Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed Plants on the Santa Rosa Plain

(modified from the September 23, 1996 Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants)

These guidelines describe protocols for conducting botanical surveys for federally listed plant species on the Santa Rosa Plain. They also describe minimum standards for reporting results of the surveys. The federally listed plant species occurring on the Santa Rosa Plain are Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), Sebastopol meadowfoam (*Limnanthes vinculans*), and many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*). The Service will use, in part, the information outlined below in determining whether the project under consideration may affect these plants, and in determining the direct, indirect, and cumulative effects.

Field inventories should be conducted by a qualified botanist in a manner that will locate listed species that may be present. With the exception of developed agricultural lands, the entire project area should be surveyed. Acceptable survey protocols are as follows:

1. A minimum of three visits must be made to the project site during the growing season. Site visits must correspond to times when at least one of the four Santa Rosa Plain listed plant species is accurately identifiable on a local reference site. Reference sites used must be acceptable to the Service. Site visits must span a period during which all four of the listed plants have been observed (not necessarily at the same time) and are identifiable on reference sites during a specific growing season. More visits to the site or the adjacent area may be needed to determine when each species is blooming in a given year. Inventories will include all potential habitats at the project site.

2. A minimum of two years of negative survey data performed according to the specifications in #1 is necessary to substantiate a negative finding for future permitting actions. For cases in which negative survey data do not conform to the standards outlined in these guidelines, the Service will make the assumption that all four listed plant species are present on the project site.

3. List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.

4. Survey documentation must include:

    a. identification of reference sites visited, which listed species were observed, phenological stage of the listed species observed, and similarity of physiographic

control between reference sites and surveyed sites (general water depth, extent of pooling, etc.)

b. a description of the biological setting at the project site, including plant community, topography, soils, potential habitat of target species, and environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species

c. a map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name

d. survey dates and survey methodology(ies)

e. a comprehensive list of all vascular plants occurring on the project site for each habitat type, to characterize and document site quality

f. a description of current and historical land uses of the habitat(s) and degree of project site alteration

g. a description of the presence of listed species off-site on adjacent parcels, if known

h. an assessment of the biological significance or ecological quality of the project site in a local and regional context

5. If listed species is (are) found on the project site, report results that additionally include:

a. a map showing the distribution of the listed species distribution relative to the proposed project

b. a description of the direction and integrity of flow of surface hydrology. If listed species is (are) affected by adjacent off-site hydrological influences, describe these factors.

c. the listed species phenology and microhabitat, an estimate of the number of individuals of each listed species per unit area; identify areas of high, medium and low density of listed species over the project site, and provide acres of occupied habitat of listed species. Investigators should provide color slides, photos or color copies of photos of listed species or representative habitats to support information or descriptions contained in reports.

d. the degree of impact(s), if any, of the proposed project as it relates to the potential unoccupied habitat of listed species.

6. Document findings of target species by completing California Native Species Field Survey Form(s) and submit form(s) to the Natural Diversity Data Base. Documentation of determinations and/or voucher specimens may be useful in cases of taxonomic ambiguities, habitat or range extensions.

7. Report as an addendum to the original survey, any change in abundance and distribution of listed plants in subsequent years. Project sites with inventories older than 3 years from the current date of project proposal submission will likely need additional survey. Investigators need to assess whether an additional survey(s) is (are) needed.

8. Guidance from California Department of Fish and Game (CDFG) regarding plant and plant community surveys can be found in Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities, 1984. Please contact the CDFG Regional Office for questions regarding the CDFG guidelines and for assistance in determining any applicable State regulatory requirements.