A. Introduction

This Site Plan Agreement for the Template Safe Harbor Agreement for Conservation of Coho Salmon in the Shasta River (Agreement), which is intended to provide conservation benefits for the Southern Oregon and Northern California Coast (SONCC) Evolutionarily Significant Unit (ESU) of coho salmon (the Covered Species), is between the Rice Livestock Company, Inc. (Permittee), NOAA’s National Marine Fisheries Service (NMFS), and the California Department of Fish and Wildlife (CDFW).

This Site Plan Agreement, combined with the provisions of the Agreement, may serve as the basis for NMFS to issue a federal Enhancement of Survival Permit (ESP) to the above named Permittee pursuant to section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended (ESA). The joint and respective responsibilities of NMFS, CDFW, and the Permittees are detailed in the Agreement. This Site Plan Agreement is subject to terms and conditions set forth herein and in the Agreement and ESP. The definitions included in Section 2 of the Agreement are incorporated herein by reference.

In accordance with Section 5.1 of the Agreement, this Site Plan Agreement includes the following:

- General description of the Enrolled Property, including map and water rights (Section B below);
- Description of Routine Agricultural Activities carried out on the Enrolled Property (Section C.1 below), applicable Avoidance and Minimization Measures (AMMs) (Section C.2 & G.1 below), and Beneficial Management Actions (BMAs) to be implemented by the Permittee, including a schedule and other terms and conditions for implementation (Section E below);
- Description of Baseline Conditions on the Enrolled Property (Section D below) and Actions Required to Maintain Baseline Conditions (Section E.1 below);
- Description of Elevated Baseline Conditions on the Enrolled Property if applicable (Section E.2 below) and description of Other Beneficial Management Activities on the Enrolled Property (Section E.3 below);
- Monitoring and reporting activities that the Permittee agrees to carry out (Section G below);
- Description of potential and existing funding sources and timeline for the
Permittee to carry out BMAs, AMMs, and monitoring and reporting requirements (Section E, F, & G below); and

- Other information consistent with the terms and conditions of the Agreement and ESP (Section F, H & I below).

The AMMs, BMAs, and associated monitoring and reporting protocols described below derive from Appendix 2 and Appendix 3 of the Agreement. In the event there is any conflict between the AMMs, BMAs, and associated monitoring and reporting protocols as described below and as described in the appendices to the Agreement, the appendices to the Agreement control.

**B. Enrolled Property**

**B.1 General narrative and map describing the Enrolled Property**

Rice Livestock Company, Inc. (Rice Livestock) is located along Highway A-12, approximately three miles east of Interstate 5, in Siskiyou County (41°38’11.56” N latitude, 122°29’22.88”W longitude). The Enrolled Property is located on the Shasta River within the stream reach identified as Mid-Shasta Reach within the Covered Area and includes a total of 2,100 acres, with approximately 379 acres under irrigation (based on GIS data/coverage). Approximately 1.8 river miles of the Shasta River is within ownership of Rice Livestock Company, Inc., within what has been designated the **Mid-Shasta Reach** in the Agreement. Baseline conditions of this reach are described in Appendix 2 of the Agreement. The approximate property boundaries and general location of the Rice Livestock Company, Inc. (Enrolled Property) within the Covered Area is shown in Figure 1.
Figure 1. Ownership.
B.2 Legal Description of the Enrolled Property

The Enrolled Property consists of the following:

APNs and Field Names/Descriptions:

- Boot Field: 038-230-030-000
- East isolated riparian piece East of Boot field: 038-230-060-000
- Small triangle north of Willow Creek: 038-190-110-000
- First and Second Field: 038-180-040-000
- Third and Fourth Field: 038-190-080-000
- Gravel Pit-East side of River: 038-180-050-000.

Legal Description from Landowner Deed is included as Appendix A.

B.3 Description of Water Rights and Usage

The Permittee utilizes two shared points of diversion from the Shasta River for irrigation: The Novy, Zenkus, Rice Riparian Diversion, and the Huseman Ditch Association Diversion, for a total maximum irrigation volume of approximately 4,131 AF per year.

The Novy, Zenkus, Rice Riparian Diversion: The Enrolled Property has a share of a riparian claim named the Novy, Zenkus, Rice Riparian Diversion. The 2017 Novy, Zenkus, Rice Diversion Statement of Use shows continuous diversion of 10 cubic feet per second (cfs) from March 01 to November 01 or a total of 4,840 acre-feet per season spanning 244 days of diversion. This diversion is shared with Rice Livestock Company, Inc., Grenada Novy Ranches and Truttman-Zenkus ownership on rotation. Novy Ranches has had an on-going long-term lease with Truttman-Zenkus ownership since 1976 and intends to manage the leased Zenkus property for the term of the Agreement.

The irrigation rotation is dependent on land ownership, with approximately 302 acres irrigated from the diversion between the three ranches. Grenada Novy Ranches currently irrigates approximately 194 acres from Novy, Zenkus, Rice Pre-1914 Riparian Diversion with wildland flood irrigation. Including the Zenkus property, Grenada Novy Ranches uses about 64% of the water diverted from the diversion. Duration of use is not defined but typically occurs from 3/1-11/1 of each season. This riparian right was not included in the Shasta River Decree when developed in 1928.

The Permittee has a 36 percent share of the riparian claim identified as the Novy, Zenkus, and Rice Riparian Diversion. The Electronic Water Rights Information Management System (eWRIMS) number for Novy-Rice-Zenkus Riparian Diversion is S000808. The 2017 Novy, Zenkus, Rice Riparian Diversion Statement of Water Use shows continuous diversion of 10 cubic feet per second (cfs) from March 1 to November 1 or a total of
4,840 acre-feet (AF), which is a typical diversion volume. Rice Livestock currently irrigates approximately 108 acres from Novy, Zenkus, Rice Riparian Diversion with a combination of checked and wildland flood irrigation. Based on rotation duration and acreage, Rice Livestock uses about 36% of the total water diverted by the Novy, Zenkus, Rice Diversion (4,840 af annually) or 1,742 af annually. Irrigation typically occurs from 3/1-11/1 of each year. Rice Livestock Company does not irrigate after 11/1 annually.

**Huseman Ditch**

Permittee also receives irrigation water from the Huseman Ditch and is a member of the Huseman Ditch Association. The Huseman Ditch is incorporated within the Shasta River Decree with an identified maximum capacity of 11.9 cfs for 569.8 acres (Paragraph 124). Per the Decree, the diversion season is from April 1 through September 30th of each year. A total of approximately 4,318 AF of water can be diverted during the irrigation season. The Permittee irrigates approximately 271 acres with the Huseman Ditch and is identified as having 53% of the right or approximately 2,289 acre feet per year. The winter right on the Huseman Ditch is 5 cfs, allowing up to approximately 1805 acre feet of water per year to be diverted. Stock water is not fully utilized as cattle are often moved off the fields served by the Huseman Ditch in the fall resulting in roughly 200 acre feet of diversion per year under current operation.

Table 1 shows the diversion numbers, amounts diverted, season, and amount of land that is irrigated on the Enrolled Property. Table 2 shows the portion of the water right diverted and used by the Permittee. Figure 2 shows the place of use on the Enrolled Property from the adjudication.

The map included below illustrates the place of use as stipulated in the Shasta River Decree and the DWR irrigated acreage coverage.

**Table 1- Adjudicated Water Rights per Diversion**

<table>
<thead>
<tr>
<th>Diversion #/Water Source</th>
<th>Permit/Adjudicated/Filed Water Use Statement</th>
<th>Description</th>
<th>Season Duration</th>
<th>Total Ac-ft per season diverted</th>
<th>Acreage Irrigated with Diversion</th>
<th>Average Days per Season diverted</th>
</tr>
</thead>
<tbody>
<tr>
<td>S000808</td>
<td>10 cfs</td>
<td>Novy, Zenkus, Rice</td>
<td>March 1-Nov 1</td>
<td>4840</td>
<td>+/-302 total between 3 users</td>
<td>244</td>
</tr>
<tr>
<td>250</td>
<td>11.9 cfs</td>
<td>Huseman Diversion</td>
<td>April 1- Oct 1</td>
<td>4318</td>
<td>+/-545 total between 3 users</td>
<td>183</td>
</tr>
<tr>
<td>250</td>
<td>5 cfs</td>
<td>Huseman Diversion</td>
<td>Oct 2 - March 31</td>
<td>200</td>
<td>+/-545 total between 3 users</td>
<td>182</td>
</tr>
</tbody>
</table>
Table 2- Portion of Adjudication for the Enrolled Property

