during this field visit. Make note of habitat identified by the County of Santa Cruz as sensitive or in serious decline (e.g., maritime chaparral, etc.). Map the vegetation types using aerial photographs, site plans, and/or GPS. Identify location and condition of creeks, rivers, drainage channels, swales, wetlands, vernal pools, depressions, serpentine rock formations, and other noteworthy features. Assess the potential for the site to provide habitat for sensitive species. If you rule out the possible occurrence of a sensitive species based on habitat conditions, provide enough detail to explain this conclusion. For example, if you conclude that “drainages on-site are insignificant”, provide the rationale that led you to that decision: e.g., “The drainage occurs as a flat swale with no definable bed, bank, or channel. Additionally, the area is not shown as a blue line stream on topographic maps. Extensive cattle grazing on-site has denuded the area of native vegetation and only weedy species such as yellow star thistle occur. Furthermore, the lack of mature

vegetative cover and ephemeral sheet flow would not provide suitable habitat for sensitive wildlife species such as steelhead, California red-legged frog, and southwestern pond turtle".

7. Obtain necessary state and federal permits, collecting permits, and/or Memorandums of Understanding (MOUs) from CDFG or verify that your permits and MOUs are valid and up-to-date.
8. At the time of botanical field survey(s), visit known reference populations of target species to verify their flowering periods. Where feasible, reference populations should be in the same general area as the project site. This information will help to support any conclusions that the species does not occur on the project site if they are not observed during the field surveys. Visiting reference populations may also be appropriate for other animal species, if they are migratory, or have a particular active/dormant cycle, to determine if they are present/active.
9. Conduct field surveys in all habitats as per standard biological techniques and recommended federal and state protocols (as applicable) for target species. The County recommends that the entire parcel be surveyed for projects that will encompass the entire parcel, and for small projects on small parcels (i.e. less than 10 acres). For small projects located on larger parcels encompassing hundreds of acres, it may not be necessary to survey the entire site, but at a minimum, the surveys should include the proposed project area, road improvements, leach fields, utility lines, and off-site improvements and appropriate buffer areas, including any areas that have the potential to be the subject to indirect impacts (such as impacts from occupation, such as pets, noise, and/or lighting). The biologist should identify all habitats/vegetation associations on the entire parcel, regardless of the project and parcel size. If sensitive resources are found on the project site which may be impacted by the proposed project, a larger area should be surveyed, to determine the extent of impacts to specific resources on the project site, to identify alternate project locations and/or to identify areas to which it would be appropriate to direct compensatory mitigation. If the entire parcel is not surveyed, the biologist should be aware that frequently project plans are changed either by the applicant, the County, or the approving hearing body. If the initial survey(s) does not include the new project areas, it could result in the need for additional surveys and delays to the project. If a project site has been disturbed or denuded prior to the field survey, it may not be possible for the County to determine possible impacts to sensitive resources that may have been present. These situations often require additional field surveys after the site is allowed to revegetate. The County may request that the applicant hire a biologist to assess the existing resources and the potential for sensitive resources to have been impacted by the activities. In these cases, the biologist should use their expertise and available resources to make a professional assessment of what was present on the site before the activity occurred. If sensitive plants are located adjacent to the area that was impacted, the species may also have occurred in the impact area. An assessment of the potential impacted population would then be required.
10. Accurately map the locations of sensitive habitats and species. Provide these maps with your report.
11. Record all plant and animal species observed on or near the project site. Identify the species to the taxonomic level necessary to determine its rarity and status. Provide this information in your report, including the survey methodology/protocol.
12. Take photographs of existing conditions, habitats, vegetation associations, sensitive resources, unique features, etc.

13. Complete the table of potentially occurring species with the survey results. (e.g. "species not found on project site during appropriately timed surveys" or "species identified on project site in wetland habitat.")
14. Assess the potential of direct and indirect impacts to biological resources from project activities. Include all impacts from the project; leach fields, wells, utility lines, Cal Fire defensible space requirements, road improvements, etc. Identify potential take of federal or state listed species that would require consultation with USFWS, NOAA Fisheries, and/or CDFG.
15. Submit survey results for habitat assessments and/or protocol surveys for listed species to CDFG/USFWS, as appropriate, and send a copy of the report to the County Environmental Planning Section of the Planning Department.
16. Recommend avoidance or mitigation measures to minimize impacts to the resources.
17. Coordinate with the applicant about the survey results and your recommendations.
18. If appropriate, prepare California Natural Diversity Database (CNDDB) forms for sensitive species sightings. Include a copy of your submitted form(s) to the County, preferably as an attachment to your biological report.
19. Prepare the biological report as per the County's Guidelines for Preparation of Biological Resources Assessments.
20. The biological report should note the jurisdictional habitats observed on-site and the necessity for the applicant to obtain all applicable permits as determined by potential impacts to those areas.

