ATTACHMENT E – NOTICE OF INTENT

WATER QUALITY ORDER 2016-0039-DWQ
GENERAL PERMIT CAG990004

STATEWIDE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR BIOLOGICAL AND RESIDUAL PESTICIDE DISCHARGES TO WATERS OF THE UNITED STATES FROM VECTOR CONTROL APPLICATIONS

I. NOTICE OF INTENT STATUS (see Instructions)

Mark only one item	☐ A. New Applicator ☐ B. Change of Information: WDID# _____
	☐ C. Change of ownership or responsibility: WDID# _____
	☒ D. Enrolled under Order 2011-0002-DWQ: WDID# 5A250100001

II. DISCHARGER INFORMATION

A. Name City of Alturas			
B. Mailing Address 200 W. North Street			
C. City Alturas	D. County Modoc	E. State CA	F. Zip Code 96101-3938
G. Contact Person Joe Picotte	H. Email address jpicotte@cityofalturas.org	I. Title Director of Public Works	J. Phone (530)233-2377

III. BILLING ADDRESS (Enter Information *only* if different from Section II above)

A. Name Cary Baker			
B. Mailing Address 200 W. North Street			
C. City Alturas	D. County Modoc	E. State CA	F. Zip Code 96101-3938
G. Email address cary@cityofalturas.org	H. Title City Clerk	I. Phone (530) 233-2512	

IV. RECEIVING WATER INFORMATION

A. Biological and residual pesticides discharge to (check all that apply)*:

☐ 1. Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.
Name of the conveyance system: _____

☒ 2. Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.
Owner's name: See PAP
Name of the conveyance system: _____

☒ 3. Directly to river, lake, creek, stream, bay, ocean, etc.
Name of water body: See PAP for list

* A map showing the affected areas for items 1 to 3 above may be included.

B. Regional Water Quality Control Board(s) where application areas are located (REGION 1, 2, 3, 4, 5, 6, 7, 8, or 9): Region 5
(List all regions where pesticide application is proposed.)

A map showing the locations of A1-A3 in each Regional Water Board shall be included.

V. PESTICIDE APPLICATION INFORMATION

A. Target Organisms: ☒ Vector Larvae ☒ Adult Vector

B. Pesticides Used: List name, active ingredients and, if known, degradation by-products
See PAP for list

C. Period of Application: Start Date March 1st End Date November 1st

D. Types of Adjuvants Added by the Discharger: None

VI. PESTICIDES APPLICATION PLAN

A. Has a Pesticides Application Plan been prepared?*
☒ Yes ☐ No

If not, when will it be prepared? _____

* A copy of the Pesticides Application Plan shall be included with the NOI.

B. Is the applicator familiar with its contents?

☒ Yes ☐ No

VII. NOTIFICATION

Have potentially affected governmental agencies been notified?

☒ Yes ☐ No

* If yes, a copy of the notifications shall be attached to the NOI.

VIII. FEE

Have you included payment of the filing fee (for first-time enrollees only) with this submittal?

☒ Yes ☐ NO ☐ NA

IX. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure 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 or imprisonment. Additionally, I certify that the provisions of the Order, including developing and implementing a monitoring program, will be complied with."

A. Printed Name: Joe Picotte

B. Signature: [signature] **Date:** May 12, 2016

C. Title: Director of Public Works

X. FOR STATE WATER BOARD USE ONLY

WDID:	**Date NOI Received:**	**Date NOI Processed:**
Case Handler's Initial:	**Fee Amount Received:** $	**Check #:**

PESTICIDE APPLICATION PLAN (PAP) FOR THE CITY OF ALTURAS MOSQUITO ABATEMENT

The Discharger shall develop a Pesticides Application Plan (PAP) that contains the following elements:

1. **Description of ALL target areas, if different from the water body of the target area, in to which larvicides and adulticides are being planned to be applied or may be applied to control vectors. The description shall include adjacent areas, if different from the water body of the target areas;**

   The City of Alturas Mosquito Abatement covers 3.5 square miles in Modoc County. The City may also be called upon to control mosquitoes outside the boundaries if the mosquito threshold is affecting the City of Alturas. Please see the attached City Boundary maps. The area in red is the approximate city boundaries. The area in green represents areas outside the city boundaries but some mosquito control work has been conducted by the City in the past during arbovirus activity.

   All applications are within Region 5 of the Regional Water Quality Control Boards. Known waterways within City boundaries include the Pit River that could be affected by the City applications.

   Should the need arise and areas outside the City boundaries are treated, they may include ditches covered under the Hot Springs Irrigation District or Modoc County Water master.

