

Hayden Ranch

April 12, 2022

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

Re: 2022 Cooperative Solution – Hayden Ranch

To Deputy Director:

As authorized by 23 CCR §§ 875(f)(4)(D), I am providing this letter to describe my proposed local cooperative solution (LCS) for the 2022 irrigation season. This plan is limited solely to this year.

We have one irrigation well which provides water exclusively for our only center pivot. The center pivot irrigation covers approximately 277 acres which are cultivated for hay and pasture each year. The installation of this pivot was accomplished about 2002, using a high pressure mid-elevation spray application (MESA) system. All of the area under the pivot consists of grass, alfalfa, native grasses. The balance of my ranch that is not irrigated by the pivot consists of dry forage.

In 2020, our irrigation pivot operated from approximately April 1 to October 15. Late season irrigation is particularly important because our cattle operation depends heavily on forage growth for pasture grazing late in the season (after the last cutting of hay).

In an effort to conserve water, we have paid to date, over \$20,000 with anticipated further expenses, in conversion parts for a Low Elevation Spray Application (LESA) system, which my son and I have worked installing with no additional help, for the last month. We are still awaiting delivery of some parts required for the LESA conversion so we are unable to start ANY irrigation until those parts arrive. Even if the parts arrived today, this late irrigation start in 2022 due to the LESA conversion project delays will very likely materially decrease our overall hay and forage production in 2022.

Specific 2022 Conservation Plan:

- 1. *Pivot span converted from MESA system to LESA system***, which utilizes very low pressure nozzles, resulting in far less wind drift and more precise and effective water application. The LESA manufacturer estimates total water savings from a MESA to

LESA system of up to 30% based on reduced wind drift and less frequent irrigation; however, we understand that other Scott Valley irrigators have proposed a more conservative calculation number of 18% in their respective 2022 LCS proposals. We accordingly used the 18% reduction estimate in our attached calculations. Conversion of our pivot to the LESA system has been entirely self funded. Verification of the conversion can be done by the Cooperating Entity with on site inspection of pivot infrastructure.

2. ***Early irrigation turn off of September 15, 2022***, even though this will greatly reduce fall and winter forage for our cattle. Additional forage will most likely have to be purchased at historically high prices with this early cessation of all irrigation. Verification of the early shut off can be made by the Cooperating Entity with on site inspection.
3. ***Pivot end gun turned off July 1, 2022***, which will conserve water. We have included an engineering summary for our pivot which confirms both (i) the total pivot operational flow is 1,728 gpm and (ii) of that amount, the high pressure end gun on the last outside span utilizes 200 gpm. Shutting off water to the end gun will accordingly save more than 11.57% of the total pivot gpm. We intend to shut the end gun off on July 1, 2022 although that action will significantly reduce hay crop/forage for some of our historically irrigated acres. Also, permanent plant damage may likely occur and future productivity may be impaired. Verification of the early shut off can be made by the Cooperating Entity with on site inspection.

Please note that this plan is offered in good faith in connection with the 2022 irrigation season only. This plan is offered voluntarily (without any current legal obligation to undertake the matters described herein), should any governmental funds later become available for any forbearance or improvement/conservation efforts to which Hayden Ranch would otherwise be entitled, nothing herein shall be construed to limit the availability of such funds to Hayden Ranch provided that we materially perform the 2022 undertakings described herein. We will not knowingly or intentionally take actions outside of the LCS that diminish, in any material way, the overall thirty percent reduction established by this proposal.

In an effort to minimize any liability claims, we request that the Cooperating Entity or any other member of the State Water Resource Control Board be accompanied by a representative from the Hayden Ranch if they need to access the ranch property to observe our LCS practices. We plan on using Joe Croteau with the CDFW as our Coordinating Entity.

Please timely advise as to your decision on the acceptability of this plan in lieu of regulatory curtailment. Feel free to contact me with any questions.

Thank you for your consideration in this matter.

