

## Section IV

### Findings on Specific EDCP and Two-Year Komeen Trial Impacts

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In this section, the DBW summarizes the significant impacts of the EDCP and Two-Year Komeen Trails. The DBW describes whether the impacts remain significant or are reduced to a less-than-significant level with adopted feasible mitigation measures. The DBW is not required to adopt mitigation measures or adopt policies as part of the EDCP and Two-Year Komeen Trails for less than significant impacts.

CEQA identifies five types of actions that fall under the category of mitigation: avoidance, minimization, rectification, reduction or elimination, and compensation. The DBW has proposed mitigation measures for the EDCP and Two-Year Komeen Trails that would generally fall under the categories of avoidance and minimization.

Most mitigation measures identified are within the jurisdiction and responsibility of the DBW. However, some of these responsibilities involve coordination or agreements with other agencies. These shared responsibilities are noted.

Findings presented herein include the following contents for each significant impact:

- ❑ A written statement identifying how the DBW dealt with each significant impact and alternative in the EIR (with mitigation measures)
- ❑ A conclusion regarding each significant impact, substantial evidence supporting the conclusion, and an explanation of how the substantial evidence supports the conclusion
- ❑ One of the following findings:
  - (1) Changes in the project have been made (including adoption of mitigation measures) to avoid or substantially reduce the magnitude of the impact
  - (2) Changes in the project are within another agency's jurisdiction and have been or should be adopted
  - (3) Specific economic, social, legal, technical, and other considerations make mitigation measures or alternatives infeasible. The Lead Agency must explain the specific reasons for rejecting the identified mitigation measure or alternative.

The DBW finds that significant impacts will occur in the five (5) general resource categories of Hydrology and Water Quality, Biological Resources, Agricultural Resources, Utilities and Service Systems, and Hazards and Hazardous Materials. The DBW finds impacts in the eleven (11) general resource categories of Transportation and Traffic, Recreation, Air Quality, Mineral Resources, Noise, Geology and Soils, Land Use and Planning, Public Services, Population and Housing, Cultural Resources, and Aesthetics are less-than-significant so are not addressed in this document.

Findings presented in this section are identified separately for the EDCP and for the Two-Year Komeen Trials. A total of 19 impacts are listed for the EDCP in Subsections A through E. A total of 16 impacts for the Two-Year Komeen Trials are listed in Subsections F through J.

The DBW finds that with proposed mitigation measures, 11 of the 19 EDCP impacts would be reduced to a less-than-significant level, leaving 8 impacts significant. Similarly, through proposed mitigation measures the DBW finds that 7 of the 16 Two-Year Komeen Trial impacts were reduced to a less-than-significant level, leaving 9 impacts significant.

The DBW considered some potential mitigation measures either provided by the public in comments received on the EIR, or identified in consultations with other agencies, as outside the scope of the EDCP and Two-Year Komeen Trials. Subsection K lists those mitigation measures suggested by commentators either not adopted, or rejected as infeasible, for economic, social, legal, technical, and other reasons.

## **A. EDCP - Hydrology and Water Quality**

### **Impact #1 Aquatic herbicides conflict with general Basin Plan standards for toxicity**

Reward and Sonar use conflict with the Basin Plan standards regarding toxicity, which state that Delta waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. Reward would be toxic to aquatic plants and moderately toxic to aquatic invertebrates, however it would dissipate relatively rapidly due to the turbidity and tidal movement in the Delta. Sonar would result in a temporary unavoidable significant impact to general water quality due to its toxicity and would be toxic to aquatic plants, but not other aquatic organisms.

The DBW has submitted an application to the CVRWQCB for an NPDES permit. Such a permit would potentially contain permit conditions to balance against the conflict of the EDCP on Basin Plan standards for toxicity. Should the CVRWQCB issue such a permit, the DBW would potentially incorporate those permit conditions as mitigation measures into its EDCP. Irrespective of this commitment by DBW, based on currently available information, the DBW finds that this impact cannot be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

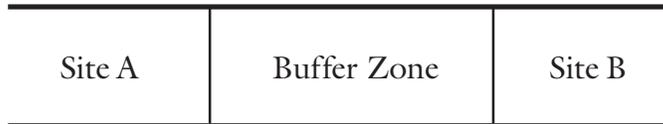
### **Impact #2 Potential reduction in dissolved oxygen levels from dying or decaying plant material**

Reward use could result in a short-term, localized reduction in dissolved oxygen (DO) to concentrations less than numeric standards specified in the Basin Plan (DO standards range from 5.0 to 7.0 ppm depending on the Delta location). Since Reward acts rapidly, following treatment a relatively large quantity of *Egeria* could begin to decay simultaneously, resulting in temporary decreases in DO concentrations due to microbial respiration (i.e., consumption of oxygen by the microorganisms responsible for the breakdown of organic material).

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. Submit to the USFWS an annual treatment schedule no later than January 31st of each year that identifies treatment sites (previous year and planned for next year), treatment methods (previous year and planned for next year), and efficacy (over the past year). Provide the USFWS a copy of treatment schedules submitted by the DBW to County Agricultural Commissioners one week in advance of a proposed treatment. Schedules would identify alternative sites should the DBW be unable to treat any of the proposed sites.
2. Prior to treatment at a site, the DBW would measure DO concentrations. For low flow areas, if DO concentrations were between 4ppm and 6 ppm, treatment would be postponed until levels fell outside this limit. For high flow areas, if DO concentrations were below 5 ppm, treatment would be postponed until levels increased above this limit.
3. Provide a protocol to the USFWS for DO monitoring.
4. Establish a review committee to examine DO monitoring results.

