

Kohl Creek Angus

Munson Family

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May 12, 2022

State Water Resources Control Board

1001 I Street

Sacramento, CA 95814

RE: Local Cooperative Solution – Scott River – Kohl Creek Angus (Munson) – Fawaz Farming, coordinator

To: State Water Resources Control Board

This letter is to affirm the commitment of Kohl Creek Angus to voluntarily reduce the volume of ground water used for irrigation in 2020 by 30% in 2022 as further defined in this letter and the attached documents as an application for a Local Cooperative Solution pursuant to section 875, subdivision (f)(D) of the regulation. The irrigated acreage operated by Kohl Creek Angus is 165 acres. Because Kohl Creek Angus operates less than 400 acres we seek to coordinate with Fawaz Farming, our custom haying provider.

Kohl Creek Angus: Kohl Creek Angus is a cattle ranch with owned property in Scott Valley. Approximately 165 acres that grow alfalfa hay, alfalfa-grass hay, grain hay in rotation and pasture. Grain hay is rotated into the field on a 6-7 year cycle with the remaining years being in alfalfa or alfalfa-grass. The pasture is permanent. Sufficient groundwater has always been available to irrigate all our acreage throughout the irrigation season regardless of the year.

The Kohl Creek Angus property is not rectangular, square or circular – the attached map shows the actual shape. Because of the shape, different types of irrigation have been implemented to provide coverage of the 165 acres. Historically pivot, wheel line and flood irrigation have all been used on the operation. The field map is part of the Siskiyou County restricted materials permit and gives the best coordinates for the ranch location. This operation does have a surface water irrigation right out of the Scott River but chooses to use a groundwater well. We will not

be using the surface water right to supplement or offset the reduction in use of the groundwater.

Historically the operation has harvested 4 cuttings of alfalfa/alfalfa-grass or one cutting of grain hay depending on the rotation year. The ranch is irrigated with one 6 tower -1200 ft center pivot, two wheel lines consisting of 52 sprinkler heads and flood irrigation on parts of the pasture.

The attached spread sheet gives the reduction calculated to reduce usage by greater than 30% over the 2020 usage. The 80 acre rotation of alfalfa to grain hay and the reduction of nozzles on the 52 sprinkler heads for the wheel lines and to only irrigate grain hay until June and alfalfa until mid-August 3rd cutting is complete will meet the reduction requirements.

Conservation Efforts:

- Crop rotation – 80 acres of alfalfa has been rotated to grain hay.
- Reduced Cuttings – historically 4 cuttings of alfalfa/alfalfa-grass – reduced to 3 in 2022.
- Irrigation efficiencies – 52 sprinkler heads reduced from 3/16 to 11/64.
- Summer/Fall forbearance – In 2022 grain hay will be irrigated as needed through June only and alfalfa/alfalfa-grass through mid-august.

These conservation efforts can be verified on inspections conducted by the coordinating entity, hopefully scheduled because we do use pesticides from time to time and those products have restricted entry protocols. As a partner in our family operation, I, Cliff Munson will be the contact person for this LCS. I can be reached by mail or the phone number listed above and by email at [REDACTED]

BINDING AGREEMENT



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



GROUNDWATER USE REDUCTION AND BINDING AGREEMENT FOR LOCAL COOPERATIVE SOLUTION

BACKGROUND

Under the 2021 drought emergency regulation establishing drought emergency minimum flows in the Scott River and Shasta River watersheds,¹ local cooperative solutions (LCS) by individuals or groups may be proposed by petition to the 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.

RECITALS

1. Section 875(f)(4)(D) of the drought emergency regulation provides a specific type of LCS that was determined to be sufficient for approval by the Deputy Director;
2. For overlying or adjudicated groundwater diversions for irrigated agriculture described in section 875.5(f)(4)(D)(i) – (ii) [Scott River], the Deputy Director may approve a groundwater basin-wide, groundwater sub-basin-wide, or any number of individual local cooperative solutions totaling at least 400 irrigated acres where:
 - (i) The proposal is based on a binding agreement. “Such binding agreement may be made with a Coordinating Entity with the expertise and the ability to evaluate and require performance of the agreement, for example with the California Department of Fish and Wildlife (CDFW), the National Marine Fisheries Service, the Scott Valley and Shasta Valley Watermaster District, a non-profit organization with expertise and experience in water-saving transactions, or similar qualified entity. “
 - (ii) For the Scott River: “The proposal provides at least: 1) a net reduction of water use of 30 percent throughout the irrigation

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

season (April 1 – October 31), as compared to the prior irrigation season; and 2) a monthly reduction of at least 30 percent in the July 1 through October 31 period, as compared to the prior year or to 2020. Such reduction may be demonstrated by evidence that provides a reasonable assurance that the change in farming practice or other action results in at least the relevant proportionate reduction. Such evidence may include, but is not limited to: pumping reports; actions that will be taken to reduce water use; estimation of water saved from conservation measures or changes in irrigation or planting decisions; and electric bills.”

