



# Santa Clara Valley Habitat Plan CLARIFICATION AND INTERPRETATION

Subject	Assessing Impacts to Covered Plant Occurrences
Clarification Number	2017-002c
Approved	Edmund Sullivan, Executive Officer <i>EPA</i>
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## Category

### Covered Plants

There are three related clarification and interpretation memos on covered plants. The first memo, *Covered Plant Survey Timing* (Clarification Number 2017-002a), explores the potential for variances in the appropriate survey window. The second memo, *Definition of a Covered Plant Occurrence and Tracking Occurrences* (Clarification Number 2017-002b), evaluates the occurrence definition as described in the Habitat Plan and outlines an adaptive approach to track those occurrences. This memo, *Assessing Impacts on Covered Plant Occurrences* (Clarification Number 2017-002c), provides guidance on how to appropriately assess different levels of impacts to covered plant occurrences. Collectively the three memos are intended to clarify the requirements of the Habitat Plan's conservation strategy regarding covered plants and provide a detailed implementation strategy based on those requirements.

## Topic

Assessing Impacts to Covered Plant Occurrences

## Issue/Question/Problem Statement

1. How are impacts to covered plant occurrences assessed? What is the difference between a temporary or permanent impact? How is a partial occurrence impact defined and assessed?
2. How does the Habitat Plan determine impacts if only a portion of the covered plant occurrence is accessible?

## Habitat Plan Guidance

The following text is comprised of Habitat Plan references that discuss how impacts on covered plants are assessed. General impact definitions (i.e., permanent, temporary) are included below to define plant impacts. There are references to partial impacts in Chapter 4 *Impact Assessment and Level of Take* and Chapter 6 *Condition on Covered Activities and Application Process* of the Habitat Plan. Page numbers are provided after each excerpt for reference.

## General Guidance

### Impacts

Impacts to covered plants under the Habitat Plan are summarized in Table 1 below. Impacts can be permanent or temporary. A permanent impact is one in which the long-term viability of the occurrence is affected. A temporary impact is one in which the population size and viability of the occurrence may be impacted, but the occurrence recovers over time to the pre-project or better condition. In addition, an impact to a covered plant occurrence may occur to only a portion of the occurrence. This is termed a partial impact under the Plan.

Impacts to less than 5% of the total occurrence of a covered plant species as measured by the number of individuals at the time of impact are considered a partial population impact and will be assumed to not affect the long-term viability of the occurrence and thus will not require monitoring or count as a permanent impact (this allowance does not apply to Coyote ceanothus, for which even minimum impacts are clearly defined and limited; pg. 5-175 and Tables 4-6 and 5-16).

Impacts to an occurrence that affect between 5% and 25% of the occurrence are considered a partial population impact and will trigger a post-impact monitoring procedure (Table 1). In assessing the significance of an impact to a plant occurrence, impacts that reduce the long-term viability of an occurrence are tracked against the cap for each species over the life of the Habitat Plan. For annual plant species, an occurrence will be assumed to retain long-term viability and will not require replacement in the Reserve System if the decline in population size and percent cover from pre-project conditions is less than 25% over a monitoring period of at least 5 years (pg. 4-62). For perennial plant species, an occurrence will be assumed to retain long-term viability and will not require replacement in the Reserve System if the decline in seedling recruitment and density from pre-project conditions is less than 25% over a monitoring period of at least 3 years. Monitoring will include estimates of percent cover and number of individuals (pg. 6-79).

Impacts to a covered plant occurrence that affect more than 25% of the population size will be considered a permanent impact to the occurrence unless post-construction monitoring can demonstrate that the long-term viability of the occurrence is not reduced.

**Table 1. Post-Project Monitoring Requirements for Covered Plants, based on Impact Analysis**

Percentage of Occurrence Impacted <sup>1</sup>	Monitoring Required?	Duration of Monitoring
<5%	No	n/a
5-25%	Yes	3 yrs <sup>3</sup> or 5 yrs <sup>4</sup>
>25%	No <sup>2</sup>	n/a <sup>2</sup>

<sup>1</sup> Calculated by number of individuals impacted divided by total occurrence size.

<sup>2</sup>Monitoring not required unless qualified botanist believes that impact is temporary and will recover to pre-project condition within prescribed monitoring period.

<sup>3</sup>For perennial plants, the duration of required monitoring is at least 3 years.

<sup>4</sup>For annual plants, the duration of required monitoring is at least 5 years.

