Addendum to the June 2022 Economic and Pest Management Evaluation of Proposed 1,3-Dichloropropene Regulation

Prepared for the Department of Pesticide Regulation by the California Department of Food and Agriculture's Office of Pesticide Consultation and Analysis, and the University of California, Davis

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*This research was conducted prior to Spalding's employment at USDA and does not represent official USDA determination or policy.

Description of Addendum

This is the second addendum to the June 21, 2022, report on the economic and pest management impacts of potential 1,3-D regulation (Goodhue et al. 2022a).[1] On February 2, 2023, DPR informed CDFA OPCA of several changes in the proposed regulation relative to the version analyzed in the first addendum dated June 23, 2022 (Goodhue et al. 2022b).[2] In the newly revised proposed regulation, DPR included the following changes:

1. Add more application rates in setback tables – changing from 25 lbs/ac to 10 lbs/ac intervals, resulting in a total of 26 application rates.
2. Add region-specific setback tables (inland vs coastal)
3. Change 50% TIF method to 40% TIF with resulting changes in the setback tables
4. Add 24-in injection GPS-guided application method
5. Add options for 300 ft and 400 ft setbacks instead of only 100 ft, 200 ft and 500 ft

Only the proposed changes 1-3 are considered in this analysis. The addition of a 24-in GPS application method does not change the setback tables and, therefore, would not impact this analysis. The addition of options for 300 ft and 400 ft setbacks gives the growers and applicators more flexibility. Given the limited time available for analysis, we analyzed only the 200 ft and 500 ft application rules that were included in the original report and first addendum. Consequently, our estimates are an overestimate in this regard as fields with buildings in the 300-400 ft range will be able to treat larger blocks than they would if limited to using the 200 ft setback rules.

This addendum includes the number of affected fields and estimated costs of the proposed regulation but does not include detailed discussions of methods or other information that did not change from the June 21, 2022, report. The original report is quoted as needed to provide context, and the first addendum is referenced as needed. However, this addendum is **not** an independent, comprehensive document and should be read in conjunction with the June 21, 2022, report and the June 23, 2022, addendum.

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[1] Goodhue, R., K. Mace, S. Blecker, Y. Zheng, J. Rudder, A. Spalding, T. Tolhurst, H. Wei, B. Gress, and J. Steggall. 2022a. Economic and pest management evaluation of proposed 1,3-Dichloropropene. University of California, Davis and California Department of Food and Agriculture Report, June 21, 2022.

[2] Goodhue, R., K. Mace, S. Blecker, Y. Zheng, J. Rudder, A. Spalding, T. Tolhurst, H. Wei, B. Gress, and J. Steggall. 2022b. Addendum to the June 2022 economic and pest management evaluation of proposed 1,3-Dichloropropene regulation. University of California, Davis and California Department of Food and Agriculture Report, June 23, 2022.

Summary

As in the June 23, 2022, addendum, this addendum examines the mitigations for acute exposure to non-occupational bystanders by evaluating how growers could comply with modifications to the proposed regulations analyzed in the June 21, 2002 report regarding the relationships between the allowable application method, setbacks to occupied structures, and block size. The addendum is not a full report. Instead, it estimates the economic impacts associated with these proposed changes to the draft regulations compared to current regulations. DPR's proposed regulation regarding these three factors is reported in tables for each mitigation option showing the maximum allowed daily acres treated (block size), which are based on distance from the field to an occupied structure (100 ft, 200 ft, or 500 ft) and the application rate. As stated in the June 21, 2022, report:

> In general, the higher the application rate and shorter the distance to an occupied structure the lower the maximum application block size for each application method. The maximum permitted block size can range from 0 acres (application not permitted) to as much as 80 acres for some application methods and rates. But for untarped applications the proposed maximum block size has been reduced to achieve the minimum 100 ft setback from occupied structures even with new application methods. Current restrictions allow a block size of up to 80 acres in an application while maintaining a 100 ft setback from occupied structures.
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> We examine the cost of complying with the proposed regulation for acute exposure in two ways. First, we evaluate the cost for all 1,3-D applications to comply with the proposed changes by adopting, if needed, a new application method and/or reducing block size to retain a 100 ft setback and current application rate, regardless of whether or not the applications are in fact near an occupied structure. This approach identifies how costly the proposed changes would be if all applications had to comply with the combinations of application rate, application method, and maximum block size permitted under the proposed regulation. This analysis uses data on applications from 2017-2020 (Method 1). Second, for three focal counties in 2017-2018, Fresno, Kern, and Stanislaus, we integrate GIS data with application data and isolate only those applications within certain distances of occupied structures. We then identify how much acreage would have been impacted directly for all crops and the associated mitigation cost (Method 2). However, we cannot know with certainty that all of the applications examined using Method 2 are ones that would have been impacted by the occupied distance restriction because fields, not applications, are mapped. If not all of a field was fumigated with 1,3-D it is conceivable that the proposed setback distance for that application would not be binding.

Under the newly proposed changes estimated costs range from $973,349 (2019) to $1,513,792 (2017) (Table 1). Comparable annual cost results from the June 21, 2022 report and June 23, 2022 addendum are presented in Table 2 (a reproduction of ES-Table 1) and Table 3 (a reproduction of Table 1). Each year the cost of the original proposed regulation would have been higher than the proposed regulation considered in this addendum. Because the initial proposed regulations did not differentiate between regions there are only statewide totals. Figure 1 illustrates the

differences in annual costs across years and the relative importance of the two regions in determining total costs.

Table 1. Updated Annual Cost of Compliance with Occupied Structure Setback for 1,3-D Applications Assuming a 100 ft Setback and Current Application Rate: Coastal and Inland Regions and Statewide

Year	Total Cost: Coastal	Total Cost: Inland	Total Cost: State
2017	$534,428	$979,364	$1,513,792
2018	$341,927	$1,162,738	$1,504,665
2019	$252,329	$721,020	$973,349
2020	$491,150	$948,749	$1,439,899

Table 2. June 21, 2022 Report Annual Cost of Compliance with Occupied Structure Setback for Statewide 1,3-D Applications Assuming a 100 ft Setback and Current Application Rate

Year	Total Cost
2017	$1,897,283
2018	$1,996,093
2019	$1,278,772
2020	$1,729,988

Table 3. June 23, 2022 Addendum Annual Cost of Compliance with Occupied Structure Setback for Statewide 1,3-D Applications Assuming a 100 ft Setback and Current Application Rate

Year	Total Cost
2017	$1,425,081
2018	$1,546,033
2019	$1,020,278
2020	$1,471,936

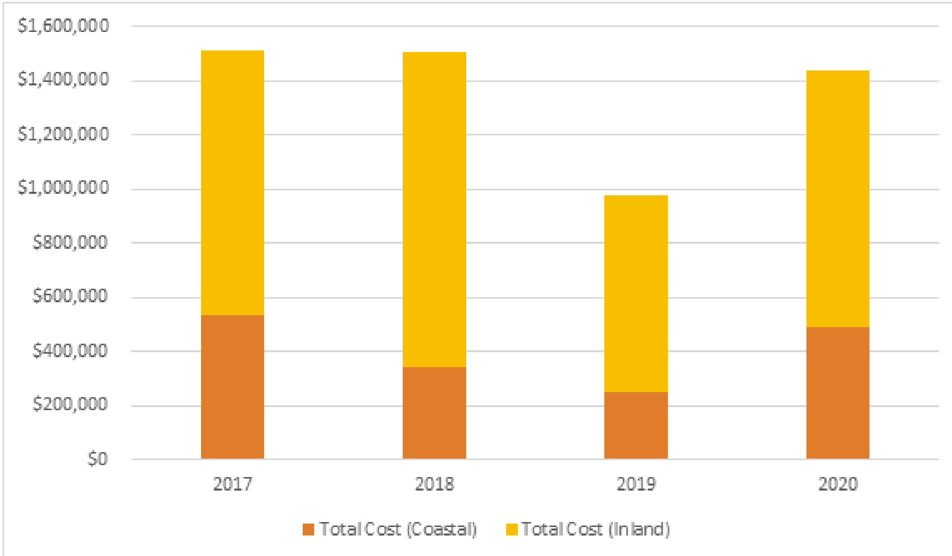

Figure 1. Total Annual Cost of Proposed Regulation: 2017-2020

Methods and Data

Detailed methods can be found in the June 21, 2022, report. Changes in the application of Method 1 relative to its application in the June 21, 2022, report are presented here. The differences that characterize the application of Method 2 from the June 21, 2022, report are the same as the differences for Method 1. The data are the same as in the June 21, 2022, report.