<table>
<thead>
<tr>
<th>Diversion #/Water Source</th>
<th>Permit/Adjudicated Filed Water Use Statement Amounts</th>
<th>Description</th>
<th>Season Duration</th>
<th>Rice Livestock Annual use (af) diversion</th>
<th>Rice Livestock Acreage Irrigated with Diversion</th>
<th>Average Days per Season diverted</th>
</tr>
</thead>
<tbody>
<tr>
<td>S000808</td>
<td>10 cfs</td>
<td>Novy, Zenkus, Rice</td>
<td>March 1-Nov 1</td>
<td>36% or 1,742</td>
<td>Approx. 108 acres</td>
<td>244</td>
</tr>
<tr>
<td>250</td>
<td>11.9 cfs</td>
<td>Huseman Diversion</td>
<td>April 1- Sept 30</td>
<td>53% or 2,289</td>
<td>Approx. 270 acres</td>
<td>183</td>
</tr>
<tr>
<td>250</td>
<td>5 cfs</td>
<td>Huseman Diversion</td>
<td>Oct 1 - March 31</td>
<td>53% or 100 afy</td>
<td>300 cattle</td>
<td>182</td>
</tr>
</tbody>
</table>

Cumulative diversion volume for the Permittee during the irrigation season is 4,031 acre feet of water per year or 10.56 acre feet. Estimated annual volume of water diverted by Permittee for irrigation and livestock watering is 4,131 acre feet.
Figure 2. Water Rights.
C. **Routine Agricultural Activities**

C.1 **Present Routine Agricultural Activities**

Rice Livestock irrigates approximately 379 acres within the Enrolled Property. Irrigated acreage is flood irrigated for pasture production. The Enrolled Property is irrigated by two diversions, the Huseman Ditch and Novy, Zenkus, Rice Riparian. Both diversion points are shared with other irrigators.

**Irrigation Management**

**Novy, Zenkus, Rice Riparian Diversion:** The Permittee irrigates approximately 108 acres, on the east side of the Shasta River, under Novy, Zenkus, Rice Riparian diversion from 3/1 through 11/01. The Permittee does not irrigate past 11/1 or prior to 3/1 annually. The water right is a Riparian Right and not included in the Shasta River Decree. The 2014 Novy, Zenkus, Rice Statement of Use shows continuous diversion of 10 cubic feet per second (cfs) from March 1st through about November 1st or a total of 4,840 acre feet per season. The rotation duration per users is dependent on land ownership, with approximately 302 cumulative acres irrigated from that diversion owned between the three ranches. The Permittee irrigates about 108 acres or 36% of the property irrigated by Novy-Zenkus-Rice Riparian Diversion. Assuming equal delivery efficiency and equal use of the reported 4,840 AF of water annually, the Permittee applies approximately 1,742 AF of water (36% of reported volume diverted) annually or 16.1 AF of water per acre. Investigations show that inefficiencies can be attributed to delivery loss as well as poor irrigation distribution.

Flood irrigation water is conveyed via approximately 1.1 mile of open ditch prior to reaching the Enrolled Property where water is then distributed via on-farm lateral ditches and turned out on to non-checked and unleveled fields, although the Rice Livestock field(s) are within the floodplain and are generally level. Water is spread and distributed through swales and irrigation distribution laterals.

Novy, Zenkus, Rice Riparian Diversion is generally operated by Novy Ranches and the Permittee, however there is not data available regarding the diversion operation and diversion efficiency. Shasta Valley RCD recently completed a compliant diversion design for the diversion including assessing fish passage, fish protection and water use efficiency. The design is under agency review but leads to improved delivery and application efficiency, potentially reducing the volume of water the Permittee applies to its 108 acres.

Tail-water from the Novy, Rice, Zenkus Riparian Diversion is prevented by historic berms that were constructed near the Shasta River that catch, redistribute and percolate flood irrigation water rather than allowing tailwater to flow into the Shasta River as surface flow.

**Huseman Ditch:** The Huseman Ditch irrigates approximately 569 acres owned by the Permittee (Rice Ranch), NB Ranches, Inc. and William Bower. The Huseman Ditch is operated by the Huseman Ditch Association. The Huseman Ditch is identified within the
Shasta River Decree (Diversion #250, Paragraph 124) and has an identified maximum diversion capacity of 11.9 cfs from April 1 through September 30. Huseman Ditch can divert approximately 4,318-acre feet throughout the irrigation season (4/1-9/30). The identified winter diversion right (10/1 – 3/31) on the Huseman Ditch is 5.0 cfs or up to 1,805 AF per year although the users typically only divert approximately 200 AF per year, for livestock outside of irrigation season.

The Permittee irrigates approximately 271 acres served by the Huseman Ditch and is identified in the Shasta River Decree as 53% of the right. In 2011, Huseman Ditch added a point of diversion as part of a large water conservation and protection project. The point of diversion was moved from the Grenada Irrigation District point of diversion (POD) to a selected location on the Enrolled Property, located approximately 31,300’ feet (5.9 miles) downstream from the previously identified POD. The project included installing buried pipe and flood risers to replace approximately 4,500 feet of open ditch. As a result of these improvements, irrigation now includes using flood risers on approximately 60 acres of the Enrolled Property (known as the Boot Field), improving irrigation efficiency. A second lateral water line delivers water to the remaining Enrolled Property and other Huseman Ditch users. This lateral water line eliminates the need to deliver water through an additional 7,000’ of inefficient open ditch.

As a result of the project implemented in 2011, 11.9 cfs of water remains instream for 31,300’ before being diverted at the second point of diversion. Huseman Ditch Association now pumps Huseman Ditch Water from Shasta River rather than gravity diversion via the previous diversion point. Instead of the practice of continuous diversion that was used prior to the project implementation in 2011, the Permittee uses approximately 142 acre feet of water per 15 day irrigation rotation. 13 irrigation rotations typically occur per year. The Permittee currently applies approximately 1,846 acre feet of water per year, where it previously applied approximately 2,248 AF (53% of the Huseman Diversion), which is a reduction of 404 AF of water use or 1.13 cfs during each irrigation season. Assuming current use of 1,846 acre-feet annually on 270 acres, approximately 6.80 acre-feet of water is applied per acre annually compared to 7.87 prior to the project implemented in 2011.

Irrigation Maintenance

Ditch cleaning

The 3.7 miles of open irrigation ditches on Rice Livestock Property are prone to algae growth, which slows the conveyance of water and clogs the buried mainlines. The ditches need to be cleaned yearly to remove algae and repair breaches. Cleaning ditches on Huseman and Novy, Zenkus, Rice consists of mechanical cleaning with a backhoe once or twice per year. On the Novy, Zenkus, Rice Riparian Diversion, the head works of all the pipelines have grates that are cleaned daily to keep them functioning properly. Pipelines and the irrigation risers have to be fully opened to flush the pipes of sediment and vegetation annually, or as needed throughout the irrigation season.
**Diversion cleaning**

The Huseman diversion intake is maintained by a self-cleaning fish screen. Operation and maintenance can entail the use of heavy equipment at the point of diversion to remove spoils and deposited sediment to maintain channel design elevations. The Permittee is not involved in cleaning or operating the Novy, Zenkus, Rice diversion at this time but elects to maintain it in the future. Expected maintenance would include sediment and spoils removal near the POD and screen/intake, removal of aquatic and other debris as necessary and repairs after high water events.

**Field Check and tail-water prevention berm maintenance**

The Permittee has field checks (fields served by Huseman Ditch) and tail water prevention berms throughout that require rebuilding and re-grading using tractors and heavy equipment to maintain their function. This work occurs as needed but work is conducted annually.

**Fish Screen cleaning**

The Huseman fish screen is a self-cleaning cone screen. The Huseman screen has not experienced any sedimentation issues since installation; however, cleaning may be required in the future. The brushes generally need to be replaced on the cone screen and the Permittee will perform this task when needed. The Novy, Zenkus, Rice fish screen is currently maintained and cleaned by CDFW but may be maintained by Rice Livestock in the future if the screen is replaced.

**Pasture Grazing Management**

Rice Livestock has six distinct pastures where cattle graze. Cattle are rotated through the six pastures as part of pasture management based on scheduled rotation. There are no riparian pastures with open access to the Shasta River where grazing occurs. The management style the permittee intends to continue livestock exclusion of the riparian area and rotational grazing. Permittee has met with UC Extension Service about grazing practices. Current practices do include limited periods during the irrigation season where stubble height in pastures is reduced to less than 4”. With tailwater limited to minor incidental durations and volumes and a continued filter strip, effects during those instances were deemed inconsequential by the Range Scientists from UC Extension Service.

**Riparian Grazing Management**

Riparian corridors on the Enrolled Property are fully fenced and the Permittee intends to continue full livestock exclusion. The Permittee maintains the fencing and will continue to maintain riparian fencing. The Permittee will replace up to 25% of the riparian fence if lost due to flooding. If flooding causes fence loss or damage greater than 25%, the Permittee will work with funding partners to repair or replace the fencing, including considering realignment to increase the riparian area. In the event of a catastrophic flood, the Permittee will control livestock within the riparian area with electric fencing until
agencies and the Permittee identify and secure funding to rebuild the fence or other suitable alternatives.

