Santa Clara Valley Habitat Plan
CLARIFICATION AND INTERPRETATION

Subject	**Covered Plant Survey Timing**
Clarification Number	**2017-002a**
Approved	**Edmund Sullivan, Executive Officer** EPA
Approval Date	**May 30, 2017**
Revision Date (if applicable)	

Category

Covered Plants

There are three related clarification and interpretation memos on covered plants. This 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. The third 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 regarding covered plants and provide a detailed implementation strategy based on those requirements.

Topic

Covered Plant Occurrences Survey Period

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Issue/Question/Problem Statement

1. Should surveys for covered perennial plants in the Habitat Plan (i.e., Santa Clara Valley dudleya (*Dudleya abramsii* ssp. *setchellii*), Mount Hamilton thistle (*Cirsium fontinale* var. *campylon*), Coyote ceanothus (*Ceanothus ferrisiae*), and Loma Prieta hoita (*Hotia strobilina*)) be limited to the appropriate survey period shown in Table 6-9 or can surveys be conducted at any time during the year?
2. Are there any variances available for the timing of surveys for annual plants?

Habitat Plan Guidance

The following excerpts from Habitat Plan Chapter 6 *Condition on Covered Activities and Application Process* and Chapter 7 *Monitoring and Adaptive Management* address the appropriate survey window for covered plants. Page numbers are provided after each excerpt for reference.

Timing

General Guidance

Plant surveys for covered species in the Habitat Plan must be performed according to the current applicable guidelines of the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS), except no floristic surveys are required (Page 6-77). A survey that is floristic in nature requires the identification of every plant species present in the project footprint, to the lowest taxonomic level. While this type of comprehensive survey is not required for the Habitat Plan (note that it may be required for other levels of environmental review such as CEQA), surveys must be conducted at the time of year when a species of interest can be clearly identified in the field (i.e., the appropriate survey period).

Species-Specific

The appropriate survey period is described in Table 6-9 of the Habitat Plan (text reference is Page 6-77) and shown in Table 1 below.

Surveys must be conducted at the time of year when the species can be identified in the field. In some cases, plants may be identifiable outside of the flowering period (e.g., Mount Hamilton thistle, Coyote ceanothus). (Page 6-77)

Results/Analysis

The Habitat Plan outlines appropriate survey windows for each species in Table 6-9, but the text states that in some cases surveys may occur outside of these windows as long as [perennial] species can be identified outside of the flowering period.

As included in the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 1996), "inventories must be conducted at the appropriate times of year when target species are present and identifiable." This 1996 document includes a supplemental protocol for Bakersfield cactus (*Opuntia treleasei*) as an example and states that "surveys are possible year-round because it is a perennial. However vegetative individuals may be obscured by dense annual grasses and thus the plants are most conspicuous while they are flowering." This could also be true for species such as Santa Clara Valley dudleya, which can be more difficult to detect when the individuals are small and not flowering or shriveled rosettes during dry summer months.

Determination

Based on the Habitat Plan text and CDFW and USFWS guidelines, there is some flexibility in the survey timing for covered perennial plants because some species can be detected outside of the bloom period (Table 1). The Habitat Plan identifies seven land cover types and habitats where plant surveys must be performed (Condition 19). Surveys in habitats that support only covered plants that are perennial and can still be detected to species—which include serpentine seep (Mt. Hamilton thistle), or areas containing Coyote Ceanothus —could be conducted at any time throughout the year by a qualified botanist.

If any survey for a covered perennial plant is conducted outside of the flowering period, the qualified botanist must conduct a desktop review of the project area (e.g., vegetation, soils, known occurrences within one mile, use of CNDDB, Consortium of California Herbaria, or other online database), visit a known reference site for the covered plant[1], and then—provided the plant was recognizable at the reference site—conduct a targeted survey for the species in question at the project site. An appropriate reference site is one which exhibits similar microclimate variables, species composition, and other characteristics which would indicate that plant demographics and phenology would be similar to the project site. If the plant is not recognizable at the reference site, a survey of the project site will be considered inconclusive. If the qualified botanist identifies any plants which could be the target species in question but the identification is inconclusive, they must return during that species' flowering period to confirm the plant identification. However, if no plants are detected that could potentially be the target covered species, the site will be deemed unoccupied. Photo documentation of plants at the reference site and of any covered plant found at the project site are required, in addition to basic reporting requirements as outlined in the Habitat Plan to document covered plant populations. For some of the perennial covered plant species which are difficult to identify outside of their bloom period or because they die back in dry summer months, there is no variance in the appropriate survey window. For example, Tiburon Indian paintbrush is a perennial plant which dies back to back to its woody base in July and August[2] making

[1] A reference site is a known, nearby occurrence of the target species that, if identifiable during the time of the survey, would validate the timing of the survey at the project site.

