

**MEMORANDUM OF UNDERSTANDING**

**by and between**

**Emmerson Investments**

**and**

**CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE**

*This California Endangered Species Act Memorandum of Understanding ("CESA MOU") is made and entered into by and between Emmerson Investments, Inc. \_\_\_\_\_ (Landowner) and the California Department of Fish and Wildlife (hereinafter called the "CDFW").*

The purpose of this CESA MOU is to provide a framework for cooperative activities and studies that involve or address issues of importance to the Shasta River coho salmon (*Oncorhynchus kisutch*). This CESA MOU provides for take associated with actions taken by the CDFW and the Landowner to provide instream flows, monitor stream conditions and fish abundance, and to potentially rescue and relocate coho salmon as management activities under authority of Section 2081(a) of the California Fish and Game Code.

**RECITALS**

WHEREAS, the CDFW has jurisdiction over the conservation and protection of fish, wildlife, and native plants and their habitats and holds those resources in trust for the people of California (California Fish and Game Code Section 1802).

WHEREAS, coho salmon are classified as a threatened species by the State of California Fish and Game Commission pursuant to the California Endangered Species Act (CESA, California Fish and Game Code section 2050 et seq.).

WHEREAS, Fish and Game Code section 2080 prohibits the import, export, take, possession, purchase or sale of any species, in whole or in part, that has been listed as threatened or endangered by the California Fish and Game Commission. Take is defined in Fish and Game Code section 86 as 'hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill.' However, Fish and Game Code section 2081(a) allows CDFW to authorize take and other acts prohibited by Fish and Game Code section 2080 for scientific, educational, or management purposes. This CESA MOU authorizes a limited level of take of coho salmon for management purposes.

WHEREAS, on January 17, 2014 Governor Brown issued a proclamation declaring the state to be in an emergency due to the ongoing severe drought conditions.

WHEREAS, on April 25, 2014, Governor Brown issued an Executive Order directing the

CDFW to, in part, work with other state and federal agencies and landowners in priority watersheds to protect threatened and endangered species and species of special concern to maximize the beneficial uses of scarce water supplies, including employment of voluntary agreements to secure instream flows, relocate members of those species or take other measures.

WHEREAS conditions on Parks creek and other Shasta River tributaries have been effected by the 2014 drought, and may continue to deteriorate, such that sufficient instream flows to ensure the survival of listed juvenile coho salmon may require the addition of voluntary water inputs to the stream by the landowner. In addition, juvenile fish may need to be relocated to areas with more suitable conditions in the watershed to prevent mortality of those CESA-listed fish. Spawning ground surveys conducted by the CDFW in collaboration with biological staff from Emmerson Investments Inc., found that 47 salmonid redds were constructed in Parks Creek and the upper Shasta River, upstream of the confluence of Parks Creek, with 30 of those redds located in Parks Creek downstream of the confluence of Parks Creek and the slough formed by water conveyed from Bridge Field Springs and Black Meadow springs.

WHEREAS, Landowner owns real property adjacent to Parks Creek in the Shasta River watershed more particularly described as (Real Property) that is located near Bridge Field Springs and Kettle Springs.

WHEREAS, the Real Property is adjacent to the Parks Creek, which has suitable habitat for listed coho salmon. Landowner is willing to participate with the CDFW in providing instream flows and fish rescue and relocation activities, if necessary, by allowing access to the Real Property for the purposes of capturing and removing, or relocating juvenile coho salmon on or to Parks Creek adjacent to the Real Property.