Riparian Fence Maintenance

The Permittee typically owns to the center of the Shasta River with Grenada Novy Ranches owning the other half of the river. The entire riparian area on the Enrolled Property has been fenced to exclude livestock. Riparian width is narrow but averages over 20’. Some riparian areas are as narrow as 8’ while other exceed 60’. The Permittee conducts fence maintenance as needed. Fence maintenance includes periodic inspection of wire, clips, and posts, and repaired/replacement of each as needed. The Permittee removes “blown debris” along fence lines and removes rock or fallen branches from nearby trees annually in the spring. Flood conditions load the riparian fence with grass and tulles and even push the fence over. The Permittee burns the debris off the fence when it becomes dry in the spring. In the event of a catastrophic flood, the Permittee will exclude livestock from the riparian area using electric fencing until agencies and the Permittee identify a solution.

Road Maintenance

The main ranch road from Highway A-12 to the residences and barn complex on the Enrolled Property is covered in aggregate base/rock as are other established farm roads. The aggregate base is maintained on an annual basis, or as needed, to minimize erosion. All other roads or trails are used mostly by ATV’s and impacts or risk of erosion is minimal.

Crossing Maintenance

The Permittee uses one wet crossing that is surfaced with angular rock and fabric across the Shasta River connecting Field #2 with the Gravel Pit field. The crossing can also be used as a watering lane for cattle in both the Gravel Field and the Field #2. There is no spawning habitat near the crossing. The approaches are rocked and fenced to direct cattle and keep them off of adjacent stream banks and will be maintained. Crossing livestock typically occurs approximately 8-10 times a year from May through September.

Three livestock watering access sites to the Shasta River also exist but are not currently in use as an alternative livestock watering systems with troughs exists. The watering access sites are approximately 20’ wide and are surfaces with angular rock and have panels to limit access into the river channel. The watering access sites are located in the Boot Field, Gravel Pit Field and 3rd field and are only intended to be used the existing alternative livestock watering system becomes inoperable.

The Permittee and Novy Ranches share a bridge located below the NRZ Riparian diversion and both parties intend to keep and maintain the bridge. Maintenance includes shoring or repair of the footings approximately once every 10 years or after a large event, removal of debris after high flow events and replacement of planks as needed. The bridge will be assessed to determine if it may be used as a crossing in the Novy, Rice, Zenkus diversion structure replacement project.
Herbicide/Fertilizer/Pesticide Use

The Permittee applies Roundup and Crossbow herbicides along ditch borders, fence lines and spot treatment of noxious weeds outside of riparian corridor. Treatments are spot treatments and by hand only during March through July. Application does not occur near water. Permittee does not apply fertilizer. Treatments are spot applied via an ATV or by hand. Treatment occurs from early April through July. Total treated acreage does not exceed 3 acres annually. Total treatment within the riparian area is less than one acre annually. Treatment does not occur within 20’ of surface water. Ditches are treated when dry. Application standards identified on labels are followed. Treatment only occurs during dry, calm days where drift risk is minimal.

C.2 Avoidance and Minimization Measures

The Permittee has agreed to carry out and monitor AMMs that are relevant to their Routine Agricultural Activities as specified in Table G1(Section G below) and as detailed in Appendix 3 of the Agreement.

D. Description of Baseline Conditions

Baseline Conditions means the habitat conditions for the Covered Species on the Enrolled Property when NMFS approves this Site Plan Agreement. The Enrolled Property is within the Mid-Shasta reach of the Covered Area. Baseline Conditions for the Enrolled Property are the conditions described in Appendix 2 of the Agreement for this reach.

Elevated Baseline Conditions are certain Baseline Conditions improved as a result of certain Beneficial Management Activities. Elevated Baseline Conditions for this Site Plan Agreement are the improved fish passage and flow conditions that will result from the following actions:

Constructing a new diversion structure at Novy-Rice Diversion, with on channel fish screen and manage tailwater returns to reduce impacts to stream temperatures.

Table 2 summarizes the Beneficial Management Activities required to maintain Baseline Conditions and to achieve Elevated Baseline Conditions on the Enrolled Property for the term of the Site Plan Agreement. The Beneficial Management Activities implement habitat enhancement actions recommended in the Agreement (Appendix 2) for the Mid Shasta reach. Section E describes the activities on the Enrolled Property in more detail. All Beneficial Management Activities stipulated below will be implemented per relevant AMM’s included in Appendix 3 of the Agreement.
### Table 2. Baseline, Elevated Baseline and Other Beneficial Management Activities for the Enrolled Property

<table>
<thead>
<tr>
<th>Habitat Parameter</th>
<th>Beneficial Management Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Present Baseline Conditions (Section E1-Maintain)</td>
</tr>
</tbody>
</table>
- Continue tailwater reduction management of Field 4 using real-time sensor and remote pump control as described in E.1.a.2.  
- Continue involvement in Novy-Zenkus-Rice project design. E.1.a.3 | - Minimize tail-water returns as described in Section E.2.a. | - Participate in design and permitting, seek funding and aid in implementation of efficiency project including piping to increase delivery efficiency on the Novy-Rice-Zenkus conveyance and provide irrigation efficiency through flood valves and piping of irrigation laterals described in more detail in Section E.3.a.1.  
- Seek redesign funding and permitting and aid in implementation of Rice Livestock Companies’ component of Huseman Ditch piping to reduce diversion volume E.3.a.2  
- Participate in Mid Shasta reach-wide flow strategy. E.3.a  
- Add instream beneficial use as secondary benefit of Huseman and Novy Rice-Zenkus Riparian Diversion E.3.a  
- Install and utilize soil moisture sensors throughout the Enrolled Property to improve water efficiency as described in Section E.3.a |
<table>
<thead>
<tr>
<th><strong>Passage/ Mitigation/ Screening</strong></th>
<th><strong>Instream Habitat Complexity</strong></th>
<th><strong>Riparian Condition</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>-Maintain unimpeded fish passage conditions at the Huseman Ditch and the existing cone screen at the new diversion. E.1.b.1</td>
<td>-Provide access for implementation of habitat enhancement projects (LWD for bank stabilization) and alcove improvement as shown on the attached Habitat Improvement Map and as described in Section E.3.c.</td>
<td>-Maintain existing cattle exclusion fencing to protect riparian areas. Continue to perform yearly maintenance on existing riparian fencing, crossing and existing alternative stock watering systems as described in E.1.d.</td>
</tr>
<tr>
<td>-Maintain flashboards at Novy-Zenkus-Rice diversion in consideration of fish passage until fish passage and screening project is implemented. Participate in assessment leading to design and implementation of a fish screening and passage facility meeting NMFS and CDFW criteria. E.1.b.</td>
<td></td>
<td>-Maintain existing cattle exclusion fencing. Continue to perform yearly maintenance on existing riparian fencing, crossing and existing alternative stock watering systems as described in E.1.d.</td>
</tr>
<tr>
<td>-Participate in current design and permitting process to improve fish passage and protection at Novy Zenkus Rice Riparian Diversion. Upon completion of approved design, seek funding and aid in construction of a new diversion structure at the Novy-Zenkus-Rice Diversion that is passable for all life stages as described in Section E.2.b</td>
<td>-Implement beaver Best Management Practices BMPs as described in E.3.c.</td>
<td>-Allow access to assess riparian planting opportunities and techniques that may be effective. Allow access for resulting riparian planting efforts as described in Section E.3.d.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Permittee will maintain Riparian exclusion fencing, Novy-Rice Bridge, Wet Crossing, and livestock watering sites in Boot Field,Filed #3 and Gravel Pit Field. In the event more than 25% of the current exclusion fencing is destroyed by a flood, Permittee will meet with agencies and funding sources to consider alternatives. E.3.d.2</td>
</tr>
</tbody>
</table>
E. Beneficial Management Activities

This section provides a detailed description of Beneficial Management Activities to be implemented on the Enrolled Property for the benefit of the Covered Species.

E.1 Actions Required to Maintain Baseline Conditions

This section details the actions required to maintain Baseline Conditions. This includes any Covered Activities that are being implemented, or have been implemented, on the Enrolled Property that benefit the Covered Species and will be maintained over the duration of the Agreement. Figure 3 shown below identifies location of Baseline Conditions.

| Substrate Quality | Permittee will conduct a site visit with agency representatives to determine if the stream reach has spawning substrate. |
| Pasture Management | - Maintain soil moisture probe in Field #4, E.1.f  
- Maintain Alternative Stock Watering systems E.1.f  
- Continue beneficial rotational grazing practices |
| | - Participate in developing design, seeking funding and installation of Alternative stock watering systems on fields irrigated by NRZ riparian diversion.  
- Continue beneficial rotational grazing practices on pastures.  
- Continue livestock exclusion of the riparian area |
| Assessment/ Studies | - Continue to allow access for studies as described in Section E.1.g. |
| | - Allow access for studies as described in Section E.3.g. |
| Supplementation | - The Permittee will participate in process allow access for salmonid supplementation as described in Section E.3.h. |
E.1.a. Hydrology/Water Quality

*Increased delivery and irrigation efficiencies*

Huseman Ditch (Rice Livestock Company, Inc.)

