French Creek Ranch Request for an Individual Cooperative Solution

May 5, 2024

Introduction:

This is a request for an Individual Cooperative Solution (ICS) for the French Creek Ranch (Michael and Betsy Stapleton) as allowed under provision CCR 875(f)(4)(C of the Scott-Shasta Drought Emergency Regulation. We are requesting an individual cooperative solution that takes the form of a binding agreement between an individual diverter (Stapleton) and CDFW to perform actions for the benefit of anadromous salmonids, and CDFW makes a recommendation for exemption from curtailment based on an assessment that the benefits of these actions in a specific time period are equal to or greater than the protections provided by their contribution to flow over the same specified time period.

We are asking to use the terms and conditions of our 2024 LCS application, as it demonstrated a 68% reduction in water use over baseline, as well as many ancillary habitat restoration and monitoring efforts that provide benefit to fisheries that is 100% or better than what would be achieved with curtailment. In spite of what is looking like a reasonably good water year, we are applying for an LCS and will abide by its terms, believing that careful water and habitat management can lead to long term sustainability of both ecological and human benefits. The specific actions undertaken by the French Creek Ranch for the benefit of salmonids starting in 2020 are described below. Those actions highlighted in yellow are the new actions undertaken in 2024 or anticipated for 2025.

Irrigation Improvements, water management, and soil moisture management since 2020:

We started our water conservation efforts in 2020 by the installation of a center pivot to replace a very inefficient traveler big gun system. On-going investments in irrigation water efficiency and reduction in water use culminated with the installation of a second pivot in April 2022. The sum of our long-term investment in irrigation efficiency shows a substantive reduction of approximately 40% in water use. Our water use reduction started in 2020, offering benefit in that drought year and prior to any regulatory pressure to do so. We used the following methodology to evaluate our total water use reduction over baseline.

a. Prior to 2020 we utilized our adjudicated water right of 0.32 CFS[1] until first priority status was reached, and then 0.11 CFS for the rest of the season[2]. We estimate that 1st priority status was reached at 9/1. Therefore total use over the season was 103 acre feet[3]. See 2019 Bascase in Attachment 1 for calculations (provided in 2024 and available upon request).

b. In 2024, we used 32.73 acre feet (refer to 2024 reports submitted to CDFW and State Waterboard), actualizing a 68% reduction over baseline. We anticipate a similar level of water use based on the terms of this LCS application in 2025.

Additional Detail on Irrigation Water Efficiency Actions:

1. The 2020 installation of a center pivot irrigation system that reduced water usage by 22.44% over 8 acres, of our total 15 irrigated acres, per the water savings tool calculator (Attachment 2: French Creek Ranch water savings calculator, submitted previously). The actual reduction was greater as the reduction calculated in this tool was based on a comparison to a wheel line (which we were not using, but the calculator tool did not have as an option the traveler and a wheel line was the closest approximation), whereas we were actually using the traveler big gun, which used considerably more water than a wheel line. The reductions calculated above in the first section of this document are actual, but the water savings tool calculator is shown as an item of interest. The pivot is a new and improved “wobbler” irrigation sprinkler head technology that provides more uniform water distribution, delivered under lower pressure and utilizing larger, but fewer water droplets that are less prone to evaporation and wind drift, thereby reducing total usage over previous irrigation head designs of older pivots used by many in the valley. The “end gun” is a low pressure device which has less water evaporation and wind drift compared to conventional high pressure end guns. Not completely pertinent to water conservation, but perhaps of interest, the

[1] Please note that all flow rates are averaged over 24 hrs and may have variations as the pump ramps up and or slows down, or electric demand on the grid changes which can result in slight variations in pump pressure with resulting flow variations.

[2] If the actual date of first priority was reached later, total use would be slightly higher and if reached earlier, total use would be slightly lower.

[3] Total acre feet is a weighted average representing use over the entire season.

pivot installation was associated with the installation of a solar power system which has made our irrigation system carbon neutral.