APPENDIX C

TEMPLATE FOR
BIOLOGICAL RESOURCES ASSESSMENTS

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EXAMPLE COVER PAGE

LOCAL PROJECT (physical address if applicable)
APN: 000-000-000
Permit or application type:
County application number (if known):

***Prepared for**:*
Applicant and/or Agent
Mailing address
Phone number
Email address
Prepared by:

Prepare by:
Biologist and/or Company name
Mailing address
Phone number
Email address

Date Report Prepared
Date of Revised Report, if applicable
Reporting Biologist: name, title, company, and contact information.

"As a County-approved biologist, I hereby certify that this Biological Resources Assessment was prepared according to the Guidelines established by the County of Santa Cruz Planning Department and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge and belief; and I further certify that I was present throughout the site visit(s) associated with this report."

_____
Printed Name

_____ _____
Signature *Date*

Add additional lines as needed for each staff person involved in the project.

Table of Contents

I. EXECUTIVE SUMMARY/SYNOPSIS

Provide a clear, concise summary of the project, habitats present, potential sensitive species present, and reference to mitigation offered.

This section should clearly define the project and what resources exist on-site. It should briefly explain all aspects of the project, with additional details provided in the remainder of the document.

The language in this section is intended for review by the public and decision makers, therefore, should not be technical in nature. The length of this section will depend on the complexity of the project, potential impacts, and the amount of disturbance to the environment in question.

II. INTRODUCTION

This section of the report should include a detailed description of the development proposal and the size and location of the disturbance footprint. The description of the development proposal should cover the **whole of the project**. This includes the immediate action being pursued as well as any reasonably anticipated future development plans. For example, for grading permit applications the project is not just the immediate grading, but also the end result for which the land will be graded. Another example is a Tentative Map that proposes to subdivide property. The project in question is not just the increase in the number of lots, but the ultimate outcome of commercial or residential development.

The introduction should include at least the following information:

- Development Proposal Description - Describe all physical alterations that would occur to the existing site. Describe all proposed structures, their approximate size, location, and purpose. Be sure to include all ancillary features (e.g., staging areas, septic location and leach field, road improvements, utility improvements/installations, etc.).
- Disturbance Envelope Size - State the size of the area proposed for development including such things as the buildable lot, fire hazard clearance areas, access roads, and fire department turn around areas. **Note:** The construction footprint size will be smaller than the survey area size because it does not take into account areas of potential indirect impacts.
- Existing and, if applicable, Proposed Land Use Designations
- Site Plans
- Maps: Location, topographic, and vegetation communities; should also show where sensitive species were found.

III. METHODOLOGY

All reports submitted to the County should include the details listed below.

- Research conducted – CNDDB, BIOS, other reports, museum records, etc.
- References including any relevant personal communications
- Survey Details – this should include type(s) of survey(s), date(s) of survey(s), duration of each survey, names of biologists, weather conditions (including drought conditions if applicable), and how the area was covered (e.g., 25 feet transects, entire property, etc).

- Description of how the vegetation communities were mapped. Note: vegetation communities should always be mapped, regardless of whether sensitive species are located.
- Survey Purpose – State if this is a preliminary biological resources assessment, a follow up spring botanical survey, protocol-level survey, oak tree survey, wetland delineation, California long-toed salamander habitat evaluation, etc.
- Survey Area - Description of the area, regional location, boundaries of the survey (how much area beyond the footprint was surveyed?), environmental setting (habitat type(s)) and soil type(s).

IV. RESULTS

A main goal of this section of the report is to answer the following questions from the CEQA checklist:

Will the project:

a) Result in a loss of unique or special status species or their habitats?

b) Reduce the extent, diversity or quality of native or other important vegetation?

c) Impact wetland or riparian habitat?

d) Introduce barriers to movement of resident or migratory fish or wildlife species, or factors, which could hinder the normal activities of wildlife?

