PINE GROVE MOSQUITO ABATEMENT DISTRICT

44352 HWY 299E, PO Box 328 McArthur, CA 96056 Phone # 530-336-5740

a. Executive Summary

The Pine Grove Mosquito Abatement 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 conducted all required chemical and physical monitoring. The results of the coalition's monitoring will be included in the Coalition Annual Report that will be sent separately to the SWRCB and Regional Boards.

The District made 36 applications to waters of the U.S. during the 2012 calendar year. The log of these applications can be found in Attachment B. The District performed Visual Monitoring of 6 individual application sites Identified as "Waters of the U.S." until mid- July 2012. The visual monitoring completed by the District in the first half of the year found that there is no observable change in water quality between the background, event, and post event time periods-see monitoring log sheets. The SWRCB notified the permit holders in a letter to MVCAC dated July 13, 2012 that because the visual monitoring requirements were "interfering with the need for maximal efficient application to adequately protect human health from vector-borne diseases like West Nile Virus," that the visual monitoring was no longer required by individual districts. The District continued to follow the guidelines of its Pesticide Application Plan (PAP).

B. Summary of Monitoring Data

The District began the year complying with the visual monitoring requirements of the permit. These requirements required a tremendous amount of time to monitor including a number of revisits to specific sites to gather the necessary information. Most critically, time spent revisiting old sites caused delay in getting to new sites. Given the short lifecycle of the mosquito, this greatly exacerbated the task of looking for and treating mosquito breeding sites early in their lifecycle when treatment is more concentrated and effective. Recognizing the need of mosquito control districts to quickly find and treat mosquito breeding sites to prevent the spread of disease, such as West Mile Virus, the SWRCB issued a letter to MVCAC dated July 13, 2012 that indicated the visual monitoring requirement would no longer be required of individual districts.
Per the instructions in the letter, the Coalition will provide information on the

incidence of West Nile Virus and other similar public health threats in the Coalition's annual report.
For the reasons stated above, the district will no longer be collecting visual monitoring data.

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

D. Violation Discussion
No violations of the General Permit by the District were observed.

E. Map of Applications
See Attachment A

F. Log of Applications made to Waters of the U.S.
Attachment B includes reports of 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
Visual Monitoring Data has been submitted to the State Water Board in the provided Monitoring Database Form- Attachment C.

I. BMP, PAP, Monitoring Program Recommendations
No recommendations are being proposed to improve the current BMPs', PAP or monitoring plan. Any changes to the Coalition Monitoring Plan will be highlighted in the Coalition Monitoring Annual Report.

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 all physical measurements and chemical monitoring done for 2011 and 2012.

Attachment B

Pine Grove Mosquito Abatement Dis

2012 Application to Waters of the U.S

Date	Technician	Location	Map Location	Acres	Material in Oz	Material
6/9/2012	scott	2	Fall River Site 2	360	58.88	Evoluer 30-30
		1	Eastman Lake Site 1			
6/11/2012	scott	4	Fall River Site 4	211	33.65	Evoluer 30-30
6/15/2012	scott	4	Fall River Site 4	280	64.77	Evoluer 30-30
6/15/2012	scott	2	Fall River Site 2	258	132.48	Pyrenone 25-5
		1	Eastman Lake Site 1			
6/18/2012	Angie	3	McArthur canal Site 3	149	34.35	Scourge 18-54
6/19/2012	Angie	4	Fall River Site 4	109	24.53	Scourge 18-54
6/26/2012	Angie	4	Fall River Site 4	229	53.97	Scourge 18-54
6/26/2012	Angie	4	Fall River Site 4	233	94.21	Pyrenone 25-5
6/26/2012	Scott	2	Fall River Site 2	233	119.13	Pyrenone 25-5
		1	Eastman Lake Site 1			
6/27/2012	Angie	3	McArthur canal Site 3	135	29.44	Scourge 18-54
6/27/2012	Angie	2	Fall River Site 2	218	129.54	Pyrenone 25-5
		1	Eastman Lake Site 1			
7/9/2012	Angie	2	Fall River Site 2	309	176.64	Pyrenone 25-5
		1	Eastman Lake Site 1			
7/10/2012	Angie	4	Fall River Site 4	509	117.76	Scourge 18-54
		3	McArthur canal Site 3			
7/16/2012	Angie	4	Fall River Site 4	164	105.98	Pyrenone 25-5
7/16/2012	Angie	4	Fall River Site 4	156	34.35	Scourge 18-54
7/19/2012	Angie	2	Fall River Site 2	462	259.07	Pyrenone 25-5
		1	Eastman Lake Site 1			
		3	McArthur canal Site 3			
7/20/2012	scott	4	Fall River Site 4	425	67.29	Evoluer 30-30
7/24/2012	Angie	4	Fall River Site 4	145	82.43	Pyrenone 25-5
		3	McArthur canal Site 3			
7/24/2012	Angie	4	Fall River Site 4	164	39.25	Scourge 18-54
		3	McArthur canal Site 3			
7/26/2012	Angie	2	Fall River Site 2	287	153.09	Pyrenone 25-5
		1	Eastman Lake Site 1			
7/27/2012	Angie	4	Fall River Site 4	473	107.95	Scourge 18-54
		3	McArthur canal Site 3			
7/31/2012	Angie	4	Fall River Site 4	175	39.25	Scourge 18-54
		3	McArthur canal Site 3			
8/2/2012	Scott	2	Fall River Site 2	80	12.62	Evoluer 30-30
		1	Eastman Lake Site 1			
8/2/2012	Scott	2	Fall River Site 2	360	193.72	Pyrenone 25-5
		1	Eastman Lake Site 1			

