Kings Mosquito Abatement District

13960 Power Way, Hanford, CA 93230
Phone: 559-584-3326 Fax: 559-584-3310
Web: www.kingsmosquito.net
E mail: office@kingsmosquito.net

January 1, 2023

Notice of Intent to Apply Public Health Pesticides for Vector Control Purposes to Surface Waters and Waters of the U.S. Within Kings and Tulare Counties.

- The Kings Mosquito Abatement District intends to make public health pesticide applications to, over and adjacent to constructed conveyances, surface waters and other waters of the U.S. owned and controlled by an entity other than the District for vector control purposes per the requirements of the General NPDES Permit for Biological and Residual Pesticide Discharges for Vector Control Applications.

- The NPDES Permit requirements for listing of the Public Health Pesticides anticipated to be used were modified from the previous permit, to the new permit which was issued in 2016. The newer requirements specify that any pesticide product can be used that contains approved active ingredients, provided all pesticide label restrictions and instructions are followed. In addition, pesticides which fall under the "minimum risk" category can be used. The minimum risk pesticides have been exempted from FIFRA requirements. The following tables list the active ingredients approved for the FIFRA regulated pesticides.

Active Ingredients for larval mosquito control:

Bacillus thuringiensis subsp. *israelensis (Bti)*
Bacillus sphaericus (Bs)
Methoprene
Monomolecular Films
Petroleum Distillates
Pyriproxyfen
Spinosad
Temephos

Active Ingredients for adult mosquito control:

Deltamethrin
Etofenprox
Lambda-Cyhalothrin
Malathion
Naled
N-octyl bicycloheptene dicarboximide (MGK-264)
Piperonyl butoxide (PBO)
Permethrin
Prallethrin
Pyrethrin
Resmethrin
Sumithrin

- The purpose of the use of larvicide and adulticide pesticides containing these active ingredients is for the control of larval and adult mosquitoes to minimize the threat of mosquito-borne diseases and biting annoyances.

- The general time period for the application of the pesticides is January through December, 2023. Locations of expected use will be constructed conveyances, surface waters and other waters of the U.S. located within Kings and Tulare Counties.

- There are no known water use restrictions or precautions during treatment.

- Interested persons may contact the District at 559-584-3326 for additional information.

Sincerely,

Michael Cavanagh, District Manager
Kings Mosquito Abatement District
13960 Power Way
Hanford, CA 93230
www.kingsmosquito.net

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February 7, 2023

Karen Mogus, Deputy Director
Division of Water Quality
c/o NPDES Wastewater Unit
State Water Resources Control Board
1001 I Street, 15th Floor
Sacramento, CA 95814

RE: Order # 2016-0039-DWQ NPDES # CAG 990004 as amended by
Water Quality Order 2022-0077-EXEC

Dear Ms. Mogus,

The attached report represents the Kings Mosquito Abatement District's submission for the year ending 2022 NPDES Report as required by the Regional Permit Order Number 2016-0039-DWQ.

The District did not observe any adverse impacts from pesticide applications made and covered by the state issued permit.

Per Attachment B, Section V.B.4 of the General Permit:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations." (40 C.F.R. § 122.22(d).)

If you have any questions regarding this report, please contact our office.

Sincerely,

Michael Cavanagh
District Manager

1. **Annual Report**

a. Executive Summary

Kings Mosquito Abatement District (District) complied with the applicable components of the General NPDES Permit for Biological and Residual Pesticide Discharges from Vector Control Applications (General Permit). The District is a member of the MVCAC NPDES Permit Coalition and the Coalition Annual Report will be sent separately to the SWRCB and Regional Boards.

The District made 59 applications to waters of the U.S during the 2022 calendar year. The log of these applications can be found in Attachment B. Per Order 2014-0038-EXEC the monitoring and reporting requirements of the Vector Control Permit were modified to consist of reporting of any visual adverse effects or reporting of non-compliant applications as well as monitoring and reporting of pesticide application rates for all applications. The District continued to follow the guidelines of its Pesticide Application Plan (PAP).

b. Summary of Monitoring Data

No adverse impacts from vector control applications were noticed or reported by any of the individual applicators. No non-compliant applications were performed. The annual report tables have been modified to include the application rate for each application reported.

