Critical Needs for Aquatic Weed Control

New tools are urgently needed to control invasive aquatic weeds in the Sacramento-San Joaquin Delta and protect current and future investments in restoration. Recent science demonstrates that **current treatment methods for invasive submerged aquatic vegetation (SAV) are not sufficient for controlling invasions across sites**. The growing aquatic weed crisis in the Delta is a major threat to restoration investments, endangered species, recreation, the local economy, and water project operations. Successful weed control is critical for fulfilling the vision of the draft Water Resilience Portfolio, the Delta Plan, and other initiatives.

SAV coverage has roughly doubled since 2004, despite ongoing treatment. Expanding SAV is now the single biggest threat to planned and existing tidal wetland restoration sites. Invasive SAV accounts for 70-90% of state investments in control efforts in the Delta, which totaled about $12.5M in 2018. Fluridone, the only herbicide approved for large-scale use on SAV in the Delta, is expensive and does not work at many treatment sites. For example, intensive fluridone treatment at Decker Island was part of the Delta Smelt Resiliency Strategy Aquatic Weed Control Action, but the treatment was not effective.

Promising control options for new tools have been identified, but require authorization to use in priority restoration areas.

ACTION 1: Prioritize regulatory authorization and identify funding to implement and research new tools at two restoration sites (Decker Island and Prospect Island). Rapid action will allow for results by 2021 to inform management. This would be a specific implementation of the draft Water Resilience Portfolio action to curb invasive species that are altering California waterways.

There is no consistently funded monitoring program in place for the Delta; monitoring to date has been funded opportunistically.

ACTION 2: Identify funding for consistent Delta-wide monitoring of aquatic weeds based on the recently published recommendations of the Interagency Ecological Program. Without comprehensive monitoring, it is not possible to evaluate the efficacy of new or existing control measures.

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Delta Smelt, Restoration, and SAV Control

CASE STUDY

- Delta Smelt, a federally and state listed endangered species and restoration target, do not use SAV beds as habitat. If restoration sites are invaded by SAV, they will not support Delta Smelt, and are unlikely to function as expected as sources of food web productivity.

- Given recent findings from the Delta Smelt Resiliency Strategy, DBW needs an expanded toolbox for treating SAV. Identifying new control tools will require testing them in the large, shallow-water habitats where they will be needed.

- Some of the largest Delta tidal restoration project obligations (Lookout Slough, Prospect Island, and Lower Yolo Ranch, Figure 1) are adjacent to rapidly expanding beds of SAV and are already being invaded. These are the locations that require rapid, proactive use of new control tools.

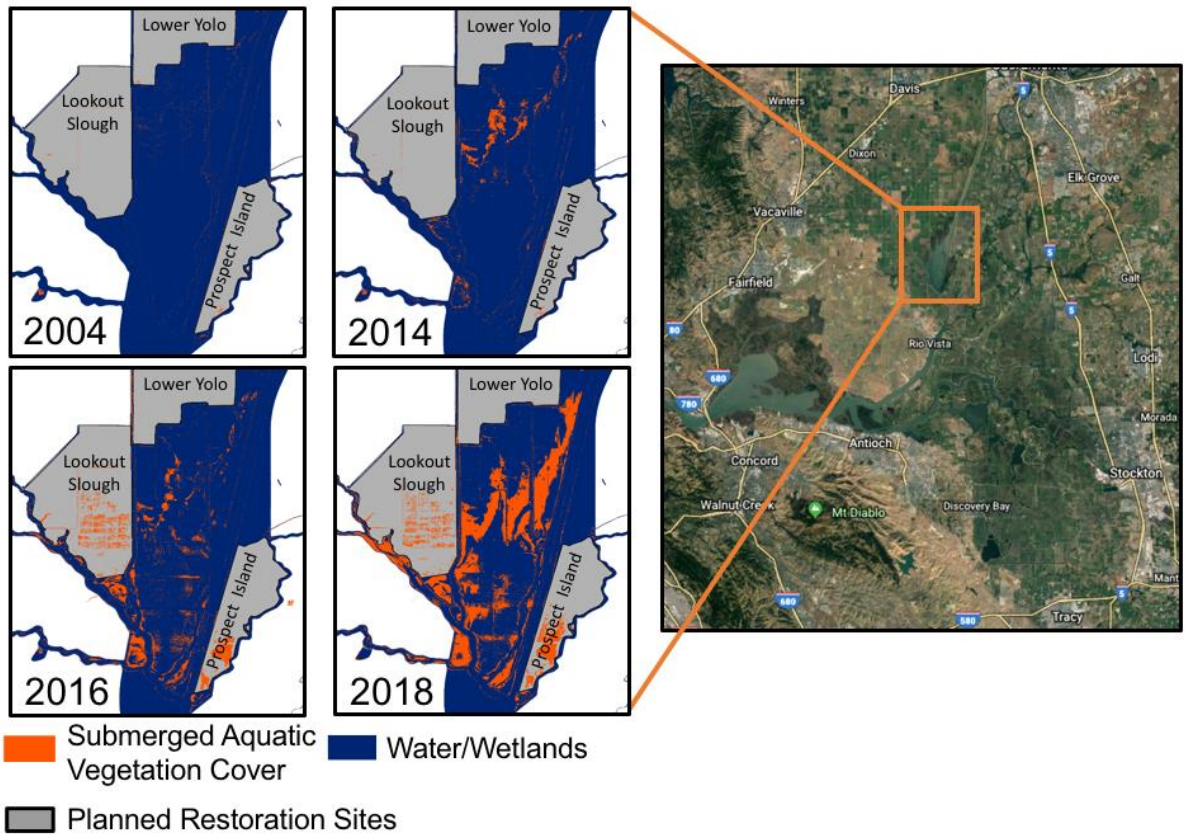

Figure 1: Expanding SAV cover adjacent to future restoration sites.