

**ATTACHMENT G – NOTICE OF INTENT**

**WATER QUALITY ORDER NO. 2011-0002-DWQ  
GENERAL PERMIT NO. CAG 990004**

**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# \_\_\_\_\_

**II. DISCHARGER INFORMATION**

A. Name County of El Dorado and Vector Control CSA3			
B. Mailing Address 3368 Lake Tahoe Blvd. Suite 303			
C. City South Lake Tahoe	D. County El Dorado	E. State CA	F. Zip Code 96150
G. Contact Person Karen Bender	H. Email address karen.bender@edcgov.us	I. Title Supervising EHS	J. Phone 530-573-3453

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

A. Name			
B. Mailing Address			
C. City	D. County	E. State	F. Zip Code
G. Email address	H. Title	I. Phone	

**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: Cal Trans, USFS, City of South Lake Tahoe  
Name of the conveyance system: Drainage ditches, Stormwater BMPs

3. Directly to river, lake, creek, stream, bay, ocean, etc.  
 Name of water body: All waters in District 5 & 6 are potentially affected

\* 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 & 6  
(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  
Altosid Briquets, Altosid XR Briquets, Altosid Pellets, and Altosid Liquid (methoprene)  
Vectobac G, and Vectobac 12 AS (Bacillus thuringiensis, subsp. israelensis)  
Vectomax CG (Bacillus sphaericus and Bacillus thuringiensis subsp. israelensis)  
Pyrenone 25-5 (Pyrethrins and Piperonyl Butoxide)  
Golden Bear 1111 (Petroleum Hydrocarbons). Any pesticides may be used from Attachments E&F of NPDES permit.

C. Period of Application: Start Date March 1, 2012 End Date February 28, 2013

D. Types of Adjuvants Added by the Discharger:

**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 PAP 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 General Permit, including developing and implementing a monitoring program, will be complied with."

A. Printed Name: Karen Bender  
 B. Signature: *Karen Bender*      Date: 12/01/2011  
 C. Title: Supervising Environmental Health Specialist

**X. FOR STATE WATER BOARD USE ONLY**

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

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EL DORADO  
COUNTY



ENVIRONMENTAL  
MANAGEMENT  
DEPARTMENT

*Environmental  
Health Division*

*Air Quality  
Management  
District*

*Solid Waste &  
Hazardous  
Materials  
Divisions*

*Vector Control*



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# COUNTY OF EL DORADO

## ENVIRONMENTAL MANAGEMENT DEPARTMENT

March 1, 2012

Re: NOTICE OF PESTICIDE APPLICATION

Dear Partner Agency,

Effective March 1, 2011, the State Water Resources Control Board adopted a new NPDES (National Pollutant Discharge Elimination System) general permit for vector control. This permit requires all dischargers of biological and residual pesticides to waters of the U.S. from vector control applications to be covered under the permit. On March 28, 2011, the Sixth Circuit Court granted USEPA's request for an extension to allow more time for pesticide operators to obtain permits for pesticide discharges into U.S. waters. The County of El Dorado and CSA 3 Vector Control District, an entity needing to do this type of work, has applied for a permit, and it is expected that our permit will be in place effective April 1, 2012.

Reference: General Permit No. CAG 990004; WATER QUALITY ORDER NO. 2011-0002-DWQ. Under this permit, the District is required to notify potentially affected governmental agencies of the following:

1. The District intends to apply one or more public health pesticides to or near areas under your agency's jurisdiction, if necessary, to limit risks to public health posed by mosquitoes and mosquito borne disease such as West Nile Virus.
2. The pesticides that may be applied are allowed under the General NPDES Permit for Biological and Residual Pesticide Discharges from Vector Control Applications (Attachment E and F). See attached lists.
3. The purpose of any application will be to reduce mosquito abundance and/or mosquito borne disease levels detected in the application area, as part of the district's integrated pest management program.
4. Applications may occur any time of the year, usually between April 1<sup>st</sup> through November 30<sup>th</sup> at appropriate locations within El Dorado County.
5. If there are any water use restrictions or precautions during treatment, they will be posted on our website.
6. For more information please visit the El Dorado County website: [www.edcgov.us/VectorControl](http://www.edcgov.us/VectorControl), or call (530) 573-3197.

