JUVENILE SALMONID COLLECTION SYSTEM PILOT PROJECT

Addendum to the

2022 Initial Study / Mitigated Negative Declaration

SCH# 2022050544

Prepared by

California Department of Water Resources, Riverine Stewardship Program

715 P Street, Sacramento CA 95814

July 2023

Table of Contents

Introduction

This document is an Addendum to the 2022 Juvenile Salmonid Collection System Pilot Project Initial Study and Mitigated Negative Declaration (MND) prepared in compliance with the California Environmental Quality Act (CEQA) of 1970, Public Resources Code, section 21000, et seq., as amended, and implementing CEQA Guidelines, Title 14, Division 6, Chapter 3 of the California Code of Regulations. The 2022 Juvenile Salmonid Collection System Pilot Project MND evaluated the impacts from testing an experimental, adaptive, and mobile guidance and capture system designed to collect out-migrating juvenile salmonids at the head of a reservoir, just downstream from where rivers enter the reservoir.

The purpose of this Addendum is to analyze the environmental impacts of the Juvenile Salmonid Collection System (JSCS) Pilot Project, herein referred to as the "Updated Project." The Updated Project includes testing of an additional major system component, the JSCS Trap (Trap), and the use of live juvenile Chinook Salmon (*Oncorhynchus tshawytcha*) to test the trap efficiency. These activities were not analyzed in the original document, which excluded the trap in project designs and specifically stated that live fish would not be used to test the system. The Updated Project also expands the project area and provides for transport of collected juvenile salmonids to downstream of the Keswick Dam by the California Department of Fish and Wildlife (CDFW). The Updated Project's area has been expanded slightly upriver; however, the technical approach does not differ from the Approved Project. Item 8, Description of Project, describes the proposed changes in detail.

The California Department of Water Resources (DWR) continues to act as the Lead Agency in 2023 and beyond, for the life of the Updated Project. DWR will test the Updated Project beginning in 2023 and continuing until 2025 or 2026, depending on reservoir conditions and coordination with CDFW, NOAA Fisheries, and the Winnemem Wintu Tribe (WWT).

This Addendum has been prepared in accordance with the relevant provisions of CEQA and the CEQA Guidelines. According to Section 15164(b) of the CEQA Guidelines, an addendum to a Negative Deceleration is the appropriate environmental document in instances when "only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent Negative Deceleration have occurred." Section 15162(a) of the CEQA Guidelines states no subsequent Negative Deceleration shall be prepared for a project unless the lead agency determines, based on substantial evidence in the light of the whole record, one or more of the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of

new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
    A. The project will have one or more significant effects not discussed in the previous MND,
    B. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    C. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    D. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The testing of the added project components included in the Updated Project is minor and would not create any additional potentially significant environmental impacts compared to those already identified in the 2022 MND for the approved Juvenile Salmonid Collection System Pilot Project. The Updated Project would also not substantially increase the magnitude or severity of impacts that were previously identified. This addendum includes a description of the Updated Project, and a discussion of the environmental impacts of the proposed project change, focusing on Air Quality, Biological Resources, Cultural Resources, Greenhouse Gases, Hazards and Hazardous Materials, Recreation, and Tribal Cultural Resources.

The Department of Water Resources shall consider this Addendum with the 2022 Juvenile Salmonid Collection System Pilot Project MND prior to making a CEQA decision on the Updated Project. The 2022 Juvenile Salmonid Collection System Pilot Project MND is available for review at the DWR Headquarters office, located at 715 P Street, 6th Floor, in Sacramento, CA 95814.

Previous Environmental Review

This section provides an overview of the 2022 Juvenile Salmonid Collection System Pilot Project MND to provide context for this addendum.

2022 Juvenile Salmonid Collection System Pilot Project MND

The Department of Water Resources (DWR) with funding from the California Department of Fish and Wildlife and the assistance of the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries), are developing the JSCS Pilot Project (Project) to determine if the system can be a critical part of the effort to reintroduce native anadromous salmonids back into historical spawning and rearing tributaries of the upper Sacramento River system. DWR also acknowledges the Winnemem Wintu Tribe (WWT) as a key partner on the proposed Project and appreciates that the WWT have shared their knowledge and understanding of the value of revitalizing the salmon population, which has informed the development of this document and benefits the project through continued coordination and partnership.

The 2022 JSCS Pilot Project MND evaluated the potential environmental impacts from testing the feasibility and viability of collecting juvenile anadromous salmonids as they emigrate out of historical habitat upstream from Shasta Dam. The Approved Project system components included a debris boom, guidance net, and temperature curtain. Overall, the Project would investigate how well the debris boom works to keep floating debris from entering the area where the guidance nets are located, how well the temperature curtain works at keeping the upstream reservoir pool cool (eventually for collecting juvenile salmonids), and how the hydraulics of the guidance net can be manipulated to improve the potential to capture fish. Annual testing will occur for approximately six to eight weeks in September through November. Testing would occur until 2025 or may continue to 2026, if additional data is needed to determine feasibility and viability of the project beyond the pilot phase. The project is located within the McCloud Arm of the Shasta Reservoir; the exact location varies from year to year based on the following factors:

1. The actual reservoir elevation estimated in the summer months—and refined in the weeks—prior to installation;
2. Consideration for the specifics of installation feasibility and site geometries;
3. Presence of biological resources; and
4. Collaboration with the WWT, to avoid any sensitive cultural and/or biological resources in the area that are considered important to the tribal community.

The 2022 MND found that the following factors would be potentially affected by the project:

Biological Resources: Analysis of biological resources present in the project area determined that adverse effects on sensitive species would be less than significant with mitigation; these species include the special-status plants broad-lobed leptosiphon, Butte County fritillary, Cantelow's lewisia, Canyon creek stone crop, Heckner's lewisia, Howell's lewisia, oval-leaved viburnum, Shasta fawn lily, Shasta huckleberry, Shasta limestone monkeyflower, Shasta maidenhair fern, and Shasta snow-wreath, and the special-status animals western pond turtle, rough sculpin, rainbow trout, white sturgeon, hardhead, bald eagle, osprey, purple martin, Clark's grebe, Townsend's big-eared bat, silver-haired bat, and fisher. Adopted mitigation measures BIO-1, BIO-2, and BIO-3 prescribe several actions to reduce potential impacts to sensitive species to less than significant. These actions include pre-construction surveys, avoidance, and relocation measures depending on the species encountered.

Cultural Resources: Analysis of cultural resources determined that adverse change in the significance of a cultural resource could be less than significant with mitigation. Adopted mitigation measures CUL-1, CUL-2, CUL-3, CUL-4, CUL-5 and CUL-6 include conducting inventories of archeological resources in the project area and prior to ground disturbance, conducting pre-construction cultural resources awareness and sensitivity training, and suspending work and contacting appropriate authorities if resources are encountered.

Greenhouse Gas Emissions: Analysis of greenhouse gas emissions determined that emissions produced by the project would not conflict with DWR's Climate Action Plan Phase 1: Greenhouse Gas Emissions Reduction Plan (GGERP) if appropriate mitigation measures are implemented. To comply with the GGERP, adopted measure GHG-1 details seven Best Management Practices (BMPs) for reducing GHG emissions during construction including evaluating the feasibility of GHG reducing actions, minimizing vehicle idle times, reducing electricity use in field offices, maintaining air filters on construction equipment and restricting material hauling on public roadways to off-peak traffic congestion hours.

Tribal Cultural Resources: Analysis of Tribal cultural resources determined adverse changes in the significance of Tribal cultural resources could be less than significant with mitigation. Adopted mitigation measures CUL-2, CUL-3, CUL-4 and CUL-5 include conducting inventories of Tribal cultural resources in the project area and prior to ground disturbance, conducting pre-construction Tribal cultural resources awareness and sensitivity training, and suspending work and contacting appropriate authorities if resources are encountered.

Juvenile Salmonid Collection System Pilot Project (Updated Project)

1. **Project Title**
   Juvenile Salmonid Collection System Pilot Project

2. **Lead Agency Name and Address**
   California Department of Water Resources
   715 P Street, Sacramento, CA 95814

3. **Contact Person and Phone Number**
   Randy Beckwith, Senior Engineer, Water Resources
   (916) 873-5715, Randy.Beckwith@water.ca.gov

4. **Project Location**
   The Updated Project expands the study area in the McCloud Arm of Shasta Reservoir, to cover the entire reach from the Hirz Bay Boat Launch upriver to the McCloud Bridge. (Figure 1)

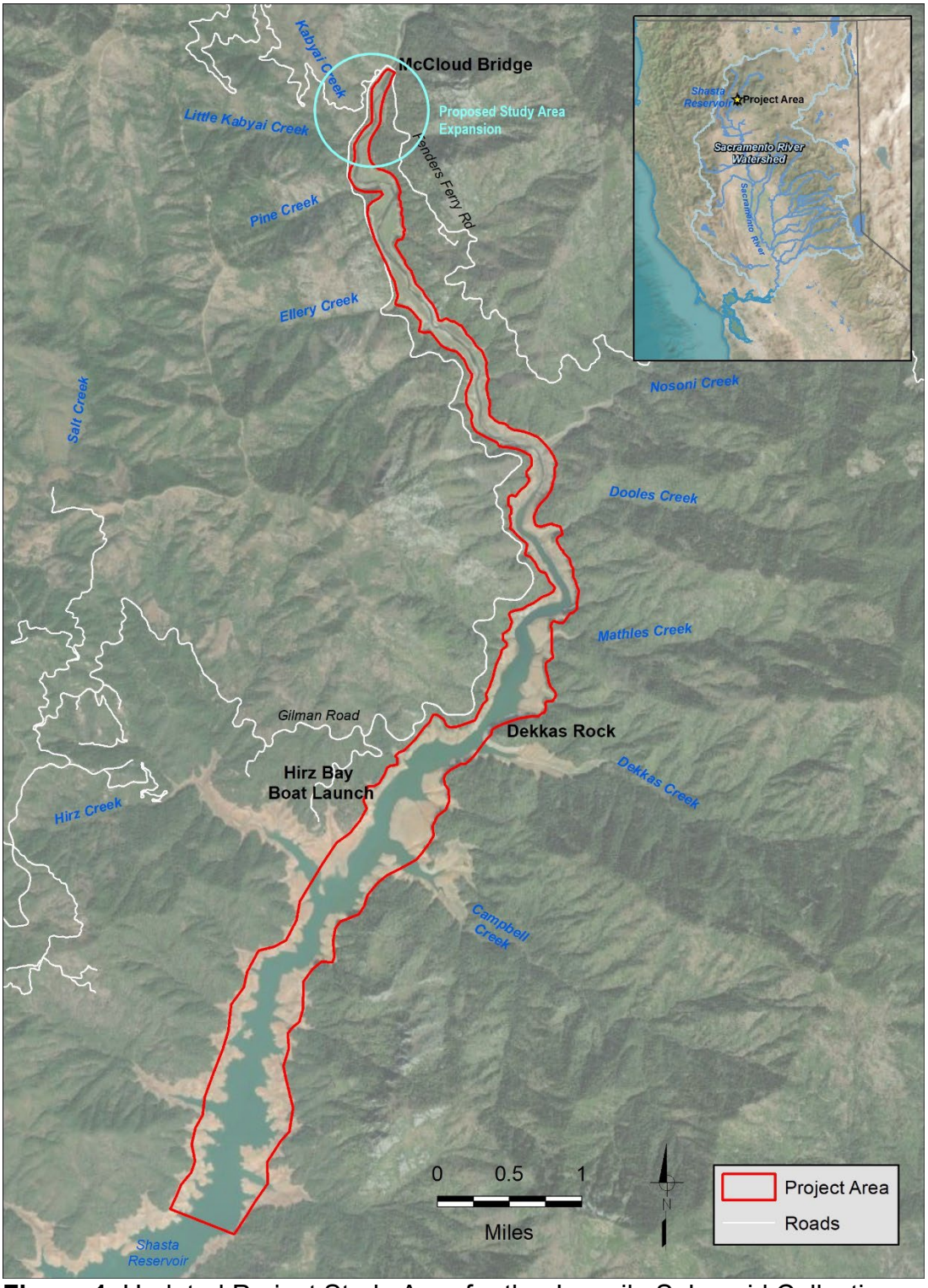


Figure 1. Updated Project Study Area for the Juvenile Salmonid Collection System Pilot Project

5. Project Sponsor's Name and Address

California Department of Water Resources, Riverine Stewardship Program
715 P Street, 6th floor, Sacramento, CA 95814

6. General Plan Designation

Public Land

7. Zoning Designation

National Recreation Area

8. Description of Updated Project

The Updated Project's system components include a debris boom, guidance net, temperature curtain, and fish trap. (Figure 2) The debris boom, guidance net and temperature curtain components are described in detail in the Approved Project MND; the Updated Project adds the fish trap**,** which is described in further detail below. The Updated Project's objectives are the same as in the Approved Project MND, but also include testing how well the temperature curtain works at keeping the fish trap cool, where salmonids will be collected and held for processing, how efficiently the fish trap captures juvenile salmonids, and how well the trap's live box preserves fish for sampling and transport.

