

February 22, 2013
Order No. 2011-0002-DWG
NPDES No. CAG 99004

2012 NPDES Annual Report

a. Executive Summary:

The Kern Mosquito and Vector Control 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 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 57 larvicide 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 six of the individual application sites identified as “Waters of the U.S.” until 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 (please see the visual monitoring log sheets - attachment “C”). 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,” the visual monitoring was no longer required by individual districts.

The lack of rainfall and snow pack during 2012 greatly reduced the number of mosquito-breeding sources that typically require pesticide applications during a year of “normal” precipitation. The District continues to follow the guidelines of its Pesticide Action Plan (PAP).

b. Summary of Monitoring Data:

The District began the year by complying with the visual monitoring requirements of the permit. See Footnote 1 of Tables C-1 and C-2 in the Amended Water Quality Control Order No. 2011-0002-DWQ, General Permit No. CAG990004. 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 life cycle of the mosquito, this greatly exacerbated the task of looking for and treating mosquito breeding sites early in their life cycle 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 Nile 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:

BMPs utilized by the District are outlined in the District's Pesticide Action Plan. The District's personnel emphasize reducing mosquito-breeding habitat through non-chemical means. The use of mosquito fish (*Gambusia*) for mosquito control in permanent or semi-permanent water impoundments has proven to be a very efficient and cost-effective measure. This District relies on naturally occurring bacteria such as *Bacillus thuringiensis* and *Bacillus sphaericus* to control mosquito larvae without impacting other beneficial insects or aquatic life. District personnel are trained in various methods to prevent pesticide spills and have supplies in vehicles to contain spills if they should occur. Application equipment is maintained and calibrated to insure that the proper amount of pesticide is applied to the treatment area.

d. Discussion of BMP Modifications Addressing Violations of this Permit:

No violations of the Permit were observed.

e. Map of Pesticide Applications:

See attachment "A".

f. Log of Applications Made to Waters of the U.S.:

See attachment "B".

g. General Information on Applications:

General information regarding applications are included in Attachment "B". The information includes dosage rates, concentration and quantity of each pesticide used.

h. Visual Monitoring Data:

Visual monitoring data has been submitted on the Monitoring Data Base form. Please see attachment "C".

I. BMP PAP Monitoring Program Recommendations:

No recommendations are being proposed to improve the current BMP's, 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:

Not applicable.

3. Self Monitoring Reports:

Not applicable.

4. Monitoring Reports:

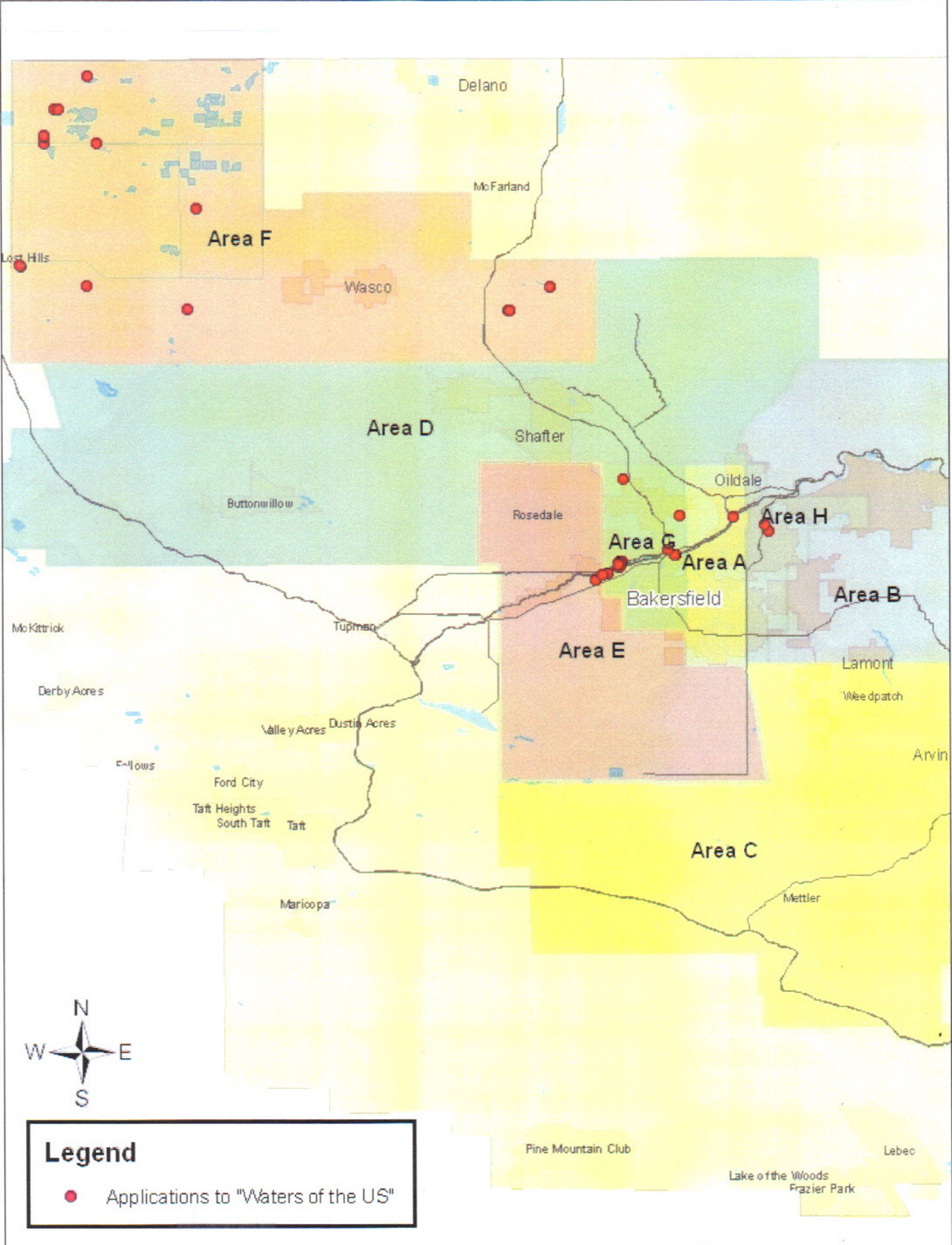
The Coalition Monitoring Annual Report will summarize all physical measurements and chemical monitoring done for 2011 and 2012.