Sincerely,

Karen Bender, REHS  
Supervising Environmental Health Specialist  
(530) 573-3453

List of Partner Agencies:

CA Dept of Fish and Game  
CA Dept of Food and Agriculture  
California Department of Public Health—Drinking Water  
California Department of Public Health—Vector Borne Disease Section  
Cal Trans  
City of South Lake Tahoe Public Works  
City of Placerville  
El Dorado County Board of Supervisors  
El Dorado Irrigation District  
El Dorado County DOT  
El Dorado County Dept. of Agriculture  
Lahontan Water Quality Control Board  
Tahoe Keys Property Owners Association  
South Tahoe Public Utility District  
Tahoe Resource Conservation District  
Tahoe Regional Planning Agency  
Tahoe Water Suppliers Association  
US Fish and Wildlife  
USFS

# **County of El Dorado and Vector Control District CSA-3**

## **Pesticide Application Plan**

**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 County Service Area (CSA) - 3 encompasses 195 square miles from the crest of the Sierra Nevada mountain range near Echo Summit to the shore of Lake Tahoe in both the City of South Lake Tahoe and the unincorporated area of El Dorado County in Region 6. Some treatment occurs on the western slope of the County by Environmental Management Department Staff in Region 5. Waters including tributaries, lakes, reservoirs, marshes, drainage ditches and the water conveyance and infrastructure throughout the county can be subject to mosquito control applications in Region 5 and 6. A map is included of the county.

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

El Dorado County monitors all possible sources for mosquito breeding and provides treatment when needed for control of mosquitoes by targeting the larval stages. In Region 6, use of mosquito fish is not effective for mosquito control, thus use of pesticides may be necessary. Surveillance of pest populations is essential for assessing the necessity, location, timing and choice of appropriate control measures. Treatment is restricted to areas where mosquito populations exceed established thresholds. The 54 mosquito species known in California differ in their biology, nuisance and disease potential and susceptibility to larvicides. Information on the species, density, and stages present is used to select an appropriate control strategy from integrated pest management alternatives. Only those mosquito sources that the County and District staff determines to represent imminent threats to public health or quality of life are treated. The presence of any mosquito may necessitate treatment, however higher thresholds may be applied depending on the County and District's resources, disease activity, or local needs. For control of adult mosquitoes, we consider the numbers of complaints in an area and monitor counts using traps to determine if adulticiding is needed. We use Best Management Practices for Mosquito Control, such as:

- Eliminate artificial mosquito sources.
- Ensure man-made temporary sources of surface water drain within four days (96 hours) to prevent development of adult mosquitoes.
- Source reduction and physical or mechanical control of plant growth in meadows, ditches and shallow wetlands, thus allowing natural predators to hunt mosquito larvae more effectively.

- Periodically inspect all storm water drainage basins and treat as needed to prevent development of adult mosquitoes.
- Conduct routine mosquito surveillance in waters that may be potential sources for mosquito breeding.
- Evaluate reports of mosquito annoyance from visitors or the public.
- Use methods to trap and identify mosquito species.
- Use appropriate bio-rational products to control mosquito larvae.
- Comply with all Federal and State Environmental Laws and the California Health and Safety Code to prevent environmental harm while reducing or eliminating mosquito production.
- Use personal protective measures when potentially exposed to adult mosquitoes.
- Educate the public to implement personal protective measures and eliminate standing water on their properties.
- Collaborate with local vector control agencies to coordinate activities on properties within a larger Integrated Pest Management mosquito control program.

**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;**

The following list of products may be used by the District for larval or adult control. This list is directly from Attachment E and F within the NPDES Permit for Biological and Residual Pesticide Discharges to Waters of the U.S. for Vector Control Applications. All of these products are used according to label directions and may be applied by hand, truck, ATV, backpack, etc. El Dorado County does not apply pesticides by helicopter or fixed wing aircraft.