## Viability Monitoring

The Habitat Plan assumes that in most cases, covered plant occurrences that overlap with the project footprint of covered activities would result in complete loss of the occurrence. However, there may be some partial impacts (affecting 5-25% of the occurrence size) which may or may not result in a permanent reduction in population size and viability. If post-project monitoring shows that the occurrence has recovered in subsequent years (5 years for annuals and 3 years for perennials) and long-term viability is not affected, then the impact is not considered permanent. (Page 4-62; see also Table 1 above). There may also be some cases, while rare, where more than 25% of the occurrence may be impacted and the occurrence may still recover to pre-project conditions. This condition will need to be substantiated by monitoring the occurrence over time as outlined above (Table 1).

When determining viability for the purpose of assessing a temporary or permanent impact, the Habitat Agency will consider the following:

1. Results of monitoring and rate of recovery of plant occurrences affected by covered activities (e.g., correlation between pre-project observations and actual viability post-project).

2. Total impacts to date to covered plant occurrences for each species and how close total impacts are to the allowable impact cap in the Habitat Plan (e.g., extra care taken when near cap not to exceed cap). (Page 6-79)

Covered plant occurrences that are determined to be partially affected (5-25% of the total occurrence size) by a qualified botanist (i.e., only a portion of the occurrence is impacted) by covered activities will be monitored by the Habitat Agency as described above. The purpose of the monitoring will be 1) to assess whether the impact reduces the long-term viability of the occurrence and whether supplemental management actions are feasible and warranted, and 2) to determine whether the Habitat Agency must protect and enhance or create occurrences in the Reserve System according to the cap and Table 5-16. (Page 6-78)

### Limited Accessibility

It is possible that only a portion of the occurrence will be located on the covered activity project site. However, it is imperative to estimate the total occurrence size, both for the initial impact analysis and for subsequent viability monitoring. In such instances, three possible approaches to estimating total occurrence size include the following:

1. If the landowner agrees, the project proponent or the Habitat Agency will obtain access to the adjacent sites on which the rest of the plant occurrence is located, and surveys will include the entire occurrence.
2. If access to adjacent sites(s) is not possible, or if for some other reasons it is not feasible to survey the entire occurrence, then an alternative will be developed to estimate the extent and condition of the adjacent portion of the occurrence. This can include the use of binoculars or a spotting scope to estimate total occurrence size and condition, or subsamples of representative density using a quadrat or other method to extrapolate total occurrence size.
3. If only a small portion of the occurrence is on adjacent properties (estimated using the above methods), then only the portion of the occurrence on the project site will be monitored and assessed for viability, but the total occurrence size will still be estimated if feasible. The determination whether this is a full impact will be made based on the results for the portion of the occurrence only. (Page 6-70)

### Determination

The Habitat Plan tracks impacts to, and conservation of, covered plants at the occurrence level, and not by individual plants (see Clarification and Interpretation Memo 2016-002 *Definition of a Covered Plant Occurrence and Tracking Occurrences*). As such, impacts to covered plant occurrences are evaluated based on the impact to the occurrence, not to an individual plant except in cases where an occurrence only includes one individual plant. If the long-term viability of a plant occurrence is not reduced, i.e. the occurrence recovers to the baseline pre-project condition or better, then this is a temporary impact on the occurrence and the impact will not count towards the covered plant occurrence impacts limit. The long-term viability of an occurrence after the impact has occurred will be determined by the Habitat Agency. The Habitat Agency will consult with species experts and

Wildlife Agency personnel when making their determination, and will follow the guidance offered below.

When a partial impact (5-25% of occurrence size) occurs, all requirements of Condition 20 apply, including but not limited to the following.

1. The baseline condition of the occurrence (including total occurrence size) will be documented.
2. A qualified botanist will assess the percentage of the occurrence which will be impacted and make a determination of the long-term viability of the occurrence given the plant occurrence condition, site conditions, and project-level construction details. For duration of monitoring, see Table 1.
3. For all but Coyote ceanothus, the qualified botanist will consider the Habitat Plan's guidance that if the impact affects less than 5% of the total occurrence as measured by the number of individuals at the time of impact, then the impact is assumed not to affect long-term viability.
4. For Coyote ceanothus there is a strict cap on the portion of the occurrence which may impacted, which is limited to 3,650 individuals of the occurrence on either side of Anderson Dam are removed by covered activities, or up to 5% of the total population, whichever is smaller.
5. Covered activity implementation will be monitored by a qualified botanist.

If only a portion of the covered plant occurrence is accessible, the Habitat Agency will attempt to obtain property access for a qualified botanist to conduct a site visit. If this is not possible, the extent and condition of the occurrence will be determined through a desktop survey to identify potential limiting factors (e.g., soil, land cover types, physical barriers, threats) with a follow-up site visit using binoculars or spotting scope to view the inaccessible area and assess viability.