Attachment “A”

Attachment “B” (page 1 of 2)

Attachment “B” (page 2 of 2)

Attachment “C”



Applicator	Date	Time	Habitat	Product	Acres Treated	Material Amount Oz.	Latitude	Longitude
Quary	4/3/2012	8:50 AM	Kern River	Vectobac 12as	2.5	40	35°21.28	119°7.62
Hendrickson	4/16/2012	10:50 AM	Canal	Vectobac 12as	1	14	35°23.77	119°04.61
Poff	4/17/2012	2:26 PM	Canal	Vectobac 12as	2	32	35°21.214	119°07.841
Quary	4/25/2012	10:10 AM	Canal	Agnique	0.125	42	35°23.771	119°04.614
Stemmler	4/27/2012	10:00 AM	Runoff	Vectobac 12as	15	240	35°43.117	119°34.791
Quary	5/3/2012	2:00 PM	Canal	Agnique	0.125	38	35°23.77	119°04.61
Stemmler	5/8/2012	10:30 AM	Pond	Vectobac 12as	110	1760	35°43.097	119°37.468
Stemmler	5/8/2012	10:00 AM	Ditch	Vectobac 12as	4	64	35°46.516	119°35.273
Winter	5/17/2012	1:30 PM	Canal	Vectobac 12as	1	16	35°22.926	119°00.0069
Winter	5/17/2012	1:00 PM	Canal	Vectobac 12as	0.25	4	35°23.288	119°00.208
Poff	5/16/2012	9:00 AM	River	Vectobac 12as	3	64	35°21.098	119°07.794
Quary	5/16/2012	12:35 PM	River	Agnique	1.25	156	35°21.177	119°07.836
Poff	5/16/2012	1:55 PM	Canal	Agnique	0.125	17	35°21.216	119°07.817
Armandariz	5/17/2012	2:00 PM	Ditch	Vectobac 12as	1	16	35°44.829	119°36.972
Armandariz	5/17/2012	2:00 PM	Pond	Vectobac 12as	3	48	35°44.828	119°36.726
Stemmler	5/23/2012	9:00 AM	Pond	Altosid	143	143	35°43.416	119°37.459
Armandariz	5/25/2012	1:45 PM	Ditch	Vectobac 12as	3	48	35°43.492	119°37.454
Gutierrez	5/22/2012	10:00 AM	Ditch	Vectobac 12as	1	16	35°39.673	119°29.603
Poff	5/24/2012	10:30 AM	River	Vectobac 12as	3	51	35°21.097	119°07.804
Poff	5/31/2012	10:30 AM	River	Vectobac 12as	2	32	35°21.217	119°07.802
Quary	5/31/2012	12:45 PM	River	BVA 2	2.5	240	35°21.700	119°04.875
Poff	6/5/2012	10:30 AM	River	Agnique	2	192	35°21.102	119°07.780
Poff	6/5/2012	10:00 AM	River	BVA 2	1	168	35°21.708	119°04.920
Krolnik	6/12/2012	9:15 AM	River	Agnique	4	256	35°23.693	119°01.842
Harris	6/1/2012	9:40 AM	Canal	Vectobac 12as	0.5	9	35°36.701	119°38.709
Harris	6/1/2012	10:25 AM	Canal	Vectobac 12as	0.5	8	35°34.502	119°30.109
J. Sangster	6/15/2012	1:55 PM	Canal	Agnique	1	32	35°25.620	119°07.571
Poff	6/14/2012	8:30 AM	Canal	Vectobac 12as	1	28	35°21.353	119°07.779
Poff	6/27/2012	9:12 AM	Canal	Agnique	0.125	30	35°23.760	119°04.613
Harris	7/10/2012	10:00 AM	Slough	Vectobac 12as	40	640	35°36.773	119°38.766
Harris	8/1/2012	1:00 PM	Canal	Vectobac 12as	12	288	35°35.661	119°35.281