**List of Permitted Larvicide Products**

<u>Larvicide Product Name</u>	<u>Registration Number</u>
<u>Vectolex CG Biological Larvicide</u>	<u>73049-20</u>
<u>Vectolex WDG Biological Larvicide</u>	<u>73049-57</u>
<u>Vectolex WSP Biological Larvicide</u>	<u>73049-20</u>
<u>Vectobac Technical Powder</u>	<u>73049-13</u>
<u>Vectobac-12 AS</u>	<u>73049-38</u>
<u>Aquabac 200G</u>	<u>62637-3</u>
<u>Teknar HP-D</u>	<u>73049-404</u>
<u>Vectobac-G Biological Mosquito Larvicide Granules</u>	<u>73049-10</u>
<u>Vectomax CG Biological Larvicide</u>	<u>73049-429</u>



<u>Larvicide Product Name</u>	<u>Registration Number</u>
<a href="#">Vectomax WSP Biological Larvicide</a>	<a href="#">73049-429</a>
<a href="#">Vectomax G Biological Larvicide/Granules</a>	<a href="#">73949-429</a>
<a href="#">Zoecon Altosid Pellets</a>	<a href="#">2724-448</a>
<a href="#">Zoecon Altosid Briquets</a>	<a href="#">2724-375</a>
<a href="#">Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator</a>	<a href="#">2724-392</a>
<a href="#">Zoecon Altosid XR Entended Residual Briquets</a>	<a href="#">2724-421</a>
<a href="#">Zoecon Altosid Liquid Larvicide Concentrate</a>	<a href="#">2724-446</a>
<a href="#">Zoecon Altosid XR-G</a>	<a href="#">2724-451</a>
<a href="#">Zoecon Altosid SBG Single Brood Granule</a>	<a href="#">2724-489</a>
<a href="#">Mosquito Larvicide GB-1111</a>	<a href="#">8329-72</a>
<a href="#">BVA 2 Mosquito Larvicide Oil</a>	<a href="#">70589-1</a>
<a href="#">BVA Spray 13</a>	<a href="#">55206-2</a>
<a href="#">Agnique MMF Mosquito Larvicide &amp; Pupicide</a>	<a href="#">53263-28</a>
<a href="#">Agnique MMF G</a>	<a href="#">53263-30</a>
<a href="#">Abate 2-BG</a>	<a href="#">8329-71</a>
<a href="#">5% Skeeter Abate</a>	<a href="#">8329-70</a>
<a href="#">Natular 2EC</a>	<a href="#">8329-82</a>
<a href="#">Natular G</a>	<a href="#">8329-80</a>
<a href="#">Natular XRG</a>	<a href="#">8329-83</a>
<a href="#">Natular XRT</a>	<a href="#">8329-84</a>
<a href="#">FourStar Briquets</a>	<a href="#">83362-3</a>
<a href="#">FourStar SBG</a>	<a href="#">85685-1</a>
<a href="#">Aquabac xt</a>	<a href="#">62637-1</a>
<a href="#">Spheratax SPH (50 G) WSP</a>	<a href="#">84268-2</a>
<a href="#">Spheratax SPH (50 G)</a>	<a href="#">84268-2</a>

**List of Permitted Adulticide Products**

<u>Adulticide Product Name</u>	<u>Registration Number</u>
<a href="#">Pyrocide Mosquito Adulticiding Concentrate for ULV Fogging 7395</a>	<a href="#">1021-1570</a>
<a href="#">Evergreen Crop Protection EC 60-6</a>	<a href="#">1021-1770</a>
<a href="#">Pyrenone Crop Spray</a>	<a href="#">432-1033</a>

