

Bob Daws Ranch



April 24, 2022

State Water Resources Control Board
1001 I St.
Sacramento, CA 95814

RE: 2022 Local Cooperative Solution

The Bob Daws Ranch is providing this letter to further describe its proposed Local Cooperative Solution (LCS) actions for the 2022 irrigation season as authorized by 23 CCR 875(f)(4)(D).

Current Practices

We irrigate 151 acres of which, 105 acres is alfalfa for hay, 40 acres is grass alfalfa for hay, and six acres is grain for hay. There is no access to surface water for irrigation. Irrigation infrastructure for hay ground includes three agriculture wells that supply the following areas and irrigation equipment:

Pivot (approximately 80 acres)

Pivot was installed in 2005, replacing two, 1900 foot wheel lines. The pivot services approximately 80 acres.

Wheel lines (approximately 66 acres)

Wheel lines (i.e. long mobile pipe sets, moved manually during irrigation season) service approximately 66 acres. Each wheel line is moved manually at approximately 6am and 6pm resulting in two approximate 11 hour operation periods (22 hours run time) in a 24 hour period.

Irrigation season for our hay operation, (including the 2020 base year), typically begins about April 1 each year and continues into August. These time frames are subject to variances that depend on annual temperature and precipitation conditions.

Specific Local Conservation Solutions (LCS) for the 2022 Irrigation Season

Pivot

40 acres of the 80 acres covered by the pivot will be put into grain. This will result in only one cutting for this 40 acre portion. This eliminates 40 acres of irrigation for an additional cutting as done in prior years.

This practice can be verified by drive-by inspection from the road.

Wheel lines

We do not intend to irrigate 36 acres that is under wheel line irrigation. These fields produced two, 30 acres cuttings of alfalfa and one 6 acre cutting of grain hay. The remaining 30 acres of wheel line irrigation will be put into grain, resulting in only one irrigated cutting.

These practices can be verified by drive-by inspection from the road.

By reducing our wheel line irrigated ground and the number of cuttings by rotating to grain, we will be eliminating approximately 96 irrigation acres.



Water Usage 2020 vs 2022 (LCS)

Year 2020

Field	Parcel #	Crop	Cuttings	Water Usage	Acres	Total Water Usage
2-01	14-290-380	alfalfa	3	1 acre ft.	45	45 acre ft.
2-01A	14-290-360	grass/alf	2	0.67 acre ft.	40	26.67 acre ft.
2-01B	14-290-360	grain	1	0.33 acre ft.	6	2 acre ft.
2-01C	14-290-360	alfalfa	2	.67 acre ft.	30	20 acre ft.
2-03	14-290-410	alfalfa	2	.67 acre ft.	20	13.33 acre ft.
2-05	14-290-420	alfalfa	2	.67 acre ft.	10	6.67 acre ft.
Total						113.67 acre t.

Year 2022

Field		Crop	Cuttings	Water Usage	Acres	Total Water Usage
2-01	14-290-380	alfalfa	3	1 acre ft.	45	45 acre ft.
2-01A	14-290-360	grain	1	0.33 acre ft.	40	13.33 acre ft.
2-01C	14-290-360	grain	1	0.33 acre ft.	30	10 acre ft.
Total						68.33 acre ft.

This shows a 39.9% water use reduction from Year 2020 going into 2022

Monthly Breakdown of Water Usage 2020 vs 2022 (LCS)

Site	Acreage	Crop	2020 Irrigation Method	April	May	June	July	August	2020 Annual total
Field 2-01	45	Alfalfa	Pivot	7.5	7.5	10.29	10.29	9.42	45
Field 2-01A	40	Grass/Alfalfa	Pivot	6.67	6.67	9.14	4.19	0	26.67
Field 2-01B	6	Grain	Wheel line	0.63	0.65	0.64	0.08	0	2
Field 2-01C	30	Alfalfa	Wheel line	5	5	8	2	0	20
Field 2-03	20	Alfalfa	Wheel line	3.335	3.335	4.56	2.1	0	13.33
Field 2-05	10	Alfalfa	Wheel line	1.66	1.67	2.29	1.05	0	6.67
			2020 Monthly total acre feet:	24.795	24.825	34.92	19.71	9.42	
									113.67
Site	Acreage	Crop	2022 Irrigation Method	April	May	June	July	August	2022 Annual total
Field 2-01	45	Alfalfa	Pivot	8.82	7.46	12.86	10.29	5.57	45
Field 2-01A	40	Grain	Pivot	4.39	4.55	4.39	0	0	13.33
Field 2-01C	30	Grain	Wheel line	3.48	3.62	2.9	0	0	10
			2022 Monthly total acre feet:	16.69	15.63	20.15	10.29	5.57	
									68.33
			Reduction Percent:	32.70%	37.00%	42.30%	47.80%	40.87%	39.90%

Water usage totals under pivot irrigation are figured using pivot calibration. All wheel line irrigation totals are figured using a two inch per 10 hour set approximation. These methods were also used to calculate the annual water usage.