The Coalition will provide information on the incidence of West Nile virus and other similar public health threats in the Coalition's annual report.

c. BMP Identification

BMP's utilized by the District are outlined in the District's PAP. These include; emphasis on reducing mosquito breeding habitat through non-chemical means, training employees to prevent spills, applying appropriate amount of chemical in each treatment area, calibrating application equipment and using a biology-based assessment for determining treatment thresholds.

d. Violation Discussion

No violations of the General Permit were observed.

e. Map of Applications

See Attachment A

f. Log of Applications made to Waters of the U.S.
Attachment B lists all application data on the covered application areas.

g. General Information on Applications
Attachment B includes information on dosage, concentration and quantity of each pesticide used which are derived from the individual pesticide labels.

h. Visual Monitoring Data
No adverse impacts from vector control applications were noticed or reported by any of the individual applicators.

i. BMP, PAP, Monitoring Program Recommendations
There are currently no recommendations suggested for improving the current PAP and monitoring plan.

j. Pesticide Application Log made to Waters of the U.S.
A representation of the pesticide application log is contained in Attachment B.

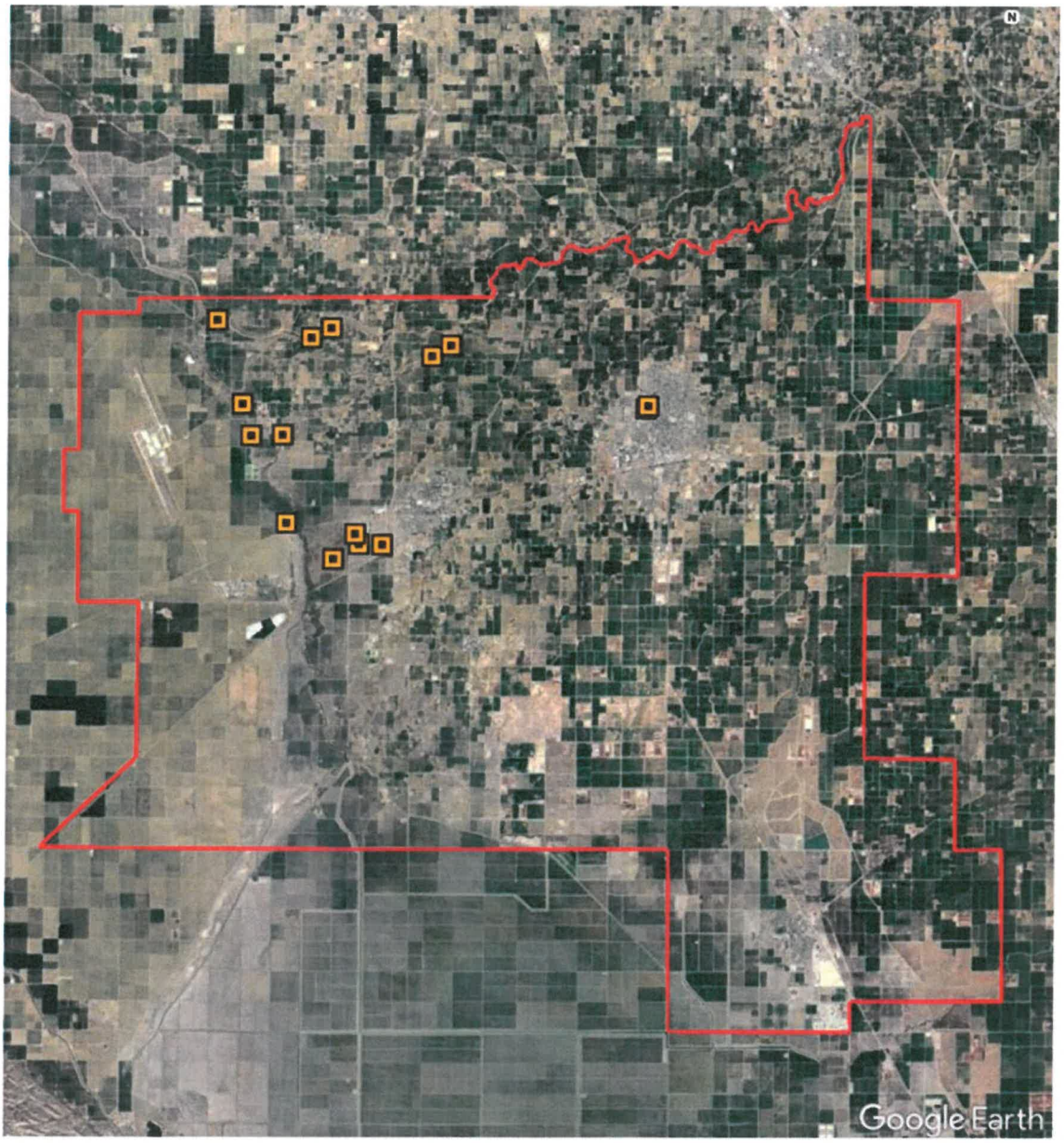
2. **Updated PAP Components**
N/A

3. **Self Monitoring Reports**
N/A

4. **Monitoring Reports**
The Coalition Monitoring Annual Report will summarize the direction and outcome of the conversations between the MVCAC and the SWRCB on potential changes to the Vector Control Permit.