The Permittee is the largest user on the Huseman Ditch, a shared ditch operated by the Huseman Ditch Association.

Water conservation: As a result of the project implemented in 2011 (described above), 11.9 cfs of water remains instream for 31,300’ before being diverted at Huseman Ditch. Huseman Ditch Association now pumps water from the Shasta River rather than gravity diversion via the previous diversion point. Instead of continuous diversion as conducted prior to the 2011 Construction Project, the Permittee diverts approximately up to 11.9 cfs or 142 acre feet per 15 day irrigation rotations from Huseman Ditch. 13 irrigation rotations typically occur per year. Rice Livestock currently diverts approximately 1,846-acre feet per year, where it previously diverted approximately 2,248 acre feet when diverting from Huseman Ditches previous POD prior to moving in 2011 (53% of the Huseman Diversion). Assuming the Permittee’s current use from Huseman Ditch is 1,846 acre feet annually on 270 acres, approximately 6.80 acre-feet of water is applied per acre annually on the Enrolled Property compared to 7.87 prior to the 2011 project.

As a user of Huseman Ditch, the Permittee will operate and maintain the Huseman Ditch diversion which was constructed 5.9 river miles downstream of the original diversion structure in 2011. Prior to 2011, the flashbaord dam diversion for Huseman Ditch (shared with GID) was eliminated and replaced by the Huseman Ditch pump diversion where sufficient by-pass flow and fish passage is provided at all times (minimum estimated by-pass at Huseman diversion is 30-40 cfs). The diversion facility includes pumps, a self-cleaning cone screen and shade structure to protect the infrastructure. The Permittee will continue remote control of Huseman diversion which allows users to shut off pump remotely, reducing diversion volume and tail water.

The Permittee will also operate and maintain the existing pipeline and irrigation infrastructure constructed as part of 2011 project which added a second point of diversion. The Permittee will operate and maintain the water efficiency project constructed in 2011 including the conversion from an open ditch flooding to buried pipeline, the flood riser in portions of Field #4, and the Boot field combined with developed irrigation management, which has significantly reduced tail-water and reduced volume of water diverted compared to conditions prior to 2011 E.1.a.1.

*Tailwater Reduction*

The Permittee will continue soil moisture monitoring as a management tool to reduce tailwater: A real-time soil moisture sensor was installed at the bottom of
Field 4. The real-time soil moisture sensor also has a tail-water sensor that alerts the irrigator when tailwater reaches it and the irrigator can shut off the pump remotely to reduce the amount of tail-water that reaches the river and to conserve water. This saves up to 6 hours diversion time for the Permittee and up to 12-18 hours per 15 day irrigation rotation for Huseman. E.1.a.2.

**E.1.b. Passage/Migration/ Diversion Screening**

Huseman Ditch: The Huseman Ditch diversion has an on-channel self-cleaning cone screen and the diversion provides volitional fish passage at all times. The diversion has a streambed agreement for screen operation, maintenance, and diversion intake. The Permittee agrees to operate and maintain the diversion facility and fish screen in coordination with other active users. E.1.b.1.

Novy, Zenkus, Rice Riparian Diversion (NZR): The NZR Diversion is managed with a steel frame and flashboard diversion structure where vertical flashboards extend across the river. NZR never completely blocks flow (does not install the flashboards from bank to bank). Depending on flow, a 4’ to 35’ foot opening is always maintained within the wetted channel during the irrigation season. Flashboards are removed during the non-irrigation season. The Permittee will manage existing flashboards as described above to allow for fish passage at current facility. E.1.b.2.

The Permittee will continue to participate in an ongoing assessment that is expected to lead to an approved redesign of the NZR Diversion to allow for agency compliant fish screening and passage facilities.

**E.1.c. Instream Habitat Complexity**

No instream structures currently exist on Permittee property. E.3.c.

**E.1.d. Riparian Function**

*Riparian Fencing*

Riparian exclusion fencing was completed for the entire Enrolled Property in 2003. The Permittee intends to continue livestock exclusion of the riparian area. The Permittee will continue to maintain riparian fencing and will repair up to 25% of flood-damaged riparian fencing. If riparian fencing loss due to flood is greater than 25 percent, Rice Livestock will, install temporary electrical fencing and work with CDFW, NOAA and funding partners to repair or replace the fencing.

*Crossings*

Wet crossings on the Enrolled Property are described in Section C.1. The Permittee will maintain the wet crossing and limit crossing to about 10 times a years from May 1 through November 1. Livestock watering access sites also exist at the Boot Field, Field #3 and Gravel Pit Field. The access sites are rocked with
angular rock, are approximately 20 feet wide and panels exist to limit access into the river. The livestock watering sites but are not currently used and will only be used if the existing alternative livestock watering system is not functioning.

*Off-Channel Stock watering*

The Permittee will maintain existing off-channel alternative stock water systems.

**E.1.e Substrate Quality**

The mid-reach of the Shasta does not hold spawning substrate or suitable spawning habitat.

**E.1.f. Pasture Management**

The Permittee will maintain soil moisture probe in Field #4 and continue beneficial rational grazing pastures. Because livestock exclusion of the riparian area will be continued, a riparian grazing plan is not proposed.

**E.1.g Assessments/Studies**

*Access for Studies:*

Currently, the permittee allows access for monitoring the following parameters:

- Temperature – seasonal monitoring using equipment from the SVRCD conducted at Highway A-12

- Dissolved O2 – seasonal monitoring using equipment from the SVRCD conducted at ingress and at Highway A-12
Figure 3. Elevated Baseline Conditions.
E.2  Actions Required to Achieve Elevated Baseline Conditions

This section and Figure 4 details the actions required to achieve and maintain Elevated Baseline Conditions. This includes any Covered Activities that will be implemented and maintained on the Enrolled Property during the term of the Agreement to improve unsuitable habitat conditions for the Covered Species.

E.2.a.  Hydrology/Water Quality

*Tailwater Reduction*

The Permittee has several tail-water re-entry sites that will be reduced or addressed including the following:

- **Huseman Fields 1 and 2:** Improve berm and develop catch ditch to deliver and re-distribute excess tail-water water to under irrigated property. This site will be addressed within the 2nd year of signing the Agreement.

- **Huseman Field 3:** Improve catch and redistribution ditches. Use remote pump operation for Huseman Ditch so pump can be remotely turned off to reduce run-off. This site will be addressed within the 2nd year of signing the Agreement.

- **Huseman Boot Field and Field 4:** Use remote activated pump operation so pump can be remotely turned off when soil moisture probe notifies Permittee. This change in operation will begin within 2nd year of signing the Agreement.

- **Novy-Zenkus- Rice Riparian -Gravel Pit Field.** Improve berm at Shasta River. This site will be addressed within 2nd year of signing the Agreement.

The Permittee also agrees to conduct work to maintain infrastructure and operations so significant tail-water contributions are minimized and infrequent.

E.2.b.  Passage/Migration/ Diversion Screening

The Novy, Rice, Zenkus Riparian Diversion: A recently completed design is under review for Novy-Rice-Zenkus diversion. Based on agency feedback, the Permittee will continue to participate in refinement of design and seek funding opportunities for project implementation. Permittee agrees to long term maintenance and operation.

*Fish Passage* - Novy, Rice, Zenkus Riparian Diversion: The Permittee agrees to work with the agencies and diversion users to seek funding and assist with installation of a compliant fish passage facility with a functional diversion facility. The Permittee commits to operate and maintain the new diversion facility in order to provide year-round fish passage per agency fish passage criteria. Permittee will continue to refine the design (completed in 2018) and seek implementation funding (also applied for in 2018). Implementation is expected to be complete by
2022. If funding is not secured by 2024, the Permittee will meet with agencies to re-evaluate the project. E.2b.1.

*Fish Screen*- Novy, Rice, Zenkus Riparian Diversion: The existing fish screen is located in the diversion ditch approximately 1,700’ down ditch from the POD and the by-pass does not meet current screening criteria. Grant-funded studies are ongoing to determine the best design options that will ensure year round compliance with fish screening criteria. The Permittee agrees to seek funding, assist with installation, and maintain an effective diversion facility that includes a fish screen that meets fish screening criteria. One hundred percent design is anticipated to be completed by mid-2018. Implementation funding will be applied for during 2018 and implementation is expected to be complete by 2022. If funding is not secured by 2024, the Permittee will meet with agencies to re-evaluate the project. E.2b.2.