Changes in the application of Method 1: Changes in application methods to retain 100-foot distance to occupied structures

The updated proposed regulation introduces regional differences in the application tables for 1,3-D. For each region there are seasonal maximum block sizes if occupied structures are near the application site for all non-tarped and some tarped fumigation methods. As in the June 21, 2022, report, this analysis assumes that all applications would have to choose an application method and/or split applications into multiple blocks in order to comply with the maximum block size specified in the proposed regulation for the observed application rate and a 100-ft setback. The new setbacks and maximum acres for 12-in, 18-in, 24-in, drip, and TIF tarp application methods proposed by DPR are presented by time period and region in tables in Appendix A. These tables were provided to CDFA by DPR on February 2, 2023.

As stated in the June 21, 2022, report,

> When choosing an application method, growers balance multiple factors; ideally, they want to minimize setbacks to occupied structures and costs while maximizing block size and maintaining pest control efficacy. Season, application rate, application method, occupied structure distance, and block size can all be adjusted to get the most cost-effective result. We make a series of assumptions about grower actions to estimate the cost. We assume that:
>
> - Growers will not change application rates; application rates are determined by what is effective for pest control for that crop so applying at a lower rate for any given method is largely not an option. Appendix B presents more detailed information on pest management. Growers will not switch to TIF tarp application methods due to cost. Adding TIF tarp is currently estimated to cost around $1,150 an acre, including tarp removal. Additionally, currently there is not a sufficient supply of TIF tarp to allow all crops to use it. If there were a substantial shift to increased TIF, the price could increase.
> - Growers using shallow injection and TIF tarp will switch to deep injection and TIF tarp when shallow injection applications would lead to greater setbacks.
> - Growers will not increase the setback to occupied structures because in many cases that would lead to leaving a section of the field untreated. These sections would have to planted to nematode-resistant plants or left fallow. Nematodes are mobile in the soil and can infect a field from one untreated section. For perennial crops like almonds, having an untreated section would risk significant long-term yield loss. For annual crops like sweet potato the margins are too small to absorb a loss of acreage or yield for the year. We look at the potential lost acreage in the Method 2 analysis. Appendix B presents more detailed information on pest management.
> - Growers will choose the least costly application method that maximizes block size. Blocks that exceed the maximum size based on application method, application rate, and occupied structure setback are split into smaller blocks that are within the size requirements. In other words, growers will not shift to an alternative application method or rate in order to increase the maximum block size, even if that would be sufficient for an existing application to meet the proposed requirements. Using TIF tarps would allow growers to maintain 80-acre blocks but comes at a cost. In comparison to the $1,150 per acre cost of TIF, the maximum estimated cost to split an 80-acre block (derived below) is $1,480, which amounts to $18.50 per acre on average. There is likely heterogeneity in the cost to split a block across fields and growers.
> - Growers using chemigation (FFM 1209) will add TIF tarps at the cost of $1,150/ac and keep using chemigation. This is more expensive than switching to deeper injection. However, if a field is set up to use chemigation, it would likely require significant time and effort to re-do that field to instead use deep injection.

The updated seasonal regulation addressed in the first addendum to the report added additional considerations.

- When planting time is flexible, growers will choose to apply in the March-October timeframe instead of splitting blocks if their desired application does not meet the November-February restrictions. We assume that planting time for annual crops is not flexible, and that they will comply with the new restrictions for the season in which the application was made, including splitting a field into smaller blocks. For tree and vine crops, there is more flexibility in when they can plant. For this analysis, we assume that applications to tree and vine crops that violate the November-February restrictions would move to March-October.

It is worth noting that particularly hot weather in March would be problematic in the current scenario. A grower waiting until March to plant an orchard, which is the assumption in this report, could end up having to wait until the fall or even following March if the desired planting time was during a severe heat wave. This serves as a caveat that applies to this addendum and the prior one but not to the June 21, 2022, report.

As stated in the June 21, 2022, report,

> We first identified any application statewide in our study period that would not have been in compliance under the proposed regulation, assuming they had to comply with the combinations of application rate, application method and maximum block size required in order to maintain a 100 ft setback from an occupied structure, regardless of whether or not one is present. Use rates are rounded up to the next level (i.e., an application with a use rate of 101 lbs/ac would be bound by the 110 lbs/ac rules). Given the assumptions above and DPR's updated fumigations tables, applications were separated into three sets: already compliant with the proposed regulation, able to comply by changing application method, and requiring splitting to comply.
>
> We estimate two types of costs: application method costs and costs associated with splitting fields into smaller blocks. Based on stakeholder input, we set the cost of converting from 12-in or 18-in injection to 24-in injection depth at $10 per acre due to increased fuel costs[3]. At the time of this report, adding TIF tarp cost around $1,150 an acre including tarp removal, as noted above. Any costs that could be associated with additional soil preparation operations such as deep tillage, if required under some conditions, are not considered. Given that, and due to the small magnitude of the increase in fuel cost, 24-in injection depth is the lowest-cost application method for untarped and tarped applications if the method must be altered for compliance with the proposed regulations.

As described in the June 21, 2022, report, growers incur a time cost when fields must be split in order to not exceed the maximum block size for a given rate and the lowest-cost application method. We obtained an estimated cost per split of $185.92. Accordingly, the change in cost for a field requiring splitting will be the change in application method cost ($10 per acre for 24-in injection) plus the splitting cost ($185.92 per split).

Results for Alternative Proposed Regulation

Discussion of the results is separated by method.

[3] These fuel cost estimates were obtained prior to the 2022 increases in the cost of fuel.

Method 1: Economic analysis of changes in application methods to comply with 100 ft setback distance for all 1,3-D applications

Table 4/5 summarizes the number of violations when the proposed requirements are applied to historical data, affected acreage, and the cost of the proposed requirements in total and disaggregated by application rate categories by year. Low applications had rates below 150 lbs per acre, medium had 150-300 lbs per acre, and high had over 300 lbs per acre.

The number of inland acres that would have been affected annually by the proposed regulation ranged from 11,263 to 13,197 for low-rate applications, 1,268 to 2,411 for medium-rate applications, and 20,468 to 24,095 for high-rate applications (Table 4). A total of 33,607 – 37,882 inland acres per year would have been affected. The number of inland fields out of compliance with the new proposed regulations ranged from 188 to 223 for low-rate applications, 34 to 80 for medium-rate applications, and 848 to 986 for high-rate applications. A total of 1,087 to 1,287 inland fields per year would have been out of compliance.

The number of coastal acres that would have been affected annually by the regulation ranged from 3,712 to 4,291 for low-rate applications, 517 to 1,203 for medium-rate applications, and 373 to 879 for high-rate applications (Table 5). A total of 4,872 – 6,372 coastal acres per year would have been affected. The number of coastal fields out of compliance with the new proposed regulations ranged from 103 to 140 for low-rate applications, 23 to 45 for medium-rate applications, and 20 to 33 for high-rate applications. A total of 159 to 208 coastal fields per year would have been out of compliance.

Under the proposed seasonal tables, the addition of TIF tarp for chemigation is the biggest driver of cost increases for inland low-rate fields (Table 4). About 76% of the estimated change in cost is due to the addition of TIF tarp in the low-rate category. For the medium-rate fields, deeper injection is the biggest driver, accounting for 79% of the cost increase. For the high-rate category, field splits accounted for slightly under half of the cost increase (45%) and deeper injection accounted for slightly over half (55%). The number of splits required varied across application rate categories. Low-rate applications required 29 to 42 splits and medium-rate applications require 15 to 43 splits annually to bring them into compliance. High-rate blocks require 777 to 1,106 splits with a cost of $144,460 to $205,628.

The addition of TIF tarp for chemigation is a big driver of cost increases in coastal region, particularly in the low and medium rate categories (Table 5). The number of splits required varied across application rate categories. Low-rate applications required 12 to 21 splits with a cost of $2,231 to $3,904. Medium-rate blocks required 0 to 11 splits with a cost of $0 to $2,045. High-rate blocks required 25 to 69 splits, costing $4,648 to $12,828, annually to bring them into compliance. For the high-rate fields, the vast majority of which are tree and vine crops, around

58% of the estimated change in cost is due to the logistical costs of splitting fields into smaller blocks. Applications requiring splits could incur higher costs if applicators decide to charge more per acre for smaller blocks and/or charge for mileage. As stated in the June 21, 2022, report:

> Additionally, it is possible that some new maximum block sizes are so small that if all applications were divided into such blocks applicators simply wouldn't have the time or resources to treat all of them in time for planting, particularly if the affected fields are geographically dispersed. That scenario could likely be resolved by increased hiring and investment in equipment by applicators but does present a potentially very damaging situation in the short term if growers struggle to meet planting times and must leave fields fallow.

In total, annual compliance costs for inland regions ranged from $349,812 to $691,136 for low-rate applications, from $17,890 to $32,108 for medium-rate applications, and from $348,334 to $446,574 for high-rate applications (Table 4). For all crops, annual compliance costs for inland region are estimated at $721,020 - $1,162,738 (Table 4). Annual compliance costs for coastal regions ranged from $64,811 to $500,976 for low-rate applications, from $11,836 to $201,272 for medium-rate applications, and from $8,373 to $21,616 for high-rate applications (Table 5). For all crops, annual compliance costs for coastal regions are estimated at $252,329 - $534,428 (Table 5).Costs disaggregated by crop and year are available in Appendix B.