WHEREAS, NOW, THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

#### **1. Methods**

CDFW or its agent will carry out all monitoring and fish capture and relocation activities in accordance with standard fishery practices. CDFW, or its agent, will notify Landowner, at least 24 hours in advance, at the telephone number listed below, of all planned monitoring and fish rescue/relocation activities it will carry out on the Real Property. Those activities may include:

Monitoring may involve one or more of the following activities:

- (1) Up and downstream snorkel surveys, where appropriate to determine where the fish are, and when they will need passage flows.
- (2) Use of traps (McBain traps or fyke nets) to monitor abundance and movement. Traps will need to be checked each morning to reduce potential impacts (delay in feeding, predation).
- (3) Once passage flows are implemented, information obtained from PIT tagged fish may help inform when fish have successfully moved into thermal refugia habitats suitable for over summering.
- (4) Monitoring of flow and water temperature conditions to allow adequate time to coordinate and assemble equipment necessary to conduct fish rescue operations prior to the point when

adverse water quality conditions (high temperatures) might decrease the effectiveness of those operations.

## **2. Landowner Commitments Regarding Fish Management Activities on the Real Property**

A. Landowner agrees to provide reasonable access to CDFW and its agents, including equipment access, to the Real Property to carry out any of the management activities listed in Section 1 of this CESA MOU for the purposes of:

- 1) Monitoring habitat conditions, including stream flow and water temperature, and coho salmon abundance, size, and condition prior to any management activities;
- 2) Capturing and removing coho salmon from and/or relocating fish to suitable habitat, and for monitoring conditions post-relocation; or

B. Landowner agrees to provide reasonable access over the Real Property to allow CDFW and its agents to either capture coho salmon or allow captured coho salmon to be placed in the Shasta River, adjacent to the Real Property. Landowner also grants access to the Real Property to CDFW and its agents to carry out the management activities described in this CESA MOU for the purposes of monitoring habitat conditions, possibly later capturing and removing fish from and/or relocating fish to suitable habitat, and for monitoring conditions post-relocation.

C. Specific Landowner Commitments: The Landowner shall carry out actions as described below:

- 1) Maintain adequate flows and instream conditions in Parks Creek from the confluence of the slough formed by water conveyed from Bridge Field Springs and Black Meadow to the confluence of Kettle Springs to ensure coho fry and juveniles have unimpeded passage opportunities to cold water refugia habitats through May 21, 2014. This to entail maintaining current flows (approximately 4 cfs) from the slough conveying waters from Bridge Field and other springs, through May 21, 2014 or until mean daily water temperatures begin to exceed lethal levels for coho salmon (24 °C, based on Sullivan et al. 2000), necessitating rescue and relocation efforts. Based on previous studies, we anticipate that juvenile coho will move toward cold water habitats once mean daily water temperatures reach about 20 °C. Maintain adequate flows to ensure redds within their property are inundated with moving water until alevins (emerging fry) are no longer observed downstream of redd locations. Based on our current understanding of emergence timing within the basin, we anticipate that emergence could end sometime between late April and early May.
- 2) Maintain unimpeded discharge from Kettle Springs through November 1, 2014, thus forgoing diversion from these springs. This Agreement is for this year and this year only

given the urgency and extent of the drought conditions and shall not be interpreted to and does not waive, relinquish, modify, abandon, forfeit, sever or change the Water Rights or any other water rights held by the owner.

- 3) Support fish rescue and relocation efforts, if necessary by
  - 1) Adjusting flows in an effort to support NMFS' and CDFW's rescue and relocation of fish. Flow adjustments may require the use of flashboard dams at Bridgefield Springs to reduce flows while rescue operations are underway.
  - 2) Allowing fish to be relocated to the river adjacent to their property and following III below or allowing fish to be rescued from the river adjacent to their property and relocated elsewhere, and allowing access for such activities and monitoring described in this agreement.
  - 3) Maintaining over-summering instream flows adequate (as defined by NMFS) for the survival of individuals.

### **3. Monitoring**

Monitoring by CDFW or its agents may involve one or more of the following activities:

- 1) Conducting snorkel surveys up and downstream of the location of the coho redds as appropriate to determine where the fish are, and when they will need passage flows.
- 2) Use of fishery sampling gear and equipment (McBain traps, fyke nets or seines) to monitor abundance and movement.
- 3) Monitoring of flow and water temperature conditions to allow adequate time to coordinate and assemble equipment necessary to conduct fish rescue operations prior to the point when adverse water quality conditions (high temperatures) might decrease the effectiveness of those operations.

