Bryan/Morris Ranch

Family Grown Hay and Livestock
Since 1856

Jim Morris
[redacted]

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

Re: 2025 Irrigation Plan (Local Cooperative Solution) in response to Scott-Shasta Drought Emergency Regulation

Deputy Director:

Introduction

This request is being submitted pursuant to Section 875, subdivision (f)(D)of the Scott-Shasta Drought Emergency Regulation (Regulation).

The Bryan/Morris Ranch is an adjudicated groundwater user for irrigated agriculture (see attached pages from the Scott River Adjudication, Decree No. 30662 (Adjudication)).

Bryan/Morris Ranch intends to meet the criteria of 30 percent net reduction of water use as set forth in Section 875, subdivision (f)(4)(D)(ii) of the Regulation through the use of several practices contained in this request.

Bryan/Morris Ranch intends to work with the Siskiyou Resource Conservation District (Siskiyou RCD) as the Coordinating Entity.

Bryan/Morris Ranch Historical Conservation Efforts

The Bryan/Morris Ranch has been passed down generationally and operated by family members since it was purchased from the United States Government in 1856. Each

generation has made improvements to the operation to enhance productivity and sustainability. The land today is more productive than it has ever been.

Starting in the 1920s and into the 1930s, agriculturalists across the nation began to recognize the importance of farm ground conservation. Much of this work began with soil conservation, but soon developed into conservation efforts for all of the resources required to farm sustainably (water, native plant and animal species, etc.). Members of the Bryan family were involved from the inception of these efforts and are still actively involved in resource conservation to this day.

This ranch began to irrigate crops on a large scale around 1926 with the opening of the Scott Valley Irrigation District (SVID) Ditch. Currently, 270 arable acres are in the District and may be irrigated with surface water from the ditch.

Beginning in the 1970s, growers were encouraged by government agencies to convert as much farmland as possible from flood to sprinkler irrigation in the name of conservation, efficiency, and productivity. In the past, (and likely in the future) highly productive farming has been considered a patriotic duty.

On January 30, 1980, the Scott River Adjudication, Decree No.30662, was approved by the Superior Court for Siskiyou County. The Bryan Ranch was granted rights to groundwater sufficient to irrigate 411 acres in schedule C of the adjudication, with the stipulation that "Claimants listed in Schedule C are allotted that amount of water, by subirrigation or by pumping from ground water interconnected to the with the Scott River, reasonably required to irrigate the acreage shown opposite their names. Rights for lands in Schedule C are not related to rights in Schedule D (Forest Service water right is in D) and may be exercised independently from rights in schedules B, D and E and those set forth in Paragraphs 45 and 46 (Forest Service water rights)" (Adjudication).

For the last ten years, the Bryan/Morris Ranch has participated in groundwater recharge research. Groundwater recharge research involves applying surface water from the river into a field, then gauging how long it takes to get back into the river as well as where it reenters. If this research shows that the water moves through the ground slowly enough, groundwater recharge could be a viable and important tool to help provide late season high quality water for returning fish (Tolley, et.al.).

2021 Irrigation and Crops

Bryan/Morris Ranch irrigates just over 400 acres (411 in 2021) with groundwater that is supplied by four wells. Three of these wells are designated by the Adjudication as being inside of the interconnected zone and one is outside of it. The well outside of the

interconnected zone has not historically required reporting and is not a highly productive producing well (100 gpm early season and is rarely run).

Since 2012, the three wells inside the interconnected zone have required yearly reporting to the Water Board (Water Code section 5104 (a), Supplemental Statement of Water Diversion and Use). The amount of water pumped from each of the wells for the last ten years has been reported yearly. The statement ID number assigned by the Water Board for the wells is S010231, S010232, and S010233.

Well S010231 is west of Scott River and supplies water for a 70 acre pivot and three six acre corners irrigated with handline and irrigation big guns. The reported annual amount that is pumped from this well has been around 210 ac-ft.

Wells S010232 and S010233 (along with the small well) are on the east side of the River and are connected to a mainline system that has the ability to irrigate any part of 325 acres farmed on the east side of the river. The reported annual amount that is pumped from these wells has been around 610 ac-ft and 340 ac-ft, respectively.