**E.2.c. Instream Habitat Complexity**

*The Permittee will not implement any measures specifically to protect/improve instream habitat complexity under elevated baseline, see section E.3.c.*

**E.2.d. Riparian Function**

*The Permittee will not implement any measures specifically to/improve riparian function under elevated baseline, see section E.1.d and E.3.d.*

**E.2.e Substrate Quality**

*Not addressed in this Site Plan Agreement.*

**E.2.f. Pasture Management**

*The Permittee will not implement any measures specifically to protect/improve Pasture Management and addresses riparian pasture in E.1.f.*

**E.2.g Assessments/Studies**

*The Permittee will not implement any measures specifically to Assessments/Studies under elevated baseline, see section E.1.g and E.3.g*
Figure 4. Proposed Conditions.
E.3 Other Beneficial Management Activities

This section summarizes any other Beneficial Management Activities that will be implemented and maintained during the term of the Agreement to improve habitat conditions for the Covered Species.

E.3.a. Hydrology/Water Quality

*Increase delivery and irrigation efficiency:*

Water conservation: Through the projects described below, the Permittee will reduce cumulative diversion from 4,031 acre feet per year (current diversion amount) to 2,418 acre feet per year. An estimated 1,342 acre feet per year will remain instream when the proposed projects described above are implemented. Verification of diversion reduction will occur through recorded diversion flow meter data that meets SWRCB Water Measuring and Reporting Standards including frequency of recorded data. The conserved water will remain instream resulting in instream benefits for the Covered Species, averaging 3.75 cfs from 4/1-9/30. Conserved water will be provided for instream benefit either through forbearance or through a SWRCB Change Petition adding Fish and Wildlife as a secondary beneficial use, potentially protected through water code 1707.

Novy, Zenkus, Rice Riparian Diversion: In exchange for the water conservation improvements identified in the project design on the Novy-Rice-Zenkus Riparian Ditch, the permittee agrees to the efficiency improvements identified in the design that is under development, and the Permittee will work to develop and implement conservation solutions. The scope of this work includes reducing diversion from 10.0 cfs to 5.0 cfs through converting main ditch and lateral ditches to piping and flood valves. The Permittee will work with SWCG to add instream beneficial use as an additional benefit for water conserved by proposed projects for Huseman and Novy-Rice-Zenkus Riparian Diversion including using water code 1707 or equivalent. Implementation is estimated to occur within 3 years of signing the Agreement. If funding is not secured by 2024, the Permittee will meet with agencies to re-evaluate the project. E.3a.2

Permittee’s contribution on the Novy, Zenkus, Rice Riparian Diversion:

Current volume diverted for use on the Enrolled Property: 1,742 afy.

Maximum volume diverted for use on the Enrolled Property after project: 871 afy.

The volume of water conserved by the Permittee as a result of the conservation project is 871 afy or 1.8 cfs for 244 days (length irrigation season from 3/1-10/31). 871 afy diverted to 108 acres results in 8.06 feet per acre.

Huseman Ditch: Huseman Ditch has two active users (Permittee and NB Ranches) seeking SHA coverage. Both entities are submitting Site Plan
Agreements for their ranches and not for Huseman Ditch. Because they are the only two active users, the operation and responsibility of Huseman Ditch is jointly addressed by the Site Plan Agreements for the two entities. Huseman Ditch is rotated between users, not continuously delivered in part to the two entities throughout the irrigation season. The Permittee irrigates with the full diversion for 6 days while NB Ranches irrigates with full diversion for 5.5 days per rotation. Typically, there are 1-4 days where diversion is turned off prior to starting the rotation again, depending on soil moisture conditions, ambient temperature, ET and time of year.

Through the Permittee’s (Rice Livestock Company) and NB Ranches Site Plan Agreements, a comprehensive piping proposal is proposed for the entire Huseman Ditch. The comprehensive Huseman Ditch piping proposal is to dedicate 1.9 cfs for instream benefit in exchange for a pipeline approximately 13,800’ in length with two proposed laterals (one to allow release of a spring to the Shasta River for instream benefit, the other to reduce tailwater). This proposal includes NB Ranches dedicating two cold water springs (approximately 0.3 cfs) to instream benefit in addition to the 1.9 cfs reduction (the Permittee and NB Ranches) in maximum diversion. Therefore, the cumulative enhancement to the river will be 2.4 cfs.

The Huseman Ditch Association will include instream beneficial uses as an additional beneficial use and dedicate the 1.9 cfs to instream benefit through California Water Code section 1707 or equivalent. In addition, NB Ranches will forego irrigation use of the two identified springs. Ditch Loss calculations have been measured demonstrating 1.7 and 2.0 cfs of loss through the proposed piped reach (based on assessments conducted by NRCS and DWR). Landowners are willing to have the loss calculations conducted again and have reached out to NRCS regarding design revisions based on pump evaluation and reduction of diversion volume.

The Permittee’s water conservation volume determination: As a result of water delivery and irrigation efficiency provided by the proposed continued pipeline for Huseman Ditch through the Enrolled Property, maximum diversion use will reduce from 11.9 cfs to 10.0 cfs while the Permittee is irrigating with Huseman Ditch water (on average 6 days of irrigation out of every 15 days). The pipeline length through the Enrolled Property would be approximately 6,500’. Reduced diversion volume and increased efficiency would result in approx. 299 afy of conserved water for the Permittee. The Permittee will participate in re-design, seek funding and assist with implementation with a projected implementation target of three years after signing the Agreement. If funding is not secured by 2024, the Permittee will meet with agencies to re-evaluate the project. E.3.a.1 (Provide explanation of both Agreements with Rice and overall project).
Huseman Ditch water use by the Permittee:

Annual use in 2011 prior to POD downstream: 2,248 afy
Current use: 1,846 afy
Commitment after piping continuation project 1,547 afy*

*1,546 afy provided to 271 acres results in 5.70 feet applied per acre for the Enrolled Property.

Summary of Calculations:

-Prior to the 2011 project, the Permittee diverted 2,448 afy of water from the Huseman Ditch.

-After the 2011 project, the Permittee (currently) diverts 1,846 afy (13 rotations at 6 days per rotation X 142 acre feet per rotation).

-Proposed: Reducing the diversion volume from 11.9 to 10.00 cfs will reduce maximum diversion volume per rotation approximately by 23 acre feet per rotation (119 acre feet per 6 day rotation X 13 rotations) or 1,547 acre feet per year. This would be a reduction in diversion from Huseman Ditch of 299 acre feet per year for the Enrolled Property.

Huseman Cumulative Summary: NB Ranches conserved volume of water from Huseman Ditch resulting from the project would be 260 acre feet year in addition into Rice Livestock Company’s 299 acre feet per year is or 559 acre feet cumulative per year for Huseman Ditch. When the .5 cfs of spring water contributed for 183 days (irrigation season duration) by NB Ranches (.5 cfs X 183 days X 1.983af/cfs =181 acre feet) is added to the cumulative volume of water conserved through piping of 559 acre feet, the Huseman Ditch Piping Project conserves up to 740 acre feet per year during irrigation season. Huseman Ditch, through NB Ranches, Inc. and Rice Livestock Company, Inc. will work with SWCG to add instream beneficial use as secondary benefit for water conserved by proposed projects for Huseman. The project has been designed by NRCS but would require some revision to truncate the piping reach, determine pipe diameter and conduct necessary permitting. Rice Livestock and NB Ranches are initiating re-design with NRCS currently. Rice Livestock and NB Ranches are willing to enter process to protect conserved water through Water Code 1707 or equivalent with the “batched approach” moving forward with TNC in 2018. Rice Livestock and NB Ranches commit to seeking funds for design, permitting and installation of the pipeline. Rice Livestock and NB Ranches intend to have pipeline installed by the close of the 5th year of the agreement and will meet with permitting agencies if funding is not obtained by that point. E.3.a.1.
Participate in Mid-Shasta Flow Strategy

Rice Livestock will cooperate in the Mid-Shasta Flow Strategy. These measures are in addition to the water conservation projects described for the Novy-Rice-Zenkus Riparian water conservation project (E.3.a.1) and the Huseman Ditch water conservation project (E.3.a.2). In cooperation with Huseman Ditch and the Novy-Rice-Zenkus Riparian, and in accordance with the Comprehensive Flow Strategy, Rice Livestock Agrees to:

Huseman Ditch:

1.) Huseman Ditch: Rice Livestock will not irrigate from 4/1-4/5 to aid in reducing rapid flow reduction that occurs on onset of irrigation season.

2.) Huseman Ditch: Rice Livestock will not irrigate from 9/25-9/30 to aid in Adult Chinook juvenile redistribution, and adult Coho early migration.

3.) Huseman Ditch: During the latter part of spring when water temperature is increasing, Rice Livestock is agreeable in reducing diversion by 25% for up to 7 days as a result of one mid-season flow pulse, provided 7 days’ notice. (Huseman contribution of 35-acre feet).