### **4. Fish Rescue and Relocation**

**Methods:** CDFW or its agent will carry out any necessary fish capture and relocation activities in accordance with standard fishery practices. CDFW, or its agent, will notify Landowner, at least 24 hours in advance, to the telephone number listed below, of all planned monitoring and fish rescue/relocation activities it will carry out on the Real Property. Those activities may include:

- 1) Monitoring of habitat conditions in the Park creek and salmonid abundance, size, and condition prior to relocation of salmonids at risk, including coho salmon;
- 2) Upon determination that stream flow and temperature conditions for salmonids, including coho salmon, are deteriorating in the Parks creek watershed, or upon

reasonable projections of same, CDFW will capture and remove juvenile coho, from Parks Creek adjacent to Landowner's Real Property and relocate those salmonids to suitable habitat elsewhere in the watershed;

- 3) The landowner will work closely with CDFW and NMFS to identify suitable locations where rescued coho salmon could be placed to successfully rear over the summer period. CDFW, NMFS and the landowner have determined that the preferred alternative is to relocate juvenile coho salmon to the Parks Creek and Kettle Springs Creek confluence where cold water refugia exist. Through this MOU, the applicant has agreed to protect the Kettle Springs Creek cold water refugia. If adequate fish relocation areas are not available at or near the Parks Creek and Kettle Springs Creek, CDFW will work with other landowners to identify suitable locations where rescued coho salmon could be relocated.
- 4) Monitoring stream depth and temperature at relocation site(s) post-relocation to determine if conditions remain adequate to keep salmonids alive and provide for salmonid passage.

## **5. Authorized Take Level**

**Coho salmon:** Juvenile fish mortalities related to, or occurring in the course of the landowner providing and maintain sufficient instream flows in the specified section of Parks Creek as specified in this MOU, or in the course of fish rescue activities is authorized. The number of coho salmon which may die in the course of fish capture and relocation activities conducted by CDFW is typically small (less than 10%) and is much-reduced from levels of mortality that will potentially occur in absence of carrying out this activity.

## **6. Federal Endangered Species Act**

The Southern Oregon Northern California coho salmon is listed as a threatened species under the federal Endangered Species Act (ESA) of 1973. CDFW has a permit from the National Marine Fisheries Service (NMFS) that allows CDFW, its employees and its designees to perform the rescue activities listed in Section 1 above, should they need to occur. Landowner is not expected or authorized to assist in the handling of coho salmon as a part of any fish rescue effort. Nothing in this CESA MOU authorizes any action pursuant to the federal ESA.

## **7. Effective Date and Termination**

Unless terminated sooner by either party of the CESA MOU by giving thirty (30) days prior written notice of earlier termination, this CESA MOU shall commence on the date of execution and will terminate on December 31, 2014 both days inclusive.

## **8. Amendments**

Amendments to this CESA MOU may be proposed by either party and shall become effective when both parties sign a written modification to this document.

**9. Disclaimer**

The CDFW shall incur no fiscal obligation under this CESA MOU.

**10. Authority**

The undersigned represents that they have the authority to, and do, bind the person or entity on whose behalf and for whom they are signing this CESA MOU.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE EXECUTED THIS CESA MOU TO BE IN EFFECT AS OF THE DATE LAST WRITTEN BELOW.

EMMERSON INVESTMENTS, INC.

By 



Neil Manji, Regional Manager,  
Northern Region

Date: 5/14/2014

Phone Number: (530)378-8000

Street address:

California Department of  
Fish and Wildlife  
601 Locust Street  
Redding CA 96001

Date: 5/14/2014

Neil.Manji@wildlife.ca.gov