Table 4. Additional Annual Cost Due to 1,3-D Restrictions, Inland Region: 2017-2020

Use Rate Category	Year	# of Violations	# of Fields with violations	Affected Acres	# of Splits	Split Cost ($)	Deep Injection Cost ($)	TIF Cost	Total Cost ($)	Share of cost due to splits (%)	Share of cost due to deep-injection (%)	Share of cost due to TIF 1209 Injection (%)
Low	2017	225	223	13,197	42	7,809	128,285	424,201	560,294	1	23	76
Low	2018	230	223	11,787	29	5,392	112,884	572,861	691,136	1	16	83
Low	2019	195	188	11,277	29	5,392	110,740	233,680	349,812	2	32	67
Low	2020	215	205	11,263	31	5,764	108,935	424,500	539,198	1	20	79
Medium	2017	81	80	2,411	43	7,995	24,113	0	32,108	25	75	0
Medium	2018	79	78	2,001	27	5,020	20,008	0	25,028	20	80	0
Medium	2019	81	74	2,009	15	2,789	20,085	0	22,874	12	88	0
Medium	2020	37	34	1,268	28	5,206	12,685	0	17,890	29	71	0
High	2017	884	859	21,238	939	174,579	212,383	0	386,961	45	55	0
High	2018	1,027	986	24,095	1,106	205,628	240,946	0	446,574	46	54	0
High	2019	883	852	20,468	777	144,460	203,875	0	348,334	41	59	0
High	2020	889	848	21,076	973	180,900	210,760	0	391,660	46	54	0
Total	2017	1,190	1,162	36,847	1,024	190,382	364,781	424,201	979,364	19	37	43
Total	2018	1,336	1,287	37,882	1,162	216,039	373,838	572,861	1,162,738	19	32	49
Total	2019	1,159	1,114	33,754	821	152,640	334,700	233,680	721,020	21	46	32
Total	2020	1,141	1,087	33,607	1,032	191,869	332,380	424,500	948,749	20	35	45

Table 5. Additional Annual Cost Due to 1,3-D Restrictions, Coastal Region: 2017-2020

Use Rate Category	Year	# of Violations	# of Violated Fields	Affected Acres	# of Splits	Split Cost ($)	Deep Injection Cost ($)	TIF Cost	Total Cost ($)	Share of cost due to splits (%)	Share of cost due to deep-injection (%)	Share of cost due to TIF 1209 Injection (%)
Low	2017	193	140	4,291	12	2,231	26,578	472,167	500,976	0	5	94
Low	2018	154	126	4,171	21	3,904	20,867	187,427	212,198	2	10	88
Low	2019	174	114	4,076	15	2,789	25,797	36,225	64,811	4	40	56
Low	2020	117	103	3,712	19	3,532	21,959	256,013	281,505	1	8	91
Medium	2017	49	45	1,203	11	2,045	9,791	0	11,836	17	83	0
Medium	2018	35	35	634	0	0	5,421	105,800	111,221	0	5	95
Medium	2019	23	23	517	1	186	3,678	171,925	175,789	0	2	98
Medium	2020	38	36	788	1	186	5,310	195,776	201,272	0	3	97
High	2017	30	23	879	69	12,828	8,788	0	21,616	59	41	0
High	2018	22	20	717	61	11,341	7,167	0	18,508	61	39	0
High	2019	33	33	541	34	6,321	5,408	0	11,729	54	46	0
High	2020	21	20	373	25	4,648	3,725	0	8,373	56	44	0
Total	2017	272	208	6,372	92	17,105	45,157	472,167	534,428	3	8	88
Total	2018	211	181	5,522	82	15,245	33,455	293,227	341,927	4	10	86
Total	2019	230	170	5,134	50	9,296	34,883	208,150	252,329	4	14	82
Total	2020	176	159	4,872	45	8,366	30,994	451,789	491,150	2	6	92

Method 2: Spatial analysis of fields impacted by 100 ft, 200 ft, and 500 ft occupied structure setback distances in three counties: Fresno, Kern and Stanislaus

There were 1,711 1,3-D applications in the three focal counties in total for the years 2017 and 2018. For these counties in total, the estimated costs obtained using Method 1 were $430,951 in 2017 and $236,356 for 2018 (Table 6). Limiting the analysis to the actual fields and acreage affected by the regulations reduces costs by 32% in 2018 and 42% in 2017 (Table 6). Note that all three counties would be subject to the inland requirements under the revised proposed regulation. Table 6 compares costs from the first analysis (Method 1) and the spatial analysis (Method 2), disaggregated into costs from splitting blocks, using deeper injection, and using TIF. It also reports the spatial costs as a share of the first analysis by cost component. Comparing the sources of the costs obtained from the two methods, the cost of 24 in-injection under Method 2 is a significantly higher percentage of the total cost under Method 1 than is the case for the cost of block splitting across both years and counties. Limiting the analysis to the actual fields and acreage affected by the regulations gave estimated costs that were $249,491 in 2017 and $160,167 in 2018 (Table 6).

Table 6. Comparison across Methods of Estimated Cost of Complying with Proposed Regulations on Occupied Structure Setbacks, Application Methods and Rates, and Maximum Block Size

	Year	Method 1 Costs ($)				Method 2 Costs ($)				Method 2 Cost as a Share of Method 1 Cost (%)			
		Split	**Deep Inj.**	**TIF**	**Total**	**Split**	**Deep Inj.**	**TIF**	**Total**	**Split**	**Deep Inj.**	**TIF**	**Total**
Fresno	2017	29,375	64,066	0	93,441	17,848	56,409	0	74,257	61	88	0	79
Kern	2017	28,074	58,656	202,400	289,130	9,482	45,393	80,500	135,374	34	77	0	47
Stanislaus	2017	13,758	34,622	0	48,380	8,180	31,679	0	39,860	59	92	0	82
Total	**2017**	**71,207**	**157,344**	**202,400**	**430,951**	**35,511**	**133,480**	**80,500**	**249,491**	**50**	**85**	**0**	**58**
Fresno	2018	21,753	60,934	0	82,686	12,271	51,308	0	63,578	56	84	0	77
Kern	2018	31,792	59,574	0	91,367	6,135	44,648	0	50,783	19	75	0	56
Stanislaus	2018	20,451	41,852	0	62,303	11,155	34,650	0	45,805	55	83	0	74
Total	**2018**	**73,996**	**162,360**	**0**	**236,356**	**29,561**	**130,606**	**0**	**160,167**	**40**	**80**	**0**	**68**

Table 7, reproduced from the June 21, 2022, report, shows the number of fields with occupied structures within 100 ft, 200 ft, and 500 ft. There were 268 fields in 2017 and 353 in 2018 with no occupied structures within 500 ft. This is 33% and 39% of fields, respectively.

Table 7. Number of Fields with Occupied Structures within 100 ft, 200 ft, and 500 ft Setbacks: 2017 and 2018

Year	Setback (ft)	Fields with structures within setback
2017	100	147
	200	223
	500	179
2018	100	155
	200	226
	500	160

Fields with occupied structures within 200 ft would have to use the 100 ft setback rules in Appendix A. This was estimated to cost $88,591 in 2017 and $85,709 in 2018, which is 36 and 54% of the total cost in each year (Table 8).

Applications that did not comply with the proposed regulations on fields with occupied structures between 200 and 500 ft would need to use deeper injection applications to comply with the proposed regulations but would be able to use the 200 ft setback rules (Appendix A). This was estimated to cost $34,243 in 2017 and $23,740 in 2018, which is 14% and 15% of the total cost in each year, respectively (Table 8). As noted earlier, we do not address the added 300 ft and 400 ft setbacks.

Applications that did not comply with the proposed regulations on fields with no occupied structures within 500 ft would switch to deeper injection but would be able to use the 500 ft setback rules in the proposed regulations (Appendix A). This was estimated to cost $126,657 in 2017 and $50,717 in 2018, which is 51% and 32% of the total cost in each year, respectively (Table 8). The higher cost of compliance in 2017 was due to some fields having to add TIF tarp. There was no TIF added in 2018 in these three counties

The total estimated cost for the three focal counties to comply with the proposed regulation using the spatially explicit approach was 58% (2017) and 68% (2018) of the total estimated cost using the assumption that all fields had a structure within 100 ft (Table 6). Most of the reduction in estimated costs is due to fewer splits being required with the larger setback distances. As stated in the June 21, 2022, report:

> Note that these three counties and two years may or may not be representative for all counties in all years. In particular, none of these are coastal counties where there are more fields using application methods that would require TIF to be added. However, it does indicate that it is appropriate to treat our estimates from the first analysis as an upper bound. For growers with blocks farther than 200 ft from an occupied structure, splitting costs will be lower than what is estimated for all counties on average.

