

May 22, 2022

From: Fisher Family Ranch



To: State Water Board  
1001 I St.  
Sacramento, CA 95814

This letter is being sent to request an LCS as authorized by 23 CCR 875(f)(4)(D) for the 2022 irrigation season for the Ranches owned and managed by Fisher Family Ranch.

Fisher Family Ranch is a small organic hay and cattle farm. Like most of the ranches and farms in Scott Valley we manage our farm to be productive, efficient, and profitable. We consistently try to improve in all of these areas, which includes water management. Over the last 20 years we have made many improvements to increase the efficiency of our irrigation systems which include wheel line and hand line improvements and maintenance, wheel line to pivot conversions, pump upgrades and VFD installations as well as main line upgrades and repairs. These upgrades allow us to manually make adjustments to our irrigation system to reduce water application per irrigation set and for the season.

To achieve the 30% reduction of water usage required by the LCS over the water used in the base year 2020 irrigation season we have:

1. Changed nozzle sizes in wheel and hand line from 7/32 to 3/16 and lowering pressure from 60 psi to 45-50 psi resulting in minimum of 30% water savings.
2. Changed application rate of pivot from 3" to 2.1" resulting in a 30% reduction in water usage
3. Follow 6.45% of lower production pasture acreage through end gun shut off which adds additional 1.8% to overall water savings.

Logs are being maintained for review by the Cooperating Entity to verify application of water as outlined above and in supporting water usage. Supporting documents are also attached. In addition we are partnering with California Heritage Farms LLC to meet the 400 acre minimum requirement.

We have signed an agreement with SRCD to act as the Cooperating Entity to verify the plan submitted is adhered to. A copy is attached. Siskiyou RCD as the Cooperating Entity is authorized to visually verify nozzle sizes, fallowed ground and pivot application.

These adjustments to our irrigation practices will result in stress to the plants, possible unrecoverable damage and decrease to production during a time when all costs are skyrocketing upward. This will also result in a very negative financial impact on our ranching operation.

Thank you in advance for your assistance with this LCS plan.

  
Brandy Fisher



**From:** [DeLano, Kevin@Waterboards](mailto:DeLano, Kevin@Waterboards)  
**To:** [Brandy Fisher](#)  
**Subject:** RE: LCS Package for 2022  
**Date:** Wednesday, July 13, 2022 11:14:00 AM

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Thank you.

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Kevin DeLano, MS, GIT  
Geologist, [Instream Flow Unit](#)  
Division of Water Rights, State Water Board

[kevin.delano@waterboards.ca.gov](mailto:kevin.delano@waterboards.ca.gov)  
Telework (Google Voice): 916-359-9827  
Office: 916-319-0631

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**From:** Brandy Fisher [REDACTED]  
**Sent:** Wednesday, July 13, 2022 11:14 AM  
**To:** DeLano, Kevin@Waterboards <[Kevin.DeLano@Waterboards.ca.gov](mailto:Kevin.DeLano@Waterboards.ca.gov)>  
**Subject:** Re: LCS Package for 2022

EXTERNAL:

Hello Mr. Delano,

This is to serve as an addendum to our LCS package. Our ranch does have a water right from SVID for surface water. This water will not be used to offset any savings afforded by our voluntary LCS package.

Thank You,  
Brandy Fisher  
[REDACTED]

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**From:** "Kevin Delano" <[Kevin.DeLano@Waterboards.ca.gov](mailto:Kevin.DeLano@Waterboards.ca.gov)>  
**To:** "Brandy" [REDACTED]  
**Sent:** Wednesday, July 13, 2022 10:13:50 AM  
**Subject:** Re: LCS Package for 2022

Hi Brandy,

Yes, I'm available.

Cheers,  
Kevin

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Kevin DeLano, MS, GIT

# **BINDING AGREEMENT**



**SISKIYOU RESOURCE CONSERVATION DISTRICT**

P.O. Box 268, Etna, CA 96027

PHONE (530) 467-3975 FAX (530) 467-5617

Email: [sgared@sistel.net](mailto:sgared@sistel.net)

Website: [www.siskiyoured.com](http://www.siskiyoured.com)

**Binding Agreement**

**Contractor Contact Information:**

<i>Business:</i>	Click or tap here to enter text.	Siskiyou RCD
<i>Contact Person:</i>	Click or tap here to enter text.	Chris Voigt
<i>Address:</i>	Click or tap here to enter text.	P.O. Box 268, Etna, CA 96027
<i>Phone:</i>	Click or tap here to enter text.	530-467-3975
<i>Email:</i>	Click or tap here to enter text.	Chris@siskiyoured.com

**Landowner Contact Information:**

<i>Business:</i>	Fisher Family Ranch
<i>Contact Person:</i>	Brandy Fisher
<i>Address:</i>	[REDACTED]
<i>Phone:</i>	[REDACTED]
<i>Email:</i>	[REDACTED]