270 Acres of this ranch are inside of the Scott Valley Irrigation District. Any of this land may be irrigated with district surface water. For the last several years, about 30 acres have been irrigated with district water, but due to unreliability (from curtailment of the District), sprinkler irrigation from groundwater has been installed and is used on all of these fields. Water from the District is often curtailed early in dry years. These pastures have equipment for ground water irrigation (sprinkler irrigation) that is used after the District water is gone. Surface water will not be used in lieu of groundwater to meet the 30% reduction target.

A total of around 1260 acre feet of water was used in 2021 to irrigate around 411 acres of crops, which amounts to just under three acre feet of water per acre of land irrigated. This amount of applied water is what is expected for alfalfa grown in the intermountain region (Hanson).

In 2021 the following crops were grown and irrigated:

Crop	Acres	Acre-feet used
Alfalfa		

311
933

Grass/alfalfa
51
153

Pasture
31
93

Grain
18
27

Total water used:
1,206 acre-feet

Depending on the amount of winter and spring rainfall, irrigation will typically begin around the middle of March (later in a wet spring) and will continue into the middle of October (sooner in a wet fall) on all alfalfa, grass, and pasture fields.

Grain for hay, which is harvested in early July, is not irrigated after harvest. A water conservation crop on the Bryan/Morris Ranch is Kentucky Bluegrass for seed. This crop is also scheduled to be harvested in July and will require very little water after harvest (less than 6”). These crops therefore require roughly half of the water that alfalfa, grass, and pasture (2021 crops) use, and most of that water is applied early in the season.

Proposed 2025 Water Conservation Measures:
Crops

For the 2022 season the following crops have been planted and will be irrigated:

Crop	Acres	Acre-feet used
Alfalfa	100	300
Grass/alfalfa	20	60
Pasture	31	93
Grain-hay	65	100
Grass for seed	160	240
(Fallow)	47	0

Total water used:
793 acre-feet

The crops planted for the 2025 season will reduce acres requiring three acre-feet/acre from 393 to 120. The grain and grass seed should require half of that, or about 18 inches over the season. This change in crops will provide for just over 30% reduction in water use compared to 2021.

Irrigation Efficiency Measures

Low Elevation Sprinkler Application (LESA) will be installed on 285 acres that are under pivots. LESA application has been shown to reduce the amount of water that needs to be applied over the season by up to 20%, (Peters). Irrigation applications for 2025 will be 1" per pass as opposed to 1.25" that was applied in 2021. This will be done whether the LESA system is installed or not. Depending on any rainfall events, which may reduce application, March and September will receive two 1" passes. April, May, June, July and August will each receive four 1" passes.

Ending irrigation early means that alfalfa acres will be reduced from 3 to 2.5 acre-feet of water/acre. There are 285 acres under pivots on this ranch. 225 pivot acres will be in grain and grass seed in 2025 that will require 1.5 acre-feet/acre.

148 acres at 2.5 acre-feet/acre = 370 acre-feet/season.

90 acres at 1.5 acre-feet/acre = 135 acre-feet/season.

505 acre-feet at 20% reduction = 101 acre-feet reduced. This practice will provide a 12% reduction in water applied on the ranch in 2025 compared to 2021.

Flow control (7 gpm) nozzles will be installed on all wheel lines for 2025. Although a water savings is expected from this practice, it is difficult to quantify, so will not be applied to the calculation.

Soil moisture monitoring and rainfall/irrigation monitoring devices were installed this winter. This will allow minimization of irrigation based on specific crop needs. This conservation measure is also difficult to quantify and will not be applied to the calculation.

Irrigation Forbearance

The following typically irrigated land will be left dry in 2025:

Corners of West side pivot 18 acres
Herbicide
Corner Wheellines in big pivot 16 acres
Cut once (alfalfa)
½ of sheep pasture 5 acres
Graze dry
Corners in field #6 pivot
8 acres
Cut once (alfalfa)

Total to be left dry in 2025 47 acres
Acre-feet of water not applied
141 acre-feet

Conclusion

At least three practices will reduce water consumption in 2025 as compared to 2021:

-
-
- Changing crops will

- reduce consumption by 33%.
-
-
-
- Irrigation efficiency
- will reduce consumption by 12%.
-
-
-
- Forbearance of irrigation
- on some land and at the end of the season will reduce consumption by 8%.
-

The cumulative effect of these three practices should reduce consumption of irrigation water by well over 35%. The extra 5% should help to provide assurance that the goal of 30% is met.

The Siskiyou RCD, as the coordinating entity, will use their worksheet to make at least weekly inspections to ensure conservation measures are being implemented.