Local Cooperative Solution (LCS) Comments

The voluntary reduction of water usage will greatly affect Bob Daws Ranch farming operation. It decreases our income which provides for higher production cost, inflation, and debt payments. These will greatly affect the potential for a reasonable profit margin.

Bob Daws Ranch is voluntarily participating in this LCS of a minimum 30% water usage reduction. Even with the likelihood of another drought, conditions will not improve until the drought is over.

This plan is only for the 2022 irrigation season. If any government or NGO funds become available, Bob Daws Ranch should be entitled to them because of its voluntary efforts.

Bob Daws Ranch agrees not to transfer any water to another parcel not included in this LCS.

Bob Daws Ranch also requests that anyone from the State Water Board or other affiliated agency must be accompanied by a representative of said ranch to check on LCS practices on the ranch property.

Local Cooperative Solution (LCS)
McAdams Creek & Moffett Creek Participants

Bob Daws Ranch

18432 Soap [REDACTED]

[REDACTED] Daws Trust, SG003707- Robert Lesina Trust)



May 5, 2022

Dear State Water Resources Control Board,

Substituting alfalfa hay for small grain hay production (e.g. wheat, triticale, barley, etc) can be a promising tool to help growers in Scott Valley to mitigate the economic impact of California’s current drought situation and possible irrigation water curtailments in the region.

In the Californian Intermountain Region, spring small grains grown for hay have a growing season between 90-110 days, usually planted in March and harvest in the end of June or early July. On the other hand, alfalfa has a longer growing season, sometimes extending until September.

While wheat grown for hay can require slightly more water than alfalfa during the grain’s growing season, alfalfa’s total seasonal water requirement is higher than small grain crops, usually more than 30%.

Scenario 1 – 90 days grain cycle (March 20th – June 17th)

Wheat water input: 14.98 inches

Scenario 2 – 100 days grain cycle (March 20th – June 27th)

Wheat water input: 18.05 inches

Scott Valley alfalfa seasonal water requirement (April 15th – September 30th)

Assuming alfalfa $K_c=0.85$, alfalfa ET_c (crop evapotranspiration) was 33.46 inches during the 2021 growing season according to CIMIS station #225.

Assumptions

Wheat crop coefficient (K_c)

- Initial Stage: 20 days - $K_c=0.35$
- Development Stage: 30 days - $K_c=0.75$
- Mid-season Stage: 50-65 days - $K_c=1.1$
- Source FAO <https://www.fao.org/land-water/databases-and-software/crop-information/wheat/en/>

Alfalfa K_c

- Alfalfa K_c used for the above ET_c calculations was 0.85.
- 2021 Reference evapotranspiration (ET_o) from CIMIS station #225

Feel free to reach out if you have any question.

Giuliano C. Galdi
 UC Cooperative Extension
 Siskiyou County Agronomy Advisor
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 Yreka-CA 96097





State of California – Natural Resources Agency
 DEPARTMENT OF FISH AND WILDLIFE
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 Redding, CA 96001
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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 April 24, 2022, the Bob Daws DBA The Bob Daws Ranch (Landowner) proposed an LCS for 151 acres of irrigated alfalfa and grain authorized by 23 CCR §§ 875(f)(4)(d) of the regulation for the 2022 irrigation season. It includes a final conservation plan, narrative, and field maps incorporated by reference. The proposal uses the year 2020 as the baseline; it includes detailed spreadsheets and a narrative that describes crop rotation and reduced irrigated acres. 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 39.9% to meet the requirement described in item "ii" above.

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 photos, logs, checklists, and other documentation for this conservation strategy 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	The Bob Daws Ranch Bob Daws <div style="background-color: black; width: 100px; height: 20px; 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: *Bobby Ray Daws* Date Signed: 8-7-22

Authorized Coordinating Entity Signature:

Sign Here: DocuSigned by:
Jana Bartlett
4D02ADE7303A474... Date Signed: 8/4/2022