Huseman diversion reduction as a result of its participation of in the Mid Shasta Flow Strategy would be up to 253-acre feet during an irrigation season, including NB Ranches, Inc. and Rice Livestock Company, Inc. Verification of diversion reduction will occur through recorded diversion flow meter data that meets SWRCB Water Measuring and Reporting Standards including frequency of recorded data. Diversion reduction resulting from participation in the Mid-Shasta Flow Strategy is in addition to water conservation/water quality projects identified in the Agreement.

4.) Huseman Ditch: If diverting for stock water from 10/1-3/31, Rice livestock will reduce maximum diversion volume to 4.0 cfs and limit days of operation to a maximum of 25 days a year as opposed to continuous right of 5.00 cfs during non-irrigation season. Maximum cumulative diversion for stock water during winter period will be 200 acre feet per year. Measures provided above to the Comprehensive Flow Strategy (and not part of a water conservation project) will be implemented on the year the Permit is issued.

Novy-Rice-Zenkus Riparian (NRZ Riparian):

1.) NRZ Riparian Ditch: Rice Livestock agrees to limit diversion volume by 50% from 4/1-4/10 of each spring to aid in reducing rapid flow reduction that occurs at the onset of irrigation season (NRZ contribution of 50 acre feet).
2.) NRZ Riparian Ditch: Rice Livestock agrees to limit diversion volume by 50% from 9/20-9/30 to aid in adult Chinook juvenile redistribution, and adult Coho early migration. (NRZ contribution of 50 acre feet).

Cumulative Measures provided by the Permittee from the NRZ Riparian towards the Comprehensive Flow Strategy total 100 acre feet. This contribution is separate from the NRZ conservation project. This contribution will be provided beginning on the first year the Permit is issued.

E.3.a1 *Forbearance Agreement:* Permittee agrees to enter into a Forbearance Agreement with SWCG members for the purpose of improving habitat for Covered Species in the Shasta River.

**E.3.b. Passage/Migration/ Diversion Screening**

**E.3.c. Instream Habitat Complexity**

*Instream Structures:*

Permittee will allow and participate with the design, funding and installation of instream structures including 4 woody debris structures, and enhancement of two existing off-channel habitats/oxbows located in the gravel field. Rice Livestock is willing to participate in developing back-water rearing, if feasible, in this stretch of the Shasta River. Specific sites and type of treatments as shown on Habitat Improvement Map included in Appendix. Permittee will participate in design, seek funding and assist with implementation with a hopeful implementation target of three year after signing of agreement. If funding is not secured within 5 years of permit issuance, Permittee will meet with agencies to re-evaluate project. E.3.c.1.

*Beaver Management:*

Permittee will participate in a beaver management plan developed for the Mid-Shasta Reach.

**E.3.d. Riparian Function**

*Riparian Planting*

Permittee will allow and participate in riparian investigations and assessments that will lead to an established riparian area, if feasible. If riparian plantings are proposed, Permittee is supportive and will aid to protect plantings but will not be held accountable for meeting any performance/success standards based on previous planting results E.3.d.1.

- Riparian Pasture Consideration: Rice Livestock, intends to continue riparian area exclusion unless significant damage to existing riparian fencing results in reconstruction and realignment of riparian fencing.
Riparian Fencing

Riparian exclusion fencing was completed for the entire Enrolled Property in 2003. The Permittee intends to continue livestock exclusion of the riparian area. The Permittee will continue to maintain riparian fencing and will repair up to 25% of flood-damaged riparian fencing. If riparian fencing loss due to flood is greater than 25 percent, Rice Livestock will, install temporary electrical fencing and work with CDFW, NOAA and funding partners to repair or replace the fencing.

Crossings

Wet crossings on the Enrolled Property are described in Section C.1. The Permittee will maintain the wet crossing and limit crossing to about 10 times a years from May 1 through November 1. Livestock watering access sites also exist at the Boot Field, Field #3 and Gravel Pit Field. The access sites are rocked with angular rock, are approximately 20 feet wide and panels exist to limit access into the river. The livestock watering sites but are not currently used and will only be used if the existing alternative livestock watering system is not functioning.

In the event over 25% of the riparian exclusion fencing is destroyed in a flood, Permittee will install electrical wiring to temporarily exclude livestock from Shasta River and meet with CDFW, NOAA and funding sources to address alternatives. E.3.d.2.

E.3.e Substrate Quality

Permittee will conduct a site visit with agency representatives to determine if the stream reach has spawning substrate.

E.3.f Pasture Management

E.3.g Assessments/Studies

Access for Studies:

-Continue to allow access for studies and assessments including existing temperature and DO monitoring at Hwy A-12.

-Rice Livestock will review other existing studies and assessments. Participation with other surveys will be considered on a case by case basis and is defined in Table G.2.

E.3.h Supplementation

The Permittee will allow reasonable access for salmonid supplementation and all associated monitoring activities.
F. Effective Date and Duration of the Site Plan Agreement and Agreement

The Agreement, Site Plan Agreement, and ESP take effect when signed by the Permittee, NMFS, and CDFW. The Agreement, Site Plan Agreement, and ESP have a term of 20 years, which may be extended by mutual written consent of the Permittee, NMFS, and CDFW. One (1) year prior to end of term of the Agreement, Site Plan Agreement, and ESP, the Permittee, NMFS, and CDFW will meet to decide whether to extend the term of the Agreement, Site Plan Agreement, and ESP.

G. Monitoring and Reporting

AMMs are intended to minimize or reduce potential adverse impacts that may occur during implementation of BMAs or Routine Agricultural Activities. The Permittee commits to implement the AMMs and associated monitoring protocols listed in Table G1 below and as described in Appendix 3 of the Agreement.

Implementation monitoring includes those monitoring tasks associated with construction and implementation of BMAs (e.g. construction of habitat restoration projects) and associated AMMs. Implementation monitoring of BMAs serves to verify that habitat restoration projects are constructed as designed and/or managed as intended. The Permittee commits to monitoring actions as summarized in Table G2. The Permittee also commits to all relevant AMMs included in Appendix 3 of the Agreement related to the implementation of the BMAs identified in Section E above.

AMM and implementation monitoring will be conducted by the Permittee, the SWCG, or a contractor and included in the annual report.

G.1 Avoidance and Minimization Measures Monitoring

<table>
<thead>
<tr>
<th>Routine Agricultural Activity</th>
<th>Rice Livestock - AMM (See Appendix 3 of Agreement for full description)</th>
<th>AMM Monitoring Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation Management</td>
<td>A1, A2</td>
<td>All maintenance of instream diversion structures shall be monitored as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Log of what in-water work had occurred and what minimization measures were implemented will be included in the annual report</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- When construction or repair work is being done, Photo Point Monitoring will be completed in accordance with Appendix 3 of Agreement.</td>
</tr>
<tr>
<td>Irrigation Maintenance</td>
<td>B1, B2, B3, B4, B5, B6, B7, B8</td>
<td>All maintenance of instream irrigation facilities shall be monitored. Following are some examples of protocols:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Log of maintenance activities carried out within the calendar year be included in the annual report.</td>
</tr>
</tbody>
</table>
Riparian Grazing Management

- Riparian grazing management shall be monitored as follows:
  - Three to five permanent photo point stations will be established and marked at locations within each riparian pasture designed to show both vegetation changes before and after seasonal grazing activities, and long-term trends. Photo Point Monitoring will be completed in accordance with Appendix 3 of Agreement. Digital photographs will be taken at each photo point station once per year for trend monitoring, and before and after riparian pasture grazing takes place for annual implementation reporting.
  - Maintain a log of grazing activities carried out within the calendar year and include in the annual monitoring report. At a minimum, the log will include the following information: beginning and end dates of riparian pasture grazing; number of animals, monitoring practices during the riparian grazing period, and management actions taken as a result of monitoring results including management cues used to determine the time to move livestock out of the riparian pasture.
  - NMFS and CDFW may initiate periodic inspection of grazed riparian pastures to ensure riparian grazing management plan is effective.

Fence Maintenance

- A short description of fence maintenance activities will be included in the annual report.

Road Maintenance

- A short description of annual road maintenance activities will be included in the annual report.

Crossing Maintenance

- When work is being done, photo point monitoring will be completed in accordance with Appendix 3 of the Agreement.

Herbicide/Fertilizer/Pesticide Use

- Permittee commits to log use of herbicide, fertilizer and pesticide activities carried out within the calendar year be included in the annual report.