PROPOSED LOCAL COOPERATIVE SOLUTION

On May 12, 2022, Cliff Munson dba Kohl Creek Angus (Landowner) proposed an LCS authorized by 23 CCR §§ 875(f)(4)(D) of the regulation for the 2022 irrigation season. It includes a final conservation plan, narrative, and spray maps incorporated by reference. The proposal uses the year 2020 as the baseline; it includes detailed spreadsheets and a narrative that describes crop rotation, reduced crop cuttings, enhanced irrigation pivot efficiencies, and a summer/fall irrigation forbearance plan. The specific conservation practices within the narrative offer concise and appropriate monitoring elements enabling the California Department of Fish and Wildlife to assume the role of a Coordinating Entity to implement a binding agreement described in “i” above. The mathematically calculated conservation plan accounts for a net reduction of approximately 36.2% to meet the requirement described in item “ii” above.

This proposal does not include the minimum 400 acres required under the emergency regulation, but this agreement is being entered in conjunction with Fawaz Farming’s Local Cooperative Solution with the understanding that their added acres are under a separate binding agreement. As such, the total enrolled acreage exceeds the 400-acre minimum for State Water Resources Control Board (State Water Board) approval.

TERMS OF BINDING AGREEMENT

The Landowner is required to adhere to the proposed conservation plan, as submitted to CDFW and approved by the State Water Board. The Landowner has requested that CDFW serve as the coordinating entity. The Landowner and CDFW agree to the following:

- For the duration of this binding agreement where CDFW is the coordinating entity, the 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 plan. Any individual not directly employed or contracted by CDFW shall provide pre-notification to, and shall obtain approval by, the Landowner.

- CDFW will strive to notify the Landowner a day in advance of visiting the parcels and shall provide the Landowner or a designee the ability to participate in the monitoring inspection.
- It is anticipated that CDFW representatives will visit the property approximately twice per month. A monitoring inspection may include verification of any or all the actions described in the conservation plan and may include inspection checklist/notes/report and photo verification.
- Any written irrigation log, photos, logs, checklists, and other documentation described under the conservation plan or incorporated by reference will be transmitted by the Landowner via email to the Klamath Watershed Program at klamathwatershed@wildlife.ca.gov. This information for each month shall be transmitted within the first 7 calendar days of each calendar month.
- CDFW will submit the Information regarding the verification materials and actions described in this agreement, and conservation plan incorporated by reference, to the State Water Board upon request, for the purposes of verifying compliance with the LCS.
- This binding agreement is not intended to preclude, harm, or otherwise interfere with the 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.
- This binding agreement may be terminated by either party with 30 days' notice. The Coordinating Entity will only terminate the agreement if the Landowner is not cooperating with the terms of this binding 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 the conservation plan, negative human interaction, or any other unforeseen circumstance prior to invoking termination.

- It is recognized that as the irrigation season unfolds, there may be reason to change the terms of the conservation plan or this agreement regarding its implementation and verification. Any such changes to the conservation plan or binding agreement will need to offer continued compliance with the drought emergency regulations and shall be agreed upon by both parties as well as the State Water Board.

Contact Information	
California Department of Fish and Wildlife Carmen Tull klamathwatershed@wildlife.ca.gov 916.203.1947	Kohl Creek Angus Cliff Munson <div style="background-color: black; width: 100px; height: 15px; margin-top: 5px;"></div> <div style="background-color: black; width: 100px; height: 15px; margin-top: 5px;"></div>

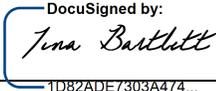
This Binding Agreement is valid while the current drought emergency regulation is in place. By signature, both parties agree and memorialize CDFW as the Coordinating Entity for this binding agreement. The Landowner shall include one signed copy with its petition to the SWB, return one signed copy to CDFW, and retain a signed copy of this binding agreement and have the conservation plan readily available at its residence in the event any questions arise from either party during implementation or monitoring.