Annual testing for approximately six to eight weeks in September through November is proposed, however, testing could begin as early as July and continue as late as January, depending on the reservoir conditions and coordination on fish collection needs with the CDFW, NOAA Fisheries and WWT. Testing of the system components began in 2022 and would continue to occur in 2023 until 2025 or 2026 to collect enough data to determine feasibility of the system beyond the pilot phase. The Approved Project MND's experimental evaluation approach for the first year was to determine if the system created the required fish guidance conditions, water temperature control, and debris management to effectively and safely capture juvenile salmonids. Based on the results of that initial evaluation, additional testing in subsequent years will include minor system modifications to address any issues of physical operations of each component of the system, and the testing of the system's fish trapping efficiency and best operating procedures.

The debris boom would be installed in the McCloud Arm of the Shasta Reservoir to keep floating debris from entering the area where the guidance nets are located. The guidance net would be installed downstream of the debris boom to provide a barrier to fish and be oriented in a "v" shape to guide fish toward the collection point. Resident fish passage would be provided through fish passage devices in the guidance net at eight locations. An impermeable temperature curtain would be installed just downstream of the guidance net, which can be

raised or lowered to allow water and organisms to pass underneath the curtain. Temporary anchoring systems would be installed for each component using soft nylon slings around rocks and/or large trees, with large clump weights (large heavy chain or pieces of steel or concrete) laying on the channel bank near the water's edge to keep the anchor lines to the system components horizontal. The anchoring system would hold the debris boom, guidance net, fish trap, and temperature curtain in-place.

The Approved Project MND includes the system components previously described (debris boom, guidance net, upstream fish passage, temperature curtain, anchoring systems), and the Updated Project adds an anti-fouling study to the guidance net component and the trap component.

In addition to the Approved Project MND's description of the guidance net component, and subject to permit approval and coordination with project partners, an additional study of anti-fouling net coatings may be tested. The term fouling can be defined as the attachment and growth of living organisms such as bacteria, algae, bryozoans, and mollusks, among others, on surfaces immersed in the aquatic environment. To test solutions for preventing net fouling, several samples of underwater netting (up to 40 samples, 1m x 1m each) coated with a novel antifouling coating material will be tested in the McCloud River to understand the potential of the anti-fouling materials to reduce maintenance to underwater nets. Each sample will have a different variation of the coating including a treatment sample (non-coated), and the coating will be applied and cured offsite. Several replicates (exact copies) of each sample may also be tested and deployed at different depths within the McCloud River water column. The exact configuration of samples and experimental design is yet to be determined, but the samples will be located separately from the deployed guidance net. The netting to be used will be like other netting used in the McCloud River for the Juvenile Salmon Collection System. The coating material itself is made of several components including a silicone-based polymer (called DMS-S35), a porous silica (MCM41), a fumed silica, and a penetrating oil, and the coating is non-hazardous after it's applied and cured. Material Safety Data Sheets of all the coating components are included in Appendix A of the Addendum.

The fish trap component is designed to capture juvenile salmonids for study and is further detailed below. The trap box has a fry box that sits within it, and a live well sits on the platform that is forty feet long and twenty-four feet wide (Figures 3 and 4). The trap will be six feet long, and at the entrance the trap is four feet wide and five feet deep; then it narrows to two feet wide and six feet deep at the trap

box. The sides of the trap box will be made of perforated aluminum plate and the back panel will be made of wedge wire screen. The entrance of the trap box will contain a fyke with interchangeable materials such as netting, woven wire, or perforated aluminum plate. The fry box will be two feet deep and sit in the bottom of the trap box. The bottom of the fry box and bottom nine inches of the sides of the fry box will be made of impermeable aluminum plates that allow for nine inches of water depth for fish holding while the fry box is pulled out of the trap box. The top 15” of the fry box will be constructed of perforated aluminum plate to allow water to drain out of the sides while the fry box is lifted, thereby reducing weight substantially. The live well will be an insulated container that sits on the platform for holding fish during processing and sorting. The live well will be continuously pumped with water from the reservoir and aerated to maintain sufficient water temperature and dissolved oxygen for fish. The live well will be wider than the fry box to allow for a water-to water-transfer of fish from the fry box into the live well.

To transfer fish, the fry box will be lifted by a chain hoist attached to a gantry crane that can be move along the length of the trap. The fry box will be placed on the edge of the live well and tilted slightly so that the downstream end of the box is facing down into the live well. A square valve on the downstream side of the fry box will be opened to release water and fish into the live well. The goal of this is a water-to-water transfer is to transfer fish into the live well as quickly as possible, and to minimize the amount of stress put on the fish by not dropping them into the live well, keeping them in water as they transfer to the live well for processing.

During the operation and monitoring of the Updated Project, testing and evaluation in addition to what was described in the Approved Project would occur, and may include:

- Water quality sampling inside the trap box and live well: Continuous water quality testing for temperature, and daily water quality testing for dissolved oxygen, turbidity, conductivity and/or pH would be completed using temperature loggers and handheld instruments
- Anti-fouling Study: samples of net coated in antifouling material and applied and cured by the manufacturer will be deployed at different locations and depths within the study area near the existing guidance net and be monitored weekly for fouling.
- Fish handling: Juvenile winter-run, fall-run, late fall-run, or spring-run Chinook Salmon provided by the Livingston Stone National Fish Hatchery and/or the Coleman National Fish Hatchery will be released/hatched

upstream and targeted for collection and relocation in collaboration with CDFW, NOAA Fisheries, USFWS, and the WWT. A portion of the Chinook Salmon released may be tagged with PIT and/or JSAT tags for tracking. Fish will be scanned for tags, measured and weighed, including a representative sample of the study Chinook Salmon caught in the trap; tissue and scale samples may be taken from anesthetized yearling salmonids. All non-target species will be returned to the reservoir downstream of the trap within the reservoir, and all juvenile salmonids will be transported once a day from the live well to shore in insulated coolers with air stone or oxygen (O_2) gas bubblers and transferred to CDFW for release downstream of Keswick Dam. If CDFW can't complete a daily transfer, juvenile salmonids removed from the trap will be stored in transport coolers to a nearby campsite and monitored by staff every few hours until a transfer can be completed during the following day. Any fish mortalities will be removed from the trap, and stored individually in plastic bags, labeled and frozen, and CDFW will be contacted immediately for instructions on processing and delivering.

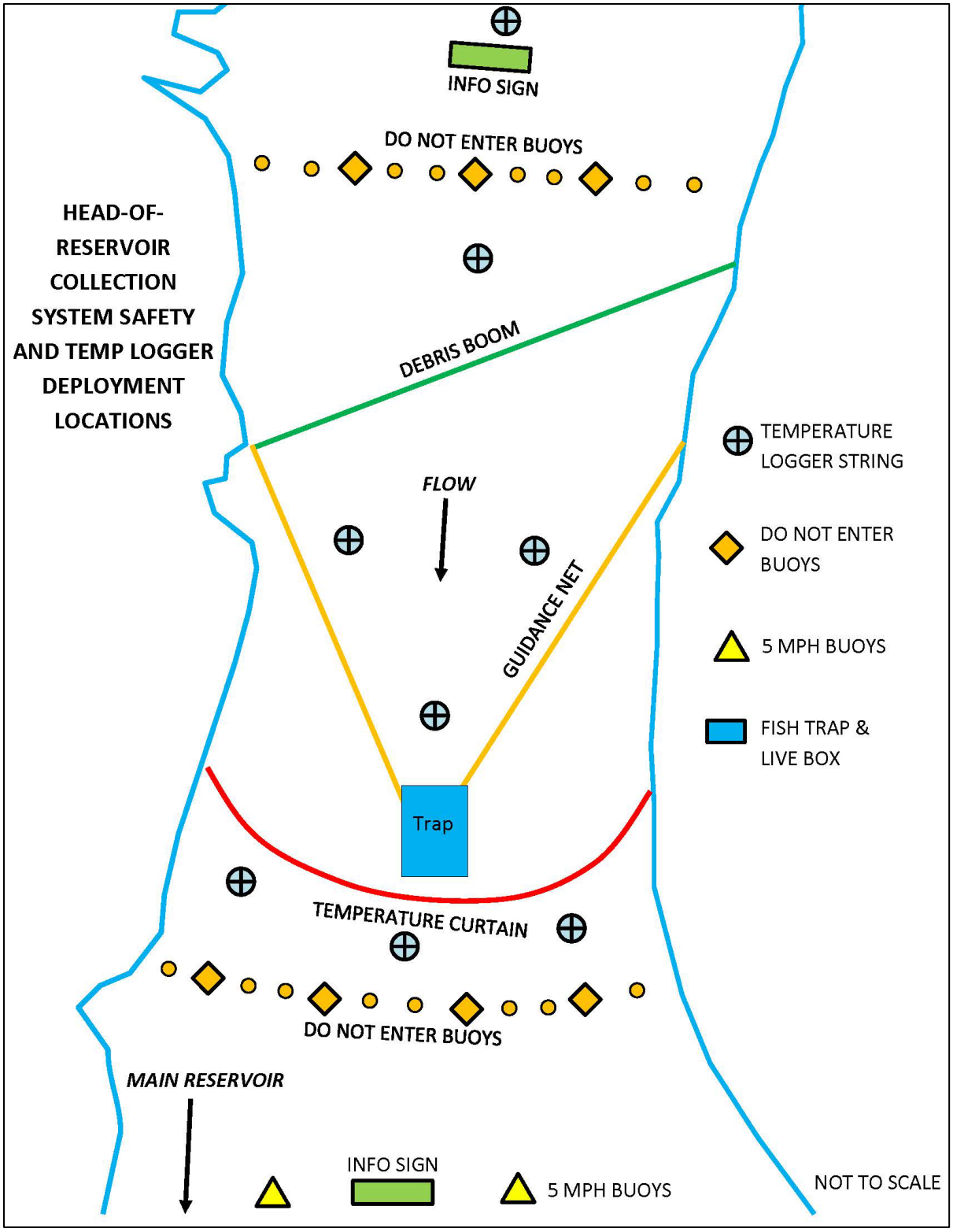


Figure 2. The Juvenile Salmonid Collection System and Major Components

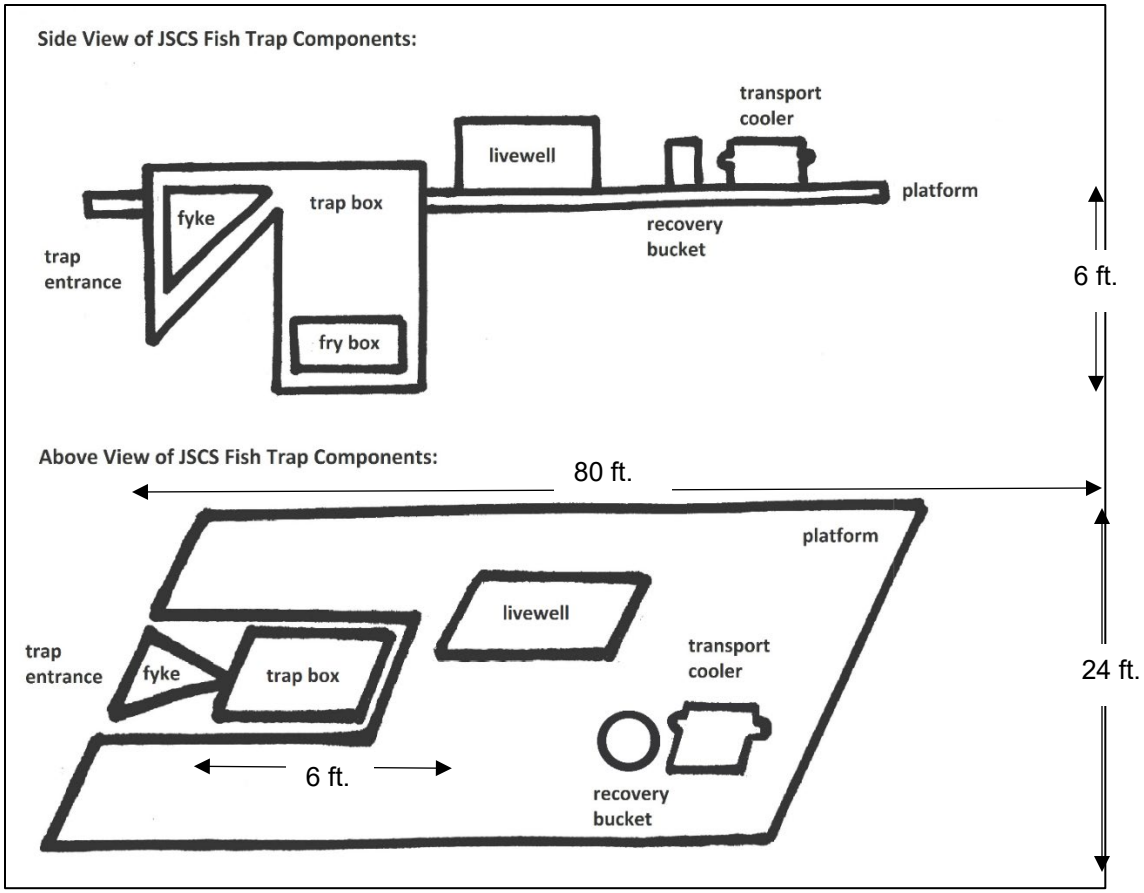


Figure 3. Fish trap, trap box, and live well system schematic (not to scale)