Flood Repair

- Permittee shall take photographs of the emergency site repairs and a detailed description of the repairs to be included in the annual report.
### G.2 Implementation and Effectiveness Monitoring Commitments

<table>
<thead>
<tr>
<th>Habitat Parameter</th>
<th>Rice Livestock – Beneficial Management Activity</th>
<th>Implementation Monitoring Technique</th>
<th>Effectiveness Monitoring Commitment/Technique</th>
</tr>
</thead>
</table>
| **Hydrology/Water Quality** | - Maintain the existing Huseman second point of diversion that conserves an estimate 240 af compared to previous point of diversion as described in E.1.a.  
- Continue to manage tailwater production using existing collection and reuse system as described in E.1.a.  
- Eliminate/Reduce Huseman tailwater through Hayfield by adding piped lateral on Eastside of field E.2.a.  
- Participate in design and implement Nicoletti component of Huseman Ditch piping to reduce diversion volume. E.3.a  
Participate in design, implementation, and protection of contributing spring source water for cold water refugia as part of a Huseman Piping exchange. E.3.a  
Install, maintain and utilize soil moisture sensors throughout the Enrolled Property to improve water efficiency as a component of Huseman piping project described in Section E.3.a.  
Participate in a reach-wide flow strategy as outlined in E.3.a  
- Manage fields to reduce tailwater returns from outside sources to reduce diversion as described in Section E.3.a. | - Three to five photo points using USDA Forest Service Photo Point Monitoring Handbook, 2002 documenting functioning diversion, pipeline improvements and spring source enhancements.  
- Soil Moisture sensor data | - Diversion monitoring station will be maintained and operated as designed. Diversion users will provide data on a frequency compliant with SB 88. |
<table>
<thead>
<tr>
<th>Habitat Parameter</th>
<th>Rice Livestock – Beneficial Management Activity</th>
<th>Implementation Monitoring Technique</th>
<th>Effectiveness Monitoring Commitment/Technique</th>
</tr>
</thead>
</table>
| Passage/ Migration/ Screening | - Maintain unimpeded fish passage conditions at the Huseman Diversion as described in Section E.1.b.  
- Maintain Huseman Ditch Fish Screen as described in Section E.1.b | - Three to five photo points using USDA Forest Service Photo Point Monitoring Handbook, 2002 documenting fish passage and fish screen.  
- Water measuring protocol that is in concurrence with SB88 of diversion, submit diversion data. |  |
| Instream Habitat Complexity | - Will participate in implementation of habitat enhancement projects (LWD for bank stabilization) as shown on the attached Habitat Improvement Map and as described in Section E.3.c.  
- Will participate in the implementation of habitat enhancement projects (re-connect oxbows) as specified on Habitat Improvement Map and as described in Section E.3.c.  
- Implement beaver Best Management Practices BMPs as described in E.3.c. | - Three to five photo points using USDA Forest Service Photo Point Monitoring Handbook, 2002 Habitat improvements |  |
| Riparian Conditions | - Continue to perform yearly maintenance on existing riparian fencing as described in E.1.d.  
- Participant will maintain existing watering lanes for stock water as described in Section E.1.d.  
- Will participate in riparian planting projects as described in Section E.3.d.  
- Participant will work with UC Extension to develop and implement riparian grazing plan E.3.d  
- Participant will provide additional watering lanes or install alternative stock watering systems to limit riparian access for watering purposes E.3.d. | - Three to five photo points using USDA Forest Service Photo Point Monitoring Handbook, 2002 To document riparian grazing area, and crossing and stock water systems in proper function. | Survival rates of riparian planting will be reported by Shasta Valley RCD or other implementing organization for a minimum period of 3 years after planting occurs or term will be stipulated by the grants utilized for implementation. |
<table>
<thead>
<tr>
<th>Habitat Parameter</th>
<th>Rice Livestock – Beneficial Management Activity</th>
<th>Implementation Monitoring Technique</th>
<th>Effectiveness Monitoring Commitment/Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substrate Quality</td>
<td>-Participant commits to maintain all riparian fencing as described in Section E.1.d.</td>
<td>Three to five photo points using USDA Forest Service Photo Point Monitoring Handbook, 2002 To document fence maintenance.</td>
<td>-</td>
</tr>
<tr>
<td>Pasture Management</td>
<td>Participant will continue to utilize pasture rotation to avoid over grazing as described in E.1.f.</td>
<td>Three to five photo points using USDA Forest Service Photo Point Monitoring Handbook, 2002 To document pasture condition.</td>
<td>-Reports of studies will be written/summarized/ obtained and provided in the annual report.</td>
</tr>
<tr>
<td>Assessment/ Studies</td>
<td>Continue to allow access for studies as described in Section E.1.g.</td>
<td>Allow access for studies as described in Section E.3.g.</td>
<td>-Access to maintain existing pit tag array and trap and tag fish as deemed feasible by agency staff</td>
</tr>
<tr>
<td>Supplementation</td>
<td>The Permittee will allow access for salmonid supplementation as described in Section E.3.h.</td>
<td>Allow access to monitoring supplementation activities</td>
<td>-Juvenile surveys for presence absence and for capturing and PIT tagging fish with 7 day notification of landowner.</td>
</tr>
</tbody>
</table>

H. Annual Report and Adaptive Management

The Permittee will complete an Annual Report yearly and report as stipulated in the Agreement.

I. Regulatory Assurances

Upon execution of the Agreement and this Site Plan Agreement and the satisfaction of all other applicable legal requirements, NMFS will issue a ESP under section 10(a)(1)(A) of the ESA to assure that the Permittee may incidentally take Covered Species, in accordance with the Site Plan Agreement and Agreement, as a result of implementing the Covered Activities described in this Site Plan Agreement, and except where such activities would result in the diminishment or non-achievement of the Baseline and/or Elevated Baseline Conditions established for the Enrolled Property. This assurance depends on the Permittee maintaining the Baseline Conditions and/or achieving the
Elevated Baseline Conditions set forth in the Site Plan Agreement, complying fully with the Agreement and the Site Plan Agreement, and so long as the continuation of Covered Activities would not be likely to result in jeopardy to Covered Species or the adverse modification or destruction of their designated critical habitat. NMFS provides no assurances with regard to any action that may affect species not covered under the Agreement, including the take of non-covered species and the adverse modification or destruction of their designated critical habitat.

J. Signatures of NMFS, CDFW, and the Permittee

Rice Livestock Company, Inc.

Barry A. Thom
Regional Administrator
NOAA’s National Marine Fisheries Service
West Coast Region

February 24, 2021

SEPARATE SIGNATURE BLOCK FOR CDFW:

By signing the Agreement and this Site Plan Agreement CDFW expresses its expectation that the Agreement along with a Permittee’s Site Plan Agreement signed by NMFS and the NMFS ESP, could meet the requirements of section 2089.22 of the California Fish and Game Code with respect to the Enrolled Property described in the Site Plan Agreement. However, CDFW will not make such determination until reviewing that Site Plan Agreement signed by NMFS and the NMFS ESP.

California Department of Fish and Wildlife
Appendix A - Legal Deeds

Grant Deed

The undersigned grantor(s) declare(s): Documentary transfer tax is $ ____________.

() computed on full value of property conveyed, or

() computed on full value less value of items and encumbrances remaining at time of sale.

() Unincorporated area: () City of ____________.

() Ready not sold.

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

FORT BAKER RANCH CO., a California corporation

hereby (GRANT(S) to RICE LIVESTOCK COMPANY, a California corporation

that property in ________________, County, State of California, described as

See Exhibit "A" attached hereto and made a part hereof.

Rice Livestock Company, 1730 Highway A-12

Mail tax statements to: MONTAGUE, CA 95044

Date ____________ (July 29, 1976) ____________ (Jul 29, 1976)

State of California ____________ (S) ____________ (S)

County of ____________ (S) ____________ (S)

Public in and for said State, personally appeared ____________ (S) before me, a Notary Public in and for said State, personally appeared ____________ (S) to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledge(s) that the same is their free act(s) and deed(s), and that by their signature(s) on the instrument, the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITHNESS my hand and official seal.

Signature

MAIL TAX STATEMENTS AS DIRECTED ABOVE.

FORT BAKER RANCH CO.

By: RICHARD W. RICE, President

By: XXHXX R. RICE, Secretary
CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California
County of _______________

On November 11, 2020 before me, Marne A. Cyphers, Notary Public, licensed and acting under the laws of the State of California as Notary Public, in and for the County of _____________, personally appeared John A. Rice and Esther A. Rice

☑Personally known to me — OR — I proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

[Signature]

MARNIE A. CYPHERS
Notary Public
Notary Public License No. ____________
License Expiration Date: November 11, 2022

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and may prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Site Agreement

Document Date: __________________________ Number of Pages: ____________________

Signer(s) Other Than Named Above: _____________________________________________

Capacity(ies) Claimed by Signer(s)

☐ Individual
☐ Corporate Officer
☐ President
☐ Partner — Limited Partner
☐ Attorney-in-Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: __________________________

Signer is Representing: Fort Baker-Royal Co.