Authorized Landowner Signature:

Sign Here:

Date Signed: 6/30/2022

Authorized Coordinating Entity Signature:

Sign Here:

Date Signed: 6/29/2022

SUPPORTING INFORMATION



Siskiyou County

Permit Number: 474646R

The Island Map

Created On: 3/17/2022

Operator: Kohl Creek Angus



Included Sites: 1-01, 1-02, 1-03



SPRINKLER IRRIGATION— APPLICATION RATES AND DEPTHS

by Thomas W. Ley, Extension Irrigation Engineer, WSU Prosser

Procedure

1. Measure sprinkler pressure (psi) using Pitot gauge. Hold gauge in center of jet no more than 1/8" from nozzle face.
2. Measure sprinkler discharge (gallons per minute) using a 5-gallon bucket, hose, and watch. Sprinkler gpm equals 300 divided by time (seconds) to fill 5-gallon bucket. For 2-nozzle heads, measure both.
3. Record nozzle size(s) and check nozzles for wear by inserting shank end of a new drill bit (same size as nozzle) into operating sprinkler. Observe any leakage or spray (amount and distance). Fine-to-coarse spray up to 10 to 15 feet from head may mean at least 15% nozzle wear or 15% more water being discharged.
4. Repeat steps 1, 2, and 3 for at least 3 sprinklers (beginning, middle, and end) on hand, wheel, and permanent systems to get average for lateral. Do same for center pivot, and record sprinkler number.
5. Measure sprinkler spacing on lateral (ft) and lateral spacing on mainline (ft) for handlines, wheel-lines, and permanent systems. Determine total

area irrigated and design or actual gallons (gpm) for center pivots.

6. Compare measured data (nozzle size, pressure, and gpm) with theoretical data in Table 1. Measured discharge vs discharge in Table 1 (at same nozzle size and pressure) indicates amount of nozzle wear. If nozzles are new and pressure is known, use Table 1 to find discharge of sprinkler. For pivots, compare sprinkler number and measured data with pivot design package to determine if pressures and discharges are correct.
7. Average gross application rates for different sprinkler gpm and spacings are given in Table 2. For other spacings or gpm use:

$$\text{Gross Application Rate (inches/hour)} = \frac{\text{GPM} \times 96.3}{\text{sprinkler spacing} \times \text{lateral spacing}} \quad (\text{or area irrigated, sq ft})$$

Example: 6 gpm heads on 40 x 60 spacing

$$\text{Average Gross Appl Rate} = \frac{6 \times 96.3}{40 \times 60} = 0.24 \text{ in/hr} \quad (\text{or use Table 2})$$

Table 1. Sprinkler discharge gpm (gallons per minute) for nozzle size (inches) and pressures (psi) (pounds per square inch).

psi	Nozzle Size (in)										
	3/32	7/64	1/8	9/64	5/32	11/64	3/16	13/64	7/32	15/64	1/4
20	1.17	1.60	2.09	2.65	3.26	3.92	4.69	5.51	6.37	7.32	8.34
25	1.31	1.78	2.34	2.96	3.64	4.38	5.25	6.16	7.13	8.19	9.32
30	1.44	1.95	2.56	3.26	4.01	4.83	5.75	6.80	7.86	8.97	10.21
35	1.55	2.11	2.77	3.50	4.31	5.18	6.21	7.30	8.43	9.69	11.03
40	1.66	2.26	2.96	3.74	4.61	5.54	6.64	7.80	9.02	10.35	11.79
45	1.76	2.39	3.13	3.99	4.91	5.91	7.03	8.30	9.60	10.99	12.50
50	1.85	2.52	3.30	4.18	5.15	6.19	7.41	8.71	10.10	11.58	13.18
55	1.94	2.64	3.46	4.37	5.39	6.48	7.77	9.12	10.50	12.15	13.82
60	2.03	2.76	3.62	4.50	5.65	6.80	8.12	9.56	11.05	12.68	14.44
65	2.11	2.88	3.77	4.76	5.87	7.06	8.45	9.92	11.45	13.21	15.03
70	2.19	2.99	3.91	4.96	6.10	7.34	8.78	10.32	11.95	13.70	15.59
75	2.27	3.09	4.05	5.12	6.30	7.58	9.08	10.66	12.32	14.19	16.14
80	2.35	3.19	4.18	5.29	6.52	7.84	9.39	11.02	12.74	14.64	16.67
85	2.42	3.29	4.31	5.45	6.71	8.07	9.67	11.35	13.11	15.10	17.18
90	2.49	3.38	4.43	5.61	6.91	8.31	9.95	11.69	13.51	15.53	17.68
100	2.62	3.57	4.67	5.91	7.29	8.76	10.50	12.32	14.23	16.37	18.64
110	2.75	3.74	4.89	6.19	7.63	9.24	11.00	12.90	14.97	17.17	19.55
120	2.87	3.91	5.10	6.46	7.97	9.65	11.48	13.47	15.63	17.93	20.42
130	2.99	4.07	5.31	6.72	8.30	10.04	11.95	14.02	16.27	18.66	21.25

Note: Figures given are approximate maximum discharge rates for given nozzle size and pressure.