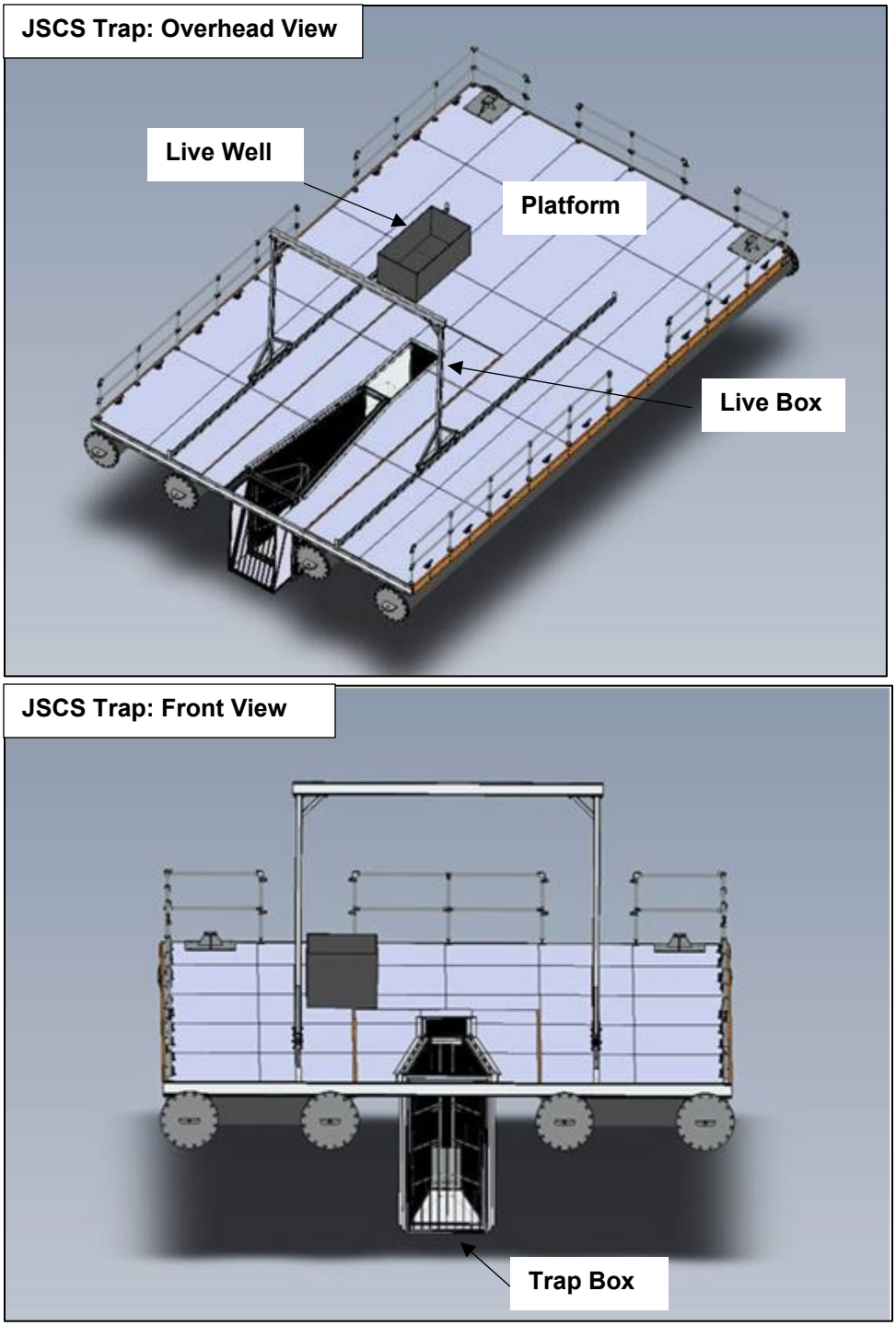


Figure 4. Fish Trap Design Drawings: overhead view (top) and front view (bottom), dimensions are to scale.

9. Surrounding Land Use Setting

The proposed Project is located within the McCloud Arm of Shasta Reservoir in Shasta County. The site is zoned public land and primarily includes the submerged area of Shasta Reservoir as well as the adjacent shoreline. The proposed Project is not located in a city or community and would be consistent with existing land uses, plans, policies, and regulations. Therefore, no impacts related to land use and planning would occur.

10. Required Approvals

TABLE 1. REGULATORY REQUIREMENTS, PERMITS, AND AUTHORIZATIONS FOR UPDATED PROJECT SYSTEM COMPONENTS

Jurisdiction	Agency	Type of Approval
Federal Agencies	United States Forest Service NOAA Fisheries	Special Use Permit Transportation and Utility Systems and Facilities on Federal Lands 10(j)Ruling on nonessential experimental population of Sacramento River Winter-run and Central Valley Spring-run Chinook Salmon in the McCloud and Upper Sacrament Rivers above Shasta Dam
State Agencies	California Department of Fish and Wildlife	Scientific Collection Permit
Local Agencies	N/A	N/A

NOTE:
N/A = not applicable
SOURCE: Data compiled by Environmental Science Associates in 2021 and DWR in 2023

11. California Native American Tribal Consultation

In support of required Native American consultation for the proposed Project pursuant to Public Resources Code, section 21080.3.1, as well as in accordance with DWR's *Tribal Engagement Policy* and California Natural Resources Agency's *Tribal Consultation Policy*, DWR conducted initial Project outreach to Native American representatives listed in the Approved Project MND (Section 3.4.1) via letters sent certified mail on May 26, 2021. DWR received responses from three Tribes contacted for the Approved Project MND including a formal request for "Assembly Bill (AB) 52" consultation with DWR from WWT Tribal Historic Preservation Officer (THPO) Mark Miyoshi in a letter dated July 9, 2021. A summary of Native American correspondence is presented in the Approved Project MND Section 3.4.1 and a complete Consultation Log with the WWT is included within the Approved Project MND Appendix B: Native American Correspondence.

DWR sent certified hard copy notification letters to all Tribes contacted for the Approved Project MND to updated Native American representatives on June 5, 2023, followed by emails sent on June 14, 2023, as a courtesy update of the addendum to the CEQA MND and an opportunity to provide comments on the Updated Project. The following Tribes were contacted for the purposes of the CEQA Addendum: Barona Band of Mission Indians, Big Pine Paiute Tribe of the Owens Valley, Fernandeño Tatavium Band of Mission Indians, Ione Band of Miwok Indians, Karuk Tribe, Mechoopda Indian Tribe of Chico Rancheria, Middletown Rancheria of Pomo Indians of California, Nor-Rel Muk Wintu Nation, Northern Valley Yokuts Tribe, Pit River Tribe, Redding Rancheria, San Luis Rey Band of Mission Indians, San Manuel Band of Mission Indians, Santa Rosa Tachi Yokut Tribe, Shasta Indian Nation, Shingle Springs Band of Miwok, Tejon Indian Tribe, United Auburn Indian Community, Wilton Rancheria, Winnemem Wintu Tribe, Wintu Tribe of Northern California, and Yocha Dehe Wintun Nation. The Tongva Ancestral Territorial Tribal Nation was unable to be contacted as no contact could be identified for the Tribe by the Native American Heritage Commission or conducting an internet search.

Two email responses were received. On June 28, 2023,an email response was received from Ryan Nordness, Cultural Resources Analyst of the Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians) stating the Project “is located outside of the Serrano ancestral territory” and the Tribe “will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.” The other email response was received on June 15, 2023, from Sarah Brunzell of the Fernandeño Tataviam Band of Mission Indians stating, “I have no questions or concerns for the attached CEQA MND Addendum Notification…” and that she is the current manager for their Cultural Resource Management Division, taking over these duties from Jario Avila. DWR will continue to coordinate with the WWT, a Tribal partner on the Project.

A copy of the Native American Correspondence related to the Updated Project is included in Appendix B of the Addendum.

Potential Impacts of Updated Project

This addendum tiers off the 2022 MND and evaluates potential environmental impacts that could result from the Updated Project. Appendix G of the CEQA Guidelines provides a checklist of environmental issue areas that are suggested as the issue areas that should be assessed in CEQA analyses. The 2022 MND for the Approved Project addressed seven of the twenty listed environmental issue areas, including Air Quality, Biological Resources, Cultural Resources, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Recreation and Tribal Cultural Resources. The Department of Water Resources determined that the Approved Project would not significantly impact the other issue areas, including Aesthetics, Agricultural Resources, Energy, Geology/Soils, Hydrology/Water Quality, Land use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation and Traffic, Utilities/Service Systems, or Wildfire.

The potential environmental impacts of the Updated Project are considered in comparison with the Approved Project, to determine whether impacts associated with the former are consistent with the impact analysis provided in the 2022 MND for the Approved Project, and whether additional mitigation measures are required to minimize or avoid potential impacts.

We reviewed all 20 environmental issue areas in our analysis of the Updated Project to determine where further information was warranted, and this addendum provides additional information in our assessment of the following issue areas as described below: Air Quality, Biological Resources, Cultural Resources, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Recreation, and Tribal Cultural Resources.

Air Quality

The Updated Project does include increased use of a generator and increases the number of truck trips, which are needed to transport collected salmonids downstream below Keswick Dam. The potential impacts of using a generator are adequately discussed and considered less than significant in the Approved Project MND. The additional truck trips will be performed by CDFW staff who are already transporting salmonids captured from a separate project, the Pilot Winter Run Chinook Salmon Remote Site Incubator Test (CDFW Project). The CDFW project is considered exempt from CEQA as a categorical exemption, section 15306. Take of listed species pursuant to the federal Endangered Species Act (ESA) is addressed via compliance with an Endangered Species Act, section 10(a)(1)(A) Recovery Permit. Because the impacts of these additional truck trips are discussed in the environmental compliance documents for the CDFW Project, and are below the significance threshold for emissions, **the Updated Project would not result in new or substantially more severe impacts**

associated with Air Quality when compared to the analysis of the Approved Project in the 2022 MND. No additional mitigation measures will be adopted.

Biological Resources

The Updated Project will be deployed in the McCloud Arm of Shasta Reservoir between Dekkas Rock and the McCloud Bridge from September through November in 2023, however depending on fish collection needs and in coordination with CDFW, the Forest Service, and WWT, work may start in future years as early as July and end as late as January. No new Species of Special Concern were identified in the expanded study area compared to the Approved Project. The installation and removal of the JSCS has the potential to harass and displace fishes present in the general area of the installation activity. General disturbance could startle fish away from in-water activity areas, making them more susceptible to predation if predators have not also been startled. Increased anthropogenic noise could make fish more susceptible to predation by elevating stress (reducing startle responses because of reduced locomotor activity or attention), increasing distraction, or masking acoustic cues indicating the approach of a predator. Installation activities will be short in duration and effects are anticipated to be temporary. The trap will collect fish and be checked twice daily; captured fish will be processed; non-target species will be released quickly with minimal handling downstream of the trap or temperature curtain, and juvenile salmon will be measured and transported in coolers with air stones by boat to shore for transfer to CDFW for release downstream of Keswick Dam. Transfer of coolers with captured salmon to CDFW will occur daily; if CDFW is not available for the transfer, captured fish will be returned to the live box to rest overnight, and the transfer will occur the following day. To avoid and minimize impacts on fish and other wildlife, the following measures will be implemented.

1. To minimize adverse impacts of debris and crowding, the trap will be checked at least twice daily. Should temperature, debris load, or crowding pose a risk to captured fish, the trap will be additionally processed throughout the day.
2. Whenever possible, water-to-water transfers will be used to move fish. When this is not feasible, fish will be moved with nets. This protocol minimizes handling stress.
3. Morphometric data (measuring length and weight) will be taken from juvenile Chinook Salmon in water to minimize stress. Fork length will be measured with an acrylic measuring board, and wet weight will be taken by placing the fish into a dish of water on a tared scale. After handling, juvenile salmon will be placed in a bucket with API® Stress Coat (Stress Coat) and an air stone bubbler for recovery monitoring.
4. Juvenile Chinook Salmon will be anesthetized when necessary for sampling and/or tagging. Use of anesthetic in sampling will follow the procedure outlined in the NOAA (2018) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation methods: Fish will be placed in an anesthetic bath of Alka-Seltzer Gold (aspirin free) brand

sodium bicarbonate (NaHCO3) until loss of equilibrium is achieved but operculum movement is still present. The lowest concentration of sodium bicarbonate that will permit safe handling will be used and will range from 1 to 2 tablets per gallon of fresh river water depending on fish size and water temperature. The bicarbonate material will be allowed to completely dissolve before fish are added to the anesthetic bath. Fish can be handled after 1-2 minutes in the anesthetic bath and will be processed immediately following loss of equilibrium. Stress Coat will be added to the anesthetic solution as needed to combat stress from loss of the protective slime layer during handling. Fish will be allowed to recover in five-gallon buckets of aerated fresh river water until normal behavior is observed. Water temperature in the recovery bucket will be monitored and maintained to be within 2°C of the ambient river temperature. Clove oil may be used as anesthetics instead of sodium bicarbonate upon request from the Winnemem Wintu Tribe or other partners. Clove oil protocol will follow Griffiths (2005) and Kennedy, Gale, and Ostrand (2007).

