Executive Summary

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A. Introduction to the PEIR

This document presents a final programmatic environmental impact report (PEIR) analyzing the potential environmental effects of the California Department of Boating and Waterways, Water Hyacinth Control Program (WHCP). This document was prepared in compliance with the California Environmental Quality Act of 1970 (CEQA) (Public Resource Code 21000 *et seq*.).

The basic purpose of CEQA is to (1) inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities; (2) identify ways that environmental damages can be avoided or significantly reduced; (3) prevent significant avoidable damages through alternatives and mitigation measures; and (4) disclose why a project is approved if significant environmental effects are involved. The Environmental Impact Report (EIR) is a State of California public document used by governmental agencies to analyze significant environmental effects of a proposed project, to identify project alternatives, and to disclose possible ways to reduce, or avoid, possible environmental damages.

A programmatic EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project, such as this WHCP. The California Department of Boating and Waterways (DBW) is the Lead Agency for purposes of this PEIR.

Water hyacinth *(Eichhornia crassipes)* is a non-native, invasive, free-floating aquatic plant. Water hyacinth grows in wetlands, marshes, shallow water bodies, slow moving waterways, lakes, reservoirs, and rivers. Water hyacinth is often noted in the scientific literature as one of the world's fastest growing and most problematic weeds. Water hyacinth is native to the Amazon region of South America.

Water hyacinth was introduced to the United States in 1884 at New Orleans, Louisiana. California's first reported water hyacinth was at a Yolo County slough, in 1904. Water hyacinth spread into the Sacramento-San Joaquin Delta (Delta) by the 1940s and 1950s, and by 1981 it covered 1,000 acres of the Delta. Since 1981, estimated water hyacinth coverage in the Delta has ranged from approximately less than 500 acres, to over 2,500 acres.

Water hyacinth negatively influences biodiversity, recreation, and agriculture. It de-stabilizes dissolved oxygen (DO) cycles, shades out important shallow water fish habitat, prevents boat passage, and blocks agricultural water intakes. In response to concerns about water hyacinth, in 1982, Senate Bill 1344 amended the California Harbors and Navigation Code and designated the California Department of Boating and Waterways as the lead agency for controlling water hyacinth in the Delta, its tributaries, and Suisun Marsh.

The DBW initiated the WHCP in 1983. For the sixteen years, between 1983 and 1999, and for the nine years, from 2001 to to-date, the DBW has operated the WHCP. There

were no water hyacinth treatments in 2000, as the program was the subject of legal and regulatory changes. Prior to resuming to-date the WHCP in 2001, the DBW obtained an individual National Pollution Discharge Elimination System (NPDES) permit for the WHCP, issued by the State Water Resources Control Board (SWRCB), and administered by the Central Valley Regional Water Quality Control Board (CVRWQCB).

The individual NPDES permit expired in 2006, and was replaced with a NPDES General Permit. The WHCP also operates under two biological opinions (BOs) from the United States Fish and Wildlife Service (USFWS), and the National Oceanic and Atmospheric Administration (NOAA-Fisheries).

The WHCP currently operates under the following three (3) Federal permits:

- NPDES Statewide General Permit (CAG990005)
- USFWS Biological Opinion (1-1-02-F-157 and 1-1-03-F-0114)
- NOAA Biological Opinion (151422SWR2005SA00681:JSS)

The goal of the WHCP is to keep waterways safe and navigable by controlling the growth and spread of water hyacinth in the Delta and its surrounding tributaries. Because of the persistence of water hyacinth in the Delta, the WHCP legislative mandate is for control, rather than eradication of water hyacinth.

The primary purpose of the WHCP is to control the growth and spread of water hyacinth in order to minimize negative impacts of the plant on navigation, recreation, and agricultural activities in Delta waterways. The DBW seeks to manage water hyacinth growth while (1) minimizing non-target plant and species impacts and (2) preventing environmental degradation in Delta waterways and tributaries.

B. Purpose of This PEIR

With preparation of this WHCP Final PEIR, the DBW is seeking to update its twenty-five (25) years of environmental documentation for the WHCP. The DBW also wants to provide parity with its other aquatic weed program, the *Egeria densa* Control Program (EDCP). For the EDCP, the DBW prepared an EIR in 2001, and in 2006, a Second Addendum to the EDCP EIR and Five-Year Program Review.

The WHCP has operated without an EIR since the program's inception. In 1985, the United States Army Corps of Engineers, acting as a Lead Agency for water hyacinth control in the Delta, prepared an Environmental Assessment and Finding of "No Significant Impact" (EA/FONSI) for the WHCP. This FONSI determined that there was no need at that time to complete further environmental documentation for the program. The DBW operated the program with no additional environmental documentation until 1999. Since 2001, the DBW has been following the new and extensive environmental monitoring and compliance measures specified in the NPDES permit and USFW and NOAA-Fisheries Biological Opinions for the program.

Much has changed in the Delta since the WHCP began in 1983. The list of threatened and endangered species has expanded, new (less toxic) aquatic herbicides and adjuvants have been added to the WHCP, and there are significant new water quality and environmental concerns in the Delta. This Final PEIR for the WHCP provides the DBW with the opportunity to carefully reevaluate the program within the current context of the Delta environment and the DBW's current treatment practices.

C. Project Alternatives Considered in this PEIR

CEQA requires that an EIR discuss a reasonable range of alternatives that could avoid, or substantially lessen, the significant environmental impacts of the proposed program, even if the alternatives might impede to some degree attainment of program objectives, or the alternatives would be more costly. An EIR must also evaluate the impacts of the "No Program Alternative" to allow decision makers to compare impacts of approving the proposed program with impacts of not approving the proposed program.

The DBW considered six program alternatives: (1) Integrated Management (the selected alternative); (2) Chemical Control Only; (3) Handpicking Only; (4) Biological Control Only; (5) Mechanical Harvesting Only; and (6) No Program Alternative. In over twenty-five years of operating the WHCP, the DBW has examined and tested a broad range of potential control methods. Reflecting an adaptive management approach, the WHCP has continuously evolved over more than two decades to incorporate new information and experience. The selected WHCP alternative reflects this program experience, and provides flexibility to continue to adapt the program over time.