2. Associated with the installation of the above center pivot, soil moisture meters were installed to guide water application for the highest efficiency. Also installed was an in-line flow meter in order to accurately measure to 1/100 of a CFS our actual water usage.
3. A second center pivot was installed on 4/20/22 to cover an additional 3 acres with a similar reduction of water use. Associated with the pivot is a fully automated cloud connected weather station with additional soil moisture sensors to refine and guide water application. We funded ~70% the cost of this total project, with emergency drought funding from the National Resource Conservation Service (NRCS) covering ~30% of the cost. As part of the NRCS practice, we will be generating and submitting irrigation management reports to NRCS for the next 5 years.
4. Flow rate reduction from surface diversion rate to groundwater rate will be accomplished by a change in irrigation nozzles on k-line pods, pivots, and irrigation guns that physically restrict the flow rates. *In 2024, we used the smaller nozzles for the entire irrigation season, resulting in even greater water conservation. While this resulted in a lower crop production, it was still acceptable.*
5. We will cease irrigation on 9/15/2024.
6. In spring of 2022, compost, compost and biochar, and biochar alone were applied to a portion of the pasture to improve soil moisture retention, thereby further reducing water demand. The application was undertaken as part of an NRCS Conservation Innovation Grant (CIG) project to investigate the applicability and extent of benefits of the compost/biochar conservation practice. If the practice is determined to be cost-efficiently beneficial it will be incorporated into a statewide NRCS practice and have large-scale impacts.
7. We keep a ~4” residual height on our post grazing/haying grass height in order to improve soil organic mass with associated water retention capability.
8. We have negotiated the terms of the renewal of our Lake and Streambed Alteration Agreement (LSAA) agreement for a diversion that requires a minimum 90% bypass flow at all times and includes resource protection

measures that ensure that our management of the instream diversion infrastructure minimizes any risk to salmonids.

9. We will forgo surface water use when the drought emergency regulation is in effect and/or when French Creek is in first priority status (assuming written notification of such by the Scott Shasta Watermaster District-SSWD) as a drought mitigation measure. We will switch to groundwater use at that point. This is the known "conjunctive use" strategy for preservation of surface flow in late season.
10. We maintain compliance with our Regional Water Board TMDL compliance waiver document.
11. While installed prior to 2020, we have two solar stock water systems that do not require winter/spring/fall surface water diversion and are highly efficient.
12. We have a total of 7 different locations in the fields with soil moisture meters to maximize location specific water application. In 2024 we deepened our use of the moisture meters to determine irrigation application frequency.
13. We have applied for the installation of water meters for both surface and groundwater that have cellular transmission capability and will have data posted to a website that regulatory entities have access to. We received notification of funding and the goal is to get them installed prior to the start of the 2025 irrigation season.

Ecological restoration actions undertaken for the benefit of salmonids.

We have been highly active restoration partners both on French Creek Ranch and across the watershed. The benefits of our actions have more than offset the impact of our minimal water use. The positive impacts of our actions are of particular importance due to the location of French Creek Ranch on mid-French Creek, which, as is widely known, is a critically important reach of a key Coho spawning and rearing tributary of the Scott River. Many of our restoration actions enumerated below were initiated prior to 2020, however the benefits extend, and possibly compound, into the period under discussion.

1. The 2017 installation of BDAs in a naturally occurring side-channel that has supported the over-winter utilization by juvenile Coho Salmon with superior growth as compared to unrestored habitats (Attachment 4:

French Creek Side Channel BDA Ponds – Catch Summary – April 26 and May 4, 2021).

2. The 2018 Installation of "French Creek Instream and Off Channel Enhancement Project". This project consisted of the installation of a side-channel habitat, the installation of three engineered log-jams in the main French Creek channel and the introduction of spawning gravel. The sum total impact of these actions has benefited all life stages of Coho as documented in the project Report. Improvement of conditions for Coho from this project extends into the present and into the foreseeable future.
3. The 2019 installation of large wood and gravel into the lower extent of the "BDA side channel", resulting in extensive use by spawning adult Coho and both over-wintering and over-summering juvenile Coho (Attachment 5: MidFrenchCreek_LowerMinersCreek spawning map). This map shows year over year increases in Coho Redds in the side channel and generally across mid-French Creek, indicating the compounding beneficial impact of restoration undertaken in Mid French Creek as a result of our efforts.
4. Engineered Log Jams, introduction of more spawning gravel, the activation of a latent high flow channel, the removal of invasive riparian vegetation and the planting of native species. This was ccompl;ted in 2023 and an additional phase will be implemented in 2024
5. On-going restoration physical and biological monitoring performed by the Scott River Watershed Council under the direction of Principal Investigator Michael Pollock, PhD, NOAA Northwest Science Center. Biological monitoring has included spawning ground surveys, juvenile snorkel surveys, mark and recapture surveys, and passive array PIT Tag monitoring with associated biometric data. A summary report is currently in prep with anticipated release in early 2023. Physical monitoring consists of extensive ground and surface water elevation monitoring, water quality monitoring (temperature) and stream flow monitoring.
6. Support for beaver populations on the property with riparian planting, caging of high value large stream-shading cottonwood trees to mitigate their negative impacts. The important beneficial impact of the beaver dams for stream conditions and Coho on French Creek Ranch has been documented (Attachment 6: Beaver Dam Effects on Water Surface Elevation).