<u><a href="#">Adulticide Product Name</a></u>	<u><a href="#">Registration Number</a></u>
<u><a href="#">Prentox Pyronyl Crop Spray</a></u>	<u><a href="#">655-489</a></u>
<u><a href="#">Pyrocyde Mosquito Adulticiding Concentrate for ULV Fogging 7396</a></u>	<u><a href="#">1021-1569</a></u>
<u><a href="#">Aquahalt Water-Based Adulticide</a></u>	<u><a href="#">1021-1803</a></u>
<u><a href="#">Pyrocyde Mosquito Adulticide 7453</a></u>	<u><a href="#">1021-1803</a></u>
<u><a href="#">Pyrenone 25-5 Public Health Insecticide</a></u>	<u><a href="#">432-1050</a></u>
<u><a href="#">Prentox Pyronyl Oil Concentrate #525</a></u>	<u><a href="#">655-471</a></u>
<u><a href="#">Prentox Pyronyl Oil Concentrate or 3610A</a></u>	<u><a href="#">655-501</a></u>
<u><a href="#">Permanone 31-66</a></u>	<u><a href="#">432-1250</a></u>
<u><a href="#">Kontrol 30-30 Concentrate</a></u>	<u><a href="#">73748-5</a></u>
<u><a href="#">Aqualuer 20-20</a></u>	<u><a href="#">769-985</a></u>
<u><a href="#">Aqua-Reslin</a></u>	<u><a href="#">432-796</a></u>
<u><a href="#">Aqua-Kontrol Concentrate</a></u>	<u><a href="#">73748-1</a></u>
<u><a href="#">Kontrol 4-4</a></u>	<u><a href="#">73748-4</a></u>
<u><a href="#">Biomist 4+12 ULV</a></u>	<u><a href="#">8329-34</a></u>
<u><a href="#">Permanone RTU 4%</a></u>	<u><a href="#">432-1277</a></u>
<u><a href="#">Prentox Perm-X UL 4-4</a></u>	<u><a href="#">655-898</a></u>
<u><a href="#">Allpro Evoluer 4-4 ULV</a></u>	<u><a href="#">769-982</a></u>
<u><a href="#">Biomist 4+4</a></u>	<u><a href="#">8329-35</a></u>
<u><a href="#">Kontrol 2-2</a></u>	<u><a href="#">73748-3</a></u>
<u><a href="#">Scourge Insecticide with Resmethrin/Piperonyl Butoxide 18%+54% MF Formula II</a></u>	<u><a href="#">432-667</a></u>
<u><a href="#">Scourge Insecticide with Resmethrin/Piperonyl Butoxide 4%+12% MF Formula II</a></u>	<u><a href="#">432-716</a></u>
<u><a href="#">Anvil 10+10 ULV</a></u>	<u><a href="#">1021-1688</a></u>
<u><a href="#">AquaANVIL Water-based Adulticide</a></u>	<u><a href="#">1021-1807</a></u>
<u><a href="#">Duet Dual-Action Adulticide</a></u>	<u><a href="#">1021-1795</a></u>
<u><a href="#">Anvil 2+2 ULV</a></u>	<u><a href="#">1021-1687</a></u>
<u><a href="#">Zenivex E20</a></u>	<u><a href="#">2724-791</a></u>
<u><a href="#">Trumpet EC Insecticide</a></u>	<u><a href="#">5481-481</a></u>
<u><a href="#">Fyfanon ULV Mosquito</a></u>	<u><a href="#">67760-34</a></u>

**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 El Dorado County'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. We treat standing water, not running water. Typically we stay a minimum of 100 feet away from the waters listed below. However, the typical sources that could be affected by treatment in our areas include:

Bird Baths, BMP's, Catch Basins, Channels, Containers, Curbs, Drains, Flooded Areas, Lake, Marsh, Neglected Pools, Ornamental Ponds, Residential Sources, Snow Melt Pools, Storm Water Structure, Stream, Sumps, Tree holes, Wetlands, etc.

Region 5: Folsom Lake, South Fork of the American River, Weber Creek, Hangtown Creek, Consumnes River (three forks), Carson Creek, Camp Creek and Tributaries.

Region 6: Lake Tahoe, Truckee River, Upper Truckee River, Fallen Leaf Lake, Heavenly Valley Creek, Trout Creek, Cold Creek, General Creek, Eagle Creek, Tallac Creek, Angora Creek, Taylor Creek, Cascade Creek and Tributaries.

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

With any source of mosquitoes or other vectors, the El Dorado County'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. The most commonly used methods and their limitations are included in the Best Management Practices for Mosquito Control in California.

Specific methods used by the agency include stocking mosquito fish (*Gambusia affinis*) on the Western Slope of the County (not in the Tahoe basin), 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 and land managers to incorporate BMPs to reduce or eliminate mosquito breeding habitat.

**6. How much product is needed and how the amounts were determined;**

The need to apply product is determined by surveillance. Actual use varies annually depending on mosquito abundance. The pesticide amounts presented below were taken from our Pesticide Use Reports in 2011. Other public health pesticides in addition to those listed below may be used as part of the agency's best management practices.