D. WHCP Overview

The DBW utilizes treatment protocols that balance the need to control water hyacinth with the need to minimize resulting environmental impacts to Delta waterways. The selected program alternative consists of an integrated approach, emphasizing chemical treatment, with limited handpicking and herding, and continued assessment of biological controls.

Selected program herbicides are 2,4-D and glyphosate, with 2,4-D being used for the majority of treatments. The DBW applies both herbicides with an adjuvant to increase adhesion to water hyacinth leaves and to reduce drift.

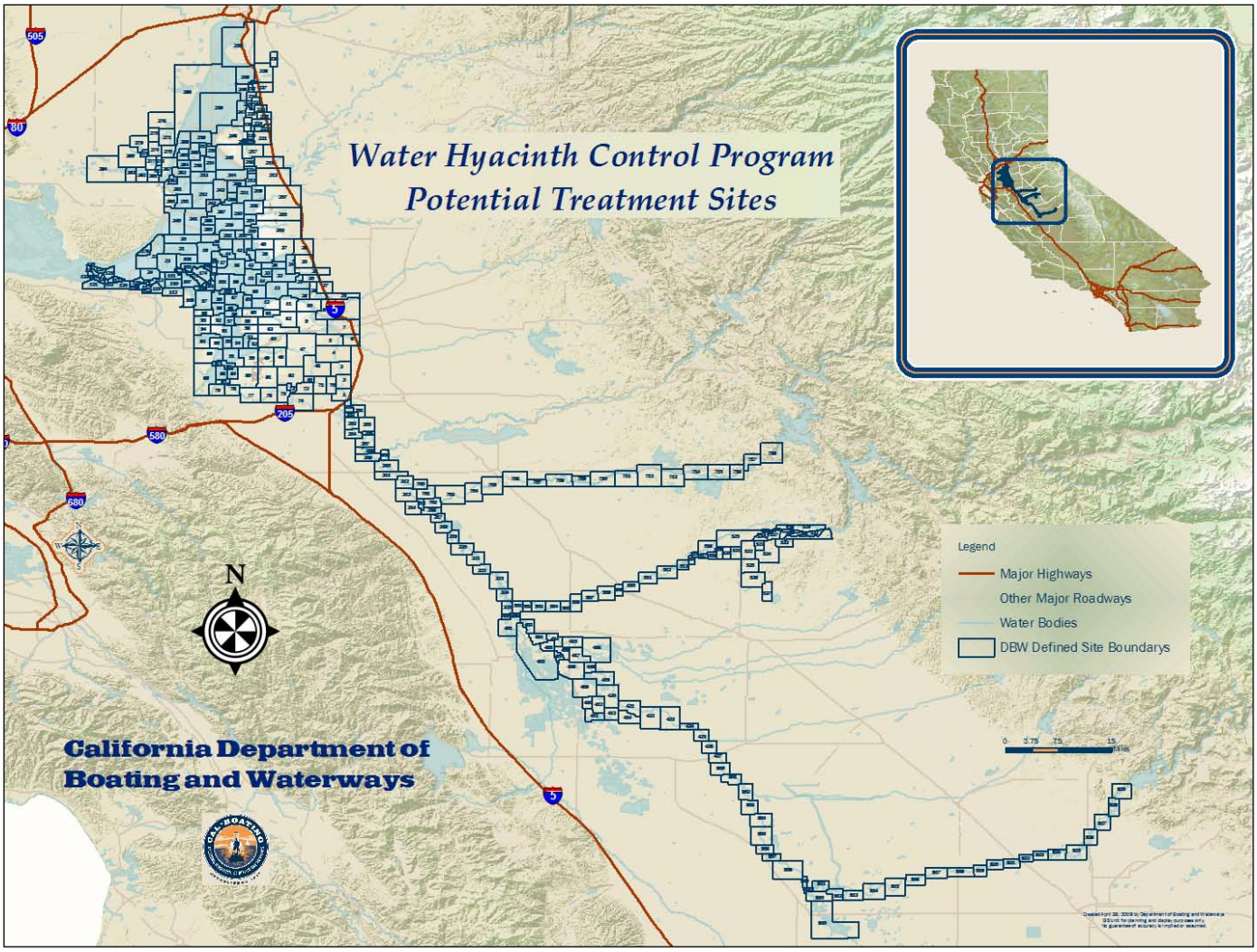
The DBW has six, two-person crews, conducting WHCP treatments (plus one Fresno County crew, and one Merced County crew). Chemical treatments begin April 1st, or April 15th in selected areas; however, the main region of the Delta can only be treated between July 1st and October 15th, to avoid potential impacts on fisheries.

The WHCP region is divided into 368 treatment sites that average between one and two miles in length. **Exhibit ES-1,** on the next page, provides a summary map of the WHCP project area and treatment sites. Sites may be treated multiple times during a treatment season. Treatment sites are prioritized so that nursery areas, and areas where water hyacinth causes negative public, agricultural, or industrial impacts are treated first. The WHCP also takes into account logistical factors such as prevailing wind, travel time, and weather, conditions when selecting treatment locations.

The WHCP follows an Operations Management Plan that specifies a pre-application planning protocol; an application/monitoring coordination protocol; "Best Maintenance Practices" for handling herbicides; spray equipment maintenance and calibration; and an herbicide spill contingency plan. The Operations Management Plan also specifies requirements related to avoiding threatened or endangered species; conducing habitat evaluation; dissolved oxygen measurement; fish passage protocols; and other monitoring requirements.

Based on NPDES permit requirements, the DBW follows the Annual Monitoring Protocol. This protocol fulfills monitoring requirements of the Regional Water Quality Control Board, NOAA Fisheries, and the USFWS. Each treatment season, the DBW is required to conduct monitoring at ten (10) percent of the sites it treats,

Exhibit ES-1
WHCP Project Area Map



for each chemical and type of waterway. At each monitoring site, WHCP environmental scientists take samples pre-application (adjacent to the water hyacinth mat), and post-application (upstream, adjacent to, and downstream of the treatment area). WHCP environmental scientists also take a sample one week following treatment.

E. WHCP Environmental Impacts and Mitigation Measures

Table ES-1, starting on page ES-6, provides the WHCP Environmental Checklist for the seventeen (17) (I to XVII) broad EIR impact categories. This table follows the general format provided in CEQA Guidelines, Appendix G. There are five (5) resource areas with avoidable, potentially avoidable, or unavoidable significant impacts. Table ES-1 also identifies eight (8) resource areas for which the WHCP has beneficial impacts. Finally, Table ES-1 identifies Mandatory Findings of Significance. In two areas, the WHCP has unavoidable, or potentially unavoidable significant impacts: (1) potential to degrade the environment, and (2) cumulative impacts.