5. To minimize predation in the trap, the entrance of JSCS will be fitted with a vertical bar rack. Three different bar spacings will be tested (1.5”, 3”, and 6”) to find the best one to maximize capture of target species and exclude adult fishes, predators, and other wildlife.
6. To minimize impacts to resident fish and non-target species, the collection system has been designed to include fish passage devices in the guidance net. Also, any non-target species that enter the trap will be identified, counted, and released quickly downstream of the trap with minimal handling and no sampling procedures.
7. All coolers, buckets, nets, and sampling equipment will be sanitized with a diluted iodine solution at the end of every workday to minimize the proliferation of disease.

Because of the measures listed above to avoid impacts, the Updated Project would not result in new or substantially more severe impacts associated with Biological Resources when compared to the analysis of the Approved Project in the 2022 MND. No additional mitigation measures will be adopted.

Cultural Resources

Environmental Science Associates (ESA) conducted cultural resource records searches for the Approved Project area and vicinity at the Northeastern Information Center (NEIC) at Chico State University. The NEIC maintains the official California Historical Resources Information System (CHRIS) records of cultural resource studies and recorded cultural resources for Shasta County. Record searches for the Approved Project were conducted in June 2021 and April 2022 for the Approved Project MND. In July 2022, ESA conducted an additional NEIC records search that included the portions

of the Project Area not covered by the two previous records searches. Cumulatively, the three NEIC records searches covered the Updated Project Area with a 0.25-mile radius buffer. Also, in May 2022, the USFS conducted a review of their cultural resources records for the Project Area and vicinity, providing the results to ESA and DWR in August 2022. Although the study area has expanded slightly from the Approved Project study area, the Updated Project study area was already included in previously requested records searches from the NEIC and USFS. **The Updated Project would not result in new or substantially more severe impacts to Cultural Resources when compared to the analysis of the Approved Project in the 2022 MND.** Previously adopted mitigation measures are adequate to avoid and minimize effects, therefore, no additional mitigation measures will be adopted for this addendum.

Greenhouse Gas Emissions

The Updated Project does include truck transport of collected salmonids downstream below Keswick Dam. These additional truck trips will be performed by CDFW staff who are already transporting salmonids captured from a separate project, the Pilot Winter Run Chinook Salmon Remote Site Incubator Test. Because this CDFW project is categorically exempt from CEQA (Section 15306), these additional truck trips are discussed in the environmental documents for the CDFW project and are below the threshold for emissions. The Updated Project will use a generator to power the live well to pump water into the well, and the potential impacts associated with using a generator are addressed and considered less than significant in the Approved Project MND. **The Updated DWR project would not result in new or substantially more severe impacts associated with Greenhouse Gas Emissions when compared to the analysis of the Approved Project in the 2022 MND.** Previously adopted mitigation measures are adequate to avoid and minimize effects, therefore, no additional mitigation measures will be adopted for this addendum.

Hazards and Hazardous Materials

The Updated Project description does include the addition of hazardous materials of the anti-fouling compounds on net samples that will be placed in the water. The amount of the anti-fouling compound is relatively minor, in that it will be a coating on a one square meter net sample. Although the materials are considered hazardous in liquid form, once the nets are dried and cured, the material is nonhazardous. This impact is less significant because the amount of hazardous material is small, and all net coatings will be applied by the manufacturer offsite; once the net samples arrive to the project site for testing, they will be cured and not hazardous anymore.

The Updated Project also includes the potential use of compressed oxygen gas to support fish health in the live well and transport coolers. This gas is considered hazardous because is stored under pressure and contact with rapidly expanding gas can cause frostbite or a regulator valve failure could cause injury from projectile equipment; as an oxidizer, this gas may cause a fire when coming into contact with combustible material. To avoid these hazards the protective measures listed in relevant

sections of the Oxygen Safety Data Sheet (Appendix A) will be followed. Additionally, staff will follow the following DWR standard operating procedures for using oxygen when handling fish:

1. Staff will make sure the oxygen tank is completely secure when hauling.
2. The hose from aeration stone will first be connected to the fitting on the inside of the stainless-steel fish haul tank; Then the hose from the oxygen tank regulator will be connected to the fitting on the outside of the fish tank.
3. Next the T- handle on the regulator will be backed off (turn to the left) prior to opening oxygen tank valve. Staff will not stand in front, or in view of regulator when turning on oxygen tank.
4. Then the oxygen tank valve will be turned on to a level that sufficiently oxygenates the water for the fish without wasting oxygen (~12 lbs.)
5. Oxygen will be turned off at the valve and staff will bleed off the lines using a T-handle at the regulator before removing any fish from their tank.
6. The safety cap will be always kept over the regulator during transport.

Because of the measures listed above to avoid impacts, the Updated Project would not result in new or substantially more severe impacts associated with Hazards and Hazardous Materials when compared to the analysis of the Approved Project in the 2022 MND. No additional mitigation measures will be adopted.

Recreation

Impacts to these resources were not considered in detail in the existing MND. The Updated Project description does not change the environmental setting, impact areas or discussion point impact thresholds for Recreation in the existing MND for this impact area. The Updated Project improves boat passage by the addition of gates on the debris boom, guidance net, and debris boom to allow improved boat passage through the study area for landowner access, tribal activities, law enforcement or emergency passage. Although the project may start earlier or end later in future years, mitigation measures are already in place to coordinate with the Forest Service and notify the public of any upcoming, temporary closures of waterways or recreational facilities. **The Updated Project would not result in new or substantially more severe impacts associated with Recreation when compared to the analysis of the Approved Project in the 2022 MND.** No additional mitigation measures will be adopted.

Tribal Cultural Resources

For a complete summary of Native American Correspondence for the CEQA Addendum to the Approved Project's MND, refer to Updated Project 11. California Native American

Tribal Consultation and Appendix B. Tribal consultation with the WWT is ongoing to coordinate project activities. Representatives of the WWT have provided input and guidance on fish trap design and fish handling procedures, science plan approaches, predation concerns and other project details through meeting participation. Specific recommendations related to predator exclusion and effects to fish in collection procedures have been factored into design avoidance and minimization features. **The Updated Project would not result in new or substantially more severe impacts to Tribal cultural resources when compared to the analysis of the Approved Project in the 2022 MND.** Previously adopted mitigation measures are adequate to avoid and minimize effects, therefore no additional mitigation measures will be adopted for this addendum.

Determination

In accordance with Section 15164 of the CEQA Guidelines, DWR has determined this Addendum to the 2022 Juvenile Salmonid Collection System Pilot Project MND is necessary to document changes or additions that have occurred since the 2022 MND was originally prepared. No new or more severe environmental impacts beyond those disclosed in the 2022 MND would occur as a result of the Updated Project. DWR has reviewed and considered the information contained in this Addendum in its consideration of the 2022 MND and finds the preparation of a subsequent environmental document is not necessary.

Randy Beckwith 7/31/2023

Randy Beckwith, Senior Engineer, Water Resources Date

California Department of Water Resources

References

Comas J, Parra D, Balasch JC, Tort L. 2021. Effects of Fouling Management and Net Coating Strategies on Reared Gilthead Sea Bream Juveniles. Animals (Basel). 11(3):734. doi: 10.3390/ani11030734. PMID: 33800253; PMCID: PMC7999983.

NMFS. 2018. Consultation on the Issuance of ESA Section 10(a)(1)(A) Scientific Research and Enhancement Permit 21477 affecting Salmon, Steelhead, and Green Sturgeon in the Stanislaus River, Central Valley, California. WCR-2018-9630. https://www.noaa.gov/sites/default/files/legacy/document/2020/Oct/07354626569.pdf, accessed July 14, 2023.

Griffiths SP. 2005. The use of clove oil as an anaesthetic and method for sampling intertidal rockpool fishes. *Journal of Fish Biology* 57(6), 1453-1464.

Kennedy BM, Gale WL, Ostrand KG. 2007. Evaluation of Clove Oil Concentrations for Use as an Anesthetic During Field Processing and Passive Integrated Transponder Implantation of Juvenile Steelhead. *Northwest Science* 81, 147-154.

Appendices

Appendix A. Safety Data Sheets

Anti-fouling Net Coating Safety Data Sheets

1. BioBlend PO

BIOBLEND™ SUSTAINABLE PERFORMANCE

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Company Information:

BioBlend Renewable Resources, LLC
1500 Jarvis Ave.
Elk Grove Village, IL 60007
(630) 227-1800
www.bioblend.com

Emergency Contact Information:

(630) 227-1800
8 AM - 4 PM, Monday through Friday

Product Name	BioBlend PO
Product Description	Biodegradable Penetrating Oil
Product Use	Product is intended for use as an industrial lubricant.

SECTION 2: HAZARD(S) IDENTIFICATION

Hazard Statement	This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard, which has been updated to align with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).	
Precautionary Statements	Flammable liquid and vapor. May be harmful if swallowed. Causes skin Keep away from heat/sparks/open flames/hot surfaces. No smoking.Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective	
Hazard Classification	Flammable liquids	Category 3
Hazards not otherwise classified	None Known	
Unknown Toxicity Statement	<1% of the mixture consists of ingredients with unknown toxicity	

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS No.	Weight %
Canola	120962-03-0	60-100%
Green Solvent	PROPRIETARY	5-15%
Water Displacing Additive	PROPRIETARY	1-5%
Performance Package	MIXTURE	1-3%

The exact percentage (concentration) of composition has been withheld as a trade secret. If CAS number is indicated as "PROPRIETARY" or "MIXTURE", information has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

First Aid - Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.
First Aid - Eye Contact	Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Promptly wash eyes with plenty of water while lifting the eye lids.
First Aid - Skin Contact	Take off immediately all contaminated clothing. Get medical attention if irritation develops and persists. Wash skin thoroughly with soap and water for several minutes.
First Aid - Ingestion	Call a physician or poison control center immediately. If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.
Recommendations for immediate medical care/special treatment	Physicians should treat symptomatically. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

SECTION 5: FIREFIGHTING MEASURES

Suitable extinguishing media	Water spray, fog, CO2, dry chemical, or alcohol resistant foam.

Unsuitable extinguishing media	**Do not use a solid water stream as it may scatter and spread fire.**
Specific hazards that may develop	**Risk of ignition. Rags and other materials containing this product may heat and spontaneously ignite if exposed to air. Store wiping rags and other materials in metal cans with tight fitting lids. Cool closed containers exposed to fire with water spray.**
Special firefighting equipment/precautions	**Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when**

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions	**Avoid high pressure washing or generation of aerosols. Material can create slippery conditions. Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Eliminate all sources of ignition. Avoid contact with skin or inhalation of spillage, dust or vapor.**
Emergency procedures	**In the event of a spill, evacuate non-essential personnel, remove any sources of ignition, ventilate spill area, and prevent entry into sewers and waterways. Pick up free material for recycle or disposal and absorb residual liquid with inert material.**
Methods and material for containment	**Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb with inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps.**
Cleanup procedures	**General: Dam up, then soak up with absorbent material. Use a dry spill kit or sand, and collect in appropriate containers before disposing according to all proper regulations. Clean contaminated surfaces thoroughly.** **Large Spills: Stop the flow of material, if this is without risk. Dike the**

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	**Do not handle or store near an open flame, heat or other sources of ignition. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Wash thoroughly after handling.**
Storage recommendations	**Store in a cool, sheltered location. To maintain product quality, do not store in heat or direct sunlight.**

Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits

Chemical Name	ACGIH TLV	OSHA PEL	Mexico	NIOSH
Vegetable Oil Mist	TVL: 10mg/m(3)	TWA: 5 mg/m(3) mist, respirable fraction TWA: 15 mg/m(3) mist, total	TWA: 10 mg/m(3) except irritant oils	TWA: 10 mg/m(3) total mist TWA: 5 mg/m(3) respirable mist

Engineering controls — **Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits.**

Recommended Personal Protective Equipment:

Eye/Face Protection — **Safety goggles or safety glasses with side shields are recommended.**

Respiratory Protection — **Respiratory protection not required. If ventilation is insufficient, suitable respiratory protection must be provided.**

Skin/Body Protection — **Chemical and oil resistant gloves are recommended. Appropriate body protection should be selected based on activity and possible exposure. Specific local conditions under which the product is used should also be taken into consideration. Use of an impervious apron is recommended.**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance — **Amber liquid**

Odor — **Mild Odor**

Odor Threshold — **Not available**

pH — **Not available**

Melting Point/ Freezing Point — **Not available**

Initial Boiling Point/ Range — **Not available**

Flash Point — **>135° F (>55° C)**

Evaporation rate — **Not available**

Flammability — **Not available**

Flammability, upper limits	**Not available**
Flammability, lower limits	**Not available**
Vapor pressure	**Not available**
Vapor density	**Not available**
Relative density	**Not available**
Solubility(ies)	**Soluble in many organic solvents**
Solubility in water	**Negligible**
Partition coefficient: n-octanol/water	**Not available**
Auto-ignition temperature	**Not available**
Decomposition temperature	**Not available**
Viscosity @ 40C, cSt	**Not applicable**

SECTION 10: STABILITY AND REACTIVITY

Reactivity	**This product is stable and non-reactive under normal conditions of use, storage, handling and transportation.**
Stability	**This product is chemically stable under normal conditions of use, storage, handling and transportation.**
Possibility of hazardous reactions	**Hazardous polymerization does not occur.**
Conditions to avoid	**Avoid contact with incompatible materials and keep product away from open flames, hot surfaces, temperatures exceeding flash point and sources of ignition.**
Incompatible mater-	**Strong oxidizing agents.**

ials

Hazardous decomp-osition products	No hazardous decomposition products if stored and handled as indicated.