The following applicable categories should be included in the results section of the biological resources assessment report:

- Habitats:
  - Results of background research relevant to the project area
  - Plant communities – what types were found, what quality, and how much of each?
  - Habitat communities – this is not always the same as plant communities; riparian habitat may consist of several different plant communities.
  - Physical features
  - Wetlands, drainages, and/or riparian areas (if not covered in above items).
- Species (Endangered, Threatened, Rare, Locally Important) and Nests
  - Results of background research relevant to the project area
  - Special status species summary and table (observed and potential)
  - Blooming period for plants and nesting/breeding period for wildlife
  - A copy of completed CNDDB forms submitted to CDFG if sensitive species were found
- Habitat Connectivity
  - Results of background research relevant to the project area
  - Mapped corridors or linkages
  - Stream crossing structures
  - Barriers to connectivity

- Any correspondence from regulatory agencies and/or local experts, if applicable

V. IMPACT ASSESSMENT AND MITIGATION

This section of the report should identify adverse impacts to sensitive biological resources and recommend compensatory mitigation as required to minimize these impacts.

A. Sufficiency of Biological Data

In some cases the information within the biological resources assessment may not be sufficient to definitively determine impacts to certain resources. Determining the impacts to some resources may require additional seasonal field surveys, coordination with other regulatory agencies, or a specialized investigation. This section of the document should clearly identify any significant deficiencies in the existing biological data and should make recommendations for further action (**Note:** Additional survey work should not be included as a mitigation measure).

B. Impact Analysis

The robustness of the impact analysis will vary depending on the biological resources found onsite and the intensity of the proposed development. In general, types of impacts include: direct (primary), indirect (secondary), short-term, long-term, and cumulative.

Use the following as a guide in the analysis of impacts:

- Discuss both temporary and permanent impacts specific to the project proposed by the applicant, but keep the discussion generic enough to allow the County flexibility of analysis in the event changes in project description occur.
- Address the questions in the CEQA checklist (as identified above); however, the County and any other Responsible Agencies will ultimately make CEQA significance determinations.
- Consider all phases of development including grading, construction, occupation, and/or operation.
- Identify all possible disturbances (both **on-site and off-site**). Examples include: alteration of drainage, erosion, sedimentation, noise, introduction of exotic plants and animals, and other potential disturbances, which may become evident during project review.
- Quantify impacts whenever possible (e.g. "project will result in the elimination of 3.5 acres of coastal scrub habitat").
- Evaluate impacts the development may have on the habitat(s), and whether the development will be consistent with long-term viability of the habitat(s).
- Discuss the adequacy of proposed setbacks from the habitat area(s).
- Discuss the potential for incidental take of rare/threatened/endangered species.
- Consider cumulative impacts.

C. Mitigation Measures

Mitigation measures should be developed for those potentially significant project impacts for which adequate data (including mapped data) was gathered during the biological impact assessment. If sufficient information is not available this should be noted in the “Sufficiency of Biological Data” section above.

Mitigation measures should be designed to accomplish the following results, in this order:

- Avoid the impact altogether;
- Minimize impacts by limiting the magnitude;
- Rectify impacts by repairing, rehabilitating, restoring;
- Reduce or eliminate the impact over time; or,
- Compensate for the impact by replacing or providing substitute resources.

Use the following as a guide in the development of mitigation measures:

- Identify the maximum feasible mitigation measures (other than "no project") to protect the resources and suggestions for monitoring and evaluating the effectiveness of the mitigation measures.
- Address the "Who, What, Where, Why and When"
  - Why – State the objective of the mitigation measure and why it is recommended.
  - What – Explain the specifics of the mitigation measure and how it would be implemented. Identify measurable performance standards by which success of the mitigation can be determined.
  - Who – Identify the agency, organization, or individual responsible for implementing the measure.
  - Where – Identify the specific location of the mitigation measure.
  - When – Identify the appropriate timing for mitigation implementation (i.e., prior to issuance of grading and/or construction permit), and any follow-up monitoring.
- Consider a range of possibilities, including: avoidance, fencing, open space easements, clustering, and off-site mitigation.
- Strive for solutions that work toward regional protection of the resources, including maintenance of open space corridors.
- Recommend conditions of approval for the restoration of damaged habitats, where feasible (refer to Appendix B, Guidelines for Revegetation/Restoration Plans).
- Develop a Mitigation Monitoring and Reporting Plan (MMRP) when necessary (refer to Appendix C, Guidelines for Mitigation and Monitoring Plans).