Within this PEIR, the DBW has identified twenty-two (22) mitigation measures to reduce environmental impacts of the WHCP. Many of these mitigation measures apply to more than one impact. **Table ES-2,** on page ES-14, provides a brief summary of each mitigation measure, and identifies the specific mitigation measure numbers associated with each WHCP potential impact.

Table ES-3, starting on page ES-15, provides a summary of proposed WHCP impacts, significance levels before mitigation, associated mitigation measures, and significance levels after mitigation. Table ES-3 identifies two (2) specific agricultural resource impacts; eight (8) specific biological resource impacts; two (2) specific hazards and hazardous materials impacts; six (6) specific hydrology and water quality impacts; and one (1) specific utilities and service systems impact. The mitigation measures are numbered according to the order provided in Table ES-2.

The CEQA Guidelines, Section 15142, state that EIR's shall focus on the significant effects on the environment. Section 15128 states that the EIR shall briefly indicate reasons that various possible effects of a project were determined not to be significant.

Furthermore, Section 15150 discusses incorporation by reference from another public document in cases where descriptions and/or analyses are duplicative. The WHCP Final PEIR makes use of these guidelines to address eleven (11) environmental factor categories. These eleven resource categories are addressed in detail in the *Egeria densa* Control Program Final EIR, prepared by the DBW in 2001.

Table ES-1 summarizes sixteen (16) environmental factor areas, plus mandatory findings of significance. Table ES-3 summarizes potential impacts in the five (5) environmental factor areas with any significant impacts. **Table ES-4,** starting on page ES-20, summarizes eleven (11) environmental factor areas that DBW determined were not significantly affected by the WHCP. Table ES-4 also summarizes Growth Inducing Impacts, stating that the WHCP will not result in any of these impacts.

Table ES-1
WHCP Environmental Checklist

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED BY THE WHCP

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Significant Impact" (either "unavoidable", "potentially unavoidable", or "avoidable") as indicated by the checklist on the following pages.

[ ] Aesthetics I	[**X**] Agricultural Resources II	[ ] Air Quality III
[**X**] Biological Resources IV	[ ] Cultural Resources V	[ ] Geology/Soils VI
[**X**] Hazards & Hazardous Materials VII	[**X**] Hydrology/Water Quality VIII	[ ] Land Use/Planning IX
[ ] Mineral Resources X	[ ] Noise XI	[ ] Population/Housing XII
[ ] Public Services XIII	[ ] Recreation XIV	[ ] Transportation/Traffic XV
[**X**] Utilities/Service Systems XVI	[**X**] Mandatory Findings of Significance XVII	

Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
I. AESTHETICS — Would the project:						
a) Have a substantial adverse effect on a scenic vista?		[ ]	[ ]	[ ]	[X]	[ ]
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?		[ ]	[ ]	[ ]	[X]	[ ]
c) Substantially degrade the existing visual character or quality of the site and its surroundings?		[ ]	[ ]	[ ]	[X]	[**X**]
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		[ ]	[ ]	[ ]	[X]	[ ]
II. AGRICULTURAL RESOURCES — In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?		[ ]	[ ]	[ ]	[X]	[ ]
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?		[ ]	[ ]	[ ]	[X]	[ ]
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?		[ ]	[ ]	[ ]	[X]	[ ]
d) Adversely impact agricultural crops or agricultural operations, such as irrigation?						
Impact A1: Agricultural crops	3, 22	[ ]	[**X**]	[ ]	[ ]	[ ]
Impact A2: Irrigation pumps	13, 22	[ ]	[**X**]	[ ]	[ ]	[**X**]

Table ES-1
WHCP Environmental Checklist *(continued)*

Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY — Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:						
a) Conflict with or obstruct implementation of the applicable air quality plan?		[ ]	[ ]	[ ]	[X]	[ ]
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		[ ]	[ ]	[ ]	[X]	[ ]
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		[ ]	[ ]	[ ]	[X]	[ ]
d) Expose sensitive receptors to substantial pollutant concentrations?		[ ]	[ ]	[X]	[ ]	[ ]
e) Create objectionable odors affecting a substantial number of people?		[ ]	[ ]	[X]	[ ]	[ ]
IV. BIOLOGICAL RESOURCES — Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS?						
Impact B1: Herbicide overspray	1, 2, 3, 4	[**X**]				[**X**]
Impact B2: Herbicide toxicity	1, 3, 5, 6, 7, 8	[**X**]				
Impact B3: Herbicide bioaccumulation				[X]		
Impact B4: Food web effects	1, 6, 7	[**X**]				[**X**]
Impact B5: Dissolved oxygen levels	9, 10, 11, 12		[**X**]			[**X**]
Impact B6: Treatment disturbances	1, 4		[**X**]			
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFG or USFWS?						
Impact B1: Herbicide overspray	1, 2, 3, 4	[**X**]				[**X**]
Impact B5: Dissolved oxygen levels	9, 10, 11, 12		[**X**]			[**X**]
Impact B6: Treatment disturbances	1, 4		[**X**]			
Impact B7: Plant fragmentation	13, 14		[**X**]			
Impact B8: Disposal following handpicking	15, 16			[X]		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?						
Impact B1: Herbicide toxicity	1, 2, 3, 4	[**X**]				[**X**]
Impact B5: Dissolved oxygen levels	9, 10, 11, 12		[**X**]			[**X**]
Impact B6: Treatment disturbances	1, 4		[**X**]			[**X**]
Impact B7: Plant fragmentation	13, 14		[**X**]			
Impact B8: Disposal following handpicking	15, 16			[X]		

