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Mr. Philip Isorena State Water Resources Control Board Division of Water Quality, 15th Floor 1001 I Street Sacramento, CA, 95814

Re: Order No. 2011-0002-DWQ -- NPDES NO. CAG 990004 -- November -- December 2011 Annual Report

Dear Mr. Isorena:

With this letter, please find the Marin Sonoma Mosquito and Vector Control District's (MSMVCD) annual report for 2011 regarding the NPDES permit referenced above. As you are aware, the permit became effective November 1, 2011 so the annual report provides information for November and December 2011.

MSMVCD was in compliance with the permit in 2011; there were no violations. The best management practices (BMPs) outlined in MSMVCD's Pesticide Application Plan (PAP) were appropriate and coincided with an Integrated Vector Management Program. The BMPs in MSMVCD's current PAP will continue to be utilized in 2012.

MSMVCD conducted visual monitoring in conjunction with the application of a larvicide at three locations in November and December 2011. The three sites consisted of a pond, hayfield ditch, and a drainage ditch respectively. The visual monitoring indicated that there no observable changes relative to water quality in conjunction with the larvicide applications (see attached monitoring sheet, Attachment A).

The BMPs currently included in MSMVCD's PAP were effective in 2011 and are expected to be effective and consistent with an Integrated Vector Management Program in 2012. Such BMPs for example, include: public relations/education, mosquito source reduction, biological control (e.g. mosquito fish), calibration of mosquito adulticide and larvicide equipment, and pesticide spill and spill prevention training.

At this time, there are no recommendations for BMP modifications given that there were no violations of the permit in 2011. Please see the maps included with this letter depicting the larvicide application areas in Marin and Sonoma counties (Attachments B and C).

The dosage, concentrations, and amounts of the larvicides applied were derived from the product labels. Please see the application log included with this letter (Attachment D).

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

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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 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 knowing violations.

Hawk

Respectfully,

Erik Hawk

Assistant Manager

Marin/Sonoma Mosquito and Vector Control District

2011 NPDES Annual Report

Order # 2011-0002-DWQ NPDES # CAG 990004

1. Annual Report

a. Executive Summary

MSMVCD was in compliance with the NPDES permit in 2011, there were no violations. The best management practices (BMPs) outlined in MSMVCD's Pesticide Application Plan (PAP) were appropriate and coincided with the District's Integrated Vector Management Program. The BMPs in MSMVCD's current PAP will continue to be utilized in 2012.

MSMVCD conducted visual monitoring in conjunction with the application of mosquito larvicides at three locations in November and December 2011. The application sites monitored included a pond, a hayfield ditch, and a drainage ditch. The visual monitoring indicated that there no observable changes relative to water quality in conjunction with the larvicide applications (see Attachment A).

b. Summary of Monitoring Data

The visual monitoring performed at the aforementioned sites indicated that there no observable changes relative to water quality in conjunction with the larvicide applications (see Attachment A). Submission of the MVCAC Coalition annual report has been delayed until March 2013. The Coalition report will include the summary of all physical and chemical monitoring to date as highlighted in the permit.

c. BMP Identification

The BMPs currently in place in MSMVCD's PAP were effective in 2011 and are expected to be effective and consistent with an Integrated Vector Management Program in 2012. Such BMPs for example, include: public relations/education, mosquito source reduction, biological control (e.g. mosquito fish), calibration of mosquito adulticide and larvicide equipment, and pesticide spill and spill prevention training.

d. Violation Discussion

No violations of the NPDES Permit were observed.

e. Map of Applications

Please see Attachments B and C - Maps of Marin and Sonoma County depicting larvicide application areas for November and December 2011.

f. Log of Applications made to Waters of the U.S.

Please see Attachment D which includes application data for November and December 2011.

g. General Information on Applications

The dosage, concentrations, and amounts of the larvicides applied were derived from the product labels. Please see the application log (Attachment D).

h. <u>Visual Monitoring Data</u> Please see Attachment A.

BMP; PAP; Monitoring Program Recommendations
 Given that the NPDES permit began in November 2011, a relatively small number of applications were performed by MSMVCD during this time, and there were no permit violations, there are currently no recommendations for improvement to the current BMPs, PAP, or monitoring plan.

j. <u>Pesticide Application Log made to Waters of the U.S.</u>
 A representation of the pesticide application log is presented in Attachment D.