Table 8. Estimated Costs by Year and Occupied Structure Setback Distance in Focal Counties

Setback (ft)	Year	# of Violations	Affected Acres	# of Splits	Split Cost ($)	Deep Injection Cost ($)	TIF 1209	Total Cost ($)	% of Total Cost
100	2017	273	6,182	144	26,772	61,819	0	88,591	36
100	2018	292	6,228	126	23,426	62,283	0	85,709	54
200	2017	96	2,848	31	5,764	28,479	0	34,243	14
200	2018	95	2,132	13	2,417	21,324	0	23,740	15
500	2017	86	4,388	16	2,975	43,182	80,500	126,657	51
500	2018	100	4,700	20	3,718	46,999	0	50,717	32
Total	2017	455	13,418	191	35,511	133,480	80,500	249,491	100
Total	2018	487	13,061	159	29,561	130,606	0	160,167	100

Appendix

Appendix A. DPR Tables for Application Block Size Limits

Appendix A1. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for Untarped Application Methods Using 12-in Injection (FFMs 1201, 1202, 1203, 1204, and 1205), Inland Region

Application Rate	**Maximum Application Block Size (ac) and Occupied Structure**					
	March to October			**November to February**		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	10 ac	20 ac	65 ac	4 ac	5 ac	15 ac
90	5 ac	15 ac	50 ac	3 ac	5 ac	15 ac
100	5 ac	10 ac	40 ac	3 ac	4 ac	10 ac
110	5 ac	10 ac	35 ac	3 ac	4 ac	10 ac
120	4 ac	5 ac	30 ac	2 ac	4 ac	5 ac
130	4 ac	5 ac	25 ac	2 ac	3 ac	5 ac
140	4 ac	5 ac	20 ac	1 ac	3 ac	5 ac
150	3 ac	5 ac	15 ac	1 ac	3 ac	5 ac
160	3 ac	5 ac	15 ac	Not allowed	2 ac	5 ac
170	3 ac	4 ac	15 ac	Not allowed	2 ac	5 ac
180	3 ac	4 ac	10 ac	Not allowed	2 ac	4 ac
190	2 ac	4 ac	10 ac	Not allowed	2 ac	4 ac
200	2 ac	4 ac	10 ac	Not allowed	1 ac	4 ac
210	2 ac	4 ac	10 ac	Not allowed	1 ac	4 ac
220	2 ac	3 ac	5 ac	Not allowed	1 ac	4 ac
230	1 ac	3 ac	5 ac	Not allowed	1 ac	4 ac
240	1 ac	3 ac	5 ac	Not allowed	1 ac	4 ac
250	1 ac	3 ac	5 ac	Not allowed	Not allowed	3 ac
260	1 ac	3 ac	5 ac	Not allowed	Not allowed	3 ac
270	1 ac	3 ac	5 ac	Not allowed	Not allowed	3 ac
280	Not allowed	2 ac	5 ac	Not allowed	Not allowed	3 ac
290	Not allowed	2 ac	5 ac	Not allowed	Not allowed	3 ac
300	Not allowed	2 ac	5 ac	Not allowed	Not allowed	3 ac
310	Not allowed	2 ac	5 ac	Not allowed	Not allowed	3 ac
320	Not allowed	2 ac	5 ac	Not allowed	Not allowed	3 ac
332	Not allowed	2 ac	4 ac	Not allowed	Not allowed	3 ac

Appendix A2. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for Untarped Application Methods Using 12-in Injection (FFMs 1201, 1202, 1203, 1204, and 1205), Coastal Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	5 ac	10 ac	25 ac	3 ac	5 ac	10 ac
90	4 ac	5 ac	20 ac	3 ac	4 ac	10 ac
100	4 ac	5 ac	15 ac	3 ac	4 ac	5 ac
110	3 ac	4 ac	10 ac	2 ac	3 ac	5 ac
120	3 ac	4 ac	10 ac	2 ac	3 ac	5 ac
130	3 ac	4 ac	5 ac	1 ac	3 ac	5 ac
140	2 ac	3 ac	5 ac	1 ac	2 ac	4 ac
150	2 ac	3 ac	5 ac	Not allowed	2 ac	4 ac
160	2 ac	3 ac	5 ac	Not allowed	2 ac	4 ac
170	1 ac	3 ac	5 ac	Not allowed	1 ac	4 ac
180	1 ac	2 ac	5 ac	Not allowed	1 ac	4 ac
190	1 ac	2 ac	4 ac	Not allowed	1 ac	3 ac
200	Not allowed	2 ac	4 ac	Not allowed	Not allowed	3 ac
210	Not allowed	2 ac	4 ac	Not allowed	Not allowed	3 ac
220	Not allowed	1 ac	4 ac	Not allowed	Not allowed	3 ac
230	Not allowed	1 ac	4 ac	Not allowed	Not allowed	3 ac
240	Not allowed	1 ac	4 ac	Not allowed	Not allowed	3 ac
250	Not allowed	1 ac	4 ac	Not allowed	Not allowed	3 ac
260	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	2 ac
270	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	2 ac
280	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	2 ac
290	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	2 ac
300	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	2 ac
310	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	2 ac
320	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	2 ac
332	Not allowed	Not allowed	3 ac	Not allowed	Not allowed	1 ac

Appendix A3. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for Application Methods Using 18-in Injection (FFMs 1206, 1207, 1208, 1210, and 1211), Inland Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	Not allowed	Not allowed	Not allowed	40 ac	65 ac	Not allowed
90	Not allowed	Not allowed	Not allowed	30 ac	45 ac	Not allowed
100	Not allowed	Not allowed	Not allowed	20 ac	35 ac	Not allowed
110	Not allowed	Not allowed	Not allowed	15 ac	25 ac	70 ac
120	60 ac	Not allowed	Not allowed	10 ac	20 ac	55 ac
130	45 ac	Not allowed	Not allowed	10 ac	15 ac	45 ac
140	35 ac	65 ac	Not allowed	5 ac	10 ac	40 ac
150	30 ac	50 ac	Not allowed	5 ac	10 ac	35 ac
160	25 ac	45 ac	Not allowed	5 ac	10 ac	30 ac
170	20 ac	35 ac	Not allowed	5 ac	5 ac	25 ac
180	15 ac	30 ac	Not allowed	4 ac	5 ac	20 ac
190	15 ac	25 ac	75 ac	4 ac	5 ac	20 ac
200	10 ac	25 ac	65 ac	4 ac	5 ac	20 ac
210	10 ac	20 ac	60 ac	4 ac	5 ac	15 ac
220	10 ac	15 ac	50 ac	3 ac	5 ac	15 ac
230	5 ac	15 ac	45 ac	3 ac	5 ac	15 ac
240	5 ac	15 ac	45 ac	3 ac	4 ac	10 ac
250	5 ac	10 ac	40 ac	3 ac	4 ac	10 ac
260	5 ac	10 ac	35 ac	3 ac	4 ac	10 ac
270	5 ac	10 ac	35 ac	3 ac	4 ac	10 ac
280	5 ac	10 ac	30 ac	2 ac	4 ac	10 ac
290	5 ac	10 ac	30 ac	2 ac	4 ac	10 ac
300	5 ac	5 ac	25 ac	2 ac	4 ac	5 ac
310	4 ac	5 ac	25 ac	2 ac	3 ac	5 ac
320	4 ac	5 ac	25 ac	2 ac	3 ac	5 ac
332	4 ac	5 ac	20 ac	2 ac	3 ac	5 ac

Appendix A4. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for Application Methods Using 18-in Injection (FFMs 1206, 1207, 1208, 1210, and 1211), Coastal Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	80 ac	80 ac	80 ac	25 ac	35 ac	80 ac
90	55 ac	80 ac	80 ac	15 ac	30 ac	65 ac
100	40 ac	65 ac	80 ac	15 ac	20 ac	55 ac
110	30 ac	50 ac	80 ac	10 ac	15 ac	40 ac
120	25 ac	40 ac	80 ac	10 ac	10 ac	35 ac
130	20 ac	30 ac	75 ac	5 ac	10 ac	30 ac
140	15 ac	25 ac	65 ac	5 ac	10 ac	25 ac
150	10 ac	20 ac	55 ac	5 ac	5 ac	20 ac
160	10 ac	15 ac	45 ac	5 ac	5 ac	20 ac
170	10 ac	15 ac	40 ac	4 ac	5 ac	15 ac
180	5 ac	10 ac	35 ac	4 ac	5 ac	15 ac
190	5 ac	10 ac	30 ac	4 ac	5 ac	10 ac
200	5 ac	10 ac	25 ac	4 ac	5 ac	10 ac
210	5 ac	10 ac	25 ac	3 ac	4 ac	10 ac
220	5 ac	5 ac	20 ac	3 ac	4 ac	10 ac
230	5 ac	5 ac	20 ac	3 ac	4 ac	5 ac
240	4 ac	5 ac	15 ac	3 ac	4 ac	5 ac
250	4 ac	5 ac	15 ac	3 ac	4 ac	5 ac
260	4 ac	5 ac	15 ac	2 ac	3 ac	5 ac
270	4 ac	5 ac	10 ac	2 ac	3 ac	5 ac
280	3 ac	5 ac	10 ac	2 ac	3 ac	5 ac
290	3 ac	4 ac	10 ac	2 ac	3 ac	5 ac
300	3 ac	4 ac	10 ac	2 ac	3 ac	5 ac
310	3 ac	4 ac	10 ac	2 ac	3 ac	5 ac
320	3 ac	4 ac	10 ac	1 ac	3 ac	5 ac
332	3 ac	4 ac	5 ac	1 ac	2 ac	5 ac