Table ES-1
WHCP Environmental Checklist *(continued)*

Page 3 of 8

Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES *(continued)* — Would the project:						
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?						
Impact B2: Herbicide toxicity	1, 3, 5, 6, 7,	[**X**]				
Impact B4: Food web effects	1, 6, 7	[**X**]				[**X**]
Impact B5: Dissolved oxygen levels	9, 10, 11, 12		[**X**]			[**X**]
Impact B6: Treatment disturbances	1, 4		[**X**]			
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		[ ]	[ ]	[X]	[ ]	[**X**]
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		[ ]	[ ]	[ ]	[X]	[**X**]
V. CULTURAL RESOURCES — Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?		[ ]	[ ]	[ ]	[X]	[ ]
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		[ ]	[ ]	[ ]	[X]	[ ]
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		[ ]	[ ]	[ ]	[X]	[ ]
d) Disturb any human remains, including those interred outside of formal cemeteries?		[ ]	[ ]	[ ]	[X]	[ ]
VI. GEOLOGY AND SOILS — Would the project:						
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.		[ ]	[ ]	[ ]	[X]	[ ]
ii) Strong seismic ground shaking?		[ ]	[ ]	[ ]	[X]	[ ]
iii) Seismic-related ground failure, including liquefaction?		[ ]	[ ]	[ ]	[X]	[ ]
iv) Landslides?		[ ]	[ ]	[ ]	[X]	[ ]
b) Result in substantial soil erosion or the loss of topsoil?		[ ]	[ ]	[ ]	[X]	[ ]
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		[ ]	[ ]	[ ]	[X]	[ ]
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		[ ]	[ ]	[ ]	[X]	[ ]
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?		[ ]	[ ]	[ ]	[X]	[ ]

Table ES-1
WHCP Environmental Checklist *(continued)*

Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
VII. HAZARDS AND HAZARDOUS MATERIALS — Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?						
Impact H1: General public exposure	17			[X]		
Impact H2: Treatment crew exposure	3, 7, 18, 19, 20		[**X**]			
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?						
Impact H3: Accidental spills	19		[**X**]			
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?		[ ]	[ ]	[ ]	[X]	[ ]
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		[ ]	[ ]	[ ]	[X]	[ ]
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?		[ ]	[ ]	[ ]	[X]	[ ]
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?		[ ]	[ ]	[ ]	[X]	[ ]
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		[ ]	[ ]	[ ]	[X]	[**X**]
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		[ ]	[ ]	[ ]	[X]	[ ]
VIII. HYDROLOGY AND WATER QUALITY — Would the project:						
a) Violate any water quality standards or waste discharge requirements?						
Impact W1: Chemical constituents	3, 6, 7, 21	[**X**]				
Impact W2: Pesticides	1, 3, 4, 6, 7, 21	[**X**]				
Impact W3: Toxicity	1, 3, 4, 6, 7, 21	[**X**]				
Impact W4: Dissolved oxygen levels	9, 10, 11, 12	[**X**]				[**X**]
Impact W5: Floating material	13, 21, 22		[**X**]			[**X**]
Impact W6: Turbidity	4			[X]		

Table ES-1
WHCP Environmental Checklist *(continued)*

Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
VIII. HYDROLOGY AND WATER QUALITY *(continued)* — Would the project:						
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?		[ ]	[ ]	[ ]	[X]	[ ]
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?		[ ]	[ ]	[ ]	[X]	[ ]
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?		[ ]	[ ]	[ ]	[X]	[ ]
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		[ ]	[ ]	[ ]	[X]	[ ]
f) Otherwise substantially degrade water quality?						
Impact W1: Chemical constituents	3, 6, 7, 21	[**X**]				
Impact W2: Pesticides	1, 3, 4, 6, 7, 21	[**X**]				
Impact W3: Toxicity	1, 3, 4, 6, 7, 21	[**X**]				
Impact W4: Dissolved oxygen levels	9, 10, 11, 12	[**X**]				[**X**]
Impact W5: Floating material	13, 21, 22		[**X**]			[**X**]
Impact W6: Turbidity	4			[X]		
g) Otherwise substantially degrade drinking water quality?						
Impact W1: Chemical constituents	3, 6, 7, 21	[**X**]				
Impact W2: Pesticides	1, 3, 4, 6, 7, 21	[**X**]				
Impact W3: Toxicity	1, 3, 4, 6, 7, 21	[**X**]				
h) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?		[ ]	[ ]	[ ]	[X]	[ ]
i) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?		[ ]	[ ]	[ ]	[X]	[ ]
j) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?		[ ]	[ ]	[ ]	[X]	[ ]
k) Inundation by seiche, tsunami, or mudflow?		[ ]	[ ]	[ ]	[X]	[ ]

Table ES-1
WHCP Environmental Checklist *(continued)*

Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
IX. LAND USE AND PLANNING — Would the project:						
a) Physically divide an established community?		[ ]	[ ]	[ ]	[X]	[ ]
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?		[ ]	[ ]	[ ]	[X]	[ ]
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?		[ ]	[ ]	[ ]	[X]	[ ]
X. MINERAL RESOURCES — Would the project:						
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?		[ ]	[ ]	[ ]	[X]	[**X**]
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?		[ ]	[ ]	[ ]	[X]	[ ]
XI. NOISE — Would the project result in:						
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		[ ]	[ ]	[ ]	[X]	[ ]
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		[ ]	[ ]	[ ]	[X]	[ ]
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?		[ ]	[ ]	[ ]	[X]	[ ]
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		[ ]	[ ]	[X]	[ ]	[ ]
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?		[ ]	[ ]	[ ]	[X]	[ ]
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?		[ ]	[ ]	[ ]	[X]	[ ]
XII. POPULATION AND HOUSING — Would the project:						
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?		[ ]	[ ]	[ ]	[X]	[ ]
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?		[ ]	[ ]	[ ]	[X]	[ ]
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?		[ ]	[ ]	[ ]	[X]	[ ]

Table ES-1
WHCP Environmental Checklist *(continued)*

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Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
XIII. PUBLIC SERVICES — Would the project:						
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
Fire protection?		[ ]	[ ]	[ ]	[X]	[ ]
Police protection?		[ ]	[ ]	[ ]	[X]	[ ]
Schools?		[ ]	[ ]	[ ]	[X]	[ ]
Parks?		[ ]	[ ]	[ ]	[X]	[ ]
Other public facilities?		[ ]	[ ]	[ ]	[X]	[ ]
XIV. RECREATION — Would the project:						
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?		[ ]	[ ]	[ ]	[X]	[**X**]
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?		[ ]	[ ]	[ ]	[X]	[ ]
c) Would the project adversely impact existing recreational opportunities?		[ ]	[ ]	[X]	[ ]	[**X**]
XV. TRANSPORTATION/TRAFFIC — Would the project:						
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?		[ ]	[ ]	[ ]	[X]	[ ]
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?		[ ]	[ ]	[ ]	[X]	[ ]
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?		[ ]	[ ]	[ ]	[X]	[ ]
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?		[ ]	[ ]	[ ]	[X]	[ ]
e) Result in inadequate emergency access?		[ ]	[ ]	[ ]	[X]	[ ]
f) Result in inadequate parking capacity?		[ ]	[ ]	[ ]	[X]	[ ]
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?		[ ]	[ ]	[ ]	[X]	[ ]