2. <u>Updated PAP Components</u> N/A

3. <u>Self Monitoring Reports</u> N/A

4. Monitoring Reports N/A

Attachment A

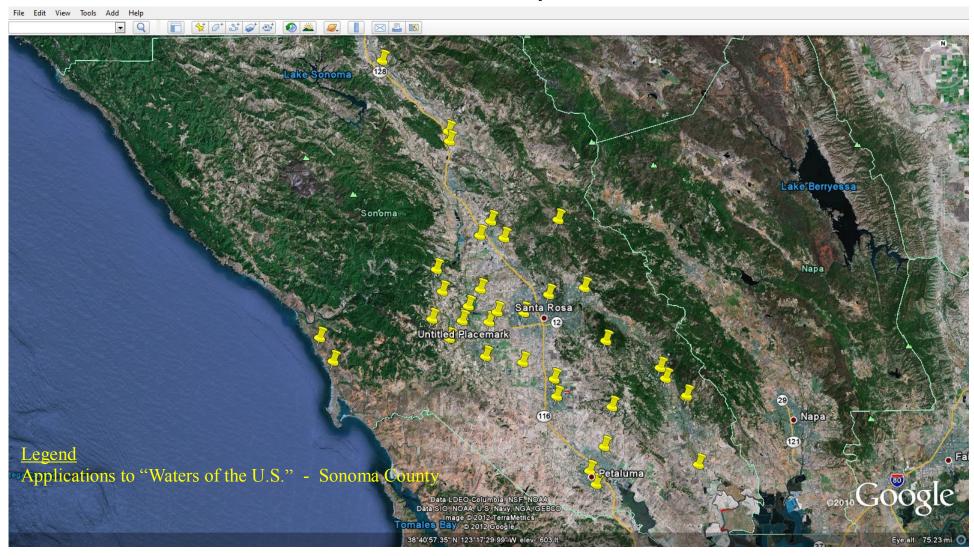
Marin/Sonoma Mosquito and Vector Control District