Kings Mosquito Abatement District

Attachment A



District Boundaries

2022 Applications to Waters of the US

2022 NPDES Application Log
Attachment B

Date Start Time	Date Finish Time	Latitude	Longitude	Name of Water Body	Area Treated
2022-05-05 15:18	2022-05-05 15:19	36.33628419	-119.869286	Kings River	1
2022-05-05 20:14	2022-05-05 20:15	36.3875601	-119.8454932	Kings River	0.5
2022-05-20 16:22	2022-05-20 16:22	36.38289557	-119.8572277	Kings River	4
2022-05-25 17:25	2022-05-25 17:25	36.35085204	-119.6576144	Mussel Slough	0.25
2022-06-16 20:53	2022-06-16 20:54	36.35085204	-119.6576144	Mussel Slough	0.25
2022-06-20 19:59	2022-06-20 20:00	36.27722354	-119.8432422	Kings River	5.5
2022-06-24 18:23	2022-06-24 18:23	36.38289557	-119.8572277	Kings River	0.5
2022-06-29 14:36	2022-06-29 14:38	36.27722354	-119.8432422	Kings River	5
2022-06-30 15:23	2022-06-30 15:24	36.3794101	-119.7748768	Kings River	2.5
2022-07-01 20:27	2022-07-01 20:28	36.35085204	-119.6576144	Mussel Slough	1
2022-07-07 14:49	2022-07-07 14:50	36.3794101	-119.7748768	Kings River	1
2022-07-08 17:37	2022-07-08 17:38	36.38909235	-119.9126928	Kings River	0.034435262
2022-07-14 20:02	2022-07-14 20:02	36.3794101	-119.7748768	Kings River	2
2022-07-21 14:27	2022-07-21 14:27	36.38289557	-119.8572277	Kings River	1.5
2022-07-21 19:36	2022-07-21 19:36	36.37415784	-119.786017	Kings River	0.2
2022-07-22 18:34	2022-07-22 18:35	36.3794101	-119.7748768	Kings River	3.5
2022-07-23 13:08	2022-07-23 13:09	36.35085204	-119.6576144	Mussel Slough	2.5
2022-07-26 14:26	2022-07-26 14:26	36.27722354	-119.8432422	Kings River	5
2022-07-27 15:43	2022-07-27 15:43	36.33592505	-119.8933768	Kings River	1.5
2022-07-27 20:01	2022-07-27 20:01	36.3794101	-119.7748768	Kings River	2
2022-07-28 14:06	2022-07-28 14:07	36.35085204	-119.6576144	Mussel Slough	3.0997
2022-07-29 20:30	2022-07-29 20:30	36.38289557	-119.8572277	Kings River	4
2022-08-04 13:59	2022-08-04 13:59	36.35085204	-119.6576144	Mussel Slough	2.5
2022-08-05 16:32	2022-08-05 16:32	36.3794101	-119.7748768	Kings River	1
2022-08-05 17:57	2022-08-05 17:57	36.38289557	-119.8572277	Kings River	8
2022-08-10 17:17	2022-08-10 17:17	36.38289557	-119.8572277	Kings River	8
2022-08-11 14:07	2022-08-11 14:07	36.35085204	-119.6576144	Mussel Slough	2.5