Table ES-1
WHCP Environmental Checklist *(continued)*

Environmental Factors	Mitigation Measures	Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact	No Impact	Beneficial Impact
XVI. UTILITIES AND SERVICE SYSTEMS — Would the project:						
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?		[ ]	[ ]	[ ]	[X]	[ ]
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		[ ]	[ ]	[ ]	[X]	[ ]
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?		[ ]	[ ]	[ ]	[X]	[ ]
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?		[ ]	[ ]	[ ]	[X]	[ ]
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?		[ ]	[ ]	[ ]	[X]	[ ]
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?		[ ]	[ ]	[ ]	[X]	[ ]
g) Comply with federal, state, and local statutes and regulations related to solid waste?		[ ]	[ ]	[ ]	[X]	[ ]
h) Result in problems for local or regional water utility intake pumps?						
Impact U1: Water utility intake pumps	13, 23	[ ]	[**X**]	[ ]	[ ]	[**X**]
XVII. MANDATORY FINDINGS OF SIGNIFICANCE — Does the project:						
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16	[**X**]	[ ]	[ ]	[ ]	[ ]
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22	[**X**]	[ ]	[ ]	[ ]	[ ]
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	3, 7, 17, 18, 19, 20	[ ]	[**X**]	[ ]	[ ]	[ ]

Table ES-2
WHCP Mitigation Measures Summary

	Mitigation Measures Summary[1]	Specific Mitigation Measures
1.	Avoid herbicide application near special status species, and sensitive riparian and wetland habitat; and other biologically important resources	B1a; B2d; B4c; B6a; W2a; W3a
2.	Provide a 250 foot buffer between treatment sites and shoreline elderberry shrubs (*Sambucus* ssp.), host plant for the valley elderberry longhorn beetle *(Desmocerus californicus dimorphus)*	B1b
3.	Conduct herbicide treatments in order to minimize potential for drift	B1c; B2f; H2d ; W1d; W2e; W3e; A1b
4.	Operate program vessels in a manner that causes the least amount of disturbance to the habitat	B1d; B6b; W2f; W3f; W6a
5.	Implement temporal and spatial limitations and restrictions on herbicide treatments to minimize treatments during times, and at locations, where larval and/or migratory fish are likely to be present	B2a
6.	Monitor herbicide and adjuvant levels to ensure that the WHCP does not result in potentially toxic concentrations of chemicals in Delta waters	B2b; B4a; W1a; W2b; W3b
7.	Implement an adaptive management approach to minimize the use of herbicides	B2c; B4b; H2c; W1c; W2c; W3c
8.	Provide treatment crews with electronic mapping that identifies previously surveyed areas for giant garter snake habitat	B2e
9.	Monitor dissolved oxygen levels pre- and post-treatment for all WHCP treatments	B5a; W4a
10.	Treat no more than three contiguous acres at any treatment site	B5b; W4b
11.	Treat no more than one-half of the area at one time of completely infested dead-end sloughs to allow for fish passage	B5c; W4c
12.	Treat no more than one-half of completely infested moving waterways at one time to allow for fish passage	B5d; W4d
13.	Collect plant fragments during and immediately following treatment	B7a; W5c; U1b; A2b
14.	Conduct handpicking and herding only as required	B7b
15.	Identify and utilize disposal areas that have no and/or low habitat value for the federal and State listed giant garter snake *(Thamnophis gigas)*	B8a
16.	Identify and utilize disposal areas that are at least 100 feet away from elderberry shrubs (*Sambucus* ssp.)	B8b
17.	Minimize public exposure to herbicide treated water	H1a
18.	Require treatment crews to participate in training on herbicide and heat hazards	H2a
19.	Follow best management practices to minimize the risk of spill and to minimize the impact of a spill, should one occur	H2b ; H3a
20.	Implement safety precautions on hot days to prevent heat illness	H2e
21.	Follow the Memorandum of Understanding (MOU) protocol for herbicide applications within one (1) mile of Contra Costa Water District (CCWD) drinking water intake facilities	W1b; W2d; W3d; W5a; U1a
22.	Notify County Agricultural Commissioners about WHCP activities	W5b; A1a; A2a

[1] Please refer to the text in Chapters 3 through 6 for the complete mitigation measure description.

Table ES-3
Summary of Proposed WHCP Impacts, Mitigation Measures, and Significance Levels Before and After Mitigation

Resource Areas	Potential Impacts	Significance Level Before Mitigation			Mitigation	Significance Level After Mitigation	
		Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact		Reduced, but still Potentially Unavoidable Significant Impact	Less than Significant Impact
II. Agricultural Resources	**A1 – Agricultural crops:** effects of WHCP herbicide treatments on agricultural crops		[X]		**3** – Conduct herbicide treatments in order to minimize drift **22** – Notify County Agricultural Commissioners about WHCP activities		[X]
	A2 – Irrigation pumps: effects of WHCP treatments on agricultural irrigation		[X]		**13** – Collect plant fragments during and immediately following treatment **22** – Notify County Agricultural Commissioners about WHCP activities		[X]
IV. Biological Resources	**B1 – Herbicide overspray:** effects of herbicide overspray on special status species, riparian or other sensitive habitats, and wetlands	[X]			**1** – Avoid herbicide application near special status species, and sensitive riparian and wetland habitat; and other biologically important resources **2** – Provide a 250 foot buffer between treatment sites and shoreline elderberry shrubs, host plant for the valley elderberry longhorn beetle **3** – Conduct herbicide treatments in order to minimize potential for drift **4** – Operate program vessels in a manner that causes the least amount of disturbance to the habitat	[X]	
	B2 – Herbicide toxicity: toxic effects of herbicides on special status species, native resident fish, and migratory fish	[X]			**1** – Avoid herbicide application near special status species, and sensitive riparian and wetland habitat; and other biologically important resources **3** – Conduct herbicide treatments in order to minimize potential for drift **5** – Implement temporal and spatial limitations and restrictions on herbicide treatments to minimize treatments during times, and at locations, where larval and/or migratory fish are likely to be present **6** – Monitor herbicide and adjuvant levels to ensure that the WHCP does not result in potentially toxic concentrations of chemicals in Delta waters **7** – Implement an adaptive management approach to minimize the use of herbicides **8** – Provide treatment crews with electronic mapping that identifies previously surveyed areas for giant garter snake habitat	[X]	
	B3 – Herbicide bioaccumulation: effects of herbicide bioaccumulation on special status species			[X]	NA		NA