**Background**

Under the 2021 drought emergency regulation instated by the State Water Resources Control Board (SWRCB) that established drought emergency minimum flows in the Scott River, a Local Cooperative Solution (LCS) may be proposed by individuals or groups to submit by petition to the Deputy Director of the SWRCB as an alternative means of reducing water use to meet or preserve drought emergency minimum flows and provide fishery benefits, in lieu of curtailment. This binding agreement between the (Landowner) and Siskiyou Resource Conservation District (SRCD) will monitor the SRWCB approved LCS to achieve 1) a net reduction of water use of 30 percent throughout the irrigation season; and 2) a monthly reduction of at least 30 percent in the July through October 31 period, as compared to 2020.



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**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 totaling at least 400 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 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 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. 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)*



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### 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 purpose 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,
- 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



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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, 2022, or
- The date a party terminates the binding agreement.
- 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 established by the actions described in the LSC



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**Signatures**

Chris Veit  
SRCD Representative  
6/28/2022  
Date

[Signature]  
Landowner  
MM 28, 2022  
Date

## **SUPPORTING INFORMATION**

## 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.

8. Table 3 gives the average *net* depth of irrigation for different set times and application rates assuming a 70% application efficiency. For efficiencies other than 70%, multiply the values in Table 3 by the factors given in Table 4.

Example: 0.24 in/hr application rate  
70% efficiency  
12-hour set

$$\text{Av Net Depth} = (0.24 \text{ in/hr}) \times (12 \text{ hr}) \times 70\% = 2.02 \text{ in (or use Table 3)}$$

If 80% efficiency, multiply by 1.14 (from Table 4)

$$\text{Av Net Depth (at 80\% efficiency)} = 1.14 \times 2.02 = 2.3 \text{ in}$$

Example: Center pivot: 1,200 gpm system on 130 acres; 24-hour revolution; 80% efficiency.

$$\text{Av Gross Application Rate} = \frac{1,200 \times 96.3}{130 \text{ ac} \times 43,560 \text{ sq ft/ac}} = 0.02 \text{ in/hr}$$

$$\text{Av Net Depth} = (0.02 \text{ in/hr}) \times (24 \text{ hr}) \times 80\% = 0.38 \text{ in}$$

**Table 2. Average gross application rate (in/hr).**

Spacing (ft)	Gallons per minute from each sprinkler									
	1	2	3	4	5	6	7	8	9	10
20 x 20	0.24	0.48	0.72	0.96	1.20	1.44	1.70	1.93	2.16	2.40
20 x 30	.16	.32	.48	.64	0.80	0.96	1.12	1.28	1.43	1.60
20 x 40	.12	.24	.36	.48	.60	.72	0.84	0.96	1.08	1.20
30 x 30	.11	.21	.32	.43	.54	.64	.75	.86	0.96	1.07
30 x 40	.08	.16	.24	.32	.40	.48	.56	.64	.72	0.80
30 x 50	.06	.13	.19	.25	.32	.38	.45	.51	.58	.64
40 x 40	.06	.12	.18	.24	.30	.36	.42	.48	.54	.60
40 x 50	.05	.10	.14	.19	.24	.29	.34	.38	.43	.48
40 x 60	0.04	0.08	0.12	0.16	0.24	0.24	0.28	0.32	0.36	0.40