5. Develop operator procedures based upon actual operations for the first and second year (i.e., using adaptive management).
6. Treat no more than 20 acres, per site, per day.
7. Treat no more than 30 acres per day in the Delta.
8. During late summer and early fall (when DO in the hypolimnion is typically lowest), the DBW would treat no more than 20 acres at a given site over a 14-day period.
9. Create a buffer zone of a distance equal to the linear dimension of the longer treatment site. Referring to the figure below, if Site A were treated on Day 1, then Site B could not be treated until Day 3. If Site B were treated on Day 3, then the DBW could not treat Site A again until Day 5.



10. Treat no more than 10 acres per day with mechanical harvester.

**Impact #3 Significant temporary increase in turbidity from mechanical harvesting operations**

Mechanical harvester maneuvering could result in temporary localized increases in turbidity, causing a nuisance or affecting beneficial uses of the Delta in the short-term. Harvester maneuvering also could violate Basin Plan standards regulating turbidity.

Implementation of the following mitigation measures will reduce this impact:

1. Use mechanical harvesting for emergency use only.
2. Follow each mechanical harvester operation with a fragment collection vessel.
3. Disallow harvesting on extremely windy days.
4. Treat no more than 10 acres per day with mechanical harvester.

The DBW finds that while the mitigation measures described above will substantially lessen this impact, based on currently available information, it is unclear whether this impact can be mitigated to less than significant. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #4 Substantial increase in floating *Egeria* fragments following mechanical harvesting operations**

Mechanical harvesting could result in a significant impact to general water quality, and a violation of the Basin Plan standard regulating floating material in the water column, if a substantial quantity of *Egeria* plant fragments remained uncollected following harvesting operations. Studies suggest that up to an estimated 30,000 fragments per hour could be generated from harvesting operations. These *Egeria* fragments could cause a nuisance or affect beneficial uses of the Delta.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. Use mechanical harvesting for emergency use only.
2. Follow each mechanical harvester operation with a fragment collection vessel.
3. Disallow harvesting on extremely windy days.
4. Treat no more than 10 acres per day with mechanical harvester.

**Impact #5 Potential for herbicide-treated water to contaminate the drinking water supply**

An influx of Reward-treated water could contaminate drinking water supplies. The Contra Costa Water District (District) diverts water for drinking water use at three Delta intakes: Rock Slough, Old River south of the Highway 4 Crossing, and Mallard Slough. All three District intake locations are near or within waterways identified with *Egeria* infestation. Other water purveyors also are potentially impacted by herbicide-treated water.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatment, contact appropriate drinking water utilities and the California Department of Health Services (DHS) to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.
3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to

commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.

4. Establish an MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.
5. Establish an MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.
7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.

#### **Impact #6 Potential increase in trihalomethane formulation near water treatment facilities**

Herbicide treatments that occur near water treatment facility intakes could increase the potential for trihalomethane (THM) formation due to the increase in dissolved organic compounds released from decaying plant material. The extent to which herbicide treatments would increase the potential for THM formation is unknown.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatment, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.
3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to

commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.

4. Establish an MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.
5. Establish an MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.
7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.
8. If the DBW can obtain this data regularly, add THM monitoring into its pre-and post-treatment monitoring activities and adjust its treatment approach around water agency/purveyor intakes accordingly based on THM results.

### **Impact #7 Temporary increase in turbidity near water treatment plant intakes**

Mechanical harvesting near water treatment plant intakes could adversely affect drinking water quality by temporarily increasing turbidity in source water diverted for drinking use. The extent to which turbidity would be increased due to harvester maneuvering is unknown. The turbidity increase would be temporary and would subside once harvester operations ceased.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatments, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.

3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.
4. Establish an MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.
5. Establish an MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.
7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.

## B. EDCP - Biological Resources

### Impact #8 Loss of special status intertidal wetland plant communities

Wetland and special status intertidal plants could be adversely impacted or killed due to inundation by herbicides or staging of mechanical harvesting equipment. These special status plants include Mason's lilaeopsis, Delta mudwort, Rose mallow, Delta tule pea, and Northern California black walnut. Wetland plants include tules and cattails.

Implementation of the following mitigation measures will reduce this impact:

1. Prior to an herbicide application, survey channel banks using a qualified botanist to determine whether sensitive plant species are present. If the site has a high percentage of sensitive plants, the site may not be treated.
2. If possible, apply herbicides during low tide to decrease the likelihood that sensitive plants would be inundated by herbicide-treated water.

3. Focus herbicide applications on the mid-channel region to decrease the possibility that concentrated herbicides would come in contact with sensitive plants growing along channel banks.
4. Following herbicide treatment, survey channel banks to determine whether a loss of sensitive plants has occurred. If substantial loss were evident, changes would be made to the treatment protocol.
5. Prior to mechanical harvesting, survey channel banks and uplands adjacent to treatment sites using a qualified biologist to assess whether sensitive species are present. Areas which show presence of sensitive species (e.g., nests or burrows) or which exhibit ideal habitat conditions for a particular sensitive species would be flagged. No mechanical harvesting equipment would be allowed within 50 feet of these flagged areas.
6. Collect *Egeria* fragments to ensure that fragments do not pile up along channel banks.

The DBW finds that while the mitigation strategies described above will substantially lessen this impact, based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

### **Impact #9    Temporarily decrease aquatic invertebrate abundance**

Reward and mechanical harvesting could cause a temporary decrease in the abundance of invertebrates, including special status species. Reward is moderately toxic to aquatic invertebrates and mechanical harvesting can result in their removal and physical destruction. The decrease in invertebrate abundance would likely be temporary. It is expected that planktonic invertebrates would be reintroduced to treatment areas inadvertently through water flow. Further, benthic and plant-dwelling organisms likely would recolonize treatment areas relatively rapidly once regrowth of plants began.