Works Cited

Attwater, et al. *Scott River Adjudication. Decree No. 30662*. 1978. Retrieved from:

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Peters,Troy et.al. *Low Energy Precision Application (LEPA) and Low Elevation Spray Application (LESA) Trials in the Pacific Northwest*.

https://extension.oregonstate.edu/sites/default/files/documents/33601/lepa-lesa-pnw-_stroh-revisions.pdf

Tolley, D., L. Foglia, T. Harter. *Sensitivity Analysis and Calibration of an Integrated Hydrologic Model in an Irrigated Agricultural Basin With a Groundwater-Dependent Ecosystem*. 2019. Retrieved from: doi:10.1029/2018WR024209.

Site	Acreage	Crop	2022Method	Conservation Me	How is monthly water use calculated	March	April	May	June	July	August	Septembe	October	2022 Annual total	2021 Annual Totals
Field 1-01	70	Alfalfa	Pivot	End Oct. 1	Meter	15	30	31	30	31	31	15	0	183	213
Field 1-01A	8	Grain hay	Handline	Fallow	Meter (dry)	0	0	0	0	0	0	0	0	0	23.43
Field 1-01B	8	Grain hay	Handline	Fallow	Meter (dry)	0	0	0	0	0	0	0	0	0	23.43
Field 1-01C	6	Grain hay	Handline	Fallow	Meter (dry)	0	0	0	0	0	0	0	0	0	17.04
Field 1-02	52	Wheat for hay	Pivot	End July 1	Meter	9	18	18	18	0	0	0	0	63	155.49
Field 1-02	8	Alfalfa	Wheel line	No Irrigation	Meter (dry)	0	0	0	0	0	0	0	0	0	23.43
Field 1-03	10	Alfalfa	Wheelline	End Oct. 1	Meter	2.11	4.2	4.34	4.2	4.34	4.34	2.11	0	25.64	29.84
Field 1-04	52	Alfalfa	Pivot	End Oct.1	Meter	10.95	21.9	22.63	21.9	22.63	22.63	10.95	0	133.59	155.49
Field 1-04	8	Alfalfa	Wheel line	No Irrigation	Meter (dry)	0	0	0	0	0	0	0	0	0	23.43
Field 1-04	10	Alfalfa	Wheel line	End Oct. 1	Meter	2.11	4.2	4.34	4.2	4.34	4.34	2.11	0	25.64	29.84
Field 1-05A	7	Pasture	Wheel line	Flow Control	Meter	1.5	3	3.1	3	3.1	3.1	1.5	1.5	19.8	21.3
Field 1-05B	10	Pasture	Kline	Fallow 5 Ac.	Meter (-5 ac)	1.1	2.1	2.17	2.1	2.17	2.17	1.1	1.1	14.01	29.84
Field 1-06	45	Alfalfa	Pivot	End Oct. 1	Meter	9.45	18.9	19.53	18.9	19.53	19.53	9.45	0	115.29	134.19
Field1-07	45	Bluegrass seed	Pivot	Apply 16"	Meter	7.5	15	15	15	0	4.5	4.5	4.5	66	134.19
Field 1-08	2	Pasture	Flood	Fallow	Flood/dry										
Field 2-01	41	Orchardgrass	Pivot	End Oct. 1	Meter	7.5	17.5	17.98	17.5	17.98	17.98	7.5	7.5	111.44	121.44
Field 2-02	20	Alfalfa	Dryland	Fallow	Dry										
Field 2-03	150	Rangeland	Dryland	Fallow	Dry								0		
Field 2-04	21	Alfalfa	Wheel line	End Oct. 1	Meter	4.5	9	9.3	9	9.3	9.3	4.5	0	54.9	63.9
Field 2-05	100	Rangeland	Dryland	Fallow	Dry										
Field 2-06	16	Alfalfa	Wheel line	Flow control	Meter	3.45	6.9	7.13	6.9	7.13	7.13	3.45	3.45	45.54	48.99
			2022 Monthly total:			74.17	150.7	154.52	150.7	121.52	126.02	62.17	18.05	857.85	
			2021 Monthly total:			86.88	176.2	181.97	176.2	181.97	181.97	176.2	86.88		1248.27
			Reduction			14.63%	14.47%	15.08%	14.47%	33.22%	30.75%	35.28%	79.22%		
														Total Reduction	31.28%