2. **Discussion of the factors influencing the decision to select pesticide applications for mosquito control;**

   The decision to use pesticides for the control of mosquitoes is influenced by, but not limited to, the stage of development of the larvae, the inability to manually reduce the source (such as drainage), when the planting of fish is not feasible due to financial restraints or availability, the adult mosquito counts, service requests, virus activity within or within close proximity to the City.

3. **Pesticide products or types expected to be used and if known, their degradation by-products, the method in which they are applied, and if applicable, the adjuvants and surfactants used;**

   Products containing the following list of active ingredients may be used by the City for larval or adult control. This list is directly from Section IIA of the Statewide NPDES Permit for Biological and Residual Pesticide Discharges to Waters of the United States from Vector Control Applications. If, at any time this list is updated by the California Department of Pesticide Regulations, our usage of product may reflect the update as such. All products are used according to label directions and may be applied by ground (hand, truck, ATV, backpack, etc) or by air (helicopter or fixed wing aircraft).

List of Permitted Larvicide Actives

monomolecular films
methoprene
Bacillus thuringiensis subspecies isralensis (or Bti)
Bacillus sphaericus (or B. Sphaericus)
temephos
petroeum distillates
spinosad

List of Permitted Adulticide Actives

Malathion
Naled
Pyrethrin
Deltamethrin
Etofenprox
Lambda-cyhalotrin
Permethrin
Prallethrin
Resmethrin
Sumithrin
Piperonyl butoxide (PBO)

4. **Description of ALL the application areas and the target areas in the system that are being planned to be applied or may be applied. Provide a map showing these areas;**

   Any site that holds water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the City of Alturas's preferred solution, and whenever possible the agency works with property owners to affect long-term solutions to reduce or eliminate the need for continued applications as described in Item 2 above. Mosquito breeding sources and areas that require adult mosquito control are difficult to predict from year to year based on the weather and variations in local environmental conditions. However, the typical sources treated by this agency include:

Irrigated Crops	Ornamental Ponds
Pastures (irrigated and non irrigated)	Catch Basins
Detention Basins/ Retention Basins	Riparian Areas
Wetlands	Roadside Ditches
Wildlife areas	Sewage Lagoons

   Wooded Areas (Riparian Areas)
   Potentially any aquatic site that holds water for more than 96 hours or more

5. **Other control methods used (alternatives) and their limitations;**

   a. **Alternatives:** With any source of mosquitoes or other vectors, the City of Alturas's first goal is to look for ways to eliminate the source, or if that is not possible, for ways to reduce the potential for vectors. Mosquito sources can be broken down into three categories based on the size. Small sources, such as tires and buckets are generally, but not always, simply emptied without the

use of pesticides. Medium sized sources, such as horse troughs and ornamental ponds, are obviously meant to hold water, so merely emptying them is not an option. Traditionally, mosquito fish (*Gambusia affinis*) are planted. Large sources such as irrigated pastures and rice fields present more of a challenge. Control work on these sources is not only of economical concern, but one of feasibility as well. It is possible to grow rice without standing water. Rice fields have been planted with mosquito fish, but often times availability of fish and the quantity needed is not obtainable. Property owners are asked to consider changing irrigation practices as well as improving drainage of irrigated pastures.

Other specific methods used by the City include educating residents that mosquitoes develop in standing water and encouraging them to remove sources of standing water on their property, and working with property owners to find long term water management strategies that meet their needs while minimizing the need for public health pesticide applications.

b. Limitations: As with any operation, there are limitations to mosquito best management practices. The cost of equipment and personnel time are two examples. Some property owners as well as the City lack the personnel and finances to implement habitat improvement (e.g. regarding irrigated pastureland to reduce mosquito habitat). Accessibility to some sources due to geography makes it impossible for source reduction. Compliance with permits, monitoring requirements, and paperwork requires more man-hours, thus reducing the hours that could be spent inspecting mosquito sources and implementing non-pesticide alternatives.

Legal restrictions and/or regulations to manipulate land, vegetation, or redesign is a significant limitation. Regulations and State and Federal laws prohibiting the necessary land improvements due to the presence of threatened or endangered species is a large limitation that does not allow for proper BMP's to be implemented.

Lastly, biological control such as mosquito fish may not be suitable in all mosquito breeding sources due to poor water quality, mosquito larvae densities, emergent vegetation, possibility of drying up, sensitive species, and/or the source may drain into natural waterways.

6. How much product is needed and how this amount was determined;

The need to apply product is determined by surveillance. Actual use varies annually depending on mosquito abundance. The pesticide amount presented below is the total actual usage of pesticides in the City of Alturas in 2015. Application amounts to waters of the U.S. will be less. Other public health pesticides in addition to those listed below may be used as part of the City's best management practices.