NPDES Annual Report 2011 Order # 2011-0002-DWQ NPDES # CAG 990004

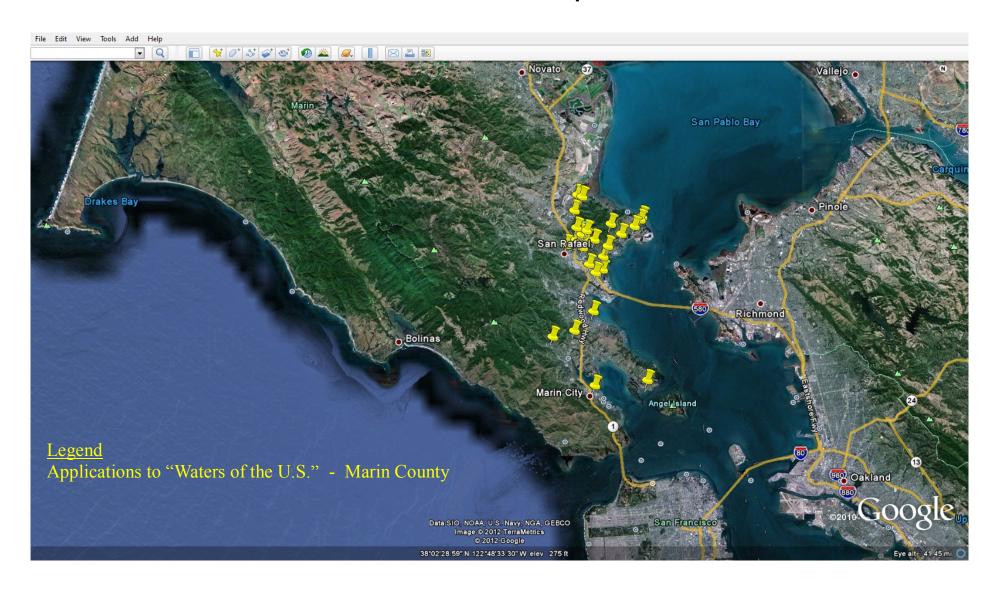
Visual Monitoring

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	Application Inform	nation						Monitoring Informa	ation							_	_	_					_								
ate of Application	Applicator	Location	Name of Water Body	Type of Water Boo	dy Type of pest	icide Product Name	Time of monit	coring Monitoring Date	Time	Name(s) of personne	Overhead Conditions	Precipitatio	n Wind	Air Temperatı	ure Water Color	Water Clarity	Floating/Suspended Matter	Bottom Deposits	Aquatic Life	Water Surface Oil	Fungi,Slimes or objectionable growth	Potential Nuisance Conditions	Water Temperature	Model	Electrical condutivity (EC)		Dissolved oxygen N (DO)	Лodel рН	Model	Turbidity	y Model
22/11	Edwards	37.94372369/-122.503	36526 Remillard Park	Pond	Larvicide	Vectobac 12AS	Background	11/22/2011	10:00am	Edwards	Hazy	None	Calm	Cool	Colorless	Clear	Observed	Observed	Observed	Not Observed	Not Observed	Duckweed		Field Inst./	,	/	/		/		/
/22/11	Edwards	37.94372369/-122.503	36526 Remillard Park	Pond	Larvicide	Vectobac 12AS	Event	11/22/2011	9:30am	Edwards	Overcast	None	Calm	Cool	Colorless	Clear	Observed	Observed	Observed	Not Observed	Not Observed	Duckweed		Field Inst./	,	/	/		/		/
•	Edwards		36526 Remillard Park	Pond	Larvicide	Vectobac 12AS	Post-Event	11/23/2011	9:00am	Edwards	Overcast	None	Light Breez	ze Cool	Colorless	Clear	Observed	Observed	Observed	Not Observed	Not Observed	Duckweed		Field Inst./		/	/		/		/
07/11	Cole		20853 Smith Ranch Airport	Hayfield Ditch	Larvicide	Agnique MMF	Background	12/07/11		Cole	Clear	None	Calm	Cool	Colorless	Clear	Observed	Not Observed	Not Observed	Not Observed	Not Observed	Algae present		Field Inst./	,	/	/		/		/
07/11	Cole		20853 Smith Ranch Airport	Hayfield Ditch	Larvicide	Agnique MMF	Event	12/07/11	12:15pm	Cole	Clear	None	Calm	Cool	Colorless	Clear	Observed	Not Observed	Not Observed	Not Observed	Not Observed	No change		Field Inst./	,	/	/		/		/
	Cole	·	20853 Smith Ranch Airport	Hayfield Ditch	Larvicide	Agnique MMF	Post-Event	12/13/11	1:05pm	Cole	Clear	None	Calm	Cool	Colorless	Clear	Observed	Not Observed	Not Observed	Not Observed	Not Observed	No change		Field Inst./	,	/	/		/		/
	Mohrman		56944 Joe Rodota Trail Ditch		Larvicide	Vectobac 12AS	Background	12/08/11	10:15am	Mohrman	Hazy	Foggy	Calm	Cool	Green	Cloudy	Observed	Observed	Observed	Not Observed	Observed	Not Observed		Field Inst./	,		/		/		/
•	Mohrman				Larvicide	Vectobac 12AS		12/08/11	10:30am	Mohrman	Hazy	Foggy	Calm	Cool	Green	Cloudy	Observed	Observed	Observed	Not Observed	Observed	Not Observed		Field Inst./	•		/		/		/
08/11	Mohrman	38.46422222/-122.885	56944 Joe Rodota Trail Ditch	Drainage Ditch	Larvicide	Vectobac 12AS	Post-Event	12/12/11	11:30am	Mohrman	Partly Cloudy	None	Calm	Cool	Green	Cloudy	Observed	Observed	Observed	Not Observed	Observed	Not Observed		Field Inst./	•		/		/		/
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Attachment B Marin/Sonoma Mosquito and Vector Control District NPDES Annual Report 2011



Attachment C Marin/Sonoma Mosquito and Vector Control District NPDES Annual Report 2011



Agency:

Attachment D Marin/Sonoma Mosquito and Vector Control District NPDES Annual Report 2011 Order # 2011-002-DWQ NPDES # CAG 990004 Application Log