D. Photos (This section can be provided as an appendix.)

Color photos should be taken during survey efforts. It may be appropriate to include photos from multiple site visits to show the change in season and available habitat.

- Photos should be included in each report.
- Digital photos should be clearly labeled and provided on a CD submitted to the County.

VI. REFERENCES

Include a standard list of sources cited, including personal communications.

APPENDIX D

GUIDELINES FOR THE PREPARATION OF REVEGETATION/RESTORATION PLANS

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GUIDELINSE FOR THE PREPARATION OF REVEGETATION/RESTORATION PLANS

I. Applicability

These guidelines are for biologists preparing Revegetation/Restoration Plans (RRPs) for the County of Santa Cruz Planning Department. These guidelines do not supersede existing Federal or State laws or regulations.

II. Purpose

The purpose of these Revegetation/Restoration Guidelines is to assist applicants in understanding the County requirements for RRPs, to improve the overall success of RRP proposals, to improve the predictability of RRPs, and to provide for more consistency in the contents of RRPs. The guidelines are intended to be used by applicants, agents, and consultants as a guide for the development of RRPs required to mitigate for adverse impacts to sensitive botanical resources. These guidelines may not be suitable in every situation, and do not guarantee the success of a revegetation/restoration project. These guidelines are intended to provide background information that may be assimilated in RRPs; however, the actual details required in an RRP needed for a particular project may vary, depending on the site conditions, project scope, and sensitive resources that require mitigation.

III. Definitions and General Information

Revegetation/Restoration Plan is defined as a plan to mitigate or compensate for the loss of sensitive habitat resulting from project activities or unauthorized development activities, and monitor over time the success of the revegetation/restoration plan.

Performance standards are specific, measurable outcomes used to track progress towards achieving the mitigation goals and objectives. The development of performance standards is a required element in an RRP. Applicants and consultants should coordinate with the County early in the RRP development to develop performance standards.

Replacement Ratio: RRPs should be developed to replace impacted sensitive resources at a minimum 1:1 replacement ratio. This replacement ratio may be increased depending on the type of resource, the percentage of the total resource that is lost due to the project activities, the likelihood of success, the time required to achieve full mitigation of the impacted resource, and the type of proposed mitigation. (i.e. young oak trees may be replaced at a 3:1 ratio, while mature oaks may be replaced at a 7:1 ratio.) Habitat enhancement as mitigation for lost habitat should be at a minimum of 3:1.

Approval of RRPs: RRPs should include a discussion of how on-site impacts were avoided and minimized and how the proposed RRP will compensate for the remaining unavoidable impacts. A preliminary RRP should be submitted to the Environmental Coordinator's Office of the County Planning Department for review. The County should review the preliminary RRP to ensure that the RRP appropriately compensates for the unavoidable impacts. The final RRP should be completed, incorporating the County's comments.

Coordination: Coordination meetings between contractors, environmental consultants, and the project planner are encouraged to facilitate the evaluation of potentially complex projects and to discuss revegetation/restoration requirements and opportunities. In addition, coordination

meetings are encouraged for larger, higher risk revegetation/restoration projects to ensure proper compliance.

IV. Revegetation/Restoration Checklist

The attached checklist is intended to serve as a guide for applicants preparing RRPs to mitigate for impacts from projects that require revegetation or restoration. The checklist identifies the items generally required when developing compensatory RRPs. Not every RRP will require each item on the checklist; however, applicants should address all applicable items and indicate, when appropriate, why a particular item was not included.

V. Contents of Revegetation/Restoration Plan

Refer to the attached checklist of RRPs. The checklist should be used prior to submittal of RRPs to ensure that all required items are included.