Implementation of the following mitigation measures will reduce this impact:

1. Treat no more than 20 acres, per site, per day
2. Treat no more than 30 acres per day in the Delta
3. Create a buffer zone of a distance equal to the linear dimension of the longer treatment site. Referring to the figure below, if Site A were treated on Day 1, then Site B could not be treated until Day 3. If Site B were treated on Day 3, then the DBW could not treat Site A again until Day 5.

Site A	Buffer Zone	Site B
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4. Treat no more than 10 acres per day with mechanical harvester.
5. Harvesters would not cut vegetation more than five feet below water level, thus leaving one to three feet of standing vegetation.

Though these measures would decrease the overall loss of invertebrates and would minimize impediments to recolonization, the DBW finds that based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #10 Potential to harm Valley elderberry longhorn beetle**

EDCP operations could harm the Federally threatened Valley elderberry longhorn beetles if project operations adversely impacted elderberry trees. Valley elderberry longhorn beetles are strictly tied to their host plant, and are thus adversely impacted by harm to elderberry trees.

Implementation of the following mitigation measures will reduce this impact to less-than-significant:

1. Prior to treatment, conduct surveys to determine whether sensitive species are present. EDCP treatments would not occur along channel bluffs where elderberry trees could be adversely impacted.

**Impact #11 Potential loss of special status fish species**

Mechanical harvesting can result in the removal and physical destruction of fish present in *Egeria* beds. Reward use may have a potential for direct adverse impacts to larval fish. Special status species that could be impacted include all four runs of Chinook salmon, steelhead, delta smelt, splittail, green sturgeon, longfin smelt, and Pacific River lamprey.

Implementation of the following mitigation measures will reduce this impact:

1. Submit to the USFWS an annual treatment schedule no later than January 31st of each year that identifies treatment sites (previous year and planned for next year), treatment methods (previous year and planned for next year), and efficacy (over the past year). Provide the USFWS a copy of treatment schedules submitted by the DBW to County Agricultural Commissioners one week in advance of a proposed treatment. Schedules would include a list

of alternative sites should the DBW be unable to treat any of the proposed sites.

2. Use the following EDCP treatment schedule:
  - a. March 1 to March 30 - No treatment using any chemical or mechanical method because Delta smelt and Sacramento splittail may have eggs adhering to aquatic plants during this time. Treatment could bury and suffocate eggs or cause adverse impacts to developing embryos.
  - b. April 1 to May 31 - Conduct fluridone and mechanical harvesting treatments if Delta smelt and Sacramento splittail larvae are not present. To determine whether larvae are present, the DBW would sample *Egeria* to determine whether eggs are present. From a laboratory analysis of the *Egeria* to determine presence and growth stage, the USFWS would determine whether or not the DBW would treat at a given site during this period. The DBW would not treat with Diquat during this period.
  - c. June 1 to November 30 - Conduct the EDCP (using all proposed aquatic herbicides and mechanical harvesting) during this period.

At any point throughout the year, the USFWS may prohibit chemical treatments when IEP Real Time Monitoring data shows Delta smelt in the vicinity of proposed treatment areas (as defined in the Federal Reg. Notice listing Critical Habitat for Delta smelt (59 FR 65256)). For any of the cases where the USFWS would restrict treatment, the USFWS would notify the DBW within 2 working days prior to the proposed treatment time.

3. Prior to mechanical harvesting, obtain and evaluate IEP Real Time Monitoring data (if available and relevant to the project site) to determine whether any sensitive fish species had been identified in the treatment area.
4. For the first two years of the EDCP, examine a representative sample of the harvested material using a qualified biologist to assess any incidental taking of threatened, endangered, or special status species. This information would be reported to the appropriate regulatory agencies and adjustments to program protocol made to minimize impacts.
5. Generally select sites with water depth between 8 and 15 feet deep. Since the primary purpose of the EDCP is to improve navigation in the Delta, most of the sites chosen for treatment would not be shallow water areas favored by juvenile salmonids. Although drift of herbicides into shallow water areas can occur, such shallow water areas would not be the focus of EDCP treatments.

Though these measures would decrease the potential overall loss of special status fish species, the DBW finds that based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #12 Short-term localized reduction in dissolved oxygen adversely impacting special status fish species habitat**

Reward use could result in a short-term, localized reduction in dissolved oxygen (DO) to concentrations that could adversely impact the habitat of the special status fish species listed in Impact #11 above. Loss of native vegetation due to EDCP project activities would be a less than significant impact, since treatments would focus on sites with a high relative abundance of Egeria.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. Submit to the USFWS an annual treatment schedule no later than January 31st of each year that identifies treatment sites (previous year and planned for next year), treatment methods (previous year and planned for next year), and efficacy (over the past year). Provide the USFWS a copy of treatment schedules submitted by the DBW to County Agricultural Commissioners one week in advance of a proposed treatment. Schedules would identify alternative sites should the DBW be unable to treat any of the proposed sites.
2. Prior to treatment at a site, the DBW would measure DO concentrations. For low flow areas, if DO concentrations were between 4ppm and 6 ppm, treatment would be postponed until levels fell outside this limit. For high flow areas, if DO concentrations were below 5 ppm, treatment would be postponed until levels increased above this limit.
3. Provide a protocol to the USFWS for DO monitoring.
4. Establish a review committee to examine DO monitoring results.
5. Develop operator procedures based upon actual operations for the first and second year (i.e., using adaptive management).
6. Treat no more than 20 acres, per site, per day.
7. Treat no more than 30 acres per day in the Delta.
8. During late summer and early fall (when DO in the hypolimnion is typically lowest), treat no more than 20 acres at a given site over a 14-day period.