Appendix A5. Maximum Block Size (Acres) for Application Rate- Occupied Structure Distance Pairs for Untarped Application Methods Using 24-in Injection (FFMs 1224, 1225, and 1226), Inland Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
90	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
100	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
110	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
120	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
130	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
140	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
150	80 ac	80 ac	80 ac	65 ac	80 ac	80 ac
160	80 ac	80 ac	80 ac	50 ac	75 ac	80 ac
170	80 ac	80 ac	80 ac	40 ac	60 ac	80 ac
180	80 ac	80 ac	80 ac	35 ac	55 ac	80 ac
190	80 ac	80 ac	80 ac	30 ac	45 ac	80 ac
200	80 ac	80 ac	80 ac	25 ac	40 ac	80 ac
210	80 ac	80 ac	80 ac	20 ac	35 ac	80 ac
220	80 ac	80 ac	80 ac	20 ac	30 ac	75 ac
230	70 ac	80 ac	80 ac	15 ac	25 ac	70 ac
240	60 ac	80 ac	80 ac	15 ac	25 ac	60 ac
250	55 ac	80 ac	80 ac	10 ac	20 ac	55 ac
260	45 ac	80 ac	80 ac	10 ac	20 ac	50 ac
270	40 ac	70 ac	80 ac	10 ac	15 ac	45 ac
280	35 ac	60 ac	80 ac	10 ac	15 ac	40 ac
290	35 ac	55 ac	80 ac	5 ac	15 ac	40 ac
300	30 ac	50 ac	80 ac	5 ac	10 ac	35 ac
310	25 ac	45 ac	80 ac	5 ac	10 ac	35 ac
320	25 ac	40 ac	80 ac	5 ac	10 ac	35 ac
332	20 ac	40 ac	80 ac	5 ac	10 ac	30 ac

Appendix A6. Maximum Block Size (Acres) for Application Rate- Occupied Structure Distance Pairs for Untarped Application Methods Using 24-in Injection (FFMs 1224, 1225, and 1226), Coastal Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
90	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
100	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
110	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
120	80 ac	80 ac	80 ac	75 ac	80 ac	80 ac
130	80 ac	80 ac	80 ac	55 ac	80 ac	80 ac
140	80 ac	80 ac	80 ac	45 ac	70 ac	80 ac
150	80 ac	80 ac	80 ac	35 ac	55 ac	80 ac
160	80 ac	80 ac	80 ac	30 ac	45 ac	80 ac
170	80 ac	80 ac	80 ac	25 ac	40 ac	80 ac
180	70 ac	80 ac	80 ac	20 ac	35 ac	80 ac
190	60 ac	80 ac	80 ac	20 ac	30 ac	75 ac
200	50 ac	80 ac	80 ac	15 ac	25 ac	65 ac
210	45 ac	70 ac	80 ac	15 ac	25 ac	60 ac
220	35 ac	60 ac	80 ac	10 ac	20 ac	50 ac
230	35 ac	50 ac	80 ac	10 ac	20 ac	45 ac
240	30 ac	45 ac	80 ac	10 ac	15 ac	40 ac
250	25 ac	40 ac	80 ac	10 ac	15 ac	40 ac
260	25 ac	35 ac	80 ac	10 ac	15 ac	35 ac
270	20 ac	35 ac	80 ac	5 ac	10 ac	35 ac
280	20 ac	30 ac	75 ac	5 ac	10 ac	30 ac
290	15 ac	30 ac	65 ac	5 ac	10 ac	30 ac
300	15 ac	25 ac	60 ac	5 ac	10 ac	25 ac
310	15 ac	25 ac	55 ac	5 ac	10 ac	25 ac
320	10 ac	20 ac	55 ac	5 ac	5 ac	25 ac
332	10 ac	20 ac	50 ac	5 ac	5 ac	20 ac

Appendix A7. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for TIF Application Methods Using Shallow Injection (FFMs 1243, 1245, and 1259), Inland Region

	Maximum Application Block Size (ac) and Occupied Structure					
Application Rate	**March to October**			**November to February**		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
90	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
100	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
110	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
120	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
130	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
140	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
150	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
160	80 ac	80 ac	80 ac	65 ac	80 ac	80 ac
170	80 ac	80 ac	80 ac	50 ac	80 ac	80 ac
180	80 ac	80 ac	80 ac	45 ac	70 ac	80 ac
190	80 ac	80 ac	80 ac	35 ac	60 ac	80 ac
200	80 ac	80 ac	80 ac	30 ac	50 ac	80 ac
210	80 ac	80 ac	80 ac	25 ac	45 ac	80 ac
220	80 ac	80 ac	80 ac	25 ac	40 ac	80 ac
230	80 ac	80 ac	80 ac	20 ac	35 ac	80 ac
240	80 ac	80 ac	80 ac	15 ac	30 ac	80 ac
250	80 ac	80 ac	80 ac	15 ac	30 ac	70 ac
260	80 ac	80 ac	80 ac	15 ac	25 ac	65 ac
270	70 ac	80 ac	80 ac	10 ac	20 ac	60 ac
280	60 ac	80 ac	80 ac	10 ac	20 ac	55 ac
290	55 ac	80 ac	80 ac	10 ac	20 ac	50 ac
300	50 ac	80 ac	80 ac	10 ac	15 ac	45 ac
310	45 ac	80 ac	80 ac	10 ac	15 ac	45 ac
320	40 ac	70 ac	80 ac	5 ac	15 ac	40 ac
332	35 ac	65 ac	80 ac	5 ac	10 ac	35 ac

Appendix A8. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for TIF Application Methods Using Shallow Injection (FFMs 1243, 1245, and 1259), Coastal Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
90	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
100	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
110	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
120	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
130	80 ac	80 ac	80 ac	75 ac	80 ac	80 ac
140	80 ac	80 ac	80 ac	60 ac	80 ac	80 ac
150	80 ac	80 ac	80 ac	50 ac	75 ac	80 ac
160	80 ac	80 ac	80 ac	40 ac	60 ac	80 ac
170	80 ac	80 ac	80 ac	35 ac	50 ac	80 ac
180	80 ac	80 ac	80 ac	30 ac	45 ac	80 ac
190	80 ac	80 ac	80 ac	25 ac	40 ac	80 ac
200	80 ac	80 ac	80 ac	20 ac	35 ac	80 ac
210	75 ac	80 ac	80 ac	20 ac	30 ac	70 ac
220	60 ac	80 ac	80 ac	15 ac	25 ac	65 ac
230	55 ac	80 ac	80 ac	15 ac	25 ac	55 ac
240	45 ac	75 ac	80 ac	10 ac	20 ac	50 ac
250	40 ac	65 ac	80 ac	10 ac	20 ac	45 ac
260	35 ac	60 ac	80 ac	10 ac	15 ac	45 ac
270	35 ac	55 ac	80 ac	10 ac	15 ac	40 ac
280	30 ac	45 ac	80 ac	10 ac	15 ac	35 ac
290	25 ac	40 ac	80 ac	5 ac	10 ac	35 ac
300	25 ac	40 ac	80 ac	5 ac	10 ac	35 ac
310	20 ac	35 ac	80 ac	5 ac	10 ac	30 ac
320	20 ac	30 ac	80 ac	5 ac	10 ac	30 ac
332	15 ac	30 ac	75 ac	5 ac	10 ac	25 ac