		Annl	ication Info						
Data of Application	Appliantes			Type of	Droduct Name	Product	Λ σ = σ =	- لد. بداهم ا	المراج والمراجع
Date of Application	Applicator	Source #	Habitat	pesticide	Product Name	Amount	Acres	Latitude	Longitude
Sonoma Co. 11/01/11	CM	4505201	Crook	Longicido	Agnique	2.04.070	0.022	20 27062000	1222 010444
11/01/11		5026114		Larvicide Larvicide	Agnique AltosidPellets	2.94 ozs. 4.0 lbs	0.023	38.37863889 38.55986111	1222.818444 -122.8075
11/01/11		5026114		Larvicide	BVA 2	6.875 gal	1.3	38.55986111	-122.8075
11/01/11			Drainage ditch	Larvicide	BVA 2	0.797 ga.	0.15	38.440444	-122846222
11/02/11		5024401	•	Larvicide	Agnique	0.002 gal	0.005	38.5575	-122.8258333
11/02/11		4396105		Larvicide	VectomaxCG	20.0 lbs	1	38.42816666	-122.8068056
11/02/11		4401110		Larvicide	VectomaxCG	19.0 lbs	0.97	38.4307777	-122.7978889
11/03/11		4835521		Larvicide	Altosid Brig.	1 ea.	0.0001	38.22816667	-122.6456667
11/03/11	DL	5304218	Creek	Larvicide	VectomaxCG	3.0 lbs	0.5	N/A	N/A
11/03/11	CW	3561625	Low area	Larvicide	VectolexCG	0.040 lbs	0.002	38.34675	-122.5250833
11/7/2011		4841110		Larvicide	Vectolex CG	0.1 lbs	0.005	38.25991667	-122.6194167
11/09/11		4494201		Larvicide	VectomaxCG	0.23 lb	0.0115	38.37947222	-122.8820833
11/14/11		4274201		Larvicide	BVA 2	2.9 gal	0.551	38.4635	-122.8228611
11/16/11			Drainage ditch	Larvicide	VectomaxCG	5.0 lb	0.25	38.44091667	-122.7615278
11/17/11			Rain Pond	Larvicide	Agnique	0.8832 oz	0.0069	38.33577778	-12276825
11/17/11			Roadside Ditch	Larvicide	Agnique	0.95 oz	0.0069	38.29899693	-1.22489E+13
11/17/11		5046105		Larvicide	Altosid Pellets	0.0002 lbs	0.0002	38.55930556	-122.6998056
11/18/2011 11/18/11			Natural Spring	Larvicide	Vectolex CG BVA 2	0.80 lbs	0.04	38.30019444 38.3479.44444	-122.6395
12/05/11		3683102 4835521		Larvicide Larvicide	Altosid Briq.	6 oz 1 ea.	0.0092	38.22816667	-122.5020556 -122.6456667
12/05/11			Low area	Larvicide	BVA 2	21 oz	0.0003	38.37061111	-122.7541944
12/05/11			Low area	Larvicide	Altosid Pellets	0.172 lb	0.034	38.37061111	-122.7541944
12/05/11			Roadside Ditch	Larvicide	Agnique	0.230 oz	0.0018	38.49336111	-122.8984444
12/08/11			Low area	Larvicide	Altosid XR	1 ea.			122-40-07.9
12/08/11			Drainage ditch	Larvicide	Vectobac12AS	0.5504 oz	0.0172	38.4642222	-122.8856944
12/12/11			Roadside Ditch	Larvicide	VectolexWSP	1 ea.	0.0003	38.4021434	-122.822083
12/12/11	CM	4382102	Roadside Ditch	Larvicide	VectolexWSP	2 ea	0.0011	38.39555555	-122.8696389
12/12/11	DL	5294315	Natural Ditch	Larvicide	AltosidPellets	2.1 lbs	0.7	38.45869444	-122.7112222
12/13/11	CM	4391201	Roadside Ditch	Larvicide	VectolexWSP	4 ea	0.0034	38.42355555	-122.8635833
12/14/11			Roadside Ditch	Larvicide	VectolexWSP	2 ea	0.0046	38.39847222	-122.6178056
12/19/11	RM	3871506	Drain	Larvicide	VectolexWSP	2 ea	0.0046	38.23575	-122.4625833
Marin Co.									
11/01/11			Marsh (Tidal)	Larvicide	BVA-2	5.876 oz	0.0092	37.92461111	122.5066667
11/01/11			Marsh (Tidal)	Larvicide	Altosid Pellets	0.0272 lb	0.0092	37.92461111	122.5066667
11/02/11		2224125		Larvicide	BVA-2	1.25 oz	0.0018	37.977725	-122.5201111