SECTION 11: TOXICOLOGICAL INFORMATION

Potential health effects:

Inhalation	May cause irritation to the respiratory system.
Eye contact	Causes serious eye damage. Causes mild eye irritation.
Skin contact	Causes skin irritation.
Ingestion	May be harmful if swallowed.

Symptoms or effects, including acute and delayed:

Inhalation	None known or expected under normal use.
Eye Contact	None known or expected under normal use.
Skin Contact	None known or expected under normal use.
Ingestion	None known or expected under normal use.

Toxicological effects:

Acute Toxicity	No data available
Skin corrosion/irritation	Causes skin irritation
Serious eye damage/irritation	Causes serious eye damage
Respiratory sensitization	No data available
Skin sensitization	In vivo assay, mouse, does not cause skin sensitization
Germ cell mutagenicity	Ames Test, S. typhimurium, negative
Carcinogenicity	29 CFR 1910.1001-1050, not listed
Reproductive toxicity	Developmental toxicity, rat - Dermal, no adverse effect observed
STOT - single exposure	May cause respiratory irritation; Inhalation - May cause respiratory irritation -Respiratory Tract
STOT - repeated exposure	Not classified
Aspiration hazard	Not available

NTP Report on Carcinogens	This product is not considered to be a carcinogen by NTP.
IARC listing of potential carcinogens	This product is not considered to be a carcinogen by IARC.
OSHA listing of potential carcinogens	This product is not considered to be a carcinogen by OSHA.

SECTION 12: ECOLOGICAL INFORMATION

OECD 301B Biodegradability	>75%
Bioaccumulation	Not available
OECD 201 Alga, EC50, 72hr, mg/L	Not available
OECD 202 Daphnia, EC50, 48hr, mg/L	Not available
OECD 203 Fish, LC50, 96hr, mg/L	Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal considerations	Do not discharge into drains, water courses or onto the ground. Do not allowthis material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of
Waste from residues/ unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Oil soaked materials may spontaneously combust and should be properly managed to avoid ignition and heat sources or oxygen rich environments. Collect and store soaked materials in closed metal containers to help prevent combustion.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product

residue, follow label warnings even after container is emptied.

SECTION 14: TRANSPORT INFORMATION

US DOT	UN 1192, COMBUSTIBLE LIQUID, N.O.S., 3, PG III LTD. QTY. or LIMITED QUANTITY
TDG (Canada)	Not available
ICAO	UN 1192, COMBUSTIBLE LIQUID, N.O.S., 3, PG III LTD. QTY. or LIMITED QUANTITY
IMDG	UN 1192, COMBUSTIBLE LIQUID, N.O.S., 3, PG III LTD. QTY. or LIMITED QUANTITY
IATA	UN 1192, COMBUSTIBLE LIQUID, N.O.S., 3, PG III LTD. QTY. or LIMITED QUANTITY

SECTION 15: REGULATORY INFORMATION

US TSCA Inventory	Not regulated
California Prop. 65	Not listed
SARA Extremely Hazardous Substances	Not listed
SARA Section 313	Not regulated
CERCLA Hazardous Substances	Not listed

SECTION 16: OTHER INFORMATION

Revision date	6/28/2018

This product's safety information is provided to assist our customers in assessing compliance with safety, health and environmental regulations. The information contained within this document is based on data available to us and is believed to be accurate at the time of last revision. However, no warranty of use or any other warranty is expressed or implied regarding the accuracy of this data, the results to be obtained from the use thereof, or the hazards connected with the use of this product. Whereas the use of this product is within the exclusive control of the user, it is the user's obligation to determine the conditions for safe use of this product. Such conditions must comply with with all regulations concerning this product. BioBlend Renewable Resources, LLC assumes no liability for any injury or damage, direct or consequential, resulting from the use of this product unless such injury or damage is attributable to gross negligence on the part of BioBlend Renewable Resources, LLC.

2. Silanol Terminated Polydimethylsiloxane (DMS-S35)

Gelest
Enabling Your Technology

SILANOL TERMINATED POLYDIMETHYLSILOXANE

Safety Data Sheet DMS-S35
Date of issue: 10/27/2014 Revision date: 10/23/2015 Version: 2.0

SECTION 1: Identification

1.1. Identification

Product name	:	SILANOL TERMINATED POLYDIMETHYLSILOXANE
Product code	:	DMS-S35
Product form	:	Substance
Physical state	:	Liquid
Synonyms	:	HYDROXY TERMINATED POLYDIMETHYLSILOXANE
Chemical family	:	ORGANOSILOXANE

1.2. Recommended use and restrictions on use

Recommended use	:	Chemical intermediate

1.3. Supplier

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

Emergency number	:	CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Hazards not otherwise classified (HNOC)

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type	:	Polymer
Name	:	SILANOL TERMINATED POLYDIMETHYLSILOXANE
CAS-No.	:	70131-67-8

Name	Product identifier	%	GHS-US classification
Silanol terminated polydimethylsiloxane	(CAS-No.) 70131-67-8	> 95	Not classified
Octamethylcyclotetrasiloxane	(CAS-No.) 556-67-2	< 3	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Irrit. 2B, H320 Repr. 2, H361 Aquatic Chronic 4, H413

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	:	Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation	:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact	:	Wash with plenty of soap and water. Get medical advice/attention.
First-aid measures after eye contact	:	Immediately flush eyes thoroughly with water for at least 15 minutes. Get medical advice/attention.
First-aid measures after ingestion	:	Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	:	May be harmful if inhaled.
Symptoms/effects after skin contact	:	May cause skin irritation.
Symptoms/effects after eye contact	:	May cause eye irritation.
Symptoms/effects after ingestion	:	No information available.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	:	Water spray. Water fog. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	:	None known.

5.2. Specific hazards arising from the chemical

Fire hazard	:	Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Wear protective equipment as described in Section 8.
Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	:	Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Avoid all eye and skin contact and do not breathe vapor and mist. Spillage of this material may create a slippery condition for foot or vehicle traffic. Use only in well ventilated areas.
Hygiene measures	:	Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep container tightly closed.
Incompatible materials	:	Oxidizing agent.
Storage area	:	Store in a well-ventilated place. Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Octamethylcyclotetrasiloxane (556-67-2)		
AIHA	WEEL TWA (ppm)	10 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide local exhaust or general room ventilation.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Avoid all unnecessary exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 49000 g/mol
Color	: No data available
Odor	: Mild menthol-like aroma.
Odor threshold	: No data available
Refractive index	: 1.403
pH	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Melting point	: < -60 °C
Freezing point	: No data available
Boiling point	: > 205 °C
Flash point	: 205 °C
Auto-ignition temperature	: 490 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.98
% Volatiles	: < 3 %
Solubility	: Insoluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 5000 cSt
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Formaldehyde. Organic acid vapors. Silicon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Octamethylcyclotetrasiloxane (556-67-2)	
LD50 oral rat	1540 mg/kg RTECS Number: GZ4397000
LD50 dermal rat	1770 mg/kg
LD50 dermal rabbit	794 µl/kg
LC50 inhalation rat (mg/l)	36 g/m³ (Exposure time: 4 h)
ATE US (oral)	1540 mg/kg body weight
ATE US (dermal)	1770 mg/kg body weight
ATE US (vapors)	36 mg/l/4h
ATE US (dust, mist)	36 mg/l/4h

Silanol terminated polydimethylsiloxane (70131-67-8)	
LD50 oral rat	> 15400 mg/kg
LD50 dermal rabbit	> 16 ml/kg
LC50 inhalation rat (mg/l)	> 8750 mg/m³ (Exposure time: 7 h)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Symptoms/effects after inhalation : May be harmful if inhaled.

Symptoms/effects after skin contact : May cause skin irritation.

Symptoms/effects after eye contact : May cause eye irritation.

Symptoms/effects after ingestion : No information available.

SECTION 12: Ecological information

12.1. Toxicity

Octamethylcyclotetrasiloxane (556-67-2)	
LC50 fish 1	> 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
LC50 fish 2	> 1000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Octamethylcyclotetrasiloxane (556-67-2)	
BCF fish 1	12400
Log Pow	5.1

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the ozone layer : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Product/Packaging disposal recommendations : Incinerate. Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

Not regulated for transport.

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Octamethylcyclotetrasiloxane (556-67-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a final TSCA section 4 test rule.

Silanol terminated polydimethylsiloxane (70131-67-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Octamethylcyclotetrasiloxane (556-67-2)
Listed on the Canadian DSL (Domestic Substances List)

Silanol terminated polydimethylsiloxane (70131-67-8)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Octamethylcyclotetrasiloxane (556-67-2)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Octamethylcyclotetrasiloxane (556-67-2)
Listed on the AICS (Australian Inventory of Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Korean ECL (Existing Chemicals List) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed on CICR (Turkish Inventory and Control of Chemicals)

Silanol terminated polydimethylsiloxane (70131-67-8)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Full text of H-phrases::

H226	Flammable liquid and vapor
H302	Harmful if swallowed
H312	Harmful in contact with skin
H320	Causes eye irritation
H361	Suspected of damaging fertility or the unborn child
H413	May cause long lasting harmful effects to aquatic life

Abbreviations and acronyms : Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor.

Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 10/27/2014 Revision date: 10/23/2015 Version: 2.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

3. Silicon Dioxide, amorphous, hexamethyldisilazane treated

Gelest
Enabling Your Technology

SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED

Safety Data Sheet SIS6962.0
Date of issue: 09/01/2015 Revision date: 09/07/2019 Version: 1.2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance
Physical state	:	Solid
Substance name	:	SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED
Product code	:	SIS6962.0
Formula	:	SiO2
Synonyms	:	FUMED SILICA, HMDZ TREATED
Chemical family	:	INORGANIC SILICATE

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type	:	Multi-constituent
Name	:	SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED
CAS-No.	:	68909-20-6 / 7631-86-9
EC-No.	:	272-697-1

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Silicon dioxide, amorphous, hexamethyldisilazane treated	(CAS-No.) 68909-20-6 (EC-No.) 272-697-1	> 97	Not classified
Silica, amorphous	(CAS-No.) 7631-86-9 (EC-No.) 231-545-4		Not classified

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Wash with plenty of water/....

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.

Symptoms/effects after skin contact : May cause skin irritation.

Symptoms/effects after eye contact : May cause eye irritation.

Symptoms/effects after ingestion : May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Not combustible.

5.2. Special hazards arising from the substance or mixture

Fire hazard : None known.

5.3. Advice for firefighters

Protection during firefighting : Avoid contact with skin and eyes. Do not breathe dust.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : While not flammable, the ability of fumed silica to generate static charge may present a hazard when used in combination with flammable liquids.

Precautions for safe handling	:	Provide local exhaust or general room ventilation to minimize exposure to dust. Avoid contact with skin and eyes. Do not breathe dust.
Hygiene measures	:	Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep container tightly closed. Store in a dry place. Absorbs moisture. Store in sealed containers.
Incompatible materials	:	Strong oxidizers.
Storage area	:	Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m³)	0.1 mg/m³ (total dust containing <1 % quartz)
USA OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (nuisance dust)

Silica, amorphous (7631-86-9)		
Austria	MAK (mg/m³)	4 mg/m³ (also Silica manufactured through wet process-inhalable fraction)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	4 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction)
Latvia	OEL TWA (mg/m³)	1 mg/m³
USA IDLH	US IDLH (mg/m³)	3000 mg/m³
USA NIOSH	NIOSH REL (TWA) (mg/m³)	6 mg/m³
Switzerland	MAK (mg/m³)	4 mg/m³ (inhalable dust, also manufactured in wet processing)
United Kingdom	WEL TWA (mg/m³)	6 mg/m³ (inhalable dust) 2.4 mg/m³ (respirable dust)
United Kingdom	WEL STEL (mg/m³)	18 mg/m³ (calculated-inhalable dust) 7.2 mg/m³ (calculated-respirable dust)
Czech Republic	Expoziční limity (PEL) (mg/m³)	0.1 mg/m³ (respirable fraction) 4 mg/m³
Finland	HTP-arvo (8h) (mg/m³)	5 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	6 mg/m³ (total inhalable dust) 2.4 mg/m³ (respirable dust)
Ireland	OEL (15 min ref) (mg/m3)	18 mg/m³ (calculated-total inhalable dust) 7.2 mg/m³ (calculated-respirable dust)
Norway	Grenseverdier (AN) (mg/m³)	1.5 mg/m³ (respirable dust)
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	1.5 mg/m³ (respirable dust)
Slovakia	NPHV (priemerná) (mg/m³)	4 mg/m³ (total aerosol)
Australia	TWA (mg/m³)	2 mg/m³ (respirable dust)