9. Create a buffer zone of a distance equal to the linear dimension of the longer treatment site. Referring to the figure below, if Site A were treated on Day 1, then Site B could not be treated until Day 3. If Site B were treated on Day 3, then the DBW could not treat Site A again until Day 5.



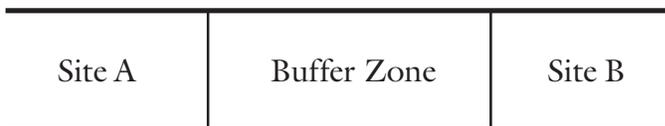
10. Treat no more than 10 acres per day with mechanical harvester.

**Impact #13 Temporary decrease in aquatic invertebrate abundance potentially adversely impacting special status fish species who rely on aquatic invertebrates for a food source**

Reward use and mechanical harvesting could cause a temporary decreases in the abundance of aquatic invertebrates, which could adversely impact special status fish species such as Chinook salmon, delta smelt, and splittail that consume these aquatic invertebrates.

Implementation of the following mitigation measures will reduce this impact:

1. Treat no more than 20 acres, per site, per day.
2. Treat no more than 30 acres per day in the Delta.
3. Create a buffer zone of a distance equal to the linear dimension of the longer treatment site. Referring to the figure below, if Site A were treated on Day 1, then Site B could not be treated until Day 3. If Site B were treated on Day 3, then the DBW could not treat Site A again until Day 5.



4. Treat no more than 10 acres per day with mechanical harvester.
5. Restrict harvesters from cutting vegetation more than five feet below water level, thus leaving one to three feet of standing vegetation.

Though these measures would decrease the overall loss of invertebrates and would minimize impediments to fish prey base, the DBW finds that based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #14 Potential adverse impact to reptiles and amphibians utilizing Delta channel banks from aquatic herbicide wash or mechanical harvesting operations**

Reward and Sonar use could adversely impact reptiles and amphibians that utilize channels and channel banks in the Delta, including special status species such as the giant garter snake, western pond turtle, and red-legged frog. Mechanical harvesting operations and staging of equipment could kill or maim individuals in channels or on channel banks.

Implementation of the following mitigation measure will reduce this impact:

1. Prior to mechanical harvesting, survey channel banks and uplands adjacent to treatment sites using a qualified biologist to assess whether sensitive species are present. Areas which show presence of sensitive species (e.g., nests or burrows) or which exhibit ideal habitat conditions for a particular sensitive species would be flagged. No mechanical harvesting equipment would be allowed within 50 feet of these flagged areas.

Because there are no available mitigation measures for impacts to reptiles and amphibians resulting from Reward and Sonar applications, though the mitigation measures for harvesting operations above will substantially lessen this impact, the DBW finds that based on currently available information, it is unclear whether for the overall EDCP this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #15 Potential adverse impact to birds who forage on channel banks for vegetation**

Reward or Sonar use could adversely impact birds that nest or forage on channel banks, since the herbicide could kill channel bank vegetation. Mechanical harvesting could adversely impact birds that nest or forage along channel banks due to staging of mechanical harvesting equipment. Special status species that could be impacted include the California black rail and great blue heron.

Implementation of the following mitigation measures will reduce this impact:

1. Prior to an herbicide application, survey channel banks using a qualified botanist to determine whether sensitive plant species are present. If the site has a high percentage of sensitive plants, the site may not be treated.
2. If possible, apply herbicides during low tide to decrease the likelihood that vegetation on channel banks would be inundated by herbicide-treated water.

3. Focus herbicide applications on the mid-channel region to decrease the possibility that concentrated herbicides would come in contact with plants growing along channel banks.
4. Following herbicide treatment, survey channel banks to determine whether a loss of channel bank vegetation has occurred. If substantial loss were evident, changes would be made to the treatment protocol.
5. Prior to mechanical harvesting, survey channel banks and uplands adjacent to treatment sites using a qualified biologist to assess whether sensitive species are present. Areas which show presence of sensitive species (e.g., nests or burrows) or which exhibit ideal habitat conditions for a particular sensitive species would be flagged. No mechanical harvesting equipment would be allowed within 50 feet of these flagged areas.

Though the mitigation measures above will substantially lessen this impact, the DBW finds that based on currently available information, it is unclear whether for the overall EDCP this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

## C. EDCP - Agricultural Resources

### Impact #16 Adverse impacts to crops using herbicide treated water

Reward and Sonar use could adversely impact crops if herbicide-treated water were used for irrigation. Mechanical harvesting could disrupt irrigation if plant fragments clogged irrigation intakes.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. As part of pre-treatment site survey efforts, provide the County Agricultural Commissioners (CACs) with a schedule of EDCP treatments. This schedule would be provided in advance of the treatment. Should the CAC determine that EDCP activities would interfere with irrigation activities, the DBW would postpone treatment at that site and reschedule treatment for a later date when there is no irrigation activity occurring at that site. Local landowners could then be informed when irrigation should not occur and when it is safe to begin irrigation.
2. Include measurement of herbicide residues in the water column and a site check for *Egeria* fragments in intake pipes following treatment.

3. If excessive amounts of *Egeria* fragments occur in areas adjacent to agricultural intakes following standard collection efforts, perform an additional collection effort. Once the number of fragments decreased sufficiently, contact the appropriate CAC.

## D. EDCP - Utilities and Service Systems

### Impact #17 Clog water intake screens or pumps with decaying *Egeria*

An increase in debris load due to decaying plant material, or plant fragments, could adversely impact public water supply operations by clogging intake screens or pumps.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatments, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.
3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.
4. Establish a MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.
5. Establish a MOU with the Mountain House Community Services District (MHCS D) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCS D.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.