Applicator	Date	Time	Habitat	Product	Acres Treated	Material Amount Oz.	Latitude	Longitude
Poff	8/8/2012	1:10 PM	Canal	Agnique	0.75	76	35°22.009	119°05.234
Garcia	8/9/2012	10:00 AM	Canal	Vectobac 12as	1	16	35°35.643	119°11.300
Garcia	8/20/2012	11:20 AM	Pond	Vectobac 12as	1.5	24	35°34.428	119°13.433
Garcia	8/27/2012	10:59 AM	Canal	Vectobac 12as	1	32	35°34.412	119°13.384
Garcia	9/17/2012	10:41 AM	Canal	Vectobac 12as	1	32	35°34.413	119°13.381
Bibe	10/22/2012	9:15 AM	Pond	Vectobac 12as	3	48	35°20.445	119°08.984
Castro	10/22/2012	9:15 AM	Pond	Vectobac 12as	1.5	16	35°20.445	119°08.984
Thao	10/24/2012	9:27 AM	Canal	Agnique	0.25	24	35°22.009	119°05.234
Thao	10/26/2012	1:33 PM	Canal	Vectobac 12as	3.5	112	35°21.217	119°07.807
Quary	10/30/2012	10:50 AM	Canal	Vectobac 12as	7	112	35°20.705	119°08.664
Thao	10/30/2012	1:08 PM	River	Vectobac 12as	6	90	35°21.217	119°07.807
Bibe	10/29/2012	10:30 AM	Pond	Vectobac 12as	1	16	35°20.430	119°08.982
Thao	10/31/2012	12:40 PM	River	Vectobac 12as	4	96	35°21.251	119°07.688
Thao	11/1/2012	8:40 AM	Canal	Vectobac 12as	6	160	35°21.217	119°07.807
Thao	11/1/2012	1:50 PM	River	Agnique	1	61	35°21.217	119°07.807
Thao	11/1/2012	12:20 PM	Canal	Vectobac 12as	3	76	35°21.217	119°07.807
Thao	11/2/2012	8:20 AM	River	Vectobac 12as	9	208	35°21.217	119°07.807
Thao	11/2/2012	8:20 AM	River	Agnique	9	120	35°21.217	119°07.807
Quary	11/2/2012	8:31 AM	Canal	Agnique	0.25	27	35°21.273	119°07.839
Thao	11/5/2012	1:53 PM	River	Agnique	0.25	42	35°21.245	119°07.703
Quary	11/6/2012	10:30 AM	Canal	Vectobac 12as	5	80	35°20.788	119°08.370
Thao	11/9/2012	1:00 PM	Canal	Vectobac 12as	8	192	35°21.217	119°07.807
Thao	11/12/2012	2:25 PM	River	Vectobac 12as	2	64	35°20.719	119°08.676
Thao	11/15/2012	12:50 PM	Canal	Vectobac 12as	3	48	35°20.719	119°08.676
Bibe	11/14/2012	9:15 AM	Pond	Vectobac 12as	4	64	35°20.430	119°08.982
Quary	11/30/2012	10:20 AM	River	Vectobac 12as	0.5	20	35°20.719	119°08.676