Table ES-3
Summary of Proposed WHCP Impacts, Mitigation Measures, and Significance Levels Before and After Mitigation *(continued)*

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Resource Areas	Potential Impacts	Significance Level Before Mitigation			Mitigation	Significance Level After Mitigation	
		Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact		Reduced, but still Potentially Unavoidable Significant Impact	Less than Significant Impact
IV. Biological Resources *(continued)*	**B4 – Food web effects:** effect of treatment on food webs, and resulting impact on special status species, sensitive habitats, and migration of species	[X]			**1** – Avoid herbicide application near special status species, and sensitive riparian and wetland habitat; and other biologically important resources **6** – Monitor herbicide and adjuvant levels to ensure that the WHCP does not result in potentially toxic concentrations of chemicals in Delta waters **7** – Implement an adaptive management approach to minimize the use of herbicides	[X]	
	B5 – Dissolved oxygen levels: effects of treatment on local dissolved oxygen (DO) levels, and resulting impact on special status species, resident native or migratory fish, sensitive habitat, and wetlands		[X]		**9** – Monitor dissolved oxygen levels pre- and post-treatment for all WHCP treatments **10** – Treat no more than three contiguous acres at any treatment site **11** – Treat no more than one-half of the area at one time of completely infested dead-end sloughs to allow for fish passage **12** – Treat no more than one-half of completely infested moving waterways at one time to allow for fish passage		[X]
	B6 – Treatment disturbances: effects of treatment disturbances on special status species, resident native or migratory fish, sensitive habitat, and wetlands		[X]		**1** – Avoid herbicide application near special status species, and sensitive riparian and wetland habitat; and other biologically important resources **4** – Operate program vessels in a manner that causes the least amount of disturbance to the habitat		[X]
	B7 – Plant fragmentation: effects of plant fragmentation on sensitive habitat and wetlands		[X]		**13** – Collect plant fragments during and immediately following treatment **14** – Conduct handpicking and herding only as required		[X]
	B8 – Disposal following handpicking: effects of disposal following handpicking on sensitive habitat and wetlands			[X]	Not required, however, the following measures will be followed: **15** – Identify and utilize disposal areas that have no and/or low habitat value for federal and State listed giant garter snake **16** – Identify and utilize disposal areas that are at least 100 feet away from elderberry shrubs		[X]

Table ES-3
Summary of Proposed WHCP Impacts, Mitigation Measures, and Significance Levels Before and After Mitigation *(continued)*

Resource Areas	Potential Impacts	Significance Level Before Mitigation			Mitigation	Significance Level After Mitigation	
		Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact		Reduced, but still Potentially Unavoidable Significant Impact	Less than Significant Impact
VII. Hazards and Hazardous Materials	**H1 – General public exposure:** there is potential for the WHCP to create a significant hazard to the public through the routine transport, use, or disposal of WHCP herbicides			[X]	Not required; however, DWB will implement the following mitigation measure: **17** – Minimize public exposure to herbicide treated water		[X]
	H2 – Treatment crew exposure: there is potential for the WHCP to create a significant hazard to treatment crews through the routine transport, use, or disposal of WHCP herbicides; and/or through heat exposure		[X]		**3** – Conduct herbicide treatments in order to minimize potential for drift **7** – Implement an adaptive management approach to minimize the use of herbicides **18** – Require treatment crews to participate in training on herbicide and heat hazards **19** – Follow best management practices to minimize the risk of spill, and to minimize the impact of spill, should one occur **20** – Implement safety precautions on hot days to prevent heat illness		[X]
	H3 – Accidental spill: there is potential for the WHCP to create a significant hazard to the public or the environment through reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment		[X]		**19** – Follow best management practices to minimize the risk of spill, and to minimize the impact of spill, should one occur		[X]
VIII. Hydrology and Water Quality	**W1 – Chemical constituents:** following WHCP herbicide treatment, waters may potentially contain chemical constituents that adversely affect beneficial uses, violating water quality standards or otherwise substantially degrading water quality or drinking water quality	[X]			**3** – Conduct herbicide treatments in order to minimize potential for drift **6** – Monitor herbicide and adjuvant levels to ensure that the WHCP does not result in potentially toxic concentrations of chemicals in Delta waters **7** – Implement an adaptive management approach to minimize the use of herbicides **21** – Follow the Memorandum of Understanding (MOU) protocol for various herbicide applications within one (1) mile of Contra Costa Water District (CCWD) drinking water intake facilities	[X]	

Table ES-3
Summary of Proposed WHCP Impacts, Mitigation Measures, and Significance Levels Before and After Mitigation *(continued)*