2022-08-11 15:47	2022-08-11 15:47	36.3794101	-119.7748768	Kings River	4
2022-08-17 18:54	2022-08-17 18:54	36.3510565	-119.8964628	Kings River	2
2022-08-17 20:15	2022-08-17 20:15	36.38289557	-119.8572277	Kings River	8
2022-08-18 14:04	2022-08-18 14:05	36.35085204	-119.6576144	Mussel Slough	2.5
2022-08-18 14:21	2022-08-18 14:21	36.3794101	-119.7748768	Kings River	3
2022-08-23 16:33	2022-08-23 16:33	36.38289557	-119.8572277	Kings River	8
2022-08-25 13:52	2022-08-25 13:52	36.35085204	-119.6576144	Mussel Slough	2
2022-08-26 15:48	2022-08-26 15:48	36.3794101	-119.7748768	Kings River	1
2022-08-30 20:40	2022-08-30 20:41	36.38289557	-119.8572277	Kings River	12
2022-08-31 15:11	2022-08-31 15:12	36.3794101	-119.7748768	Kings River	2
2022-09-01 13:58	2022-09-01 13:58	36.35085204	-119.6576144	Mussel Slough	2.5
2022-09-02 18:31	2022-09-02 18:31	36.38289557	-119.8572277	Kings River	15
2022-09-06 16:42	2022-09-06 16:42	36.38289557	-119.8572277	Kings River	12
2022-09-08 13:44	2022-09-08 13:44	36.35085204	-119.6576144	Mussel Slough	1.5
2022-09-09 15:45	2022-09-09 15:45	36.38289557	-119.8572277	Kings River	7.5
2022-09-15 13:59	2022-09-15 13:59	36.35085204	-119.6576144	Mussel Slough	1.5
2022-09-20 17:46	2022-09-20 17:47	36.29002453	-119.8302577	Kings River	4
2022-09-22 14:09	2022-09-22 14:09	36.35085204	-119.6576144	Mussel Slough	0.25
2022-09-26 15:50	2022-09-26 15:50	36.29432321	-119.8709671	Kings River	8
2022-09-26 18:15	2022-09-26 18:16	36.29002453	-119.8302577	Kings River	6
2022-09-28 19:42	2022-09-28 19:42	36.3875601	-119.8454932	Kings River	0.5
2022-09-28 19:56	2022-09-28 19:56	36.38289557	-119.8572277	Kings River	0.5
2022-09-29 14:10	2022-09-29 14:10	36.35085204	-119.6576144	Mussel Slough	0.3125
2022-10-03 16:36	2022-10-03 16:37	36.29002453	-119.8302577	Kings River	1
2022-10-03 20:42	2022-10-03 20:43	36.28406827	-119.8144299	Kings River	0.25
2022-10-03 20:44	2022-10-03 20:44	36.28433355	-119.8281738	Kings River	0.25
2022-10-06 14:17	2022-10-06 14:17	36.35085204	-119.6576144	Mussel Slough	1.25
2022-10-10 17:20	2022-10-10 17:21	36.29002453	-119.8302577	Kings River	1
2022-10-13 14:45	2022-10-13 14:45	36.35085204	-119.6576144	Mussel Slough	1
2022-10-17 18:38	2022-10-17 18:38	36.29002453	-119.8302577	Kings River	2