MATERIAL	EPA Reg. #	GALLONS
Biomist 4+4 ULV	8329-35	177.0
Biomist 4+12 ULV	8329-34	0
Permanone 4+8	432-1277	0
Zoecon Altosid XR Extended Residual Briquettes	2724-421	0

7. **Representative monitoring locations and the justification for selecting these monitoring locations**
   Please see the MVCAC NPDES Coalition Monitoring Plan.

8. **Evaluation of available BMPs to determine if there are feasible alternatives to the selected pesticide application project that could reduce potential water quality impacts;**

   The City of Alturas routinely inspects larval sources both pre and post treatment. Based upon the criteria described in Item 2 above, the decision for treatment is evaluated. Adult mosquito control is evaluated by utilizing the various adult mosquito traps placed throughout the district. These are monitored both pre and post treatment.

9. **Description of the BMPs to be implemented. The BMPs shall include at a minimum:**

   The City of Alturas's BMPs are described in item 2 above. Specific elements have been highlighted below under items a-f:

   a. measures to prevent pesticide spill;

   All pesticide applicators receive annual spill prevention and response training. City employees ensure daily that application equipment is in proper working order. Spill mitigation devices are placed in all vehicles and pesticide storage areas

   b. measures to ensure that only a minimum and consistent amount is used;

   Application equipment is calibrated at least annually as required by the Department of Pesticide Regulations (DPR) and the terms of a cooperative agreement with the California Department of Public Health (CDPH).

   c. a plan to educate Coalition's or Discharger's staff and pesticide applicator on any potential adverse effects to waters of the U.S. from the pesticide application;

   This will be included in our pesticide applicators annual pesticide application and safety training, continuing education programs, and/or regional NPDES permit training programs.

   d. descriptions of specific BMPs for each application mode, e.g. aerial, truck, hand, etc.;

   The City of Alturas calibrates truck-mounted and handheld larviciding equipment each year to meet application specifications. Application records are reviewed to ensure appropriate amounts of material are being used. Ultra-low volume (ULV) application equipment is calibrated for output and droplet size to meet label requirements Aerial larviciding equipment is calibrated by

the contractor. Aerial adulticide equipment is calibrated regularly and droplet size will be monitored by the City to ensure droplets meet label requirement s. Airplanes used in urban ULV applications and the primary airplane used for rural ULV applications is equipped with advanced guidance and drift management equipment to ensure the best available technology is being used to place product in the intended area. If a secondary airplane is used in rural ULV applications, it will be equipped with an advanced guidance system.

e. descriptions of specific BMPs for each pesticide product used;

Please see the Best Management Practices for Mosquito Control in California for general pesticide application BMPs, and the current approved pesticide labels for application BMPs for specific products.

f. descriptions of specific BMPs for each type of environmental setting (agricultural urban, and wetland);

Please see the Item 2 above. Through public education, residents are encouraged to monitor their property for standing water.

10. Identification of the problem. Prior to first pesticide allocation covered under this General Permit that will result in a discharge of biological and residual pesticides to waters of the U.S., and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the discharger must do the following for each vector management area:

a. If applicable, establish densities for larval and adult vector populations to serve as action threshold(s) for implementing pest management strategies;

The City of Alturas staff only applies pesticides to sources of mosquitoes that represent imminent threats to public health or quality of life. The presence of any mosquito may necessitate treatment, however higher thresholds may be applied depending on the agency's resources, disease activity, surveillance data, or local needs. Treatment thresholds are based on a combination of one or more of the following criteria:

- Mosquito species present
- Mosquito stage of development
- Pest, nuisance, or disease potential
- Disease activity
- Mosquito abundance
- Flight range
- Proximity to populated areas
- Size of source
- Presence/absence of natural enemies or predators
- Presence of sensitive/ endangered species or habitats

b. Identify target vector species to develop species-specific pest management strategies based on developmental and behavioral considerations for each species;

Please see Item 2 above.

Specific Species of mosquitoes of major concern found within the City of Alturas

Culex pipien

Culex stigmatosoma
Culex tarsalis
Aedes melanimon
Aedes nigromaculis
Aedes sierrensis
Aedis sticticus
Aedis increpitus
Aedis vexans
Culiseta incidens
Culiseta inornata
Anopheles franciscanus
Anopheles freeborni
Anopheles punctipennis

Additional Species of mosquitoes which may be found within the City of Alturas

Aedes washinoi
Aedes ataphylla
Aedes fitchii
Aeded flavescens
Aedes hemiteleus
Aedes hexodontus
Aedes tahoeensis
Aedes ventrovittis
Aedes dorsalis
Culiseta impatiens
Culex apicaltis
Culex boharti
Culex territans

c. Identify known breeding areas for source reduction, larval control program, and habitat management;

Any site that holds water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the City's preferred solution, and whenever possible the City works with property owners to implement long term solutions to reduce or eliminate the need for continued pesticide applications as described in Item 2 above.

d. Analyze existing surveillance data to identify new or unidentified sources of vector problems as well as areas that have recurring vector problems.