A. Executive Summary

1. Impacted versus created or enhanced vegetation and habitat type(s)
2. Project goals and objectives
3. Summary schedule

B. Baseline Information for Impact Site, Proposed Revegetation/Restoration-Sites and Reference Sites (if applicable)

1. Description of project that requires mitigation
   - Describe the project type (e.g. parcel map, tract map, grading permit, etc.),
   - Describe project phases
   - Describe project schedule
   - Include total area of disturbance (temporary and permanent)
   - Include conditions of approval as they relate to the RRP
2. Location - For the impact site, revegetation/restoration-site, and reference site (if applicable), include the following information:
   - Assessor's parcel number (i.e. APN)
   - Address
   - Location description
   - Township and range coordinates and/or Global Positioning System (GPS) coordinates.
   - Maps (e.g., vicinity map, site map showing project plans, USGS map, zoning or planning maps, etc.)
   - Aerial and on-site photos
   - Environmental setting of impact, revegetation/restoration and reference sites
   - Climate/aspect
   - Configuration and topography

- Soils testing and soils description
- Watershed
- Existing hydrology (surface and groundwater)
- Quantify wetland resources (acreage) or stream resources (linear feet) by type(s).
- Existing vegetation/habitats (descriptions and maps)
- List of species on-site, indicating dominant species
- Plant species characteristics such as densities, general age and health, and native/nonnative/invasive status
- Percent vegetative cover; community structure (canopy stratification)
- Existing wildlife usage (indicate possible rare, threatened and endangered species habitat)
- Map showing location of plant communities
- For revegetation/restoration-sites, also describe level of existing disturbance, exotic invasive species presence, and site constraints (e.g. zoning, current uses, surrounding uses, etc.)

3. Land Use and Ownership
   - Current owner(s)
   - Historic and current land use
   - Surrounding land use
4. Parties responsible for project
5. Required Permits from Non-County Agencies.
   - Describe permits required from other agencies such as the Department of Fish and Game, U.S. Fish and Wildlife Service, Army Corps of Engineers, etc., and when permits will be obtained.
   - If cultural or historical resources will be impacted, discuss whether a letter is needed by the State Historic Preservation Office. Explain how and when this will be accomplished.

C. Revegetation/Restoration Goals and Objectives

- Describe the resource type and functions that will be impacted at the proposed impact site and the resource and functions for which the revegetation/restoration project is intended to compensate.
- Include both temporary and permanent impacts
- Include attainable and measurable goals and objectives to achieve through implementation of the RRP (e.g. goals pertaining to revegetation/restoration, drainage and hydrology, slope stability, erosion and sedimentation, sensitive target species and habitats)
- Proposed compensation ratios
- Schedule for accomplishing goals and objectives

D. Revegetation/Restoration-site Selection and Justification (If the revegetation/restoration site is located off-site from the impact site, include the following information)**:**

- Explain why on-site options are not practicable or environmentally preferable.
- Description of site selection practicability in terms of cost, existing technology, and logistics
- Description of likelihood of success, future adjacent land uses and compatibility (show on map or aerial photo)
- Existing and proposed revegetation/restoration-site deed restrictions and rights-of-way. Demonstrate how the existence of any such restriction will be addressed, particularly in the context of incompatible uses.
- Explanation of how the design is sustainable and self-maintaining

E. Revegetation/Restoration Work Plan (The work plan should include the following information)**:**

- Specific details so that work can be accomplished by a secondary party, if necessary. Methodologies should be repeatable.
- Responsible party(ties)
- Maps marking boundaries of proposed revegetation/restoration-sites, preparation and/or treatments. Include GPS coordinates.
- Revegetation/restoration schedule for all phases (expected start and end dates of each phase, expected date for finished plan)
- Protections to be implemented for extant vegetation, hydrologic features, and landforms
- Description of revegetation/restoration methods (e.g., equipment to be used)
- Describe land shaping, grading, and drainage. Include planned elevation, slopes, hydrology, soils, vegetation, plant species, etc.
- Include grading plan, if applicable
- Slope protection, erosion control, and soil compaction control measures
- Planned soils/substrate/growth media
    - Source of soils (e.g., salvaging existing soil, stockpiling, replacing or importing)
    - Soil characteristics (organic content, structure, texture, permeability)
    - Soil amendments (e.g., organic material or topsoil)
    - Mulching
    - Weed eradication from soil source
- Plant materials
    - Species selection
    - Stock type (bare root, potted, seed)
    - Plant age(s)/size(s)

- Quantities of each species and stock type
- Propagule source (e.g. salvaged from impact site, local source, seed bank, commercial)
- Plant/seed handling
- Planting/seeding rates, densities, spacing, percent cover
- Planting/seeding methods (details)
- Planting/seeding locations (include description and show locations on map)

- Expected natural regeneration from existing seed bank, plantings, and natural recruitment
- Plant protection (e.g. Chan can, screens, Weedstop)
- Irrigation installation (frequency, duration, source and water quality)
- Planned habitat features (identify large woody debris, rock mounds, etc. on map)
- Other planned features, such as interpretive signs, trails, fence(s)
- Planned buffer (identify on map)
  - Physical characteristics (location, dimensions, native plant composition, spatial and vertical structure etc.

