Statement Opposing Transplantation as Mitigation for Impacts to Rare Plants

July 9, 1998

The California State Legislature enacted the Native Plant Protection Act (NPPA) in 1977. The NPPA identifies wide-ranging and broad categories of activities on private lands that could result in the take (killing) of state-listed plants. These activities include: (1) agricultural operations or management practices including clearing of land, (2) land clearing for fire control, (3) timber operations in accordance with a legal timber harvesting plan, (4) mining assessment work, (5) performance by a public agency or public utility of its obligation to provide service to the public, (6) removal of listed plants from (a) a canal, (b) lateral ditch, (c) building site, (d) road, or (e) other right of way by the owner of the land. Few land use or management activities fall outside of these categories. Under one interpretation of Section 1913 of the NPPA, landowners who wish to engage in any of the aforementioned activities, and who have been informed by the California Department of Fish and Game (Department) of the presence of state-listed plants on their property, need only provide 10 day notice and give the Department the opportunity to salvage the plants before proceeding. This would be the *sole* mitigation required for destruction of listed plants or their habitat in these cases.

Recent regulatory proposals by the Department, statements by the California Attorney General, and activities in the courts and the state legislature, signal that NPPA's provisions on transplantation may soon become the major, possibly the only, form of "protection" from unlimited take for all state-listed plant taxa. For these reasons, it has become necessary to review the reasons why reliance on transplantation to conserve state-listed plant species is not only unlikely to succeed, but is likely to contribute to further declines of these taxa, possibly to widespread extinctions.

Transplantation is rarely successful in establishing rare plants at new locations. A study by the Department itself (Fiedler, 1991) found that, even under optimum conditions with ample time for planning, transplantation was effective in only 15% of cases studied. Other reviews (e.g. Allen, 1994; Howald, 1996) have found similar problems. There are many reasons for this poor success rate:

1. we often know very little about the biology of rare plants. We may not be aware of all the intricate habitat requirements of each listed species. Rare plants are often specialists that exploit a particular and unusual combination of habitat attributes. They may require a particular soil type, set of pollinators, mycorhizal fungi or other associate species, aspect, hydrological regime, microclimate or some combination of these or other factors for survival.

2. suitable transplantation or propagation sites may not be available, particularly with only 10 days notice.

3. digging up, transporting, and replanting plants, bulbs, rhizomes or seeds imposes a tremendous stress on a plant. They can easily die in the process.

4. scientifically-tested, reliable methods for salvage, propagation, translocation or transplantation are not available for many rare species.

5. areas where the impacted taxon is already present are often at the carrying capacity of the habitat, and the introduction of transplanted individuals into the existing population will disrupt the equilibrium of that population and will not increase the viability of the taxon.

6. the 10 day notice provision means that landowners can require the Department to salvage plants at any time of the year, including times that are inappropriate for physical disruption of the plant. Annual species may not even be visible at some times of the year.

Transplantation can also cause problems at the target site. Genetic contamination can occur if the plant being transplanted can exchange genetic material with local taxa. Disturbance at the target site may facilitate invasion by non-native invasive species.

For all of these reasons, the California Native Plant Society (CNPS) does not recognize off–site compensation as appropriate mitigation for project impacts and opposes the use of salvage and transplantation as mitigation for impacts to rare and listed plants (California Native Plant Society Rare Plant Scientific Advisory Committee, 1991).

The undersigned individuals, botanical societies and organizations oppose the use of transplantation as the primary means of conservation of rare plant species.

Signed,

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Literature Cited

Allen, W. H. 1994. Reintroduction of endangered plants: biologists worry that mitigation may be considered an easy option in the political and legal frameworks of conservation. Bioscience 44(2): 65-8.

California Native Plant Society Rare Plant Scientific Advisory Committee. 1991. Mitigation Guidelines Regarding Impacts to Rare, Threatened and Endangered Plants. California Native Plant Society, Sacramento, CA.

Fiedler, P. 1991. Mitigation related transplantation, translocation and reintroduction projects involving endangered and threatened and rare plant species in California. California Department of Fish and Game, Sacramento, CA. 82 pp.

Howald, A.M. Translocation as a mitigation strategy: lessons from California. In: D.A. Falk, C.I. Millar, and M. Olwell eds. Restoring Diversity: Strategies for Reintroduction of Endangered Plants. Island Press, Washington, DC.