This is provided in item 2 above that the City uses. The City continually collects adult and larval mosquito surveillance data, dead bird reports, and sentinel chicken test results, and monitors regional mosquito-borne disease activity detected in humans, horses, birds, and/or other animals, and uses this data to guide mosquito control activities.

11. Examination of Alternatives. Dischargers shall continue to examine alternatives to pesticide use in order to reduce the need for applying larvicides that contain temephos and for spraying adulticides. Such methods include:

a. Evaluating the following management options, in which the impact to water quality, impact to non-target organisms, vector resistance, feasibility, and cost effectiveness should be considered:

- **No action**
- **Prevention**
- **Mechanical or physical methods**
- **Cultural methods**
- **Biological control agents**
- **Pesticides**

If there are no alternatives to pesticides, dischargers shall use the least amount of pesticide necessary to effectively control the target pest.

The City of Alturas uses the principles and practices of Integrated Vector Management (IVM) as described on pages 26 and 27 of the Best Management Practices for Mosquito Control in California and is discussed in Item 2 above. As stated in Item 10 above, locations where vectors may exist are assessed, and the potential for using alternatives to pesticides is determined on a case-by-case basis. Commonly considered alternatives include: 1) Eliminate artificial sources of standing water; 2) Ensure temporary sources of surface water drain within four (4) days (96 hours) top prevent adult mosquitoes from developing; 3) Control plant growth in ponds, ditches, and shallow wetlands; 4) Design facilities and water conveyance and/or holding structures to minimize the potential for producing mosquitoes; and 5) Use appropriate biological control methods that are available. Additional alternatives to using pesticides for managing mosquitoes are listed on pages 4-19 of the Best Management Practices for Mosquito Control in California (See previous comment).

Implementing preferred alternatives depends on a variety of factors including availability of City resources, cooperation with stakeholders, coordination with other regulatory agencies, and the anticipated efficacy of the alternative. If a pesticide-free alternative does not sufficiently reduce the risk to public health, pesticides are considered, beginning with the least amount necessary to effectively control the target vector.

b. Applying pesticides only when vectors are present at a level that will constitute a nuisance.

The City of Alturas follows an existing IVM program which includes practices described in Item 2 above.

A "nuisance" is specifically defined in California Health and Safety Code (HSC) §2002(j). This definition allows vector control agencies to address situations where even a low number of vectors may pose a substantial threat to public health and quality of life. In practice, the definition of a "nuisance" is generally only part of a decision to apply pesticides to areas covered under this permit. As summarized in the California Mosquito-borne Virus Surveillance and Response Plan, the overall risk to the public when vectors and/or vector-borne disease are present is used to select an available and appropriate material, rate, and application method to address that risk in the context of our IVM program.

12. **Correct Use of Pesticides**
Coalition's or Discharger's use of pesticides must ensure that all reasonable precautions are taken to minimize the impacts caused by pesticide applications. Reasonable precautions include using the right spraying techniques and equipment, taking account of weather conditions and the need to protect the environment.

    This is an existing practice of the City of Alturas, and is required to comply with the Department of Pesticide Regulation's (DPR) requirements and the terms of our California Department of Public Health (CDPH) Cooperative Agreement. All pesticide applicators receive annual safety and spill training in addition to their regular continuing education.

13. **If applicable, specify a website where public notices, required in Section VIII.B, may be found.**

    The City of Alturas currently has a website: www.cityofalturas.org as does the local newspaper that publishes all public notices under www.modocrecord.com. Please also see the California State Water Resource Control Board's website for public notices.

References:

Best Management Practices for Mosquito Control in California. 2010. Available by download from the California Department of Public Health – Vector-Borne Disease Section at http:/www.westnile.ca.gov/resources.php under the heading *Mosquito Control and Repellent Information.* Copies may also be requested by calling the California Department of Public Health – Vector-Borne Diseases Section at (916) 552-9730 or the City of Alturas at (530) 233-2180.

California Mosquito-borne Virus Surveillance and Response Plan. 2010. [Note: this document is updated annually by CPDH]. Available by download from the California Department of Public Health – Vector-Borne Disease Section at http:/www.westnile.ca.gov/resources.php under the heading *Response Plans & Guidelines.* Copies may be also requested by calling the California Department of Public Health-Vector-Borne Disease Section at (916) 552-9730 or the City of Alturas at (530) 233-2180.

MVCAC NPDES Coalition Monitoring Plan. 2011. Available by download from the State Water Resource Control Board at http:/www.waterboards.ca.gov/water issues/programs/npdes/aquatic.shtml. Copies may be also requested by calling the City of Alturas at (530) 233-2180.