Kern Mosquito and Vector Control District

Application Information								Monitoring Information				
Date of Application	Applicator	Location	Name of Water Body	Type of Water Body	Type of Pesticide	Product Name	Acres Treated	Material Amount oz.	Type of Monitoring	Monitoring Date	Time	Name of Personnel
04/03/12	Quary	35°21.28/119°7.62	Kern River	Inlet	Larvicide	Vectobac 12as	2.5	40	Background	4/3/2012	8:30 AM	Quary
		35°21.28/119°7.62	Kern River	Inlet	Larvicide	Vectobac 12as	2.5	40	Event	4/3/2012	8:50 AM	Quary
		35°21.28/119°7.62	Kern River	Inlet	Larvicide	Vectobac 12as	2.5	40	Post	4/5/2012	12:00 PM	Quary
04/17/12	Poff	35°21.214/119°07.841	Cross Valley	Canal	Larvicide	Vectobac 12as	2	32	Background	4/17/2012	2:00 PM	Poff
		35°21.214/119°07.842	Cross Valley	Canal	Larvicide	Vectobac 12as	2	32	Event	4/17/2012	2:26 PM	Poff
		35°21.214/119°07.843	Cross Valley	Canal	Larvicide	Vectobac 12as	2	32	Post	4/18/2012	8:20 AM	Poff
05/17/12	Winter	35°22.929/119°00.069	East Side Canal	Canal	Larvicide	Vectobac 12as	1	16	Background	5/17/2012	1:30 PM	Winter
		35°22.929/119°00.070	East Side Canal	Canal	Larvicide	Vectobac 12as	1	16	Event	5/17/2012	1:30 PM	Winter
		35°22.929/119°00.071	East Side Canal	Canal	Larvicide	Vectobac 12as	1	16	Post	5/18/2012	7:35 AM	Winter
05/17/12	Armendariz	35°44.829/119°36.972	Wildlife Refuge	Ditch	Larvicide	Vectobac 12as	1	16	Background	5/17/2012	9:00 AM	Wells
		35°44.829/119°36.972	Wildlife Refuge	Ditch	Larvicide	Vectobac 12as	1	16	Event	5/17/2012	2:00 PM	Armendariz
		35°44.829/119°36.972	Wildlife Refuge	Ditch	Larvicide	Vectobac 12as	1	16	Post	5/21/2012	9:00 AM	Wells
05/25/12	Armendariz	35°43.492/119°37.454	Wildlife Refuge	Ditch	Larvicide	Vectobac 12as	3	48	Background	5/24/2012	10:00 AM	Wells
		35°43.492/119°37.454	Wildlife Refuge	Ditch	Larvicide	Vectobac 12as	3	48	Event	5/25/2012	1:45 PM	Wells
		35°43.492/119°37.454	Wildlife Refuge	Ditch	Larvicide	Vectobac 12as	3	48	Post	5/29/2012	11:00 AM	Wells
05/31/12	Poff	35°21.217/119°07.802	Kern River	River	Larvicide	Vectobac 12as	2	32	Background	5/31/2012	10:00 AM	Poff
		35°21.217/119°07.802	Kern River	River	Larvicide	Vectobac 12as	2	32	Event	5/31/2012	10:30 AM	Poff
		35°21.217/119°07.802	Kern River	River	Larvicide	Vectobac 12as	2	32	Post	6/5/2012	8:30 AM	Poff

KERN MOSQUITO & VECTOR CONTROL
 4705 ALLEN ROAD
 BAKERSFIELD CA 93314

Weather Conditions					Visual Observation							Potential Nuisance Conditions
Overhead Conditions	Precipitation	Wind	Air Temperature	Water Color	Water Clarity	Floating / Suspended Matter	Bottom Deposits	Aquatic Life	Water Surface Oils	Fungi, Slimes or Objectional Growths	Potential Nuisance Conditions	
Sunny	None	Calm	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Sunny	None	Calm	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Sunny	None	Breezy	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Sunny	None	Breeze	Warm	Clear	Clear	None Observed	None Observed	Not Observed	None	None Observed	None	
Sunny	None	Breeze	Warm	Clear	Clear	None Observed	None Observed	Not Observed	None	None Observed	None	
Sunny	None	None	Cool	Clear	Clear	None Observed	None Observed	Not Observed	None	None Observed	None	
Clear	None	Light Breeze	Warm	Brown	Clear	Observed	None Observed	Observed	None	Aquatic Weeds	None	
Clear	None	Light Breeze	Warm	Brown	Clear	Observed	None Observed	Observed	None	Aquatic Weeds	None	
Clear	None	None	Warm	Brown	Clear	Observed	None Observed	Observed	None	Aquatic Weeds	None	
Clear	None	Calm	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Clear	None	Calm	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Clear	None	Light Breeze	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Clear	None	Calm	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Clear	None	Calm	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Clear	None	Light Breeze	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Clear	None	Light Breeze	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Clear	None	Light Breeze	Warm	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	
Cloudy	None	Windy	Cool	Brown	Murky	None Observed	None Observed	Observed	None	None Observed	None	

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