7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.

**E. EDCP - Hazards and Hazardous Materials**

**Impact #18 Potential human exposure if Reward enters drinking water supply**

Reward use could adversely impact drinking water supplies. Impacts to human health could also result from exposure to concentrated formulations of Reward and Sonar.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatments, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.
3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.
4. Establish a MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.
5. Establish a MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.

7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.
8. Mark site with buoys during treatments, making herbicide treatments visible to the public.
9. Patrol treatment areas on a support boat, informing those recreating that treatments are occurring.
10. Handle concentrated chemicals following the protocol identified in "Herbicide Handling Procedures and Spill Contingency Plan" (Appendix S of the final EIR). The plan contains guidelines for herbicide handling procedures, storage, transportation, mixing, loading and applications, as well as measures to take in the event of an herbicide spill. Although the potential for a chemical spill can never be entirely removed, the guidelines set forth by the DBW significantly reduce the possibility of a spill occurring.
11. Report any suspected case of pesticide related illness or injury to the appropriate County Agricultural Commissioner (CAC). In addition, physicians treating suspected cases of pesticide-related illness or injury would be notified by CACs of their requirement to report such cases by telephone to the local health officer within 24 hours of examining the patient (Health and Safety Code Section 105200).

**Impact #19 Potential loss of aquatic, wetland, intertidal habitat, flora and fauna, and special status species resulting from catastrophic spill of herbicide**

A catastrophic spill of Reward or Sonar could result in adverse impacts to aquatic, wetland, and intertidal habitat, and associated flora and fauna, including special status species. Adverse impacts to human health could occur also due to exposure to concentrated herbicide formulations. The degree of harm would depend on the amount of chemical spilled, environmental conditions (flow, tidal action), and emergency response time.

Implementation of the following mitigation measure will reduce this impact to a less-than-significant level:

1. Handle concentrated chemicals following the protocol identified in "Herbicide Handling Procedures and Spill Contingency Plan" (Appendix S of the final EIR). The plan contains guidelines for herbicide handling procedures, storage, transportation, mixing, loading and applications, as well as measures to take in the event of an herbicide spill. Although the potential for a chemical spill can never be entirely removed, the guidelines set forth by the DBW significantly reduce the possibility of a spill occurring.

2. Assure personnel involved with the application of herbicides are trained in herbicide handling in accordance with the Food and Agriculture Code and Title 3 Code of Regulations Pertaining to Pesticides and Pest Control Operations. Participants would learn about herbicide toxicity, use of product labels and material safety data sheets (MSDS), proper handling of herbicides, emergency and first aid procedures in case of a spill, and the proper clothing and eye protection.

**F. Two-Year Komeen Trials - Hydrology and Water Quality**

**Impact # 1 Komeen levels proposed for the trials exceed Basin Plan standards for copper**

Komeen use would result in a violation of the Basin Plan standard for copper concentration.

The DBW has submitted an application to the CVRWQCB for an NPDES permit and for a short-term variance from Basin Plan standards for copper. Such a permit or variance would potentially contain conditions to balance against the conflict of the Komeen Trials on Basin Plan standards for toxicity. Should the CVRWQCB issue such a permit or variance, the DBW would potentially incorporate those conditions as mitigation measures. Irrespective of this commitment by DBW, based on currently available information, the DBW finds that this impact cannot be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #2 Komeen use conflicts with general Basin Plan standards for toxicity**

Komeen use conflicts with the Basin Plan standards regarding toxicity, which states that Delta waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses.

The DBW has submitted an application to the CVRWQCB for an NPDES permit and for a short-term variance from Basin Plan standards for copper. Such a permit or variance would potentially contain conditions to balance against the conflict of the Komeen Trials on Basin Plan standards for toxicity. Should the CVRWQCB issue such a permit or variance, the DBW would potentially incorporate those conditions as mitigation measures. Irrespective of this commitment by DBW, based on currently available information, the DBW finds that this impact cannot be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #3 Chelated copper contained in Komeen does not biodegrade and could accumulate in sediments**

Chelated copper, the active ingredient in Komeen, does not biodegrade and thus could accumulate in the sediments. The extent to which chelated copper might accumulate and the degree of harm it could pose to the aquatic environment is not currently known.

Implementation of the following mitigation measures will reduce this impact:

1. Based on consultations with USFWS, the DBW modified its project description to include the following sites for the Two-Year Komeen Trials:
  - Disappointment Slough
  - Sandmound Slough
  - Venice Cut.

Frank's Tract (along the edges and not near areas proposed for the EDCP) is an alternate site. The DBW would conduct the trials at Frank's Tract if one of the other three sites identified above had either pre-treatment or day of treatment conditions, which would restrict the DBW's ability to perform the treatment or properly capture the necessary data for the trial.

Sites above are not located at the confluence of any major rivers, thus minimizing the potential for downstream movement of copper in sediment.

Although the Komeen research trials propose extensive monitoring to determine whether accumulation is occurring, the DBW finds that based on currently available information, this impact cannot be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered potentially significant and unavoidable.

**Impact #4 Potential for herbicide-treated water to contaminate the drinking water supply**

Komeen treatments that occur near water treatment facility intakes could adversely impact drinking water supplies if an influx of herbicide-treated water contaminated drinking water supplies.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatments, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.

2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.
3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.
4. Establish an MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.
5. Establish an MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.
7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.

**Impact #5 Potential increase in trihalomethane formulation near water treatment facilities**

Komeen treatments that occur near water treatment facility intakes could increase the potential for THM formation due to the increase in dissolved organic compounds released from decaying plant material.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatments, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.

