

3. Potentially Significant Effect: Changes in Aquatic Macrophyte Community Composition (Issue AQU-4).

Potential direct and indirect effects to the non-target macrophyte community could occur as the result of the Project, including both Group A and Group B methods. The threshold of significance for this issue area would be a substantial change or reduction in the diversity or distribution of the non-target macrophyte community.

FINDING

(1) Changes or alterations have been required in or incorporated into such project which avoid or reduce the significant adverse environmental effects to a less-than-significant level

RATIONALE AND EVIDENCE SUPPORTING IMPACT REDUCTION BY MITIGATION

Native aquatic plant species in the West Lagoon include leafy pondweed (*Potamogeton foliosus*), nitella (*Nitella* sp., a macroalga), elodea (*Elodea canadensis*), and Richard's pondweed (*P. richardsonii*) (TKPOA 2019). Native aquatic plants in Lake Tallac include most of the same species (Richard's pondweed is not known to occur); in addition, watershield (*Brasenia schreberi*) is found along the margins of Lake Tallac.

The application of aquatic herbicides can directly affect non-target plant species due to direct contact with the herbicide within the designated treatment site or adjacent open water areas. Existing information on the selectivity of the proposed aquatic herbicides, including manufacturer's labels and peer reviewed literature, was used to evaluate their potential to impact non-target aquatic plants. The magnitude of short-term impacts to these species from herbicides depends on the herbicide applied, with endothall being a less-selective contact herbicide that would likely result in the greatest impacts to non-target species. Tryclopyp herbicide is selective to Eurasian watermilfoil and is not reported to have lethal effects on the non-target macrophytes known to occur in the lagoons. The extent of herbicide-only sites is 13.3 acres, or 7.7percent of the lagoons, of which 8.2 acres or less than five percent are proposed for application of endothall.

Potential direct effects to non-target macrophyte species could occur through the use of UV light treatments and implementation of some Group B methods. The use of UV light and bottom barriers can be non-selectively lethal to non-target aquatic plants and could result in changes to community composition.

Potential impacts to non-target macrophyte community composition are reduced to less than significant through the following Mitigation Measure AQU-1. These surveys will result in adjustment of the test sites to avoid areas dominated by native or non-target plant communities.

Macrophyte Surveys (Mitigation AQU-1): Spring macrophyte surveys would be used as a basis to adjust testing site boundaries to better target dense beds of target species and avoid adverse changes in macrophyte community composition.