Unit	Total Amount Applied	Unit	Application Rate	Product Name	USEPA Number
acre	10	lb	10 lbs/acre	VectoMax FG	73049-429
acre	2	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	128	fl oz	32 fl oz/acre	AQUA-BAC XT	62637-1
acre	1	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	1	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	55	lb	10 lbs/acre	VectoMax FG	73049-429
acre	2	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	50	lb	10 lbs/acre	VectoMax FG	73049-429
acre	80	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	10	lb	10 lbs/acre	VectoBac GS	73049-10
acre	32	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	30	lb	10 lbs/acre	VectoBac GS	73049-10
acre	20	lb	10 lbs/acre	Natular Sand	8329-82
acre	6	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	2	lb	10 lbs/acre	VectoBac GS	73049-10
acre	112	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	20	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	40	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	48	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	20	lb	10 lbs/acre	Natular Sand	8329-82
acre	15	lb	4.8 lbs/acre	VectoBac GS	73049-10
acre	40	lb	10 lbs/acre	VectoBac GS	73049-10
acre	20	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	32	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	80	lb	10 lbs/acre	VectoBac GS	73049-10
acre	80	lb	10 lbs/acre	VectoBac GS	73049-10
acre	20	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	128	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	20	lb	10 lbs/acre	VectoBac GS	73049-10
acre	80	lb	10 lbs/acre	VectoBac GS	73049-10
acre	20	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	96	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	80	lb	10 lbs/acre	VectoBac GS	73049-10
acre	20	lb	10 lbs/acre	VectoBac GS	73049-10
acre	32	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	120	lb	10 lbs/acre	VectoBac GS	73049-10
acre	64	fl oz	32 fl oz/acre	VectoBac 12AS	73049-38
acre	20	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	120	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	120	lb	10 lbs/acre	VectoBac GS	73049-10
acre	15	lb	10 lbs/acre	VectoBac GS	73049-10
acre	60	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	15	lb	10 lbs/acre	VectoBac GS	73049-10
acre	40	lb	10 lbs/acre	VectoBac GS	73049-10
acre	2.5	lb	10 lbs/acre	VectoBac GS	73049-10
acre	80	lb	10 lbs/acre	VectoBac GS	73049-10
acre	60	lb	10 lbs/acre	VectoBac GS	73049-10
acre	2	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	2	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	2.5	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	10	lb	10 lbs/acre	VectoBac GS	73049-10
acre	1	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	1	gal	4 gals/acre	Coco Bear Oil	8329-93
acre	10	lb	8 lbs/acre	Natular G / Censor	8329-80
acre	10	lb	10 lbs/acre	VectoBac GS	73049-10
acre	10	lb	10 lbs/acre	VectoBac GS	73049-10
acre	20	lb	10 lbs/acre	VectoMax FG	73049-429

Active Ingredient #1	% Active Ingredient #1	Active Ingredient #2	% Active Ingredient #2
Bacillus thuringiensis israelensis	4.5	Bacillus sphaericus	2.7
Mineral Oil	10		
Bacillus thuringiensis israelensis	8		
Mineral Oil	10		
Mineral Oil	10		
Bacillus thuringiensis israelensis	4.5	Bacillus sphaericus	2.7
Mineral Oil	10		
Bacillus thuringiensis israelensis	4.5	Bacillus sphaericus	2.7
Bacillus thuringiensis israelensis	11.6		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	11.6		
Bacillus thuringiensis israelensis	2.8		
Spinosad	20.6		
Mineral Oil	10		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	11.6		
Spinosad	0.5		
Spinosad	0.5		
Bacillus thuringiensis israelensis	11.6		
Spinosad	20.6		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Spinosad	0.5		
Bacillus thuringiensis israelensis	11.6		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Spinosad	0.5		
Bacillus thuringiensis israelensis	11.6		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Spinosad	0.5		
Bacillus thuringiensis israelensis	11.6		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	11.6		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	11.6		
Spinosad	0.5		
Spinosad	0.5		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Spinosad	0.5		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Mineral Oil	10		
Mineral Oil	10		
Spinosad	0.5		
Bacillus thuringiensis israelensis	2.8		
Mineral Oil	10		
Mineral Oil	10		
Spinosad	0.5		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	4.5	Bacillus sphaericus	2.7

Pesticide Label Rate	Potentially Affected Areas	PAP Followed
5 to 20 lbs/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
5 to 20 lbs/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
5 to 20 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
0.018-0.045 lbs/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
0.018-0.045 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
.25 to 2 pts/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
3 to 5 gal/acre	See Map	Yes
3.5 to 9 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
2.5 to 10 lbs/acre	See Map	Yes
5 to 20 lbs/acre	See Map	Yes

2022-10-20 14:40	2022-10-20 14:40	36.35085204	-119.6576144	Mussel Slough	1
2022-10-21 14:44	2022-10-21 14:44	36.34945939	-119.6589438	Mussel Slough	0.5

acre	10 lb	10 lbs/acre	VectoBac GS	73049-10
acre	5 lb	10 lbs/acre	VectoMax FG	73049-429

Bacillus thuringiensis israelensis	2.8		
Bacillus thuringiensis israelensis	4.5	Bacillus sphaericus	2.7

2.5 to 10 lbs/acre	See Map	Yes
5 to 20 lbs/acre	See Map	Yes