7. Riparian planting has resulted in increased streamside trees and shade, and a Scott River TMDL waiver criteria. The last round of planting, consisting of 57 cottonwood poles and 57 willow bundles was undertaken in the spring of 2021. In addition to riparian shade (and habitat for birds and other terrestrial species), the vegetation will reduce erosion and sediment delivery to French Creek during high flows and flood events.
8. Our upland management practices have potential indirect positive effects on instream conditions. We have performed thinning on our upland 20 acres to reduce stem counts and favor larger diameter trees, thereby reducing tree soil moisture demand, improving run off and reaching optimum canopy cover for snow to reach the ground (avoiding sublimation off of the tree tops), but sufficient shade to reduce melting. We have performed a prescribed burn on ~7 acres, with an additional ~5 acres prepared for burning when it comes into a burn prescription this year, with additional acreage in future years. The combination of thinning and prescribed burning reduces the risk of catastrophic wildfire reaching French Creek and harming the vitally important Coho habitat it supports. This has been a personal project.
9. In 2024, two new restoration projects were installed in French Creek on FRC or on the adjacent Miners Creek Ranch, with a total of 9 Engineered log jams, supplementation of spawning gravel and extensive riparian planting.
10. In 2024, the Scott River Watershed Council received funding for the development of a comprehensive restoration plan for the MCR and FCR reach, which will result in 1.1 miles of restoration.
11. In 2024, we allowed extensive fish and water monitoring which informed French Creek resource management decisions.
12. Less tangible, and without quantifiable results, is the impact of our participation in restoration in French Creek and across the region. While perhaps not eligible to be formally included in the calculation of the offset of water use impacts, it should, in our estimation, be considered. A brief description of these actions includes:
    a. Our continued commitment to, and participation in, active physical restoration in French Creek, Michael's service, past (over 10 years) and on-going, on the Scott Groundwater Advisory Committee.

b. Michael's 8 years of service on the Scott Shasta Watermaster Service.
c. Betsy's 10 years of service on the Scott River Watershed Council Board of Directors as Board Chair
d. Betsy is now the French Creek Restoration Project Project Manager.

Our specific request is that we be allowed to continue to irrigate even when the Scott Curtailment is in effect under the following terms:

1. Prior to French Creek reaching first priority status, we use surface water in our highly efficient pivot systems on 85% of our irrigated acres and existing other sprinkler systems on the residual acreage.
2. When we are notified in writing by the SSWD that French Creek stream flow for all users has reached first priority status, and/or the State Water Board removes the suspension of the Scott Curtailment, we will cease surface diversion and utilize groundwater at a rate not to exceed an averaged 100 gallons per minute, as measured and documented by our taking weekly pictures of the installed in-line flow gauge.
3. The sum total of these actions will result in a water savings of at least approximately 40% over baseline.
4. We will take photos at every irrigation set change with flow rate and cumulative acre feet of water documented. Photos available upon request by CDFW. If funding is received in time, we will install remote access flow meters available to regulatory agencies (as appropriate).

The sum total of the benefit of our highly efficient agricultural water management, ecological restoration, and community volunteer restoration commitment has resulted in improvement to Coho habitat and populations that far outweighs that impact of our small agricultural water use. We have undertaken these actions because of our principles, not because of regulatory pressure. We request that the value of these actions should be acknowledged by CDFW, State Waterboard and NOAA with the issuance of an ICS.