11/02/11 11/02/11			Roadside Ditch	Larvicide	BVA-2	0.5 oz 0.0128 oz	0.0008 0.0002	37.98616667	-122.5215278
11/02/11			Roadside Ditch Roadside Ditch	Larvicide Larvicide	Agnique BVA-2	1.5 oz	0.0002	37.99211111 37.98083333	-122.4622222 -122.5184167
11/02/11			Roadside Ditch	Larvicide	Altosid Brig.	1.5 02 1 ea	0.0023	37.98083333	-122.5184167
11/02/11		2143057		Larvicide	Altosid Briq.	1 ea	0.0023	37.97616666	-122.5215278
11/02/11		2143609		Larvicide	BVA-2	0.06 oz	0.0001	37.9775	-122.5222777
11/02/11		2143609		Larvicide	Altosid Briq.XR	1 ea	0.0001	37.9775	-122.5222777
11/02/11		2143610		Larvicide	Altosid Brig.	2 ea	0.0002	37.975555	-122.5229167
11/03/11	CE	2155520		Larvicide	Agnique	0.75 oz	0.0057	37.99094444	-122.5094722
11/03/11	CE	2154620	Creek	Larvicide	BVA-2	1.5 oz	0.0023	37.97869444	-122.5143889
11/03/11	CE	2154505	Drain	Larvicide	Altosid Briq.	3 ea	0.0007	37.98419444	-122.5128333
11/04/11	CE	2154622	Drain	Larvicide	Altosid Briq.	2 ea	0.0046	37.97916667	-122.5123056
11/04/11		2161407		Larvicide	Altosid Briq.	3 ea	0.0001	37.98919444	-122.4893888
11/04/11		2224113		Larvicide	Altosid Briq.	3 ea	0.0007	37.97161111	-122.5163888
11/07/11			Roadside Ditch	Larvicide	Altosid Briq.	1 ea	0.0023	37.98683333	-122.4680556
11/07/11			Roadside Ditch	Larvicide	Altosid Briq. XR	1 ea	0.0023	37.9941111	-122.4602778
11/07/11		2226128		Larvicide	Altosid Briq. XR	1 ea	0.0001	37.97213889	-122.4932778
11/09/11		1226222		Larvicide	BVA-2	3 oz	0.0046	37.96475	-122.4971666
11/14/11			Ditch (natural)	Larvicide	Vectolex CG	2.0 lb	0.1837	38.1105761	-122.502165
11/14/11 11/14/11		2154601 2154602		Larvicide	Bti-Sand Bti-Sand	2.0 lb. 1.0 lb	0.05	37.98051948	-122.5162053
11/14/11				Larvicide Larvicide		1.0 lb 0.44 oz	0.05 0.0034	37.97870973 37.9333333	-122.5179487 -122.5315278
11/15/2011		2154617	Drainage Ditch	Larvicide	Agnique Bti-Sand	0.44 02	0.0034	37.933333	-122.5315278
11/15/2011		2154617		Larvicide	Bti-Sand	0.066 0.13 lbs	0.0034	37.97869444	-122.5146111
11/15/2011		2134307		Larvicide	Altosid Brig.	2 ea.	0.0009	38.00746598	-122.5177932
11/15/11		2134307		Larvicide	BVA-2	1.1 oz.	0.0034	38.00746598	-122.5177932
11/15/11		2143408		Larvicide	Bti-Sand	.08 lb	0.0046	37.99882592	-122.5243485
11/15/11		2154604		Larvicide	Bti-Sand	.045 lb	0.0023	37.9780374	-122.5157332
11/16/11			Low Area	Larvicide	Agnique	0.44 oz	0.0034	37.86277778	-122.4224722
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11/16/11 CE	2225120 Retension Basin		Altosid Briq. XR	4 ea	0.0092	37.97764204	-122.5051922
11/16/11 CE	2225120 Retension Basin	Larvicide	Agnique	1.25 oz	0.0092	37.97764204	-122.5051922
11/17/11 MC	2053410 Retension Basin	Larvicide	Vectolex WSP	1 ea	0.0023	38.04727778	-122.5228611
11/17/11 MC	2054403 Low area	Larvicide	Vectolex WSP	1 ea	0.0023	38.04688889	-122.5213056
11/17/11 MC	2054406 Drainage Ditch	Larvicide	Vectolex WSP	6 ea	0.0138	38.04355556	-122.5223333
11/17/11 JP	1335201 Ditch (Natural)	Larvicide	Agnique	0.587 oz	0.0046	37.8674444	-122.5057222
11/17/11 CE		Larvicide	BVA-2	7.5 oz	0.0115	37.95447222	-122.5068056
11/17/11 CE	1225303 Roadside Ditch	Larvicide	BVA-2	7.5 oz	0.0115	37.95447222	-122.5068056