F. Site Protection and Maintenance

- Describe long-term legal protection instrument (e.g. conservation easement, deed restriction, transfer of title).
- Party(ies) responsible for site protections and their role (e.g. property owner, easement owner, maintenance implementation). If more than one party, identify primary party.
- Schedule of maintenance activities
- Maintenance plan
  - Measures to control predation/grazing
  - Invasive species control plan (plant and animal)
  - Fertilizing
  - Irrigation/supplemental watering
  - Replanting
  - Control of anthropogenic effects (e.g. fencing, signing, replacement planting, structure maintenance/repair, etc.)
- Evaluation and reporting of maintenance activities

G. Performance Standards

- Identify clear, precise, quantifiable parameters that can be used to evaluate the status of the RRP in attaining the desired goals and objectives (objectives may include measures such as number of individual plants, percent vegetative cover, percent cover of exotic/invasive species, etc).

- Describe how performance standards were derived (e.g. industry standards, local ordinances, developed specific for this project).
- Describe basis for standards (e.g. pilot project, research, monitored results of previously implemented project)
- Describe how performance standards will be used to verify that goals and objectives identified in section V.C. have been attained.
- Describe when performance standards will be evaluated.
- Set target values or ranges for the parameters identified.
- Describe standards for each revegetation/restoration project element such as species, community, structure, site, or function.
    - Describe qualitative standards (e.g. photo reference points, visual/aesthetic quality)
    - Reference sites or other controls

H. Monitoring Plan

- Include site plans of RRP with elevations and acreage. Explanations of any deviations from the approved RRP plan should be provided. Plans of completed project should also indicate the actual plantings.
- Party(ies) responsible for monitoring. If more than one, identify primary party
- Monitoring schedule
- Description of monitoring methods: data to be collected and reported, how often and for what duration. Identify proposed monitoring stations, including transect locations on map. Include specific details so that monitoring can be repeated by secondary party, if necessary.
- Discussion of methods for analyzing results
- Identify locations of photo stations and transects on map
- Photographs from stations

I. Adaptive Management Plan

- Describe party(ies) responsible for adaptive management and their responsibilities
- Identification of potential challenges that pose a risk to RRP project success (e.g., flooding, drought, invasive species, seriously degraded site, extensively developed landscape). Discuss how the design accommodates these challenges.
- Discussion of potential remedial measures in the event mitigation does not meet performance standards in a timely manner
- Discussion of how and when adaptive management practices will be applied to the plan
- Identify party(ies) to consult when goals and objectives are not attained.

J. Budget

- Include estimated costs associated with

- Planning RRP
- Implementation of RRP
- Maintenance
- Monitoring
- Contingencies

K. Financial Assurances

- For each of the following, identify party(ies) responsible to establish and manage the financial assurance, the specific type of financial instrument, the method used to estimate assurance amount, the date of establishment, and the release and forfeiture conditions:
  - Implementation
  - Maintenance
  - Monitoring
  - Adaptive Management
  - Project success
- Describe types of assurances (e.g., performance bonds, irrevocable trusts, escrow accounts, casualty insurance, letters of credit, etc.).
- Payees/designated appropriate use of funds
- Schedule by which financial assurance will be reviewed and adjusted to reflect current economic factors

L. Data sheets

- Include copies of data sheets for baseline data
- Include copies of monitoring forms
- Monitoring results

M. Monitoring Reports

- Include part(ies) responsible for submission of monitoring reports.
- Include schedule for submission of monitoring reports.
- Include details about contents of monitoring reports.