3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.
4. Establish an MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.
5. Establish an MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.
7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.
8. If the DBW can obtain this data regularly, add THM monitoring into its pre-and post-treatment monitoring activities and adjust its treatment approach around water agency/purveyor intakes accordingly based on THM results.

## G. Two-Year Komeen Trials - Biological Resources

### Impact #6 Loss of special status intertidal wetland plant communities

Intertidal wetland plants could be adversely impacted or killed due to inundation by Komeen treated water. Special status plants that could be impacted include Mason's lilaepsis, Delta mudwort, Rose mallow, Delta tule pea, and Northern California black walnut. Wetland plants include tules and cattails.

Implementation of the following mitigation measures will reduce this impact:

1. Prior to a Komeen application, survey channel banks using a qualified botanist to determine whether sensitive plant species are present. If the site has a high percentage of sensitive plants, the site may not be treated.

2. If possible, perform Komeen applications during low tide to decrease the likelihood that sensitive plants would be inundated by herbicide-treated water.
3. Focus Komeen applications on the mid-channel region to decrease the possibility that concentrated herbicides would come in contact with sensitive plants growing along channel banks.
4. Following Komeen treatment, survey channel banks to determine whether a loss of sensitive plants has occurred. If substantial loss were evident, changes would be made to the treatment protocol.

The DBW finds that while the mitigation measures described above will lessen this impact, based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

### **Impact #7 Temporary decrease aquatic invertebrate abundance**

Komeen use could cause a temporary decrease in the abundance of aquatic invertebrates, since it is moderately toxic to these organisms. The decrease in invertebrate abundance likely would be temporary. It is expected that planktonic invertebrates would be reintroduced to treatment areas inadvertently through water flow. Further, benthic and plant-dwelling organisms would likely recolonize treatment areas relatively rapidly once regrowth of plants began.

Implementation of the following mitigation measures will reduce this impact:

1. Treat no more than 20 acres with Komeen, per site, per day
2. Treat upstream portions first and downstream portions several weeks later. This period of time would likely be sufficient to allow for recolonization of invertebrates.

The DBW finds that while the mitigation measures described above will lessen this impact, based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #8 Potential to harm Valley elderberry longhorn beetle**

Komeen trials could harm the Federally threatened Valley elderberry longhorn beetles if project operations adversely impacted elderberry trees. Valley elderberry longhorn beetles are strictly tied to their host plant, and are thus adversely impacted by harm to elderberry trees.

Implementation of the following mitigation measure will reduce this impact to a less-than-significant level:

1. Prior to treatment, conduct surveys to determine whether sensitive species are present. Komeen trials would not occur along channel bluffs where elderberry trees could be adversely impacted.

**Impact #9 Potential loss of special status fish species**

Exposure of fish to Komeen, or its residues, could result in direct adverse impacts to fish. Although Komeen is not expected to be lethal to most fish species, it is moderately toxic to some. Komeen residues could become toxic to certain fish under certain environmental conditions. Komeen has the potential to bioaccumulate in fish tissues. Special status species that could be impacted include all four runs of Chinook salmon, steelhead, Delta smelt, splittail, green sturgeon, longfin smelt, Pacific river lamprey, and river lamprey.

Implementation of the following mitigation measures will reduce this impact:

1. Submit to the USFWS an annual treatment schedule no later than January 31st of each year that identifies treatment sites (previous year and planned for next year), treatment methods (previous year and planned for next year), and efficacy (over the past year). Provide the USFWS a copy of treatment schedules submitted by the DBW to County Agricultural Commissioners one week in advance of a proposed treatment. Schedules would identify alternative sites should the DBW be unable to treat any of the proposed sites.
2. Conduct Two-Year Komeen Trials between June 1 and November 30. At any point throughout this period, the USFWS may prohibit treatments when IEP Real Time Monitoring data shows Delta smelt in the vicinity of proposed treatment areas (as defined in the Federal Reg. Notice listing Critical Habitat for Delta smelt (59 FR 65256)). For any of the cases where the USFWS would restrict treatment, the USFWS would notify the DBW within 2 working days prior to the proposed treatment time.

3. Modify the initial draft EIR research trial protocol to reflect the following:

- ❑ Research trials will not occur at the two proposed research sites near the confluence of the Sacramento and San Joaquin rivers (Big Break and Sherman Island), but rather three sites further inland will be used including Disappointment Slough, Sandmound Slough, and Venice Cut.
- ❑ A revised research proposal will be completed with input from DBW, USDA, USFWS and NMFS, and circulated for peer review. The research proposal will include studies in addition to those proposed in the draft EIR.
- ❑ The research will include field trials with "live cage" experiments to determine the effect of exposure to Komeen on delta smelt and splittail.
- ❑ Over the next five years, the DBW would perform toxicity tests in a USFWS-approved sampling and analysis laboratory on the following three sensitive fish species:
  - a. Delta smelt
  - b. Sacramento splittail
  - c. Chinook salmon (salmonids)

If one of the species identified above were unavailable through IEP or Cal Fed sources, the DBW would work with USFWS to identify an acceptable surrogate species.

Note that if the Two-Year Komeen Trials do not provide sufficient reason for the DBW to incorporate Komeen into the EDCP (requiring supplemental environmental documentation), then these toxicity tests may not be performed.

4. Generally chose trial locations with water depth between 8 and 15 feet deep. Most of the trial areas chosen would not be shallow water areas favored by juvenile salmonids. Although drift of Komeen into shallow water areas can occur, such shallow water areas would not be the focus of the trials.