Resource Areas	Potential Impacts	Significance Level Before Mitigation			Mitigation	Significance Level After Mitigation	
		Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact		Reduced, but still Potentially Unavoidable Significant Impact	Less than Significant Impact
VIII. Hydrology and Water Quality *(continued)*	**W2 – Pesticides:** following WHCP herbicide treatment pesticides may potentially be present in concentrations that adversely affect beneficial uses, violating water quality standards or otherwise substantially degrading water or drinking water quality	[X]			**1** – Avoid herbicide applications near special status species, and sensitive riparian and wetland habitat; and other biologically important resources **3** – Conduct herbicide treatments in order to minimize potential for drift **4** – Operate program vessels in a manner that causes the least amount of disturbance to the habitat **6** – Monitor herbicide and adjuvant levels to ensure that the WHCP does not result in potentially toxic concentrations of chemicals in Delta waters **7**– Implement an adaptive management approach to minimize the use of herbicides **21** – Follow the Memorandum of Understanding (MOU) protocol for herbicide applications within one (1) mile of Contra Costa Water District (CCWD) drinking water intake facilities	[X]	
	W3 – Toxicity: following WHCP herbicide treatment toxic substances may potentially be found in waters in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life, violating water quality standards or otherwise substantially degrading water or drinking water quality	[X]			**1** – Avoid herbicide applications near special status species, and sensitive riparian and wetland habitat; and other biologically important resources **3** – Conduct herbicide treatments in order to minimize potential for drift **4** – Operate program vessels in a manner that causes the least amount of disturbance to the habitat **6** – Monitor herbicide and adjuvant levels to ensure that the WHCP does not result in potentially toxic concentrations of chemicals in Delta waters **7** – Implement an adaptive management approach to minimize the use of herbicides **21** – Follow the Memorandum of Understanding (MOU) protocol for herbicide applications within one (1) mile of Contra Costa Water District (CCWD) drinking water intake facilities	[X]	

Table ES-3
Summary of Proposed WHCP Impacts, Mitigation Measures, and Significance Levels Before and After Mitigation *(continued)*

Resource Areas	Potential Impacts	Significance Level Before Mitigation			Mitigation	Significance Level After Mitigation	
		Unavoidable or Potentially Unavoidable Significant Impact	Avoidable Significant Impact	Less than Significant Impact		Reduced, but still Potentially Unavoidable Significant Impact	Less than Significant Impact
VIII. Hydrology and Water Quality *(continued)*	**W4 – Dissolved oxygen:** following WHCP herbicide treatment, dissolved oxygen may potentially be reduced below Basin Plan and Bay-Delta Plan objectives, violating water quality standards or otherwise substantially degrading water quality	[X]			**9** – Monitor dissolved oxygen (DO) levels pre- and post- treatment for all WHCP treatments **10** – Treat no more than three contiguous acres at any treatment site **11** – Treat no more than one-half of the area at one time of completely infested dead-end sloughs to allow for fish passage **12** – Treat no more than one-half of completely infested moving waterways at one time to allow for fish passage	[X]	
	W5 – Floating material: following WHCP treatments, waters may potentially contain floating water hyacinth fragments in amounts that cause nuisance or adversely affect beneficial uses, violating water quality standards or otherwise substantially degrading water quality		[X]		**13** – Collect plant fragments during and immediately following treatment **21** – Follow the Memorandum of Understanding (MOU) protocol for herbicide applications within one (1) mile of Contra Costa Water District (CCWD) drinking water intake facilities **22** – Notify County Agricultural Commissioners about WHCP activities		[X]
	W6 – Turbidity: WHCP treatment may potentially result in changes to turbidity that cause nuisance or adversely affect beneficial uses, violating water quality standards or otherwise substantially degrading water quality			[X]	Not required, however, the following measure will be followed: **4** – Operate program vessels in a manner that causes the least amount of disturbance to the habitat		[X]
XVI. Utilities and Service Systems	**U1 – Water utility intake pumps:** effects of WHCP treatments on water utility intake pumps		[X]		**13** – Collect plant fragments during and immediately following treatment **21** – Follow the Memorandum of Understanding (MOU) protocol for herbicide applications within one (1) mile of Contra Costa Water District (CCWD) drinking water intake facilities		[X]

Table ES-4
WHCP Environmental Factors with "Less Than Significant Impact" or "No Impact"

Environmental Factors	Impact Level		Discussion *The WHCP will not:*	Incorporation by Reference
	Less Than Significant	No Impact		
I. AESTHETICS — Would the project:				
a) Have a substantial adverse effect on a scenic vista?	[ ]	[**X**]	Impact scenic vistas. The WHCP will improve scenic vistas by controlling large monoculture expanses of water hyacinth.	*EDCP Final EIR* (2001), DBW, Pages 2-48 to 2-49; 3-99
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	[ ]	[**X**]	Damage scenic resources. The WHCP will improve scenic resources by controlling large monoculture expanses of water hyacinth.	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	[ ]	[**X**]	Degrade the existing visual character or quality of the Delta. The WHCP will improve the visual character of the Delta by controlling large monoculture expanses of water hyacinth.	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	[ ]	[**X**]	Create a new source of light or glare.	
III. AIR QUALITY — Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	[ ]	[**X**]	Conflict with or obstruct implementation of the applicable air quality plan.	*EDCP Final EIR* (2001), DBW, Pages 2-42; 3-84 to 3-85
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	[ ]	[**X**]	Violate any air quality standard or contribute to an existing or projected air quality violation.	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	[ ]	[**X**]	Result in net increases of any criteria pollutants for which the project region is under an applicable federal or state ambient air quality standard.	
d) Expose sensitive receptors to substantial pollutant concentrations?	[**X**]	[ ]	Result in significant exposure of sensitive receptors to substantial pollutant concentrations. There may be short-term less than significant impacts on sensitive receptors due to drift of WHCP herbicides during spraying operations.	
e) Create objectionable odors affecting a substantial number of people?	[**X**]	[ ]	Result in significant objectionable odors. There may be short-term, less than significant, objectionable odors in the immediate vicinity of treatments due to drift of WHCP herbicides during spraying operations.	
V. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	[ ]	[**X**]	Cause a substantial adverse change in a historical resource.	*EDCP Final EIR* (2001), DBW, Pages 2-47; 3-98
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	[ ]	[**X**]	Cause a substantial adverse change in an archeological resource.	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	[ ]	[**X**]	Destroy a unique paleontological resource or site or a geologic feature.	
d) Disturb any human remains, including those interred outside of formal cemeteries?	[ ]	[**X**]	Disturb any human remains.	