French Creek Ranch Request for an Individual Cooperative Solution

May 5, 2024

Michael and Betsy Stapleton

Referenced attachments and documents available upon request

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Northern Region
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

CONSERVATION ACTIONS, BINDING AGREEMENT, AND RECOMMENDATION FOR LOCAL COOPERATIVE SOLUTION

The following binding agreement regarding a local cooperative solution (LCS) is entered into between the California Department of Fish and Wildlife (CDFW) as Coordinating Entity, and the French Creek Ranch (Landowner)(together, the Parties) pursuant to Section 875(f)(4)(C)(ii) of the 2025 Drought Emergency Regulation for the Scott River and Shasta River Watershed (2025 Drought Emergency Regulation).[1] Landowner and CDFW hereby agree to the following:

RECITALS

A. Under the 2025 Drought Emergency Regulation establishing drought emergency minimum flows in the Scott River and Shasta River watersheds and associated curtailment of water diversions, local cooperative solutions (LCSs) by individuals or groups may be proposed by petition to the SWRCB Deputy Director for the Division of Water Rights (SWRCB Deputy Director) as an alternative means of reducing water use to meet or preserve drought emergency minimum flows, or to provide other fishery benefits (such as cold-water refugia, localized fish passage, or redd protection), in lieu of curtailment.

B. Section 875(f)(4)(C)(ii) provides for an individual LCS where CDFW makes a recommendation for an exemption to curtailment based on an assessment that the benefits of the actions to anadromous fish in a specific time are equal to or greater than the protections provided by curtailment of the petitioners' water diversion.

C. Section 875(f)(4)(C)(ii) requires that the diverter(s) enter into a binding agreement with a coordinating entity to perform actions for the benefit of anadromous salmonids.

D. Landowner has requested that CDFW serve as the coordinating entity.

[1] California Code of Regulations, title 23, sections 875–875.9.

SECTION 1 PROPOSED LOCAL COOPERATIVE SOLUTION AND CONSERVATION ACTIONS

On February 6, 2025, the French Creek Ranch proposed an LCS that includes and further supplements actions for the benefit of anadromous salmonids pursuant to an existing Lake and Streambed Alteration Agreement (No. 1600-2016-0172-R1) executed on August 26, 2016 (LSAA)(Exhibit B), and a Regional Water Board total maximum daily load (TMDL) compliance waiver document (TMDL waiver)(Exhibit C).

The LSAA and TMDL waiver are incorporated herein by reference to this agreement. Landowner shall comply with the LSAA and TMDL wavier requirements. Additionally, Landowner shall coordinate with NOAA Fisheries, the SWRCB, the Regional Water Board, and CDFW to develop cooperative mitigation to balance ranch management and obligations to the LSAA and TMDL waiver.

This proposed LCS provides additional voluntary conservation actions that include irrigation efficiencies and foregoing surface water diversion, as follows:

1. Prior to French Creek reaching first priority status, Landowner will irrigate 85% of their acreage with surface water utilizing a highly efficient pivot system. Remaining acreage will be irrigated using existing less-efficient sprinkler systems.

2. When notified in writing by the Scott Valley and Shasta Valley Watermaster District (SSWD) that French Creek stream flow for all users has reached first priority status, and/or the State Water Board removes the suspension of the Scott Curtailment, Landowner will cease surface diversion and utilize groundwater at a rate not to exceed an averaged 100 gallons per minute, as measured and documented by weekly photos of the installed in-line flow gauge.

3. The sum total of these actions will result in water savings of approximately 40% over baseline.

4. Landowner will photo document, monthly, the flow rate and cumulative acre feet of water.

As part of this binding agreement, Landowner is required to adhere to the above proposed conservation actions.

SECTION 2 CDFW DETERMINATION OF EQUAL OR GREATER ACTION FOR THE BENEFIT OF ANADROMOUS SALMONIDS

CDFW has determined that this LCS provides equal to or greater actions for the benefit of anadromous salmonids compared to the protection provided by Landowner's contribution to flow described in section 875, subdivision (c)(1). The cumulative Landowner conservation actions represent obligations above prior commitments and provide instream benefits appropriate to this drought emergency. In addition, Landowner conservation actions under the LSAA include significant French Creek habitat improvements including beaver dam analogs, riparian planting, and channel restoration for fish passage. The Landowner is active in community conversations and contributes to surface and groundwater conservation for beneficial users and shares important data to inform future watershed improvement efforts. CDFW is recommending an exemption to curtailment for the French Creek Ranch based on the following:

1. The instream contributions defined in items 1-3 above in consideration of Landowner's full portfolio of water rights;

2. The cumulative additional benefits of Landowner's conservation agreements and orders described above, including the LSAA and TMDL waiver; and

3. A commitment in this LCS to coordinate with NOAA Fisheries, the SWRCB, the Regional Water Board, and CDFW to develop cooperative mitigation to balance ranch management and obligations to the LSAA and TMDL waiver document.