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Safety glasses. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection. NIOSH-certified dust and mist (orange cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Powder.
Molecular mass	:	60.09 g/mol
Colour	:	White.
Odour	:	No data available
Odour threshold	:	No data available
Refractive index	:	1.45
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	> 1600 °C
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	< 0.01 mm Hg @ 20°C
Relative vapour density at 20 °C	:	No data available
Relative density	:	2.2
Solubility	:	Insoluble in water.
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)	
LD50 oral rat	> 5000 mg/kg

Silica, amorphous (7631-86-9)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 2.2 mg/l (Exposure time: 1 h)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Silicon dioxide, amorphous, hexamethyldisilazane treated (68909-20-6)	
IARC group	3 - Not classifiable

Silica, amorphous (7631-86-9)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : May cause eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

Silica, amorphous (7631-86-9)	
LC50 fish 1	5000 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	7600 mg/l (Exposure time: 48 h - Species: Ceriodaphnia dubia)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Silica, amorphous (7631-86-9)	
BCF fish 1	(no bioaccumulation expected)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Landfill. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable

UN-No. (ADN)	:	Not applicable
UN-No. (RID)	:	Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	Not applicable
Proper Shipping Name (IMDG)	:	Not applicable
Proper Shipping Name (IATA)	:	Not applicable
Proper Shipping Name (ADN)	:	Not applicable
Proper Shipping Name (RID)	:	Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR)	:	Not applicable
Packing group (IMDG)	:	Not applicable
Packing group (IATA)	:	Not applicable
Packing group (ADN)	:	Not applicable
Packing group (RID)	:	Not applicable

14.5. Environmental hazards

Dangerous for the environment	:	No
Marine pollutant	:	No
Other information	:	No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED is not on the REACH Candidate List

SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED is not on the REACH Annex XIV List

SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.
SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

15.1.2. National regulations

Germany

Reference to AwSV	:	Water hazard class (WGK) nwg, Non-hazardous to water (Classification according to VwVwS, Annex 1 or 2; ID No. 1429)
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	:	Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED is listed
SZW-lijst van mutagene stoffen	:	SILICON DIOXIDE, amorphous, HEXAMETHYLDISILAZANE TREATED is listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	:	The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	:	The substance is not listed

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

	Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemcial Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

4. Silica, mesostructured

SAFETY DATA SHEET

Version 6.5
Revision Date 10/19/2022
Print Date 05/06/2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Silica, mesostructured

Product Number : 643645
Brand : Aldrich
CAS-No. : 7631-86-9

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES

Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS).

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Silicon dioxide

Formula : O_2Si
Molecular weight : 60.08 g/mol

CAS-No. : 7631-86-9
EC-No. : 231-545-4

Component	Classification	Concentration
silicon dioxide		
		<= 100 %

SECTION 4: First aid measures

4.1 Description of first-aid measures

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed
After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
silicon oxides
Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters
In the event of fire, wear self-contained breathing apparatus.

5.4 Further information
Suppress (knock down) gases/vapors/mists with a water spray jet.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.
For personal protection see section 8.

6.2 Environmental precautions
No special precautionary measures necessary.

6.3 Methods and materials for containment and cleaning up
Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions
Tightly closed. Dry.

Storage class
Storage class (TRGS 510): 13: Non Combustible Solids

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
silicon dioxide	7631-86-9	TWA	20Million particles per cubic foot	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
		TWA	80mg/m3 / %SiO2	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
		PEL	0.05 mg/m3	OSHA Specifically Regulated Chemicals/Carcinogens
	Remarks	OSHA specifically regulated carcinogen		

		TWA	6 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	6 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

8.2 Exposure controls

Appropriate engineering controls
Change contaminated clothing. Wash hands after working with substance.

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).
Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min
Material tested:KCL 741 Dermatril® L

Respiratory protection
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure
No special precautionary measures necessary.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: powder Color: white

b)	Odor	odorless
c)	Odor Threshold	Not applicable
d)	pH	3.7 - 4.7 at >= 40 g/l at 25 °C (77 °F)
e)	Melting point/freezing point	Melting point: 1,713 °C (3,115 °F) - (ECHA)
f)	Initial boiling point and boiling range	2,230 °C 4,046 °F
g)	Flash point	()Not applicable
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	The product is not flammable.
j)	Upper/lower flammability or explosive limits	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Density	2.56 g/cm3
	Relative density	No data available
n)	Water solubility	ca.0.076 g/l at 37 °C (99 °F) - OECD Test Guideline 105 - slightly soluble
o)	Partition coefficient: n-octanol/water	Not applicable for inorganic substances
p)	Autoignition temperature	does not ignite
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	none

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Exothermic reaction with:
Hydrogen halides
halogen oxides

alkali hydroxides
sodium
xenon hexafluoride

10.4 Conditions to avoid
no information available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male and female - > 5,000 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - male and female - 4 h - > 5.01 mg/l - aerosol

(OECD Test Guideline 436)
LD50 Dermal - Rabbit - > 5,000 mg/kg
Remarks: (ECHA)
No data available

Skin corrosion/irritation
Skin - Rabbit
Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation - 24 h
(OECD Test Guideline 405)

Respiratory or skin sensitization
in vivo assay - Guinea pig
Result: Not a skin sensitizer.
(OECD Test Guideline 406)

Germ cell mutagenicity
Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473
Result: negative

Test Type: gene mutation test
Species: Rat

Application Route: Inhalation

Result: negative
Remarks: (ECHA)

Carcinogenicity
This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

This is a generally physiologically inert substance that displays no hazardous properties after oral intake and skin contact and after inhalation of its dusts as long as the total dust limit for silicic acid is adhered to. Intensive contact with the eye may lead to irritation symptoms.

Handle in accordance with good industrial hygiene and safety practice.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - > 5,000 mg/l - 96 h

	(OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 5,000 mg/l (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Desmodesmus subspicatus (green algae) - > 173.1 mg/l (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)
Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity)	semi-static test NOEC - Daphnia magna (Water flea) - 68 mg/l (OECD Test Guideline 211)

12.2 Persistence and degradability
The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties
No data available

12.7 Other adverse effects
No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

DOT (US)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

Further information
Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information

SARA 302 Components
This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

SECTION 16: Other information

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

Version: 6.5 Revision Date: 10/19/2022 Print Date: 05/06/2023

API Stress Coat Safety Data Sheet

Stress Coat Plus

Mars Fishcare North America, Inc.

Chemwatch Hazard Alert Code: **0**

Chemwatch: **4656-3**
Version No: **9.1.4.7**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **06/17/2021**
Print Date: **06/17/2021**
S.GHS.USA.EN

SECTION 1 Identification

Product Identifier

Product name	Stress Coat Plus
Chemical Name	Not Applicable
Synonyms	Solution ID# RM000184
Chemical formula	Not Applicable
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	For product 85.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Mars Fishcare North America, Inc.**
Address	50 E. Hamilton Street, Chalfont PA 18914 United States
Telephone	215 822 8181
Fax	215 997 1290
Website	Not Available
Email	Not Available

Emergency phone number

Association / Organisation	**ChemTel**
Emergency telephone numbers	1-800-255-3924
Other emergency telephone numbers	ChemTel: 1-813-248-0585

SECTION 2 Hazard(s) identification

Classification of the substance or mixture

NFPA 704 diamond

Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Not Applicable

Label elements

Hazard pictogram(s)	Not Applicable
Signal word	**Not Applicable**

Hazard statement(s)

Page 1 continued...

Not Applicable

Hazard(s) not otherwise classified

Not Applicable

Precautionary statement(s) General

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available	100	Ingredients determined not to be hazardous

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 First-aid measures

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ‣ Wash out immediately with water. ‣ If irritation continues, seek medical attention. ‣ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ‣ Flush skin and hair with running water (and soap if available). ‣ Seek medical attention in event of irritation.
Inhalation	‣ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ‣ Other measures are usually unnecessary.
Ingestion	‣ Immediately give a glass of water. ‣ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Fire-fighting measures

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Continued...

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.

Special protective equipment and precautions for fire-fighters

Fire Fighting	‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear breathing apparatus plus protective gloves in the event of a fire. ‣ Prevent, by any means available, spillage from entering drains or water courses. ‣ Use fire fighting procedures suitable for surrounding area. ‣ **DO NOT** approach containers suspected to be hot. ‣ Cool fire exposed containers with water spray from a protected location.
Fire/Explosion Hazard	‣ Non combustible. ‣ Not considered a significant fire risk, however containers may burn. Decomposition may produce toxic fumes of: sulfur oxides (SOx) May emit poisonous fumes.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	‣ Clean up all spills immediately. ‣ Avoid breathing vapours and contact with skin and eyes. ‣ Control personal contact with the substance, by using protective equipment. ‣ Contain and absorb spill with sand, earth, inert material or vermiculite. ‣ Wipe up. ‣ Place in a suitable, labelled container for waste disposal.
Major Spills	Moderate hazard. ‣ Clear area of personnel and move upwind. ‣ Alert Fire Brigade and tell them location and nature of hazard. ‣ Wear breathing apparatus plus protective gloves. ‣ Prevent, by any means available, spillage from entering drains or water course. ‣ Stop leak if safe to do so.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	‣ Avoid all personal contact, including inhalation. ‣ Wear protective clothing when risk of exposure occurs. ‣ Use in a well-ventilated area. ‣ Prevent concentration in hollows and sumps. ‣ **DO NOT** enter confined spaces until atmosphere has been checked. ‣ **DO NOT** allow material to contact humans, exposed food or food utensils.
Other information	‣ Store in original containers. ‣ Keep containers securely sealed. ‣ Store in a cool, dry, well-ventilated area. ‣ Store away from incompatible materials and foodstuff containers. ‣ Protect containers against physical damage and check regularly for leaks. ‣ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	‣ Polyethylene or polypropylene container. ‣ Packing as recommended by manufacturer. ‣ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	None known

Continued...

+	+	+	+	+	+	+

X — *Must not be stored together*
0 — *May be stored together with specific preventions*
\+ — *May be stored together*

Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Stress Coat Plus	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
Stress Coat Plus	Not Available	Not Available

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
Personal protection	
Eye and face protection	‣ Safety glasses with side shields ‣ Chemical goggles. ‣ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable.
Skin protection	See Hand protection below
Hands/feet protection	The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. ‣ Wear chemical protective gloves, e.g. PVC. ‣ Wear safety footwear or safety gumboots, e.g. Rubber
Body protection	See Other protection below
Other protection	‣ Overalls. ‣ P.V.C apron. ‣ Barrier cream. ‣ Skin cleansing cream. ‣ Eye wash unit.

Continued...

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Viscous green liquid with a faint characteristic odour; mixes with water.

Physical state	Liquid	**Relative density (Water = 1)**	1.013
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Applicable
pH (as supplied)	9.5-9.9	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	Not Applicable	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Applicable	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Applicable	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Miscible	**pH as a solution (%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	‣ Unstable in the presence of incompatible materials. ‣ Product is considered stable. ‣ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 Toxicological information

Information on toxicological effects

Inhaled	Not normally a hazard due to non-volatile nature of product The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. The material may accumulate in the human body and progressively cause tissue damage. Extended use of purgatives and laxatives can cause a profuse, watery diarrhoea with severe dehydration, mineral losses,

Continued...

	weakness and weight loss. Absorption from the bowel may become impaired and damage to the heart and kidneys can also occur.

Stress Coat Plus	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✗	**Reproductivity**	✗
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✗	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✔ *– Data available to make classification*

SECTION 12 Ecological information

Toxicity

Stress Coat Plus	**Endpoint**	**Test Duration (hr)**	**Species**	**Value**	**Source**
	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	*Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*				

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	‣ Recycle wherever possible. ‣ Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified. ‣ Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material). ‣ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 Transport information

Continued...

Labels Required

Marine Pollutant	NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group

Transport in bulk in accordance with the ICG Code

Product name	Ship Type

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

State Regulations

US. California Proposition 65

Continued...

None Reported

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Not Available
Canada - DSL	Not Available
Canada - NDSL	Not Available
China - IECSC	Not Available
Europe - EINEC / ELINCS / NLP	Not Available
Japan - ENCS	Not Available
Korea - KECI	Not Available
New Zealand - NZIoC	Not Available
Philippines - PICCS	Not Available
USA - TSCA	Not Available
Taiwan - TCSI	Not Available
Mexico - INSQ	Not Available
Vietnam - NCI	Not Available
Russia - FBEPH	Not Available
Legend:	*Yes = All CAS declared ingredients are on the inventory* *No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)*

SECTION 16 Other information

Revision Date	06/17/2021
Initial Date	10/14/2005

SDS Version Summary

Version	Date of Update	Sections Updated
8.1.3.1	05/10/2021	Regulation Change
8.1.4.1	05/24/2021	Regulation Change
8.1.4.1	05/28/2021	Classification, Ingredients
8.1.4.2	05/30/2021	Template Change
8.1.4.3	06/04/2021	Template Change
8.1.4.4	06/05/2021	Template Change
8.1.4.5	06/09/2021	Template Change
8.1.4.6	06/11/2021	Template Change
8.1.4.7	06/15/2021	Template Change
9.1.4.7	06/17/2021	Physical Properties

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

end of SDS

Oxygen Safety Data Sheet

Material Safety Data Sheet

Airgas

Oxygen

Section 1. Chemical product and company identification

Product Name	:	Oxygen
Supplier	:	AIRGAS INC., on behalf of its subsidiaries 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Product use	:	Synthetic/Analytical chemistry.
Synonym	:	oxygen (dot),Oxygen USP, Aviator's Breathing Oxygen (ABO)
MSDS#	:	001043
Date of Preparation/Revision	:	**7/30/2007.**
In case of emergency	:	1-866-734-3438

Section 2. Hazards identification

Physical state	:	Gas.
Emergency overview	:	Warning! OXIDIZER. CONTENTS UNDER PRESSURE. Contact with combustible material may cause fire. Do not puncture or incinerate container. Store in tightly closed container. Avoid contact with combustible materials. Contact with rapidly expanding gases or liquids can cause frostbite.
Routes of entry	:	Inhalation
Potential acute health effects		
Eyes	:	No known significant effects or critical hazards.
Skin	:	No known significant effects or critical hazards.
Inhalation	:	Slightly irritating to the respiratory system. Practically non-toxic by inhalation.
Ingestion	:	Ingestion is not a normal route of exposure for gases
Potential chronic health effects	:	**CARCINOGENIC EFFECTS** Not available. **MUTAGENIC EFFECTS** Not available. **TERATOGENIC EFFECTS** Not available.
Medical conditions aggravated by overexposure	:	Acute or chronic respiratory conditions may be aggravated by overexposure to this gas.