Table ES-4
WHCP Environmental Factors with "Less Than Significant Impact" or "No Impact" *(continued)*

Environmental Factors	Impact Level		Discussion *The WHCP will not:*	Incorporation by Reference
	Less Than Significant	No Impact		
VI. GEOLOGY AND SOILS — Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				*EDCP Final EIR* (2001), DBW, Pages 2-44; EC-4
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	[ ]	[**X**]	Expose people or structures to adverse effects due to a known earthquake fault.	
ii) Strong seismic ground shaking?	[ ]	[**X**]	Expose people or structures to adverse effects due to seismic ground shaking.	
iii) Seismic-related ground failure, including liquefaction?	[ ]	[**X**]	Expose people or structures to adverse effects due to seismic related ground failure, including liquefaction.	
iv) Landslides?	[ ]	[**X**]	Expose people or structures to adverse effects due to landslides.	
b) Result in substantial soil erosion or the loss of topsoil?	[ ]	[**X**]	Result in substantial erosion or loss of topsoil.	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	[ ]	[**X**]	Be located on a geological unit or soil that is or could become unstable and result in landslide, lateral spreading, subsidence, liquefaction, or collapse.	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	[ ]	[**X**]	Be located on expansive soil	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	[ ]	[**X**]	Have soils incapable of supporting septic tanks or alternative waste disposal systems.	
IX. LAND USE AND PLANNING — Would the project:				
a) Physically divide an established community?	[ ]	[**X**]	Physically divide a community.	*EDCP Final EIR* (2001), DBW, Pages 2-45 to 2-46; 3-95
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	[ ]	[**X**]	Conflict with applicable land use plans, policies, or regulations.	
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	[ ]	[**X**]	Conflict with any applicable habitat conservation plan or natural community conservation plan. WHCP has no known conflicts with various conservation plans, programs, or other initiatives in the Delta (see Chapter 7). WHCP's control of water hyacinth is consistent with, and supportive of, conservation planning efforts to reduce invasive species in the Delta.	

Table ES-4
WHCP Environmental Factors with "Less Than Significant Impact" or "No Impact" *(continued)*

Environmental Factors	Impact Level		Discussion *The WHCP will not:*	Incorporation by Reference
	Less Than Significant	No Impact		
X. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	[ ]	[**X**]	Result in loss of availability of a known mineral resource.	*EDCP Final EIR* (2001), DBW, Pages 2-43; EC-7
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	[ ]	[**X**]	Result in loss of availability of a locally-important mineral resource recovery site.	
XI. NOISE — Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	[ ]	[**X**]	Result in exposure to, or generation of, noise levels in excess of standards.	*EDCP Final EIR* (2001), DBW, Pages 2-43; EC-7; 3-91
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	[ ]	[**X**]	Result in exposure of persons, or generation of, excessive groundborne vibration or groundborne noise levels.	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	[ ]	[**X**]	Result in a permanent increase in ambient noise levels.	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	[**X**]	[ ]	Result in a substantial temporary or period increase in ambient noise levels. There may be a less than significant increase in localized ambient noise levels due to operation of WHCP boats during treatment.	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	[ ]	[**X**]	Be located within an airport land use plan, or within two miles of a public airport, or expose people within the area to excessive noise levels.	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	[ ]	[**X**]	Be located within the vicinity of a private airstrip, or expose people within the area to excessive noise levels.	
XII. POPULATION AND HOUSING — Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	[ ]	[**X**]	Induce population growth in the area.	*EDCP Final EIR* (2001), DBW, Pages 2-47; 3-97
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	[ ]	[**X**]	Displace existing housing.	
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	[ ]	[**X**]	Displace people.	

Table ES-4
WHCP Environmental Factors with "Less Than Significant Impact" or "No Impact" *(continued)*

Environmental Factors	Impact Level		Discussion *The WHCP will not:*	Incorporation by Reference
	Less Than Significant	No Impact		
XIII. PUBLIC SERVICES — Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				*EDCP Final EIR* (2001), DBW, Pages 2-47; 3-96
Fire protection?	[ ]	[**X**]	Impact fire protection.	
Police protection?	[ ]	[**X**]	Impact police protection.	
Schools?	[ ]	[**X**]	Impact schools.	
Parks?	[ ]	[**X**]	Impact parks.	
Other public facilities?	[ ]	[**X**]	Impact other public facilities.	
XIV. RECREATION — Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	[ ]	[**X**]	Result in substantial physical deterioration of neighborhood or regional parks due to increased use.	*EDCP Final EIR* (2001), DBW, Pages 2-40 to 2-41; 3-82 to 3-83
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	[ ]	[**X**]	Include or require expansion of recreational facilities that would have an adverse physical effect on the environment.	
c) Would the project adversely impact existing recreational opportunities?	[**X**]	[ ]	Adversely impact existing recreational opportunities. The WHCP would temporarily impact recreational boating at treatment sites, during treatment, however this impact would be less than significant. The WHCP would have a beneficial impact on recreational boating in the Delta by controlling the growth of water hyacinth.	

Table ES-4
WHCP Environmental Factors with "Less Than Significant Impact" or "No Impact" *(continued)*

Environmental Factors	Impact Level		Discussion *The WHCP will not:*	Incorporation by Reference
	Less Than Significant	No Impact		
XV. TRANSPORTATION/TRAFFIC — Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	[ ]	[**X**]	Cause an increase in traffic.	*EDCP Final EIR* (2001), DBW, Pages 2-38 to 2-39; EC-9
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	[ ]	[**X**]	Exceed a level of service standard for designated roads or highways.	
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	[ ]	[**X**]	Result in a change in air traffic patterns.	
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	[ ]	[**X**]	Substantially increase hazards due to a design feature or incompatible uses.	
e) Result in inadequate emergency access?	[ ]	[**X**]	Result in inadequate emergency access.	
f) Result in inadequate parking capacity?	[ ]	[**X**]	Result in inadequate parking capacity.	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	[ ]	[**X**]	Conflict with adopted policies, plans, or programs supporting alternative transportation.	

GROWTH-INDUCING IMPACTS[a] — Would the project:				
a) Foster economic or population growth?	[ ]	[**X**]	Foster economic or population growth.	*EDCP Final EIR* (2001), DBW, Page 7-1
b) Foster construction of additional housing, either directly or indirectly, in the surrounding environment? (Including removing obstacles to population growth).	[ ]	[**X**]	Foster construction of housing, either directly or indirectly.	
c) Encourage or facilitate other activities that could significantly affect the environment, either individually or cumulatively?	[ ]	[**X**]	Encourage or facilitate other activities that could affect the environment.	

[a] Growth-inducing impacts are not included within the environmental factors checklist, however, CEQA Guidelines, Section 15126.2(d) require a discussion of the growth-inducing impacts of the proposed project or program. Because the WHCP will not result in growth-inducing impacts, the topic is included in this table of "Less Than Significant Impact" and "No Impact" factors.