Appendix A9. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for Drip Application (FFM 1209), Inland Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	40 ac	75 ac	80 ac	5 ac	15 ac	40 ac
90	30 ac	50 ac	80 ac	5 ac	10 ac	30 ac
100	20 ac	40 ac	80 ac	5 ac	5 ac	25 ac
110	15 ac	30 ac	80 ac	4 ac	5 ac	20 ac
120	10 ac	25 ac	70 ac	4 ac	5 ac	15 ac
130	10 ac	20 ac	60 ac	3 ac	5 ac	15 ac
140	5 ac	15 ac	50 ac	3 ac	4 ac	10 ac
150	5 ac	15 ac	40 ac	3 ac	4 ac	10 ac
160	5 ac	10 ac	35 ac	2 ac	4 ac	10 ac
170	5 ac	10 ac	30 ac	2 ac	4 ac	10 ac
180	4 ac	10 ac	30 ac	2 ac	3 ac	5 ac
190	4 ac	5 ac	25 ac	2 ac	3 ac	5 ac
200	4 ac	5 ac	20 ac	1 ac	3 ac	5 ac
210	4 ac	5 ac	20 ac	1 ac	3 ac	5 ac
220	3 ac	5 ac	15 ac	1 ac	3 ac	5 ac
230	3 ac	5 ac	15 ac	Not allowed	2 ac	5 ac
240	3 ac	5 ac	15 ac	Not allowed	2 ac	5 ac
250	3 ac	4 ac	15 ac	Not allowed	2 ac	5 ac
260	3 ac	4 ac	10 ac	Not allowed	2 ac	5 ac
270	2 ac	4 ac	10 ac	Not allowed	2 ac	4 ac
280	2 ac	4 ac	10 ac	Not allowed	2 ac	4 ac
290	2 ac	4 ac	10 ac	Not allowed	2 ac	4 ac
300	2 ac	4 ac	10 ac	Not allowed	1 ac	4 ac
310	2 ac	4 ac	10 ac	Not allowed	1 ac	4 ac
320	2 ac	3 ac	10 ac	Not allowed	1 ac	4 ac
332	1 ac	3 ac	5 ac	Not allowed	1 ac	4 ac

Appendix A10. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for Drip Application (FFM 1209), Coastal Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure					
	March to October			November to February		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	20 ac	30 ac	75 ac	5 ac	10 ac	25 ac
90	10 ac	20 ac	55 ac	5 ac	5 ac	20 ac
100	10 ac	15 ac	40 ac	4 ac	5 ac	15 ac
110	5 ac	10 ac	35 ac	4 ac	5 ac	10 ac
120	5 ac	10 ac	30 ac	3 ac	4 ac	10 ac
130	5 ac	5 ac	20 ac	3 ac	4 ac	10 ac
140	4 ac	5 ac	20 ac	3 ac	4 ac	5 ac
150	4 ac	5 ac	15 ac	2 ac	3 ac	5 ac
160	4 ac	5 ac	15 ac	2 ac	3 ac	5 ac
170	3 ac	5 ac	10 ac	2 ac	3 ac	5 ac
180	3 ac	4 ac	10 ac	1 ac	3 ac	5 ac
190	3 ac	4 ac	10 ac	1 ac	2 ac	5 ac
200	3 ac	4 ac	10 ac	1 ac	2 ac	4 ac
210	2 ac	4 ac	5 ac	Not allowed	2 ac	4 ac
220	2 ac	3 ac	5 ac	Not allowed	2 ac	4 ac
230	2 ac	3 ac	5 ac	Not allowed	2 ac	4 ac
240	2 ac	3 ac	5 ac	Not allowed	1 ac	4 ac
250	2 ac	3 ac	5 ac	Not allowed	1 ac	4 ac
260	1 ac	3 ac	5 ac	Not allowed	1 ac	4 ac
270	1 ac	3 ac	5 ac	Not allowed	1 ac	3 ac
280	1 ac	2 ac	5 ac	Not allowed	Not allowed	3 ac
290	1 ac	2 ac	5 ac	Not allowed	Not allowed	3 ac
300	Not allowed	2 ac	4 ac	Not allowed	Not allowed	3 ac
310	Not allowed	2 ac	4 ac	Not allowed	Not allowed	3 ac
320	Not allowed	2 ac	4 ac	Not allowed	Not allowed	3 ac
332	Not allowed	2 ac	4 ac	Not allowed	Not allowed	3 ac

Appendix A11. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for TIF Application Methods using Broadcast and Strip (FFM 1242, 1247, and 1249), Inland Region

Application Rate	Maximum Application Block Size (ac) and Occupied Structure March to October 100 ft	200 ft	500 ft	November to February 100 ft	200 ft	500 ft
80	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
90	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
100	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
110	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
120	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
130	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
140	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
150	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
160	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
170	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
180	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
190	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
200	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
210	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
220	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
230	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
240	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
250	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
260	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
270	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
280	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
290	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
300	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
310	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
320	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
332	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac

Appendix A12. Maximum Block Size (Acres) for Application Rate-Occupied Structure Distance Pairs for TIF Application Methods using Broadcast and Strip (FFM 1242, 1247, and 1249) Coastal Region

	Maximum Application Block Size (ac) and Occupied Structure					
Application Rate	**March to October**			**November to February**		
	100 ft	200 ft	500 ft	100 ft	200 ft	500 ft
80	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
90	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
100	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
110	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
120	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
130	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
140	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
150	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
160	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
170	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
180	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
190	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
200	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
210	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
220	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
230	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
240	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
250	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
260	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
270	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
280	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
290	80 ac	80 ac	80 ac	80 ac	80 ac	80 ac
300	80 ac	80 ac	80 ac	75 ac	80 ac	80 ac
310	80 ac	80 ac	80 ac	65 ac	80 ac	80 ac
320	80 ac	80 ac	80 ac	60 ac	80 ac	80 ac
332	80 ac	80 ac	80 ac	55 ac	80 ac	80 ac

Appendix B. Estimated Costs by Region, Crop and Year

Appendix B1. Estimated Costs by Crop and Year: Inland Region

Commodity	Year	Fields not in compliance	Acres not in compliance	Splits needed	Split costs ($)	Deeper injection Costs ($)	TIF 1209	Total cost ($)
ALMOND	2017	369	9,111	238	44,249	91,107	0	135,356
ALMOND	2018	483	11,153	272	50,570	111,530	0	162,100
ALMOND	2019	386	8,824	206	38,300	88,241	0	126,540
ALMOND	2020	394	9,277	238	44,249	92,772	0	137,021
APPLE	2018	2	19	0	0	190	0	190
APPLE	2019	2	23	0	0	225	0	225
APRICOT	2017	4	61	1	186	609	0	795
APRICOT	2018	0	0	0	0	0	0	0
APRICOT	2020	3	65	2	372	650	0	1,022
ASIAN PEAR	2019	1	7	0	0	65	0	65
BEAN DRIED	2017	0	0	0	0	0	0	0
BEET	2017	1	5	0	0	50	0	50
BEET	2019	0	0	0	0	0	0	0
BITTER MELON	2017	0	0	0	0	0	0	0
BITTER MELON	2018	0	0	0	0	0	0	0
BITTER MELON	2019	0	0	0	0	0	0	0
BLUEBERRY	2017	2	111	4	744	1,107	0	1,851
BLUEBERRY	2018	2	178	7	1,301	1,780	0	3,081
BLUEBERRY	2019	1	40	1	186	400	0	586
CANTALOUPE	2017	3	336	3	558	3,360	0	3,918

CANTALOUPE	2018	2	240	2	372	2,400	0	2,772
CANTALOUPE	2019	2	279	2	372	2,790	0	3,162
CANTALOUPE	2020	2	181	2	372	1,810	0	2,182
CARROT	2017	116	7,094	19	3,532	70,943	0	74,475
CARROT	2018	102	6,230	14	2,603	62,300	0	64,903
CARROT	2019	109	6,621	15	2,789	66,215	0	69,003
CARROT	2020	105	6,351	16	2,975	63,512	0	66,487
CHERRY	2017	15	338	8	1,487	3,377	0	4,864
CHERRY	2018	17	378	10	1,859	3,782	0	5,641
CHERRY	2019	10	222	5	930	2,223	0	3,153
CHERRY	2020	10	174	4	744	1,735	0	2,479
CITRUS	2017	0	0	0	0	0	0	0
CORN FOR/FOD	2017	1	27	1	186	270	0	456
DAIKON	2017	0	0	0	0	0	0	0
EGGPLANT	2017	2	60	0	0	600	0	600
EGGPLANT	2018	3	52	0	0	524	0	524
EGGPLANT	2019	3	85	0	0	849	0	849
EGGPLANT	2020	1	20	0	0	200	0	200
FALLOW OR IDLE LAND	2018	1	37	1	186	370	0	556
GF-GROUND COVER	2019	1	43	2	372	432	0	804
GP-VINE	2018	1	78	3	558	778	0	1,336
GRAPE	2017	64	2,180	67	12,457	21,802	0	34,258
GRAPE	2018	47	1,691	49	9,110	16,914	0	26,024
GRAPE	2019	42	1,644	42	7,809	16,444	0	24,253
GRAPE	2020	67	1,715	42	7,809	17,150	0	24,959
GRAPE, RAISIN	2017	14	351	8	1,487	3,514	0	5,001