☐ Individual
☐ Corporate Officer
☐ Secretary
☐ Partner — Limited Partner
☐ Attorney-in-Fact
☐ Trustee
☐ Guardian or Conservator
☐ Other: __________________________

Signer is Representing: Fort Baker-Royal Co.
Appendix B

Huseman Ditch - Shasta River Decree & Statements of Water Use from Novy-Rice-Zenkus Riparian Diversion

(a) during the period between April first and October first of each year,
11.90 CUBIC FEET PER SECOND--PRIORITY APRIL 1, 1885,
or as much thereof as they directly apply to beneficial use for stock watering purposes and for the irrigation of the lands hereinafter described in this paragraph;

(b) during the period between October first of each year and April first of the succeeding year,
5.00 CUBIC FEET PER SECOND--PRIORITY APRIL 1, 1885,
or as much thereof as they directly apply to beneficial use for stock watering purposes;

all of said water to be diverted from said Shasta River at a point (designated on Division of Water Rights Map as Diversion 250) which bears approximately S. 82° 30' 7", approximately 1250 feet distant from the north quarter corner of Sec. 6, T. 43 N., R. 5 W., M.D.B. & M., being within the NE¼ NE¼ of said Sec. 6, and all of said water to be used upon the following described lands:
23.1 acres in the NE
2.7 acres in the NW
7.8 acres in the SW
26.3 acres in the SE
23.6 acres in the NE
32.8 acres in the SW
14.8 acres in the SE
27.0 acres in the NE
14.7 acres in the NW
0.8 acre in the SW
34.0 acres in the NE
14.8 acres in the SE
13.5 acres in the SE
14.8 acres in the NE
32.5 acres in the NE
27.9 acres in the NW
4.3 acres in the NE
29.5 acres in the NW
36.6 acres in the SW
11.3 acres in the SW
16.2 acres in the NE
9.5 acres in the SE
5.5 acres in the NE
20.4 acres in the NE
21.5 acres in the NW
29.7 acres in the SW
31.4 acres in the SE
0.5 acres in the SW
3.5 acres in the NE
5.3 acres in the SE
2.3 acres in the NW
20.6 acres in the NW
11.6 acres in the NW

569.8 acres — Total.
NOVY-ZENKUS-RICE RIPARIAN DIVERSION: RICE LIVESTOCK REPORTED PROPORTIONAL USE

SUPPLEMENTAL STATEMENT OF WATER DIVERSION AND USE FOR 2017

Primary Owner: RICE LIVESTOCK COMPANY Statement Number: S022755

Date Submitted: 06/27/2018

1. Water is used under Riparian Claim

2. Year diversion commenced 1900

3. Purpose of Use
   Irrigation
   Stockwatering 200 pair
   Fish and Wildlife Protection and/or Enhancement duck/goose habitat

Irrigated Crops

<table>
<thead>
<tr>
<th>Multiple Crops</th>
<th>Area Irrigated (Acres)</th>
<th>Primary Irrigation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasture</td>
<td>No</td>
<td>Surface (example: flood)</td>
</tr>
<tr>
<td></td>
<td>108</td>
<td></td>
</tr>
</tbody>
</table>

4. Changes in Method of Diversion

Special Use Categories
C1. Are you using any water diverted under this right for the cultivation of cannabis? No

5-6. Maximum Rate of Diversion for each Month and Amount of Water Diverted and Used

<table>
<thead>
<tr>
<th>Month</th>
<th>Rate of diversion (CFS)</th>
<th>Amount directly diverted (Acre-Feet)</th>
<th>Amount diverted or collected to storage (Acre-Feet)</th>
<th>Amount beneficially used (Acre-Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>February</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>March</td>
<td>4</td>
<td>226</td>
<td>0</td>
<td>226</td>
</tr>
<tr>
<td>April</td>
<td>4</td>
<td>226</td>
<td>0</td>
<td>226</td>
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<tr>
<td>May</td>
<td>4</td>
<td>226</td>
<td>0</td>
<td>226</td>
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<td>June</td>
<td>4</td>
<td>226</td>
<td>0</td>
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<td>July</td>
<td>4</td>
<td>226</td>
<td>0</td>
<td>226</td>
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<tr>
<td>August</td>
<td>4</td>
<td>226</td>
<td>0</td>
<td>226</td>
</tr>
<tr>
<td>September</td>
<td>4</td>
<td>226</td>
<td>0</td>
<td>226</td>
</tr>
<tr>
<td>Month</td>
<td>Water Transfers</td>
<td>Water Supply Contracts</td>
<td>Comments</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>------------------------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1808 Acre-Feet</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Water Transfers**

6d. Water transferred: No
6e. Quantity transferred (Acre-Feet)
6f. Dates which transfer occurred: / to /
6g. Transfer approved by

**Water Supply Contracts**

6h. Water supply contract: No
6i. Contract with
6j. Other provider
6k. Contract number
6l. Source from which contract water was diverted
6m. Point of diversion same as identified water right
6n. Amount (Acre-Feet) authorized to divert under this contract
6o. Amount (Acre-Feet) authorized to be diverted in 2017
6p. Amount (Acre-Feet) projected for 2018
6q. Exchange or settlement of prior rights
6r. All monthly reported diversion claimed under the prior rights
6s. Amount (Acre-Feet) of reported diversion solely under contract

**7. Water Diversion Measurement**

a. Required to measure as of the date this report is submitted: No
b. Is diversion measured? Yes
c. An alternative compliance plan was submitted to the division of water rights on
d. A request for additional time was submitted to the division of water rights on

<table>
<thead>
<tr>
<th>Measurement ID number</th>
<th>This Device/Method was used to measure</th>
<th>M1. Briefly describe the measurement device or method</th>
</tr>
</thead>
<tbody>
<tr>
<td>M003579</td>
<td>Yes</td>
<td>Aqua Calc</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>M2. Nickname</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>M3. Type of device / method</td>
<td>Other: Aqua Calc</td>
</tr>
<tr>
<td>M4. Device make</td>
<td>Aqua Calc</td>
</tr>
<tr>
<td>M5. Serial number</td>
<td>12110021</td>
</tr>
<tr>
<td>M6. Model number</td>
<td></td>
</tr>
</tbody>
</table>
M7. Approximate date of installation
M8. Additional info
M9. Approximate date the measuring device was last calibrated or the measurement method was updated
M10. Estimated accuracy of measurement
M11. Description of calibration method
M12. Describe the maintenance schedule for the device/method

Information for the person who last calibrated the device or designed the measurement method
M13. Name Tim Beck
M14. Phone number
M15. Email
M16. Qualifications of the individual A person trained and experienced in water measurement and reporting (this may include the diverter or the diverter's agent)

M17. License number and type for the qualified individual above and/or any other relevant explanation
M18. Type of data recorder device / method
M19. Data recorder device make
M20. Data recorder serial number
M21. Data recorder model number
M22. Data recorder units of measurement
M23. Frequency of data recording
M24. Additional data recorder info
M25. I am required to report my diversion or No storage data by telemetry as of the date this report is submitted
M26. I report my diversion or storage date by telemetry to the following website
M27. I have attached additional information on the method I used to calculate the volume of water
M28. Describe any documents related to this measurement device or method that are attached to this water use report

8. Conservation of Water
   a. Are you now employing water conservation efforts? Yes
      Describe any water conservation efforts you have initiated Ditch repair and maintenance
   b. Amount of water conserved
I have data to support the above surface water use reductions due to conservation efforts.

9. Water Quality and Wastewater Reclamation
a. Are you now or have you been using reclaimed water from a wastewater treatment facility, desalination facility, or water polluted by waste to a degree which unreasonably affects such water for other beneficial causes? No
b. Amount of reduced diversion
   Type of substitute water supply
   Amount of substitute water supply used
   I have data to support the above surface water use reductions due to the use of a substitute water supply

10. Conjunctive Use of Surface Water and Groundwater
a. Are you now using groundwater in lieu of surface water? No
b. Amount of groundwater used
   I have data to support the above surface water use reductions due to the use of groundwater.

Additional Remarks
This division is shared by 3 water users.

Attachments
<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Attachments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contact Information of the Person Submitting the Form
First Name | Brian
Last Name | Rice
Relation to Water Right | Diverter of Record

The information in the report is true to the best of his/her knowledge and belief Yes
Appendix C – Map of Existing Infrastructure and Habitat Improvement Projects
Figure 5 - Habitat Improvements

- Off channel habitat with LWD at 2 existing cutoff oxbows
- Rootwads on outside bends of eroded banks

LEGEND
- Proposed Habitat Improvements
- Proposed Conveyance
- Rivers and Streams
  - Open Ditch
  - Pipe
  - Tailwater
  - Berm
  - Slough
  - Other

RICE LIVESTOCK COMPANY

Scale: 1:18,000
1 inch = 3 miles
natural resource geospatial
davek@riverglobal.net
(510) 459-8846

45 Rice Livestock Company Site Plan Agreement – October 27, 2020