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APPENDIX E

REVEGETATION/RESTORATION PLAN CHECKLIST

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REVEGETATION/RESTORATION PLAN CHECKLIST

Executive Summary

- ☐ Impacted resources vs. resources proposed
- ☐ Project goals
- ☐ Schedule Summary

Baseline Information for Impact Site, Proposed Revegetation/Restoration-sites, and Reference Sites

- ☐ Description of project that requires mitigation (type, phases, schedule, quantify area of disturbance). Include proposed project site plan, topographic maps, and aerial photographs
- ☐ Location of impact site, revegetation/restoration-site, and reference sites (location description and site plan, APN, GPS coordinates, maps, photos, etc.)
- ☐ Provide data on environmental setting of sites (climate, topography, soils, watershed, hydrology, wetlands, plant communities, vegetation, habitat, wildlife species, level of existing disturbance, etc.)
- ☐ Describe historic and existing land uses and resources impacted
- ☐ Describe surrounding land use
- ☐ Land ownership
- ☐ Responsible parties
- ☐ Required permits from non-county agencies

Revegetation/Restoration Goals and Objectives

- ☐ Describe functions/resources lost at impact site
- ☐ Describe functions/resources to be gained at revegetation/restoration-site
- ☐ Include attainable and measurable goals and objectives
- ☐ Relationship to mitigation measures required for project
- ☐ Proposed mitigation ratios
- ☐ Time frame for accomplishing goals and objectives

Mitigation-site Selection and Justification (if located off-site from impact site)

- ☐ Describe process of selecting proposed site
- ☐ Likelihood of success, future land use compatibility, etc.
- ☐ Explain reason for selecting off-site mitigation (if applicable)
- ☐ Describe site restrictions

Mitigation Work Plan

- ☐ Include specific details of all aspects of revegetation/restoration work
- ☐ Responsible parties
- ☐ Maps showing boundaries of revegetation/restoration-sites
- ☐ Schedule
- ☐ Describe land shaping, grading, drainage
- ☐ Describe planned elevation, slopes, hydrology, soils, buffers, vegetation, plant and wildlife species, habitat features, signs, etc.
- ☐ Describe slope protection, erosion control, and soil compaction measures
- ☐ Planned soils information
- ☐ Plant materials information

- [ ] Plant protection
- [ ] Irrigation installation
- [ ] Habitat features
- [ ] Other features
- [ ] Buffers

Site Protection and Maintenance

- [ ] Provide evidence of long-term protective measures
- [ ] List parties and responsibilities
- [ ] Maintenance schedule
- [ ] Predation/grazing control plan
- [ ] Invasive species control plan
- [ ] Fertilizing
- [ ] Irrigation/supplemental watering
- [ ] Replanting
- [ ] Control of anthropogenic effects
- [ ] Evaluation and reporting maintenance activities

Performance Standards

- [ ] Identify precise, measurable parameters to determine success of revegetation/restoration plan. Performance standards should address project goals.
- [ ] Describe performance standards for each project element
- [ ] Describe how performance standards were derived
- [ ] Identify how and when performance standards will be evaluated

Monitoring Plan

- [ ] Include site plans of RRP work efforts
- [ ] Identify party(ies) and responsibilities
- [ ] Monitoring schedule
- [ ] Describe monitoring methods. Include specific details so that monitoring data collection can be repeated by secondary party, if necessary
- [ ] Identify photo station and transect locations
- [ ] Reporting monitoring data and assessing RRP status

Adaptive Management Plan

- [ ] Identify party(ies) and responsibilities
- [ ] Identify potential challenges (e.g. flooding, drought, invasive species, etc.)
- [ ] Remedial measures to implement in the event that performance standards are not met
- [ ] Identify when and how success criteria will be evaluated
- [ ] Identify how and when adaptive management practices will be applied to the plan
- [ ] Identify party(ies) to consult when goals and objectives are not attained.

Budget

- [ ] Include estimated costs for RRP planning, implementation, maintenance, monitoring, and contingencies

Financial Assurances

- [ ] Identify party(ies) responsible for assurances
- [ ] Specify type of assurances (e.g. performance bonds, irrevocable trusts, escrow accounts, etc.)
- [ ] Schedule for reviewing financial assurances

Data Sheets

- [ ] Include copies of data sheets for baseline data
- [ ] Copies of monitoring forms
- [ ] Monitoring results

Monitoring Reports

- [ ] Include party(ies) responsible for submission of monitoring reports
- [ ] Include schedule for submission of monitoring reports
- [ ] Include details about contents of monitoring reports

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