Charlie N. Hayden, Owner

email: [REDACTED]



cc: Brian Heffernan

PIVOTS (DRAFT)	
Total Pivot Acres	277.00
Pivot % Total Acres	100.00%
LEPA Conversion Savings (%) (ESTIMATED)	18.00%

	2020 Pivot AF (baseline)	2022 Reduction AF
April	85.71	15.43
May	128.57	23.14
June	171.43	30.86
July	235.71	42.43
August	278.57	50.14
September	214.29	38.57
October	85.71	15.43
	1200.00	216.00

END GUN OFF

Total Pivot Flow (GPM)	1,728.00	2020	1-Apr Oct 15	105
End Gun Flow (GPM)	200	2022	1-Apr 1-Jul	175
Saving with Endgun Off	11.57%			

EARLYSHUTOFF(DRAFT)

EARLY IRRIGATION SHUT OFF (9/15)

	2020 AF (baseline)	2022 Estimated AF (without early shutoff)	2022 Estimated Reduction AF with Early Shutoff)	
September		214.29	175.71	126.43
October		85.71	70.29	70.29

LINDSAY ZIMMATIC CENTER PIVOT APPLICATION CHART

Remember ARROWS ▽

Customer Name : Charlie Hayden Dealer Name : J. W. Wood Company Serial No. or B No. : 047072			GROSS APPLICATION (INCHES)	MAIN PANEL TIMER (PERCENT)	CIRCLE TIME (HOURS)	GROSS APPLICATION (INCHES)	MAIN PANEL TIMER (PERCENT)	CIRCLE TIME (HOURS)	GrowSmart Fieldboss Inputs: 1728 GPM 1135 Min 2028 ft
Last Tower Tire Size :	14.9 x 24		0.24	100.00	18.91	1.10	22.13	85.45	
Last Tower Motor Speed :	43.0	RPM	0.24	100.00	18.91	1.20	20.29	93.22	
Feet per Minute @ 100% :	10.20	fpm	0.24	100.00	18.91	1.30	18.73	100.99	
Flowrate :	1728	gpm	0.30	81.15	23.31	1.40	17.39	108.76	
Pivot Pressure :	60	psi	0.40	60.87	31.07	1.50	16.23	116.53	
			0.50	48.69	38.84	1.60	15.22	124.30	
Length to Last Tower :	1842	ft	0.60	40.58	46.61	1.70	14.32	132.06	
Total System Length :	1909	ft	0.70	34.78	54.38	1.80	13.53	139.83	
Range of End Gun :	119	ft	0.80	30.43	62.15	1.90	12.81	147.60	
Total Length w/Endgun:	2028	ft	0.90	27.05	69.92	2.00	12.17	155.37	
Date:	06/05/02		1.00	24.35	77.68				

Note that this chart is merely an estimate of the performance of your Zimmatic center pivot system. The speed given in feet per minute above is based on average operation. Tire inflation, soil conditions, flow fluctuations, and other conditions can cause deviations from the times and inches in the chart. Time the rotation of your center pivot to verify accuracy. Any questions should be directed to the Sprinkler Dept. at Lindsay, Phone No. (402) 428-2131.

When this chart is placed on the panel door, make sure that it does not cover safety decals, warning stickers, or wiring diagrams.



DANGER

STAY CLEAR OF ALL
HIGH VOLTAGE LINES



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 April 12, 2022, the Charlie N. Hayden DBA Hayden Ranch (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 field maps incorporated by reference. The proposal uses the year 2020 as the baseline; it includes detailed spreadsheets and a narrative that describes enhanced irrigation pivot efficiencies and a summer and 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 68.8% 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 H & H Land and Livestock’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 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	Hayden Ranch Charlie N. Hayden <div style="background-color: black; height: 15px; width: 100%;"></div> <div style="background-color: black; height: 15px; width: 100%;"></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:

DocuSigned by:
Pamela Hayden
39DD5178DF4A404...
Date Signed: 8/2/2022

Authorized Coordinating Entity Signature:

Sign Here:

DocuSigned by:
Jana Bartlett
ID82ADE7303A474...
Date Signed: 7/27/2022