See toxicological Information (section 11)

Section 3. Composition, Information on Ingredients

Name	CAS number	% Volume	Exposure limits
Oxygen	7782-44-7	100	

Section 4. First aid measures

No action shall be taken involving any personal risk or without suitable training.If fumes are still suspected to be present, the rescuer should wear an appropriate mask or a self-contained breathing apparatus.It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Eye contact	:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact	:	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
Frostbite	:	Try to warm up the frozen tissues and seek medical attention.

Oxygen

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Section 5. Fire fighting measures

Flammability of the product : Non-flammable.

Fire fighting media and instructions : Use an extinguishing agent suitable for surrounding fires.

If involved in fire, shut off flow immediately if it can be done without risk. Apply water from a safe distance to cool container and protect surrounding area.

This material increases the risk of fire and may aid combustion. Contact with combustible material may cause fire.

Special protective equipment for fire-fighters : Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Do not touch or walk through spilled material.

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 7. Handling and storage

Handling : Store in tightly closed container. Avoid contact with combustible materials. Do not puncture or incinerate container. High pressure gas. Use equipment rated for cylinder pressure. Close valve after each use and when empty. Protect cylinders from physical damage; do not drag, roll, slide, or drop. Use a suitable hand truck for cylinder movement.

Never allow any unprotected part of the body to touch uninsulated pipes or vessels that contain cryogenic liquids. Prevent entrapment of liquid in closed systems or piping without pressure relief devices. Some materials may become brittle at low temperatures and will easily fracture.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Cylinders should be stored upright, with valve protection cap in place, and firmly secured to prevent falling or being knocked over. Cylinder temperatures should not exceed 52 °C (125 °F).

Section 8. Exposure Controls, Personal Protection

Engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Personal protection

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

When working with cryogenic liquids, wear a full face shield.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

The applicable standards are (US) 29 CFR 1910.134 and (Canada) Z94.4-93

Oxygen

Hands : Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Insulated gloves suitable for low temperatures

Personal protection in case of a large spill : A self-contained breathing apparatus should be used to avoid inhalation of the product.

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Molecular weight : 32 g/mole

Molecular formula : O2

Boiling/condensation point : -183.11°C (-297.6°F)

Melting/freezing point : -218.55°C (-361.4°F)

Critical temperature : Not available.

Vapor density : 1.105 (Air = 1)

Specific Volume (ft^3/lb) : 12.0482

Gas Density (lb/ft^3) : 0.083

Section 10. Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Extremely reactive or incompatible with reducing agents, combustible materials.

Section 11. Toxicological information

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material for humans.

Specific effects

Carcinogenic effects : No known significant effects or critical hazards.

Mutagenic effects : No known significant effects or critical hazards.

Reproduction toxicity : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity of the products of biodegradation : The product itself and its products of degradation are not toxic.

Environmental fate : Not available.

Environmental hazards : No known significant effects or critical hazards.

Toxicity to the environment : Not available.

Section 13. Disposal considerations

Product removed from the cylinder must be disposed of in accordance with appropriate Federal, State, local regulation.Return cylinders with residual product to Airgas, Inc.Do not dispose of locally.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1072	OXYGEN, COMPRESSED	2.2	Not applicable (gas).		**Limited quantity** Yes.
	UN1073	Oxygen, refrigerated liquid				**Packaging instruction** Passenger

Oxygen						
						Aircraft Quantity limitation: 75 kg **Cargo Aircraft** Quantity limitation: 150 kg Special provisions A52
TDG Classification	UN1072 UN1073	OXYGEN, COMPRESSED Oxygen, refrigerated liquid	2.2	Not applicable (gas).		Explosive Limit and Limited Quantity Index 0.125 ERAP Index 3000 Passenger Carrying Ship Index 50 Passenger Carrying Road or Rail Index 75 Special provisions 42
Mexico Classification	UN1072 UN1073	OXYGEN, COMPRESSED Oxygen, refrigerated liquid	2.2	Not applicable (gas).		-

Section 15. Regulatory information

United States

U.S. Federal regulations : TSCA 8(b) inventory: Oxygen

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: Oxygen
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Oxygen: Fire hazard, Sudden Release of Pressure, Delayed (Chronic) Health Hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 accidental release prevention: No products were found.

Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

Oxygen

State regulations : Pennsylvania RTK: Oxygen: (generic environmental hazard)
Massachusetts RTK: Oxygen
New Jersey: Oxygen

Canada

WHMIS (Canada) : Class A: Compressed gas.
Class C: Oxidizing material.
CEPA DSL: Oxygen

Section 16. Other information

United States

Label Requirements : OXIDIZER.
CONTENTS UNDER PRESSURE.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

Canada

Label Requirements : Class A: Compressed gas.
Class C: Oxidizing material.

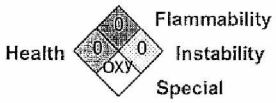
Hazardous Material Information System (U.S.A.) :

	0
Fire hazard	0
Reactivity	0
Personal protection	C

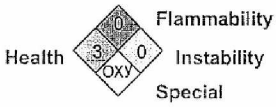
liquid:

	3
Fire hazard	0
Reactivity	0
Personal protection	

National Fire Protection Association (U.S.A.) :



liquid:



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Appendix B. CEQA MND Addendum Native American Correspondence

CEQA MND Addendum Notification to Tribes

On June 5, 2023 notification letters requesting input on the Addendum were sent to the following Tribal Contacts:

Tribe	Tribal Contact
Barona Band of Mission Indians	Honorable Raymond J. Welch, Chairperson
Big Pine Paiute Tribe of the Owens Valley	Honorable L'eaux Stewart, Chairperson
Fernandeno Tataviam Band of Mission Indians	Jairo Avila, Tribal and Cultural Preservation Officer
Ione Band of Miwok Indians	Honorable Sara Dutschke Setshwaelo, Chairperson
Karuk Tribe	Honorable Russell Attebury, Chairperson
Mechoopda Indian Tribe of Chico Rancheria	Honorable Dennis Ramirez, Chairperson
Middletown Rancheria of Pomo Indians	Honorable Sally Peterson, Chairperson
Nor-Rel-Muk Wintu Nation	Honorable John Hayward, Chairperson
Northern Valley Yokuts Tribe	Honorable Katherine Erolinda Perez, Chairperson
Pit River Tribe	Honorable Agnes Gonzales, Chairperson
Redding Rancheria	Honorable Jack Potter, Chairperson
San Luis Rey Band of Mission Indians	Cami Mojado, Cultural Resources Manager
San Manual Band of Mission Indians	Honorable Lynn Valbuena, Chairperson
Santa Rosa Tachi Yokut Tribe	Honorable Leo Sisco, Chairperson
Shasta Indian Nation	Honorable Janice Crowe, Chairperson
Shingle Springs Band of Miwok	Honorable Regina Cuellar, Chairperson
Tejon Indian Tribe	Honorable Octavio Escobedo III, Chairperson
United Auburn Indian Community	Honorable Gene Whitehouse, Chairperson
Wilton Rancheria	Honorable Jesus Tarango, Jr., Chairperson
Wnnemem Wintu Tribe*	Honorable Caleen Sisk, Chief
Wintu Tribe of Northern California	Honorable Gary Rickard, Chairperson
Yocha Dehe Wintun Nation	Honorable Anthony Roberts, Chairperson

**The Winnemem Wintu Tribe is a Tribal partner on the Project and previously consulted with DWR on the Approved Project MND and a slightly different letter was sent requesting their continued coordination.*

Example JSCS CEQA MND Addendum Notification Letter to Tribes

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY
GAVIN NEWSOM, Governor

DEPARTMENT OF WATER RESOURCES
P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

June 5, 2023

Sent via certified mail and email

The Honorable Raymond J. Welch
Chairperson
Barona Band of Mission Indians
1095 Barona Road
Lakeside, CA 92040

Subject: Formal Notification of California Environmental Quality Act (CEQA) Addendum for the Juvenile Salmonid Collection System (JSCS) Project

Dear Chairperson Welch,

The California Department of Water Resources (DWR), in coordination with the California Department of Fish and Wildlife (CDFW), the National Marine Fisheries Service (NOAA Fisheries), and in partnership with the Winnemem Wintu Tribe is entering the second year of testing on the Juvenile Salmonid Collection System (JSCS) Project on the McCloud River arm of the Shasta Reservoir. During its first year, the JSCS Project conducted an experimental evaluation to determine if the collection system creates required fish guidance conditions, water temperature control, and debris management to effectively and safely capture juvenile salmonids.

The second year of the JSCS Project intends to collect fish and to extend the system deployment period to start in August and go through February if conditions allow due to the drought emergency release of winter-run Chinook in 2022 and 2023 by CDFW and NOAA Fisheries. An expansion of the Study Area to accommodate future trap efficiency studies, establish operational procedures, and collect fish is also needed due to required water depths and preferrable head-of-reservoir conditions.

An Initial Study/Proposed Mitigated Negative Declaration (IS/MND) was prepared for the Project in May 2022 to meet California Environmental Quality Act (CEQA) requirements (State Clearinghouse No. 2022050544). DWR, as the CEQA lead agency, proposes an addendum to the 2022 IS/MND to expand the Study Area to the McCloud Bridge as depicted in Figure 1 (attached) and update several sections including Cultural Resources, Section 3.4.

Prior engagement with Tribes regarding the JSCS Project was initiated by DWR in 2021 during early project planning. DWR has conducted consultation with Tribes that provided a formal request for consultation. As a Tribe who was notified during the initial outreach in 2021, DWR is providing this addendum notification as an informational update to all Tribes culturally and geographically affiliated with the Study Area.

If the Tribe would like additional information or would no longer like to receive notifications of this Project, please contact Randy Beckwith at (916) 873-5715 or email at Randy.Beckwith@water.ca.gov or me at (916) 291-1974 or email at Mariko.Falke@water.ca.gov.

Sincerely,

Mariko Falke

Mariko Falke,
Executive Tribal Liaison on behalf of Tribal Policy Advisor Anecita Agustinez

CC:
Art Bunce, Tribal Attorney

DWR:
Marc Commandatore, Branch Manager, Special Restoration Initiatives Branch
Michal Koller, Manager, Environmental Engineering Support
Randy Beckwith, Supervisor, Riverine Stewardship Engineering Support
Amy Bailey, Manager, Riverine Stewardship Program
Jim Long, Supervisor, Fish Passage Improvement Program
Kevin Marr, Environmental Scientist, Fish Passage Improvement Program