SISKIYOU RESOURCE CONSERVATION DISTRICT
P.O. Box 268, Etna, CA 96027
PHONE (530) 467-3975 FAX (530) 467-5617
Email: sisqrcd@sisqtel.net
Website: www.siskiyourcd.com

Binding Agreement

Contractor Contact Information:

Business:	Siskiyou RCD
Contact Person:	Evan Senf
Address:	PO Box 268, 450 Main St., Etna, CA, 96027
Phone:	(530) 467-3975
Email:	evan@siskiyourcd.com

Landowner Contact Information:

Business:	BRYAN/MORRIS RANCH
Contact Person:	JIM MORRIS
Address:	[redacted]
Phone:	[redacted]
Email:	[redacted]

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 sections 875.5(f)(4)(D)(i)-(iii) [Scott River], the Deputy Director may approve a groundwater-basin-wide, groundwater sub-basin-wide, or any number of individual local cooperative solutions where:

    i. The proposal is based on a binding agreement. "Such binding agreement may be made with a coordinating entity with the expertise and 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

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expertise and experience in water-saving transactions or similarly qualified entity."

ii. For the Scott River: "The proposal provides at least: 1) a net reduction in water use of 30 percent throughout the irrigation season (April 1-October 31), as compared to the prior irrigation season; and 2) a monthly reduction of at least 30% in the July 1 through October 31 period, as compared to the prior year or 2020 or 2021. 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: (*Specific action plan to be completed by landowner, see attached LCS application form)*

Binding Agreement Terms
The Landowner is required to adhere to the LCS, as approved by SWRCB. The Landowner has requested that SRCD serve as the coordinating entity. As such, both parties agree to the following:

- For the duration of this binding agreement where SRCD is the coordinating entity, the Landowner shall give SRCD the right to reasonably access the included parcels for the limited propose of verifying execution of the LCS. Any individual not directly employed or contracted by SRCD shall provide pre-notification to, and shall obtain approval by the Landowner before accessing the property,

- SRCD will strive to notify the Landowner a day in advance of visiting the parcels and shall provide the Landowner or designee the ability to participate in monitoring activities,

- It is anticipated that SRCD representatives will visit the property approximately twice per month to monitor the approved LCS, unless inadequacies are discovered, in which case additional field visits will occur until inadequacies are rectified. A monitoring inspection may include verification of any or all of the actions described in the conservation plan and may include inspection checklist/notes/reports and photo verification,

- SRCD 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,

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- 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. SRCD supports the 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 at any time. Both parties agree to take reasonable measures to resolve any concerns related to the performance of the LCS, negative interpersonal interaction, or any unforeseen circumstance prior to invoking termination,

- As the irrigation season unfolds, there may be reason to change the terms of the LCS or this binding agreement with respect to its implementation and verification. Any such changes to the LCS or service agreement will need to be agreed upon by the Landowner and SRWCB. If a Landowner requests SRCD assistance with an updated LCS, the SRCD and Landowner will enter into a new Binding Agreement and,

Payment
In consideration for the services to be performed by SRCD, the Landowner agrees to pay SRCD at the rate of $75.00 per hour for initial consultation and $75.00 per hour for all services rendered after signing of the binding agreement.

Expenses
The Landowner will reimburse SRCD for expenses that are attributable directly to work performed under this Agreement. Any expenses incurred will be approved by the Landowner beforehand. SRCD will submit an itemized statement of Contractor's expenses attached with invoicing.

Terms of Payment
Upon completion of SRCD services under this binding agreement, the SRCD will submit an invoice. The Landowner will pay SRCD the compensation described within 30 days of receiving SRCD's invoice.

Term of Agreement
This agreement will become effective when signed by both parties and will terminate on:

- November 1, 2025, or
- The date a party terminates the binding agreement.

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- Monitoring information will be collected by the SRCD and shared with State Water Board as a field report in accordance with their reporting schedule or upon request
- SRCD is not authorized to and will not distribute data or other information regarding work done under this contract to any third party without previous written approval by the Landowner
- Landowner agrees that water saved under the LCS will not be transferred to parcels not included under the LCS, and Landowner will not knowingly or intentionally otherwise take actions outside of the LCS that diminish, in any material way, the overall thirty percent reduction establish by the actions described ion the LSC

Signatures

SRCD Representative

7/15/2025
Date

Landowner

7-8-2025
Date