8/6/2012	Angie	4	Fall River Site 4	484	92.53	Scourge 18-54
		3	McArthur canal Site 3			
8/8/2012	Angie	2	Fall River Site 2	229	129.54	Pyrenone 25-5
		1	Eastman Lake Site 1			
8/13/2012	Scott	4	Fall River Site 4	520	84.11	Evoluer 30-30
8/13/2012	Angie	3	McArthur canal Site 3	185	32.11	Evoluer 30-30
8/14/2012	Angie	2	Fall River Site 2	305	176.64	Pyrenone 25-5
		1	Eastman Lake Site 1			
8/14/2012	Angie	2	Fall River Site 2	91	16.06	Evoluer 30-30
		1	Eastman Lake Site 1			
8/17/2012	Angie	4	Fall River Site 4	145	82.43	Pyrenone 25-5
		3	McArthur canal Site 3			
8/17/2012	Angie	4	Fall River Site 4	509	133.8	Evoluer 30-30
		3	McArthur canal Site 3			
8/21/2012	Scott	4	Fall River Site 4	393	63.09	Evoluer 30-30
8/21/2012	Scott	4	Fall River Site 4	105	52.99	Pyrenone 25-5
8/21/2012	Angie	3	McArthur canal Site 3	40	23.55	Pyrenone 25-5
8/21/2012	Angie	3	McArthur canal Site 3	418	69.58	Evoluer 30-30
8/29/2012	Angie	2	Fall River Site 2	127	70.66	Pyrenone 25-5
8/30/2012	Angie	6	Fall River Site 6	62	35.33	Pyrenone 25-5

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latitude	longitude	Adjacent Water Bodies
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.01090N	121.262920W	Fall River
41.01090N	121.262920W	Fall River
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.34374N	121.234354W	McArthur canal
41.01090N	121.262920W	Fall River
41.01090N	121.262920W	Fall River
41.01090N	121.262920W	Fall River
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.34374N	121.234354W	McArthur canal
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.01090N	121.262920W	Fall River
41.01090N	121.262920W	Fall River
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.34374N	121.234354W	McArthur canal
41.01090N	121.262920W	Fall River
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake

41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.5182N	121.293564W	Fall River
41.63423N	121.29299W	Eastman Lake
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.01090N	121.262920W	Fall River
41.01090N	121.262920W	Fall River
41.34374N	121.234354W	McArthur canal
41.34374N	121.234354W	McArthur canal
41.5182N	121.293564W	Fall River
41.12209N	121.281873W	Fall River