Landowner has prepared a petition to the SWRCB in consideration of this agreement (Petition) (Exhibit A). CDFW, as coordinating entity, has reviewed the Petition and agrees that the Petition accurately reflects, and is not in conflict with, any provisions in this LCS.

SECTION 3 TERM

This agreement is valid while the 2025 Drought Emergency Regulation remains in place. By signature, both parties agree and memorialize CDFW as the coordinating entity for this LCS.

SECTION 4 MONITORING AND REPORTING

4.1: CDFW representatives will exercise CDFW's monitoring obligations defined in the LSAA and this LCS.

4.2: Written irrigation logs for water dedication and any photos, checklists, and other documentation for the conservation actions incorporated by reference will be transmitted by the Landowner via email to the Klamath Watershed Program at klamathwatershed@wildlife.ca.gov and to the site inspector stephanie.houtman@wildlife.ca.gov. This information for each month shall be transmitted by the 7th of each month.

4.3: CDFW will submit the information regarding the verification materials and actions described in this agreement to the SWRCB monthly for the purposes of verifying compliance with this LCS.

SECTION 5 ACCESS

5.1: For the duration of this agreement, Landowner shall give CDFW and CDFW agents the right to reasonably access the included parcels for the limited purpose of verifying execution of the conservation actions. Any individual not directly employed or contracted by CDFW shall provide a minimum of 24 hours advance notice to the Landowner and shall obtain approval from the Landowner prior to entering the French Creek Ranch.

5.2: CDFW will strive to notify Landowner a day in advance of visiting the French Creek Ranch and shall provide Landowner or a designee the ability to participate in the monitoring inspection.

SECTION 6 AMENDMENT

It is recognized that as the irrigation season unfolds, there may be reason to change the terms of this agreement regarding its implementation and verification. Any such changes to this agreement will need to offer continued compliance with the 2025 Drought Emergency Regulations and shall be agreed upon by both parties and approved by the SWRCB.

SECTION 7 TERMINATION

This agreement may be terminated by either party with 30 days notice. CDFW will only terminate the agreement if Landowner is not cooperating with the terms of this agreement (e.g., is not providing access, is not reporting, etc.). Both parties agree to take reasonable measures to resolve any concerns related to performance of this agreement, negative human interaction, or any other unforeseen circumstance prior to invoking termination.

SECTION 8 ADDITIONAL FUNDING

This agreement is not intended to preclude or otherwise interfere with Landowner's ability to secure any funding to mitigate the financial impacts imposed by the emergency regulation or proposed conservation practices. CDFW supports use of funding programs to ameliorate the costs of implementing the conservation practices described in the proposed conservation plan. Planning and cooperation under a voluntary LCS should not undermine the ability to receive such funding.

SECTION 9 REPRESENTATIVES

All inquiries may be directed to the following representatives:

California Department of Fish and Wildlife
Crystal Robinson
crystal.robinson@wildlife.ca.gov
530.340.0767

French Creek Ranch
Michael and Betsy Stapleton
[redacted]

Landowner and CDFW shall inform each other in writing of any changes to representatives.

SECTION 10 TRANSMITTAL OF COPIES

The Landowner shall include one signed copy with its Petition to the SWRCB, return one signed copy to CDFW, and retain a signed copy of this agreement and the LSAA conservation plan readily handy at its residence in the event any questions arise for either party during implementation or monitoring.

EXHIBITS

Exhibit A – Petition to the SWRCB
Exhibit B – Lake and Streambed Alteration Agreement (No. 1600-2016-0172-R1)
Exhibit C - Regional Water Board total maximum daily load (TMDL) compliance waiver

Authorized Landowner Signature

_____Date signed:

Authorized Cooperating Entity Signature

_____Date signed:
CDFW Regional Manager, Northern Region 1