[2] U.S. Fish and Wildlife Service 2009. Species Account Tiburon Paintbrush (*Castilleja affins* ssp. *neglecta*). Sacramento Fish and Wildlife Office. August 25.
http://www.fws.gov/sacramento/es_species/Accounts/Plants/Documents/tiburon_paintbrush.pdf

it nearly impossible to identify outside of the flowering period. Loma Prieta hoita is difficult to identify to genus without flowers, and Santa Clara Valley dudleya shrivels back to a woody caudex in dry summer months, making individuals difficult to detect.

The survey(s) should be comprehensive in order to ensure that all individuals are identified. Therefore, it will be very important to conduct systematic searches with botanists walking parallel transects at an appropriate distance to detect the target species (i.e. five to 15 meters apart throughout the entire site, regardless of subjective habitat evaluations[3] ; U.S. Fish and Wildlife Service 2002). If for any reason surveys conducted outside of the flowering period are inconclusive (restricted access limiting visibility, dense vegetation masking areas of suitable habitat, unusual specimen, etc.), the project area (and a reference site) must be resurveyed during the flowering period to confirm identification.

Table 1. Summary of Changes to Appropriate Survey Window

Covered Plants	Habitat Plan Appropriate Survey Window	Recommended Appropriate Survey Window
Tiburon Indian paintbrush (*Castilleja affinis* spp. *neglecta*):	April through July	No change unless approved by a qualified botanist
Coyote ceanothus (*Ceanothus ferrisiae*):	January through May	Year-Round
Mount Hamilton thistle (*Cirsium fontinale* var. *campylon*):	April through September (uncommon in February, March, and October)	Year-Round, if botanist is familiar with the seedling and rosette stage (species is a biennial)
Santa Clara Valley dudleya (*Dudleya abramsii* ssp. *setchellii*):	April through July	No change unless approved by a qualified botanist
Fragrant fritillary (*Fritillaria liliacea*):	February through April	No change unless approved by a qualified botanist
Loma Prieta hoita (*Hoita strobilina*):	June through July (uncommon May, August, September, October)	No changed unless approved by a qualified botanist
Smooth lessinga (*Lessingia micradenia* var. *glabrata*):	July through September (uncommon October and November)	No change unless approved by a qualified botanist
Metcalf Canyon jewelflower (*Streptanthus albidus* ssp. *albidus*):	April through July	No change unless approved by a qualified botanist
Most beautiful jewelflower (*Streptanthus albius* ssp. *peramoenus*):	March through June	No change unless approved by a qualified botanist

[3] Walking transects will be conducted regardless of the time of year but is especially important during the non-flowering period.

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There is very little flexibility in the appropriate survey window for covered annual plant species because they dieback every year and are difficult to detect outside of the typical bloom period. However, a qualified botanist may make a determination prior to the survey as to the exact dates of the appropriate survey window, based on annual fluctuations in rainfall or other variables which affect bloom period (Table 1). If the qualified botanist intends to conduct a survey for a covered annual plant outside of the typical survey period as shown in Table 1, an appropriate reference site must be identified and visited, just as is described above for covered perennial plant species. An appropriate reference site is one which exhibits similar microclimate variables, soils, species composition, and other characteristics which would indicate that plant demographics and phenology would be similar to the project site. Photo documentation of the reference site and of any covered plant species found at the project site is required, in addition to basic reporting requirements as outlined in the Habitat Plan to document covered plant occurrences. For additional detail on assessing impacts to covered plant species, see Clarification Memo 2017-002c, *Assessing Impacts to Covered Plant Occurrences.*