Though these measures would decrease the potential overall loss of special status fish species, the DBW finds that based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #10 Temporary decrease in aquatic invertebrate abundance potentially adversely impacting special status fish species who rely on aquatic invertebrates for food source**

Komeen use could cause a temporary decrease in the abundance of aquatic invertebrates, which could adversely impact special status fish species such as Chinook salmon, delta smelt, and splittail that consume these invertebrates.

Implementation of the following mitigation measures will reduce this impact:

1. Treat no more than 20 acres with Komeen at any given site on a given day
2. Treat upstream portions first, and downstream portions several weeks later. This period of time would likely be sufficient to allow for recolonization of invertebrates.

The DBW finds that while the mitigation measures described above will lessen this impact, based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #11 Potential adverse impact to reptiles and amphibians utilizing Delta channel banks from Komeen wash**

Komeen use could adversely impact reptiles and amphibians that utilize channels and channel banks in the Delta, including special status species such as the giant garter snake, western pond turtle, and red-legged frog.

Implementation of the following mitigation measure will reduce this impact:

1. Prior to treatment, survey channel banks and uplands adjacent to treatment sites using a qualified biologist to assess whether sensitive species are present. If evidence suggests a relatively large number of sensitive species are present along channel banks, a new location for the Komeen trials would be selected.

Though the mitigation measures above will substantially lessen this impact, the DBW finds that based on currently available information, it is unclear whether for this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**Impact #12 Potential adverse impact to birds who forage on channel banks for vegetation**

Komeen use could adversely impact birds, including special status species such as California black rail and tricolored blackbirds, that nest on channel banks, since the herbicide could kill channel bank vegetation. Further, piscivorous birds could be impacted since Komeen can bioaccumulate in fish tissues.

Implementation of the following mitigation measures will reduce this impact:

1. Prior to an application, survey channel banks using a qualified botanist to determine whether sensitive plant species are present. If the site has a high percentage of sensitive plants, the site may not be treated.
2. If possible, apply Komeen during low tide to decrease the likelihood that sensitive plants would be inundated by herbicide-treated water.
3. Focus applications on the mid-channel region to decrease the possibility that concentrated herbicides would come in contact with sensitive plants growing along channel banks.
4. Following a treatment, survey channel banks to determine whether a loss of sensitive plants has occurred. If substantial loss were evident, changes would be made to the treatment protocol.

Mitigation measures described above would minimize the possibility that special status bird species would be exposed to Komeen. There is no mitigation to avoid bioaccumulation of Komeen in non-special status bird species. Thus, the DBW finds that while the mitigation strategies described above will lessen this impact, based on currently available information, it is unclear whether this impact can be mitigated to a less-than-significant level. Therefore, for purposes of this document, this impact is considered significant and unavoidable.

**H. Two-Year Komeen Trials - Agricultural Resources**

**Impact #13 Adverse impacts to crops using herbicide treated water**

Komeen use could adversely impact crops if herbicide-treated water were used for irrigation.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. Prior to beginning Komeen trials that are to occur near agricultural

intakes, consult the appropriate County Agricultural Commissioner's Office. Local landowners could then be informed of the particular periods of time during which irrigation should not occur and when it is safe to begin irrigation.

2. Include measurement of herbicide residues in the water column and a site check for *Egeria* fragments in intake pipes following treatment.
3. If excessive amounts of *Egeria* fragments occur in areas adjacent to agricultural intakes following standard collection efforts, an additional collection effort would be made. Once the number of fragments decreased sufficiently, the appropriate CAC would be contacted.

## I. Two-Year Komeen Trials - Utilities and Service Systems

### Impact #14 Clog water intake screens or pumps with decaying *Egeria*

An increase in debris load due to decaying plant material following Komeen applications could adversely impact public water supply operations by clogging intake screens and or pumps.

Implementation of the following mitigation measure will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatments, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.
3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.
4. Establish an MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.

5. Establish an MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.
7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.

**J. Two Year Komeen Trials - Hazards and Hazardous Materials**

**Impact #15 Potential human exposure if Komeen enters drinking water supply**

Komeen use could adversely impact drinking water supplies. Consumption of fish or other aquatic organisms recently exposed to Komeen could be harmful to human health. Exposure to concentrated formulations of Komeen could adversely affect human health.

Implementation of the following mitigation measures will reduce this impact to a less-than-significant level:

1. At least, two weeks prior to treatments, contact appropriate drinking water utilities and the DHS to inform them that treatment is to occur.
2. If required, in addition to regular monitoring activities (measurements of DO, herbicide residues, turbidity, etc.), consult with the DHS to coordinate monitoring of various water quality parameters (e.g., BOD, TOC, DOC, and UVA-254) as necessary.
3. Establish a Memorandum of Understanding (MOU) with the Contra Costa Water District. Requirements of the MOU would include notification of the agency at least two weeks prior to commencement of treatment. This MOU will identify a one-mile buffer zone, requiring the DBW to get approval for any treatments inside the zone from the CCWD.
4. Establish an MOU with the Little Potato Slough Mutual Water Co. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get approval for any treatments inside the zone from the Little Potato Slough Mutual Water Co. This MOU will consider scheduling treatments during months of the year that could mitigate any potential impacts to this water system.