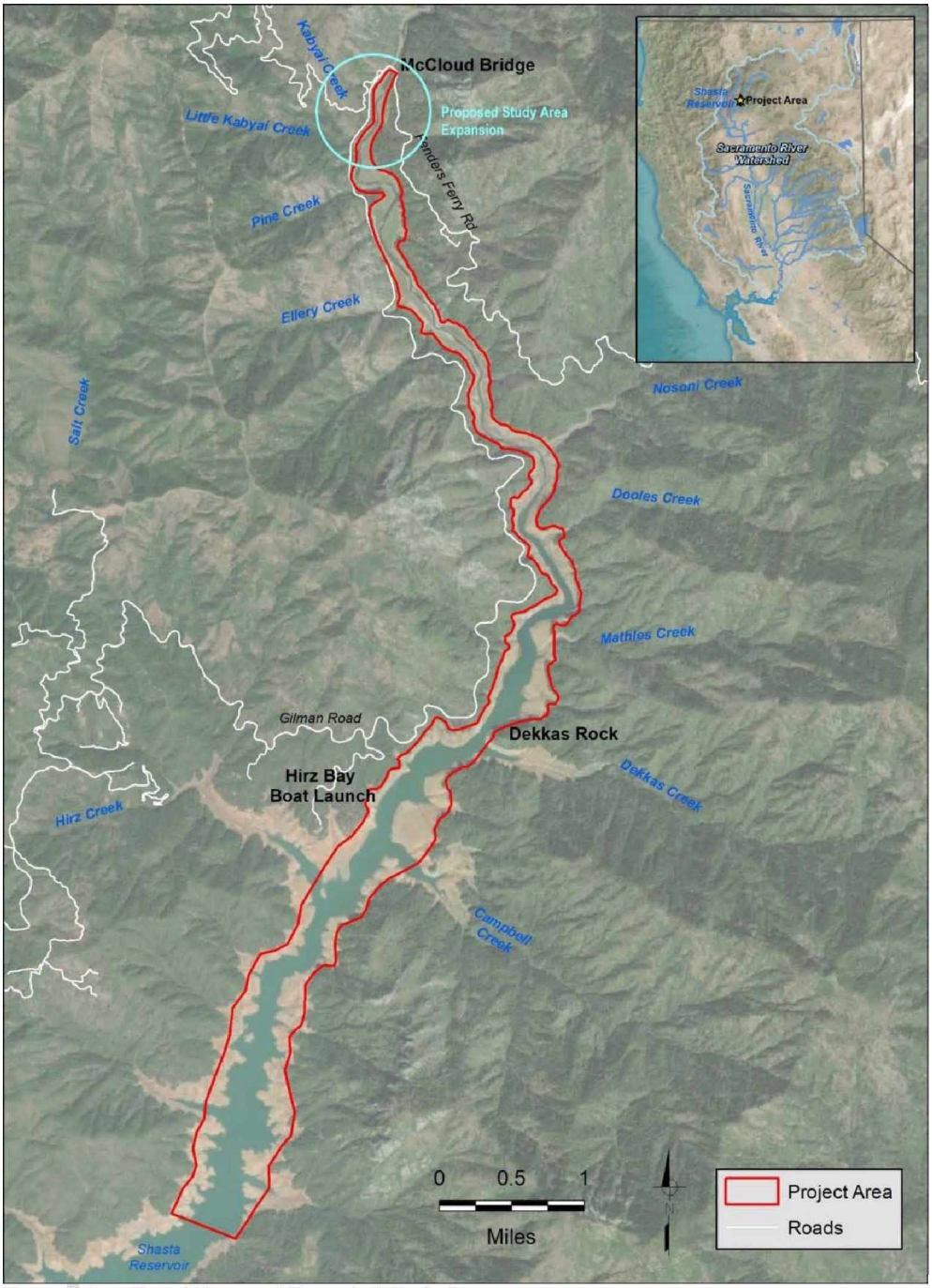


Figure 1: Location of Proposed Expanded Study Area

JSCS CEQA Addendum Letter to Winnemem Wintu Tribe

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY
GAVIN NEWSOM, Governor

DEPARTMENT OF WATER RESOURCES
P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

June 5, 2023 *Sent via certified mail and email*

Honorable Chief Caleen Sisk
Spiritual Leader and Tribal Chief
Winnemem Wintu Tribe
P.O. Box 995
Shasta Lake, CA 96019

Subject: Formal Notification of California Environmental Quality Act (CEQA) Addendum for the Juvenile Salmonid Collection System (JSCS) Project

Dear Chief Sisk,

The California Department of Water Resources (DWR), in coordination with the California Department of Fish and Wildlife (CDFW), the National Marine Fisheries Service (NOAA Fisheries), and in partnership with the Winnemem Wintu Tribe (Tribe) is entering the second year of testing on the Juvenile Salmonid Collection System (JSCS) Project on the McCloud River arm of the Shasta Reservoir. During its first year, the JSCS Project conducted an experimental evaluation to determine if the collection system creates required fish guidance conditions, water temperature control, and debris management to effectively and safely capture juvenile salmonids.

The second year of the JSCS Project intends to collect fish and to extend the system deployment period to start in August and go through February if conditions allow due to the drought emergency release of winter-run Chinook in 2022 and 2023 by CDFW and NOAA Fisheries. An expansion of the Study Area to accommodate future trap efficiency studies, establish operational procedures, and collect fish is also needed due to required water depths and preferrable head-of-reservoir conditions.

An Initial Study/Proposed Mitigated Negative Declaration (IS/MND) was prepared for the Project in May 2022 to meet California Environmental Quality Act (CEQA) requirements (State Clearinghouse No. 2022050544). DWR, as the CEQA lead agency, proposes an addendum to the 2022 IS/MND to expand the Study Area to the McCloud Bridge as depicted in Figure 1 (attached) and update several sections including Cultural Resources, Section 3.4.

Prior engagement with Tribes regarding the JSCS Project was initiated by DWR in 2021 during early project planning. DWR has provided this addendum notification to all Tribes culturally and geographically affiliated with the Study Area who were notified during the initial outreach in 2021. DWR acknowledges and values the partnership with the Winnemem Wintu Tribe on the Project. As an Assembly Bill (AB) 52 consulting Tribe for the 2022 IS/MND, DWR as the CEQA lead agency is providing this notification as an informational update of the need for a CEQA Addendum. As a partnering Tribe on the project, DWR will resume coordination with the Tribe for the CEQA Addendum.

To schedule a meeting to discuss further, please contact Randy Beckwith at 916-873-5715 or email at Randy.Beckwith@water.ca.gov or me at (916) 291-1974 or email at mariko.falke@water.ca.gov.

Sincerely,

Mariko Falke

Mariko Falke,
Executive Tribal Liaison on behalf of Tribal Policy Advisor Anecita Agustinez

CC:
Winnemem Wintu Tribe:
Mark Miyoshi, Tribal Historic Preservation Officer
Luisa Navejas, Administrative Assistant for the Historic Preservation Office
Marine Sisk, Winnemem Wintu Tribal member

DWR:
Marc Commandatore, Branch Manager, Special Restoration Initiatives Branch
Michal Koller, Manager, Environmental Engineering Support
Randy Beckwith, Supervisor, Riverine Stewardship Engineering Support
Amy Bailey, Manager, Riverine Stewardship Program
Jim Long, Supervisor, Fish Passage Improvement Program
Kevin Marr, Environmental Scientist, Fish Passage Improvement Program

Page Break

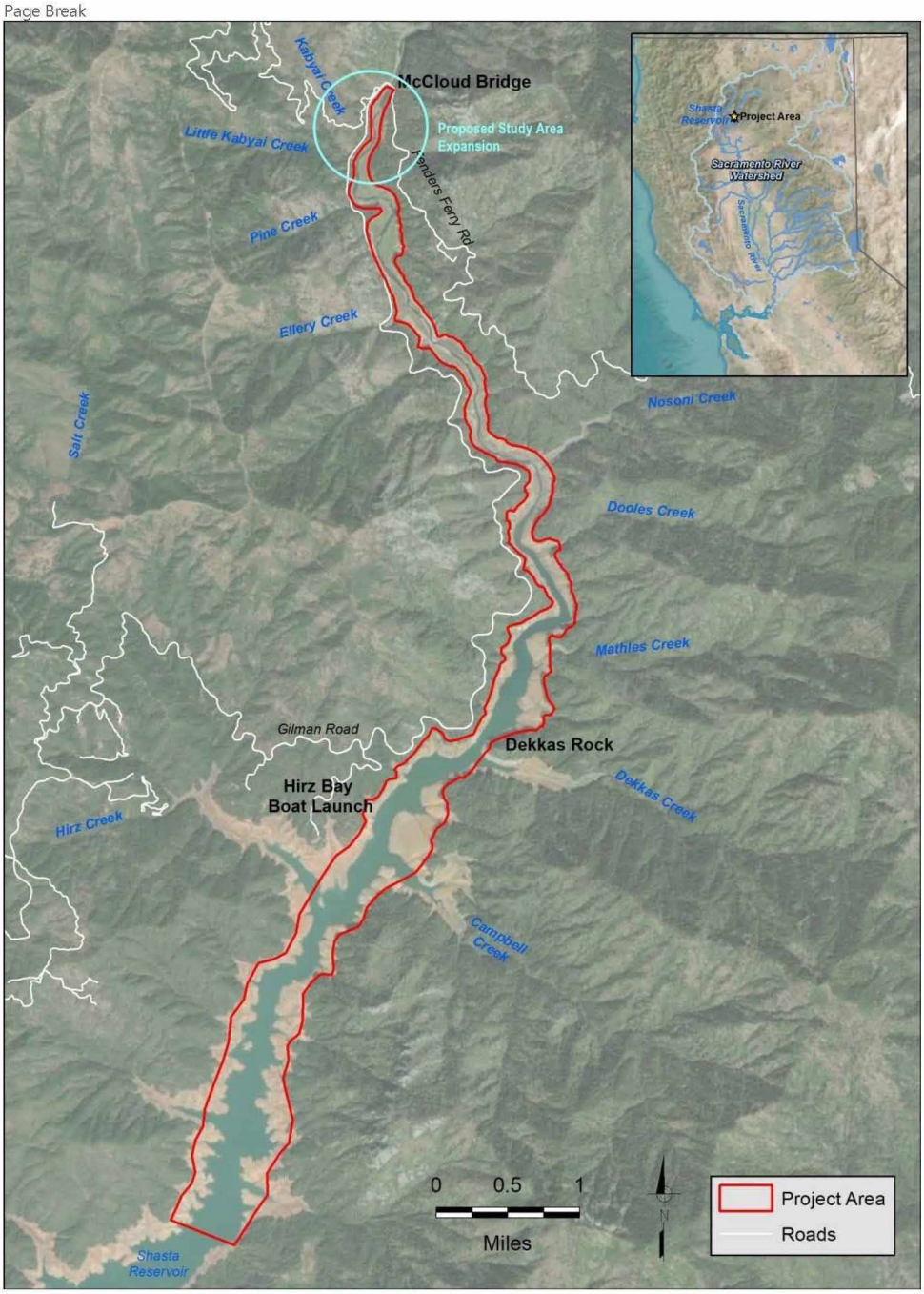


Figure 1: Location of Proposed Study Area Expansion

Responses to JSCS CEQA MND Addendum Notification Letter

1.

Marr, Kevin@DWR

From: Sarah Brunzell <Sarah.Brunzell@tataviam-nsn.us>
Sent: Thursday, June 15, 2023 1:26 PM
To: Marr, Kevin@DWR
Subject: Re: CEQA MND Addendum Notification for the Juvenile Salmonid Collection System Pilot Project

You don't often get email from sarah.brunzell@tataviam-nsn.us. Learn why this is important

Good afternoon Mr. Marr,

My name is Sarah Brunzell. I am the Manager for the Cultural Resources Management (CRM) Division of the Fernandeño Tataviam Band of Mission Indians (FTBMI). I have no questions or concerns for the attached CEQA MND Addendum Notification but wantED to inform you Jairo is no longer with the Tribe and my role has taken on his duties. Any updates on previous projects can be sent directly to thcp@tataviam-nsn.us.

Thank you in advance.

Kind Regards,

Please submit all proposed Projects via our Mandatory Digital Project Intake Form:
https://www.tataviam-nsn.us/project-intake/

Sarah Brunzell
Manager
Cultural Resources Management Division
Tribal Historic and Cultural Preservation Department

Fernandeño Tataviam Band of Mission Indians
1019 Second Street
San Fernando, California 91340
Office: (818) 837-0794
Website: http://www.tataviam-nsn.us

From: Marr, Kevin@DWR <Kevin.Marr@water.ca.gov>
Sent: Wednesday, June 14, 2023 2:58 PM
To: THCP <thcp@tataviam-nsn.us>
Subject: CEQA MND Addendum Notification for the Juvenile Salmonid Collection System Pilot Project

[CAUTION] EXTERNAL Email. Exercise caution.

Dear Tribal Historic and Cultural Preservation Officer Jairo Avila,

Please see the attached letter regarding the notification of a California Environmental Quality Act Mitigated Negative Declaration Addendum for the Juvenile Salmonid Collection System Project, which has been prepared by the Department of Water Resources. A certified hard copy of this letter was also mailed for the Tribe's records on Wednesday, June 7, 2023. Please reach out to the contacts on the attached letter for any questions or concerns. Thank you.

Sincerely,

Kevin Marr, M.S.
Environmental Scientist
Riverine Stewardship Program
Department of Water Resources

2.

From: Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>
Sent: Wednesday, June 28, 2023 3:52 PM
To: Falke, Mariko@DWR <Mariko.Falke@water.ca.gov>
Cc: Beckwith, Randy@DWR <Randy.Beckwith@water.ca.gov>
Subject: CEQA response for the juvenile salmonids Collection System JSCS Project

Some people who received this message don't often get email from ryan.nordness@sanmanuel-nsn.gov. Learn why this is important

Dear Mariko,

Thank you for contacting the Yuhaaviatam of San Manuel Nation (formerly known as the San Manuel Band of Mission Indians) regarding the above-referenced project. YSMN appreciates the opportunity to review the project documentation, which was received by the Cultural Resources Management Department on June 13th 2023. The proposed project is located outside of Serrano ancestral territory and, as such, YSMN will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.

Kind regards,
Ryan Nordness
Cultural Resource Analyst
Yuhaaviatam of San Manuel Nation

Ryan Nordness
Cultural Res Analyst
Ryan.Nordness@sanmanuel-nsn.gov
O:(909) 864-8933 Ext 50-2022
M:(909) 838-4053
26569 Community Center Dr Highland, California 92346