GRAPE, RAISIN	2018	16	331	9	1,673	3,314	0	4,987
GRAPE, RAISIN	2019	16	345	9	1,673	3,448	0	5,121
GRAPE, RAISIN	2020	17	436	11	2,045	4,355	0	6,400
GRAPE, WINE	2017	12	288	6	1,116	2,881	0	3,996
GRAPE, WINE	2018	22	1,183	46	8,552	11,825	0	20,378
GRAPE, WINE	2019	21	653	20	3,718	6,528	0	10,247
GRAPE, WINE	2020	23	1,369	47	8,738	13,690	0	22,428
GRAPEFRUIT	2018	0	0	0	0	0	0	0
GRAPEFRUIT	2019	1	14	0	0	135	0	135
HONEYDEW MELON	2017	3	315	3	558	3,150	0	3,708
HONEYDEW MELON	2018	1	129	1	186	1,290	0	1,476
HONEYDEW MELON	2019	3	400	3	558	4,000	0	4,558
HONEYDEW MELON	2020	3	303	2	372	3,030	0	3,402
KIWI	2018	1	12	0	0	118	0	118
KIWI	2020	0	0	0	0	0	0	0
LEMON	2017	2	50	1	186	500	0	686
LEMON	2018	7	90	0	0	902	0	902
LEMON	2019	4	142	4	744	1,422	0	2,166
LEMON	2020	1	7	0	0	66	0	66
LETTUCE HEAD	2018	3	193	0	0	1,930	0	1,930
LETTUCE HEAD	2020	1	34	0	0	340	0	340
LETTUCE HEAD SEED	2017	0	0	0	0	0	0	0
LETTUCE LEAF	2017	2	148	0	0	1,481	0	1,481
LETTUCE LEAF	2018	1	150	1	186	1,500	0	1,686
LETTUCE ROMAINE	2019	2	144	0	0	1,443	0	1,443
MELON	2019	1	76	0	0	760	0	760

N-OUTDOOR FLOWER	2019	0	0	0	0	0	0	0
N-OUTDOOR PLANT	2017	7	68	3	558	682	0	1,240
N-OUTDOOR PLANT	2018	10	91	4	744	913	0	1,657
N-OUTDOOR PLANT	2019	2	17	2	372	165	0	537
N-OUTDOOR PLANT	2020	2	17	2	372	167	0	539
N-OUTDOOR TRANSPL	2017	0	0	0	0	0	0	0
N-OUTDOOR TRANSPL	2018	1	8	0	0	75	0	75
N-OUTDOOR TRANSPL	2019	2	12	0	0	121	0	121
N-OUTDOOR TRANSPL	2020	0	0	0	0	0	0	0
NECTARINE	2017	19	258	6	1,116	2,582	0	3,697
NECTARINE	2018	18	202	1	186	2,024	0	2,210
NECTARINE	2019	16	158	1	186	1,578	0	1,764
NECTARINE	2020	14	182	3	558	1,823	0	2,380
NURSERY SOIL	2019	0	0	0	0	0	0	0
OLIVE	2017	3	92	3	558	922	0	1,479
OLIVE	2018	9	272	8	1,487	2,724	0	4,211
OLIVE	2020	1	22	1	186	219	0	405
ONION DRY	2017	0	0	0	0	0	0	0
ONION DRY	2019	1	4	0	0	40	0	40
OP-FLOWERING PLANT	2017	0	0	0	0	0	0	0
OP-FLOWERING PLANT	2018	0	0	0	0	0	0	0
OP-FLOWERING PLANT	2019	0	0	0	0	0	0	0
OP-ROSE	2017	2	13	0	0	127	0	127
OP-ROSE	2018	0	0	0	0	0	0	0
OP-ROSE	2019	1	81	1	186	0	0	186
OP-ROSE	2020	0	0	0	0	0	0	0

OP-VINE	2017	4	211	5	930	2,109	0	3,038
OP-VINE	2018	5	316	5	930	3,160	0	4,090
OP-VINE	2019	4	306	6	1,116	3,064	0	4,180
ORANGE	2017	5	87	2	372	869	0	1,241
ORANGE	2018	7	200	6	1,116	1,998	0	3,113
ORANGE	2019	2	33	0	0	325	0	325
ORANGE	2020	4	62	1	186	618	0	804
ORANGE NAVEL	2019	1	10	0	0	100	0	100
ORANGE NAVEL	2020	2	50	1	186	497	0	683
OT-DEC. TREE	2017	6	47	0	0	473	0	473
OT-DEC. TREE	2018	3	23	0	0	232	0	232
OT-DEC. TREE	2019	4	27	0	0	267	0	267
OT-DEC. TREE	2020	2	12	0	0	115	0	115
PEACH	2017	58	703	7	1,301	7,034	0	8,335
PEACH	2018	40	444	2	372	4,442	0	4,814
PEACH	2019	36	416	6	1,116	4,159	0	5,274
PEACH	2020	32	412	7	1,301	4,117	0	5,418
PEACH PROCESSING	2017	13	140	1	186	1,399	0	1,585
PEACH PROCESSING	2018	8	92	1	186	921	0	1,107
PEACH PROCESSING	2019	4	32	0	0	316	0	316
PEACH PROCESSING	2020	2	13	0	0	132	0	132
PEAR	2017	0	0	0	0	0	0	0
PEAR	2019	1	7	1	186	68	0	254
PEAR, ASIAN	2017	1	13	0	0	127	0	127
PECAN	2017	0	0	0	0	0	0	0
PEPPER FRUITING	2017	12	358	0	0	800	319,815	320,615

PEPPER FRUITING	2018	19	515	0	0	3,830	151,225	155,055
PEPPER FRUITING	2019	17	544	3	558	3,770	192,280	196,608
PEPPER FRUITING	2020	20	432	0	0	1,000	382,088	383,088
PEPPER FRUITING SD	2017	0	0	0	0	0	0	0
PEPPER FRUITING SD	2018	0	0	0	0	0	0	0
Pepper, Bell	2020	7	369	1	186	3,693	0	3,878
PERSIMMON	2018	1	8	0	0	80	0	80
PISTACHIO	2017	1	13	0	0	130	0	130
PISTACHIO	2020	4	69	1	186	691	0	876
PLUM	2017	9	86	0	0	864	0	864
PLUM	2018	10	81	0	0	807	0	807
PLUM	2019	11	145	3	558	1,449	0	2,007
PLUM	2020	3	26	0	0	260	0	260
POTATO	2017	16	795	6	1,116	7,952	0	9,068
POTATO	2018	27	1,090	1	186	10,900	0	11,086
POTATO	2019	24	1,073	1	186	10,732	0	10,917
POTATO	2020	1	70	6	1,116	700	0	1,816
POTATO SEED	2018	1	85	1	186	850	0	1,036
PREPLANT/SOIL FUM	2017	215	5,242	454	84,408	52,422	0	136,830
PREPLANT/SOIL FUM	2018	226	4,553	452	84,036	45,533	0	129,569
PREPLANT/SOIL FUM	2019	242	5,294	334	62,097	52,936	0	115,033
PREPLANT/SOIL FUM	2020	234	5,082	427	79,388	50,817	0	130,205
PRUNE	2017	8	360	13	2,417	3,602	0	6,019
PRUNE	2018	13	338	9	1,673	3,377	0	5,050
PRUNE	2019	8	106	1	186	1,063	0	1,249
PRUNE	2020	3	133	5	930	1,335	0	2,264

RASPBERRY	2017	0	0	0	0	0	0	0
RASPBERRY	2018	0	0	0	0	0	0	0
RASPBERRY	2020	0	0	0	0	0	0	0
RESEARCH COMMODITY	2018	0	0	0	0	0	0	0
RESEARCH COMMODITY	2019	1	5	0	0	50	0	50
RESEARCH COMMODITY	2020	0	0	0	0	0	0	0
RUTABAGA	2019	0	0	0	0	0	0	0
SOIL FUMI/PREPLANT	2017	5	117	14	2,603	1,172	0	3,775
SOIL FUMI/PREPLANT	2018	3	33	4	744	332	0	1,076
SOIL FUMI/PREPLANT	2019	3	26	2	372	260	0	632
SOIL FUMI/PREPLANT	2020	6	212	19	3,532	2,124	0	5,656
SQUASH	2018	0	0	0	0	0	0	0
SQUASH	2019	0	0	0	0	0	0	0
SQUASH	2020	0	0	0	0	0	0	0
SQUASH, SUMMER	2017	0	0	0	0	0	0	0
SQUASH, SUMMER	2018	1	16	0	0	158	0	158
SQUASH, SUMMER	2019	1	18	0	0	180	0	180
SQUASH, SUMMER	2020	0	0	0	0	0	0	0
SQUASH, WINTER	2019	1	34	0	0	340	0	340
STONE FRUIT	2020	1	7	0	0	70	0	70
STRAWBERRY	2017	0	0	0	0	0	0	0
STRAWBERRY	2018	0	0	0	0	0	0	0
STRAWBERRY	2019	0	0	0	0	0	0	0
STRAWBERRY	2020	0	0	0	0	0	0	0
SWEET POTATO	2017	61	2,834	8	1,487	28,341	0	29,828
SWEET POTATO	2018	65	2,886	9	1,673	28,862	0	30,536