5. Establish an MOU with the Mountain House Community Services District (MHCSD) prior to when that district begins taking water from the Delta. This MOU would identify a one-mile buffer zone around intakes, requiring the DBW to get for approval any treatments inside the zone from MHCSD.
6. Establish a one-mile buffer zone around other water treatment facility intakes within which herbicide application would not occur without consultation and agreement from the water agency.
7. Coordinate with the City of Tracy and/or the Department of Water Resources as needed to minimize impacts from treatments on water pumped into the Delta Mendota Canal.
8. Mark site with buoys during treatments, making herbicide treatments visible to the public.
9. Patrol treatment areas on a support boat, informing those recreating that treatments are occurring.
10. Handle concentrated chemicals following the protocol identified in "Herbicide Handling Procedures and Spill Contingency Plan" (Appendix S of the final EIR). The plan contains guidelines for herbicide handling procedures, storage, transportation, mixing, loading and applications, as well as measures to take in the event of an herbicide spill. Although the potential for a chemical spill can never be entirely removed, the guidelines set forth by the DBW significantly reduce the possibility of a spill occurring.
11. Report any suspected case of pesticide related illness or injury to the appropriate County Agricultural Commissioner (CAC). In addition, physicians treating suspected cases of pesticide-related illness or injury would be notified by CACs of their requirement to report such cases by telephone to the local health officer within 24 hours of examining the patient (Health and Safety Code Section 105200).

**Impact #16 Potential loss of aquatic, wetland, intertidal habitat, flora and fauna, and special status species resulting from catastrophic spill of herbicide**

A catastrophic spill of Komeen could result in adverse impacts to aquatic, wetland and intertidal habitat and associated flora and fauna, including special status species. Adverse impacts to human health could occur also due to exposure to concentrated herbicide formulations. The degree of harm would depend on the amount of chemical spilled, environmental conditions (flow, tidal action), and emergency response time.

Implementation of the following mitigation measure will reduce this impact to a less-than-significant level:

1. Handle concentrated chemicals following the protocol identified in "Herbicide Handling Procedures and Spill Contingency Plan" (Appendix S of the final EIR). The plan contains guidelines for herbicide handling procedures, storage, transportation, mixing, loading and applications, as well as measures to take in the event of an herbicide spill. Although the potential for a chemical spill can never be entirely removed, the guidelines set forth by the DBW significantly reduce the possibility of a spill occurring.
2. Assure personnel involved with the application of herbicides are trained in herbicide handling in accordance with the Food and Agriculture Code and Title 3 Code of Regulations Pertaining to Pesticides and Pest Control Operations. Participants would learn about herbicide toxicity, use of product labels and material safety data sheets (MSDS), proper handling of herbicides, emergency and first aid procedures in case of a spill, and the proper clothing and eye protection.

#### K. Mitigation Measures Considered and Rejected

A mitigation measure may be rejected as infeasible if it is "[in]capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (Public Resources Code, Section 21061.1). Legal or other factors, such as providing employment opportunities, may also be considered in making a finding of infeasibility (Public Resources Code, Section 21081 and CEQA Guidelines Section 15091 (a)(3)).

The DBW rejects the following mitigation measures as infeasible for specific economic, legal, environmental, social, technological, or other considerations:

- ❑ *Planting new native vegetation* (e.g., elderberry trees). This activity is considered an ecosystem restoration activity. Mitigation measures already proposed by the DBW would reduce the impact on elderberry trees from herbicide applications to a less than significant level. Such planting activities may be a Cal Fed initiative.
- ❑ *Restoring and recolonizing sensitive intertidal wetland plant communities* occurring along Delta channels and on in-channel islands that are potentially be impacted by herbicide treatments. Based on the proposed mitigation measures for impacts to intertidal wetland plant communities (i.e., channel bank surveys, treatment during low tide where possible, and treatment focused on the mid-channel) if substantial loss of intertidal wetland plant communities were evident, the DBW would make changes to the treatment protocol to limit any future impacts. The DBW will only mitigate for such losses through restoration and/or recolonization should this be required by USFWS and/or CDFG.

Based on formal consultations with these entities, no such restoration and/or recolonization measures have been required. Restoration and recolonization activities may be a Cal Fed initiative.

- ❑ *Apply aquatic herbicides to fragments from harvested Egeria.* Due to the high flow and high tidal exchange in the Delta, treating floating fragments with herbicides following harvesting would be an ineffective mitigation measure.
- ❑ *Mechanical removal of dead Egeria densa following aquatic herbicide treatment* to minimize reduction in biological oxygen demand. Extensive harvesting operations are economically and operationally infeasible due to the large scale of the Delta and the following operational constraints:
  - Harvested *Egeria* will produce fragments of plant material that, if not collected and disposed of properly, would greatly contribute to the spread of *Egeria*. Despite the efforts of harvesting contractors to collect all viable plant fragments, due to the volume of plant material generated, many fragments would float away before collection could occur.
  - In larger bodies of water, harvesting logistics may be overwhelming. It would be difficult to capture the large amount of harvested *Egeria* and haul it to an appropriate disposal facility.
  - Finding disposal sites for *Egeria* is difficult due to its high water content (approximately 93 percent). This moisture content is considered too excessive for a Class III landfill, thus DBW must find alternative sites for disposal. The DBW proposes to dispose of harvested *Egeria* on fallow agricultural land in the Delta.
  - Disposal of harvested weeds is labor intensive and, if harvesting were done on a large scale, would require a significant amount of acreage. Results from the DBW research trials indicate that between 3/4 to 3 1/3 tons (wet weight) of *Egeria* would be produced per acre harvested. Harvested *Egeria* must then be moved to a disposal site. The plant material is then manually spread to a depth of no more than one foot and left to dry for approximately 30 days. Once dry, harvested *Egeria* is then disked into the soil.
- ❑ *Habitat improvement outside the application areas.* The DBW considers habitat improvement outside the treatment area as beyond the scope of the EDCP and Two-Year Komeen trials. The DBW would consider this mitigation strategy should this be required by USFWS and/or CDFG. Based on formal consultations with these entities, no such habitat improvement measures outside proposed treatment areas have been required.