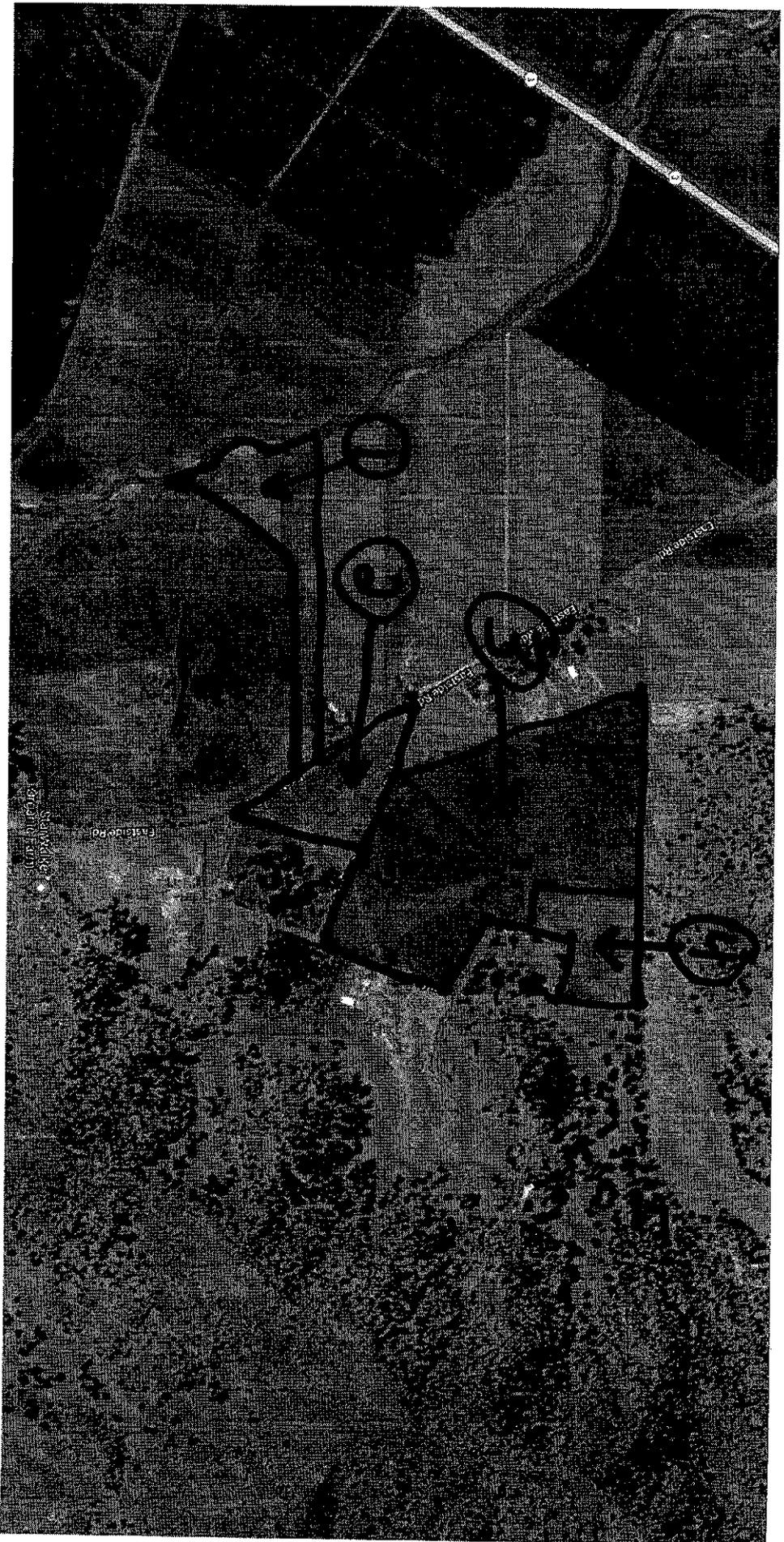
**Table 3. Net applied depth (in) at 70% efficiency.**

Set time (hrs)	Application rate (in/hr)											
	0.10	0.12	0.14	0.16	0.18	0.20	0.24	0.28	0.32	0.36	0.45	0.60
1	.07	.08	.10	.11	.13	.14	.17	.20	.22	.25	.32	.42
2	.14	.17	.20	.22	.25	.28	.34	.39	.45	.50	.63	0.84
3	.21	.25	.29	.34	.38	.42	.50	.59	.67	0.76	0.95	1.26
4	.28	.34	.39	.45	.50	.56	.67	.78	0.90	1.01	1.26	1.68
5	.35	.42	.49	.56	.63	.70	0.84	0.98	1.12	1.26	1.58	2.10
6	.42	.50	.59	.67	.76	.84	1.01	1.18	1.34	1.51	1.89	2.52
7	.49	.59	.69	.78	0.88	0.98	1.18	1.37	1.57	1.76	2.21	2.94
8	.56	.67	.79	0.90	1.01	1.12	1.34	1.57	1.79	2.02	2.52	3.36
9	.63	.76	.88	1.01	1.13	1.26	1.51	1.76	2.02	2.27	2.84	3.78
10	.70	0.84	0.98	1.12	1.26	1.40	1.68	1.96	2.24	2.52	3.15	4.20
12	0.84	1.01	1.18	1.34	1.51	1.68	2.02	2.35	2.69	3.02	3.78	5.04
18	1.26	1.51	1.76	2.02	2.27	2.52	3.02	3.53	4.03	4.54	5.67	7.56
24	1.68	2.02	2.35	2.69	3.02	3.36	4.03	4.70	5.38	6.05	7.56	10.08
36	2.52	3.02	3.53	4.03	4.54	5.04	6.05	7.06	8.06	9.07	11.34	15.12
48	3.36	4.03	4.70	5.38	6.05	6.72	8.06	9.41	10.75	12.10	15.12	20.16

**Table 4. Adjustment factor to use with values in Table 3 for other than 70% efficiency.**

Efficiency	Multiply by	Efficiency	Multiply by
55	0.79	75	1.07
60	0.86	80	1.14
65	0.93	85	1.21

Fields 1,2,3,4



Google Maps Field 5



Imagery ©2022 Maxar Technologies, USDA/FPAC/GEO, Map data ©2022 200 ft