SWEET POTATO	2019	45	2,246	10	1,859	22,461	0	24,320
SWEET POTATO	2020	72	3,154	7	1,301	31,540	0	32,841
TANGELO	2017	1	19	0	0	191	0	191
TANGELO	2019	1	25	1	186	246	0	431
TANGERINE	2017	7	133	2	372	1,329	0	1,701
TANGERINE	2018	18	200	1	186	1,998	0	2,184
TANGERINE	2019	20	341	6	1,116	3,409	0	4,524
TANGERINE	2020	9	196	5	930	1,961	0	2,890
TANGERINE, SEEDLESS	2017	7	264	25	4,648	2,643	0	7,291
TANGERINE, SEEDLESS	2018	8	254	36	6,693	2,544	0	9,237
TANGERINE, SEEDLESS	2019	18	654	30	5,578	6,537	0	12,114
TANGERINE, SEEDLESS	2020	9	343	51	9,482	3,431	0	12,913
TOMATO	2017	17	1,463	10	1,859	14,633	0	16,492
TOMATO	2019	1	80	0	0	798	0	798
TOMATO	2020	1	86	1	186	861	0	1,047
TOMATO PROCESSING	2017	2	194	2	372	1,938	0	2,310
TOMATO PROCESSING	2020	3	224	1	186	2,240	0	2,426
UNCULTIVATED AG	2017	38	899	46	8,552	8,988	0	17,541
UNCULTIVATED AG	2018	37	1,095	125	23,240	10,948	0	34,188
UNCULTIVATED AG	2019	33	1,090	63	11,713	10,898	0	22,611
UNCULTIVATED AG	2020	42	1,243	89	16,547	12,426	0	28,973
WALNUT	2017	60	1,787	57	10,597	17,873	0	28,470
WALNUT	2018	80	2,490	80	14,874	24,898	0	39,772
WALNUT	2019	52	1,370	41	7,623	13,704	0	21,326
WALNUT	2020	38	1,172	38	7,065	11,715	0	18,780
WATERMELON	2017	2	91	0	0	0	104,386	104,386

WATERMELON	2018	12	367	0	0	0	421,636	421,636
WATERMELON	2019	2	41	0	0	47	41,400	41,447
WATERMELON	2020	1	37	0	0	0	42,412	42,412
WHEAT	2017	1	83	1	186	830	0	1,016
WHEAT	2018	3	79	2	372	786	0	1,158
WHEAT FOR/FOD	2020	1	52	2	372	520	0	892

Appendix B2. Estimated Costs by Crop and Year: Coastal Region

Commodity	Year	Fields not in compliance	Acres not in compliance	Splits needed	Split costs	Deeper injection costs	TIF 1209	Total cost
APPLE	2018	0	0	0	0	0	0	0
APPLE	2020	0	0	0	0	0	0	0
BEET	2017	1	10	0	0	100	0	100
BLACKBERRY	2017	0	0	0	0	0	0	0
BLACKBERRY	2018	0	0	0	0	0	0	0
BLACKBERRY	2019	0	0	0	0	0	0	0
BLACKBERRY	2020	0	0	0	0	0	0	0
BLUEBERRY	2019	0	0	0	0	0	0	0
BROCCOLI	2017	4	113	3	558	1,130	0	1,688
BROCCOLI	2018	0	0	0	0	0	0	0
BROCCOLI	2019	2	60	0	0	602	0	602
BROCCOLI	2020	1	33	0	0	333	0	333
BRUSSEL SPROUT	2017	89	1,802	0	0	18,021	0	18,021
BRUSSEL SPROUT	2018	70	1,350	0	0	13,495	0	13,495
BRUSSEL SPROUT	2019	85	1,616	0	0	16,160	0	16,160
BRUSSEL SPROUT	2020	38	820	0	0	8,200	0	8,200
BRUSSEL SPROUT SEED	2020	1	17	0	0	170	0	170
CABBAGE	2017	5	56	0	0	557	0	557
CABBAGE	2018	1	10	0	0	95	0	95
CABBAGE	2019	1	11	0	0	110	0	110
CABBAGE	2020	1	14	0	0	140	0	140
CARROT	2017	15	572	6	1,116	5,717	0	6,833
CARROT	2018	16	327	1	186	3,265	0	3,451

CARROT	2019	21	460	0	0	4,602	0	4,602
CARROT	2020	8	481	3	558	4,808	0	5,366
CAULIFLOWER	2017	0	0	0	0	0	0	0
CAULIFLOWER	2018	0	0	0	0	0	0	0
CAULIFLOWER	2020	10	152	0	0	1,523	0	1,523
GRAPE, WINE	2017	22	809	67	12,457	8,090	0	20,547
GRAPE, WINE	2018	16	658	58	10,783	6,575	0	17,358
GRAPE, WINE	2019	13	334	25	4,648	3,336	0	7,984
GRAPE, WINE	2020	8	213	16	2,975	2,133	0	5,107
LEMON	2018	1	10	1	186	102	0	288
LEMON	2019	1	20	1	186	196	0	382
LEMON	2020	1	48	4	744	483	0	1,226
LETTUCE HEAD	2017	1	15	0	0	150	0	150
LETTUCE HEAD	2020	1	20	0	0	200	0	200
LETTUCE LEAF	2020	1	34	0	0	343	0	343
LETTUCE ROMAINE	2019	0	0	0	0	0	0	0
N-OUTDOOR FLOWER	2017	1	5	0	0	0	5,463	5,463
N-OUTDOOR FLOWER	2018	0	0	0	0	0	0	0
N-OUTDOOR FLOWER	2019	0	0	0	0	0	0	0
N-OUTDOOR FLOWER	2020	0	0	0	0	0	0	0
N-OUTDOOR PLANT	2018	0	0	0	0	0	0	0
NAPA CAB(TGHT HD)	2017	60	600	0	0	5,995	0	5,995
NAPA CAB(TGHT HD)	2018	35	379	0	0	3,790	0	3,790
NAPA CAB(TGHT HD)	2019	46	451	0	0	4,513	0	4,513
NAPA CAB(TGHT HD)	2020	43	536	0	0	5,360	0	5,360
OF-BULB	2017	0	0	0	0	0	0	0

OF-BULB	2019	1	6	0	0	62	0	62
OP-BULB	2017	14	121	0	0	1,212	0	1,212
OP-FLOWERING PLANT	2017	5	57	1	186	572	0	758
PARSLEY	2017	0	0	0	0	0	0	0
PEAS	2019	0	0	0	0	0	0	0
PEPPER FRUITING	2017	3	169	0	0	1,448	28,175	29,623
PEPPER FRUITING	2018	3	188	1	186	1,882	0	2,067
PEPPER FRUITING	2019	5	171	0	0	1,710	0	1,710
PEPPER FRUITING	2020	5	173	0	0	0	198,375	198,375
POTATO SEED	2017	0	0	0	0	0	0	0
POTATO SEED	2018	0	0	0	0	0	0	0
PREPLANT/SOIL FUM	2017	19	202	1	186	2,018	0	2,204
PREPLANT/SOIL FUM	2018	34	351	2	372	3,511	0	3,883
PREPLANT/SOIL FUM	2019	34	359	9	1,673	3,592	0	5,265
PREPLANT/SOIL FUM	2020	35	365	5	930	3,650	0	4,580
RASPBERRY	2017	0	0	0	0	0	0	0
RASPBERRY	2018	0	0	0	0	0	0	0
RASPBERRY	2019	0	0	0	0	0	0	0
RASPBERRY	2020	2	25	0	0	0	28,888	28,888
RESEARCH COMMODITY	2017	0	0	0	0	0	0	0
RESEARCH COMMODITY	2019	0	0	0	0	0	0	0
SOIL FUMI/PREPLANT	2017	1	7	0	0	67	0	67
SOIL FUMI/PREPLANT	2018	0	0	0	0	0	0	0
SQUASH, SUMMER	2018	4	74	0	0	740	0	740
STRAWBERRY	2017	31	1,827	14	2,603	0	438,530	441,132
STRAWBERRY	2018	31	2,177	19	3,532	0	293,227	296,759

STRAWBERRY	2019	21	1,646	15	2,789	0	208,150	210,939
STRAWBERRY	2020	19	1,679	15	2,789	1,044	224,526	228,359
TOMATO	2017	0	0	0	0	0	0	0
TOMATO	2019	0	0	0	0	0	0	0
TOMATO	2020	1	205	2	372	2,045	0	2,417
UNCULTIVATED AG	2017	1	8	0	0	80	0	80
UNCULTIVATED AG	2020	0	0	0	0	0	0	0
UNDECLARED COMM	2020	1	56	0	0	564	0	564