Agency:	Pine Grove Mosquito Abatement Distric

Application Info							
Date of Application	Applicator	Location	Name of Water Body	Type of Water Body	Description	Type of pesticide	Product Name
06/09/2012	Scott Heringer	Island Rd	Fall River, Eastman Lake	Open waterway		Adulticide	Pyrenone 25-5
06/09/2012	Scott Heringer	Island Rd	Fall River, Eastman Lake	Open waterway		Adulticide	Pyrenone 25-5
06/09/2012	Scott Heringer	Island Rd	Fall River, Eastman Lake	Open waterway		Adulticide	Pyrenone 25-5
06/11/2012	Scott Heringer	Fall River Mills	Fall River	Open waterway		Adulticide	Evoluer 30-30
06/11/2012	Scott Heringer	Fall River Mills	Fall River	Open waterway		Adulticide	Evoluer 30-30
06/11/2012	Scott Heringer	Fall River Mills	Fall River	Open waterway		Adulticide	Evoluer 30-30
06/18/2012	Angie Bosworth	McArthur	McArthur canal	Channel		Adulticide	Scourge 18-54
06/18/2012	Angie Bosworth	McArthur	McArthur canal	Channel		Adulticide	Scourge 18-54
06/18/2012	Angie Bosworth	McArthur	McArthur canal	Channel		Adulticide	Scourge 18-54
06/26/2012	Angie Bosworth	Fall River Mills	Fall River	Open waterway		Adulticide	Pyrenone 25-5
06/26/2012	Angie Bosworth	Fall River Mills	Fall River	Open waterway		Adulticide	Pyrenone 25-5
06/26/2012	Angie Bosworth	Fall River Mills	Fall River	Open waterway		Adulticide	Pyrenone 25-5
06/27/2012	Angie Bosworth	McArthur	McArthur canal	Channel		Adulticide	Scourge 18-54
06/27/2012	Angie Bosworth	McArthur	McArthur canal	Channel		Adulticide	Scourge 18-54
06/27/2012	Angie Bosworth	McArthur	McArthur canal	Channel		Adulticide	Scourge 18-54
07/09/2012	Angie Bosworth	Island Rd	fall River, Eastman Lake	Open waterway		Adulticide	Pyrenone 25-5
07/09/2012	Angie Bosworth	Island Rd	fall River, Eastman Lake	Open waterway		Adulticide	Pyrenone 25-5
07/09/2012	Angie Bosworth	Island Rd	fall River, Eastman Lake	Open waterway		Adulticide	Pyrenone 25-5

MONITORING Information				Weather Conditions						
Time of monitoring	Monitoring Date	Time	Name(s) of personnel	Overhead Conditions	Precipitation	Wind	Air Temperature	Water Color	Water Clarity	Floating/Suspended Matter
Background	06/08/2012	4:30pm	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Event	06/09/2012	7:50pm	Scott Heringer	Clear/sunny	None	Light breeze	Cool	Colorless	Clear	Observed
Post-Event	06/10/2012	9:25am	Scott Heringer	Hazy	None	Calm	Cool	Colorless	Clear	Observed
Background	06/10/2012	5:50pm	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Event	06/11/2012	7:30pm	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Post-Event	06/14/2012	11:55am	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Background	06/17/2012	5:50pm	Scott Heringer	Clear/sunny	None	Gusty	Warm/mild	Colorless	Clear	Observed
Event	06/18/2012	7:50pm	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Post-Event	06/19/2012	5:55am	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Background	06/25/2012	12:30pm	Scott Heringer	Clear/sunny	None	Gusty	Warm/mild	Colorless	Clear	Observed
Event	06/26/2012	8:10pm	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Post-Event	06/27/2012	8:10am	Scott Heringer	Clear/sunny	None	Calm	Cool	Colorless	Clear	Observed
Background	06/26/2012	6:30pm	Scott Heringer	Clear/sunny	None	Gusty	Warm/mild	Colorless	Clear	Observed
Event	06/27/2012	8:00pm	Scott Heringer	Clear/sunny	None	Light breeze	Warm/mild	Colorless	Clear	Observed
Post-Event	06/28/2012	6:10am	Scott Heringer	Clear/sunny	None	Calm	Cool	Colorless	Clear	Observed
Background	07/08/2012	4:30pm	Scott Heringer	Partly cloudy	None	Gusty	Warm/mild	Colorless	Clear	Observed
Event	07/09/2012	7:00pm	Scott Heringer	Clear/sunny	None	Light breeze	Cool	Colorless	Clear	Observed
Post-Event	07/10/2012	8:10am	Scott Heringer	Clear/sunny	None	Light breeze	Cool	Colorless	Clear	Observed

Visual Observation					Field Measu				
Bottom Deposits	Aquatic Life	Water Surface Oils	Fungi,Slimes or objectionable growths	Potential Nuisance Conditions	Water Temperature	Model	Electrical condutivity (EC)	Model	Dissolved oxygen (DO)
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	
Not Observ	Observed	none observe	Not Observed	None		Field Inst./		/	

ırements				
Model	pH	Model	Turbidity	Model
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Fall River Site 4
Fall River Site 6
Fall River Mills
Fall River Site 5
Fall River Site 2
The Island
Eastman Lake Site 1
McArthur McArthur Canal Site 3
© 2013 Google
Google earth
Imagery Date: 7/10/2012 41°03'31.17" N 121°27'50.43" W elev 3317 ft eye alt 51980 ft