11/17/11 CE	1225303 Roadside Ditch	Larvicide	Altosid Briq.	2 ea	0.0001	37.9544444	-122.5016667
11/17/11 CE	1246402 Roadside Ditch	Larvicide	Altosid Pellets	0.1145 lb	0.0115	37.94945997	-122.4951875
11/21/11 CE	2162501 Roadside Ditch	Larvicide	Bti-Sand	0.13 lb	0.0069	37.981	-122.4795
11/22/11 CE	1245502 Marsh (Fresh H20	Larvicide	Vectobac12AS	64 oz	2	37.94372369	-122.5036526
11/28/11 CE	3Az00004 Roadside Ditch	Larvicide	VectolexWSP	1 ea	0.0005	37.99975169	-122.5343156
11/28/11 CE	2135206 Marsh (Tidal)	Larvicide	Bti-Sand	0.067 lbs	0.0034 ac	38.01453283	-122.5030518
11/28/11 CE	2136201 Marsh (Tidal)	Larvicide	Bti-Sand	4.0 lbs	0.2	38.01036128	-122.4967271
11/28/11 CE	2136302 Marsh (Tidal)	Larvicide	Vectobac12AS	10.0 oz	0.3214	38.00255006	-122.463693
11/29/11 RM	2034302 Ditch (natural)	Larvicide	Vectolex WSP	3 ea	0.0034	37.55328765	-122.6513672
11/30/11 CE	2226113 Creek	Larvicide	Bti-Sand	0.22 lbs	0.0115	37.97495055	-122.5006324
12/01/11 CE	1225302 Roadside Ditch	Larvicide	BVA-2	7.5 oz	0.0115	37.95447222	-122.5068056
12/02/11 JP	1305101 Marsh (Tidal)	Larvicide	Agnique	0.881 oz	0.0069	37.92461111	122.5066667
12/2/2011 JP	1305126 Drainage Ditch	Larvicide	BVA-2	1.763 oz	0.0028	37.92297458	-122.508443
12/7/2011 MC	2134113 Hayfield Ditch	Larvicide	Agnique	1.32 oz	0.021	38.01180556	-122.5220833
12/05/11 CE	1226301 Marsh (Seasonal)	Larvicide	Vectobac12AS	320 oz	10	37.95749678	-122.4941468
12/12/11 CE	2134201 Drain	Larvicide	VectolexCG	0.45 lbs	0.023	38.01202866	-122.522487
12/13/11 CE	1226301 Marsh (Seasonal)	Larvicide	Vectobac12AS	256 oz	8	37.95749678	-122.4941468
12/14/11 JP	1293313 Low Area	Larvicide	VectolexWSP	1 ea	0.0007	37.91308333	-122.5235278
12/14/11 JP	1312522 Roadside Ditch	Larvicide	VectolexCG	0.009 lbs	0.0005	37.89372222	-122.54
12/15/11 CE	2154617 Creek	Larvicide	Vectolex WSP	2 ea	0.0023	37.97791667	-122.5146111
12/15/2011 JP	1335201 Ditch (Natural)	Larvicide	Agnique	0.293 oz	0.0023	37.8674444	-122.5057222
12/15/2011 CE	2154620 Creek	Larvicide	Bti-Sand	0.14 lbs	0.007	37.97869444	-122.5143889
12/15/2011 CE	2224125 Creek	Larvicide	Bti-Sand	0.2 lbs	0.0115	37.977725	-122.5201111
12/15/11 CE	2162501 Roadside Ditch	Larvicide	BVA-2	7.5 oz	0.0115	37.981	-122.4795
12/15/11 CE	2154601 Creek	Larvicide	Bti-Sand	2 lb	1	37.98051948	-122.5162053
12/15/11 CE	2154602 Creek	Larvicide	VectolexCG	1 lb	0.5	37.97870973	-122.5179487
12/22/11 CE	1226301 Marsh (Seasonal)	Larvicide	Vectobac12AS	320 oz	10	37.95749678	-122.4941468
Marin/Sonoma Co.							
11/9/2011 MW	E241C405 Ditch (natural)	Larvicide	BVA-2	1.6 oz	0.0025	38.80422222	-123.0106667
11/9/2011 MW	E282H704 Ditch (natural)	Larvicide	Agnique	0.64 oz	0.01	38.67936239	-122.8701925
11/17/11 NR	E400A301 Natural Spring	Larvicide	Agnique	0.0276 lbs	0.0092	38.40102778	-123.0957222
11/28/11 NR	E400C701 Roadside Ditch	Larvicide	Agnique	3.2 oz	0.025	38.37322222	-123.0755833
12/6/2011 MW	E302H401 Low Area	Larvicide	Agnique	32 oz	0.5	38.65355556	-122.8745833
12/07/11 MW	E302H206 Natural Spring	Larvicide	Altosid Pellets	0.576 oz	0.009	38.66772222	-122.87625