New Restoration Strategies for Holocarpha macradenia in light of 2011 field studies Report to Parks & Recreation Resource Managers

presented by Michael Lewis & Jean Brocklebank
on behalf of Friends of Arana Gulch
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Summary

For years, the City of Santa Cruz has experimented with various management prescriptions for the restoration and retention of a viable population of Santa Cruz tarplant (Holocarpha macradenia) at Arana Gulch. 1987 is usually noted as the year that grazing ended at Arana Gulch and that tarplant began its demise. Currently all management prescriptions are based on trying to replicate grazing and/or disturbance. On occasion, catastrophic treatment has been tried, with some immediate success. However, over the years, such catastrophic treatments at Arana Gulch have not produced intended results and may have even been responsible for the loss of seed and seedbed.

We surveyed two other coastal terrace prairie grasslands in the county and compared management treatments to see if there is a correlation with treatment and success or failure. We also factored in weather/ precipitation data to see if either may be a factor in the yearly population variation of all three grassland sites. We reviewed the literature by botanists Grey Hayes and Laurie Kiguchi.

Based on our field studies and research, we have concluded the following:

1. Variation in precipitation amounts and timing may well be important and unrecognized factors in the demise of tarplant populations at Arana Gulch, Tarplant Hill and Twin Lakes State Park.
2. Catastrophic treatments at Arana Gulch must be halted.

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3 A lot of seed and seed bed has been removed from Arana Gulch in the last several years.
4 Small scale, patch work areas, such as those produced at Tarplant Hill in Watsonville, should be replicated for the upcoming treatment season at Arana Gulch.
5 Mowing should be done with smaller scale equipment.
6 If possible, this fall, the entire grassland (considered "critical habitat" by CDF & G, 7-15-10) should be mowed with a sickle mower, then either hand raked (with volunteers) or with the use of a drop rake, not a rock rake as has been used in the past.
7 The mowing/raking treatments of the past four seasons ('06 - '11) does not allow for response to variable climate conditions.

We recommend: 1) that P & R sponsor another meeting soon, with Kathy Lyons and Grey Hayes to discuss the ideas presented today and develop prescriptions for fall treatment; and 2) that P & R contact CDF & G to reinstate the 1997 MOU.