Region 5 El Dorado County Vector Control – West Slope

Zoecon Altosid 30 day Briquets	232.941 oz.
Zoecon Altosid Pellets	61.01 oz.
Zoecon Altosid liquid	9.5 oz.
Zoecon Altosid XR Briquets	173.745 oz.
Valent Biosciences Vectobac G	58.75 lbs.
Clark Golden Bear 1111	18.75 gal.

Region 6 El Dorado County CSA 3 – Tahoe Basin

Zoecon Altosid 30 day Briquets	212.704 oz.
Zoecon Altosid XR Briquets	317.1 oz.
Valent Bioscience Vectobac G	242.023 lbs.
Valent Biosciences Vectomax CG	219.93 lbs.
Zoecon Altosid liquid	2.75 oz.
Valent Biosciences Vectobac 12 AS	2.75 pints
Bayer Pyrenone 25-5	69.5 oz.
Clark Golden Bear 1111	1.5 oz.

**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;**

Site specific mosquito reduction BMP's that reduce the need for pesticide applications are considered where feasible. For example, the District works closely with landowners, agencies, and organizations to educate people and reduce or eliminate mosquito breeding. The District's plan is to use source surveillance and source reduction so that the amount of pesticides applied is kept to a minimum. Adulticiding is used infrequently when the numbers of customer complaints, along with documentation of high numbers of trapped mosquitoes, would indicate the need to fog. Beaver dam management is also used in some of the areas.

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

El Dorado County'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. Agency 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). The pesticide label must be followed for how much product can be legally applied to control the target.

**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;**

Applicators are required to complete pesticide training on an annual basis. Records are kept of these training sessions for review by the local agricultural commissioner and/or CDPH. Employees certified by the CDPH must maintain their Continuing Education units in order to maintain their certification.

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

El Dorado County EMD & VCD calibrates truck-mounted, ATV-mounted and handheld larviciding equipment each year to meet application specifications. We use no aerial applications. Supervisors review application records daily 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.

**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 item #2 above. El Dorado County VCD works with the local Department of Transportation for identifying locations of newly installed BMPs (sand traps, catch basins, and drainage ditches) so that they can be monitored for possible breeding sources. Urban and commercial areas are encouraged to install BMPs by local Building regulations and the Tahoe Regional Planning Agency. Residential sprinkler run off is monitored by our South Tahoe Public Utility District. Agencies in our local area work well together to provide support to each other.

**10. Identification of the problem. Prior to first pesticide application covered under this General Permit that will result in a discharge of biological and residual pesticides to waters of the US, 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;**

El Dorado County's 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. Although larval mosquito control is preferred, it is not possible to identify all larval sources. Therefore, adult mosquito surveillance is needed to pinpoint problem areas and locate previously unrecognized or new larval developmental sites. Adult mosquitoes are sampled using standardized trapping techniques (i.e., New Jersey light traps, carbon dioxide-baited traps and oviposition traps). Mosquitoes collected by these techniques are counted and identified to species. The special and seasonal abundance of adult mosquitoes is monitored on a regular basis and compared to historical data. The species of mosquitoes found within El Dorado County are:

- *Aedes cataphylla*
- *Aedes dorsalis*
- *Aedes fitchi*
- *Aedes hemiteus*
- *Aedes hexodontus*
- *Aedes increpitus*
- *Aedes sierrensis*
- *Aedes tahoensis*
- *Aedes vexans*
- *Aedes ventrovittis*
- *Anopheles franciscanus*
- *Anopheles freeborni*
- *Anopheles punctipennis*
- *Culex apicaltis*
- *Culex boharti*
- *Culex pipiens*
- *Culex stigmatosoma*
- *Culex tarsalis*
- *Culex territans*
- *Culex thriambus*
- *Culiseta incidens*
- *Culiseta inornata*

- Culiseta impatiens
- Culiseta particeps
- Coquillettidia perturbans

**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 agency's preferred solution, and whenever possible the agency 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 agency uses. El Dorado County EMD & VCD continually collect 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 these data to guide mosquito control activities. Thus far in 2011, there has been one dead bird report that yielded a positive WNV test in the Placerville area near the Union Mine.

**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.**

El Dorado County EMD & VCD use 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 as 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 days (96

hours) to 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 agency 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.**

El Dorado County EMD & VCD follows an existing IVM program which includes practices described in the 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 El Dorado County EMD & VCD, 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.**

<http://www.edcgov.us/VectorControl>



**References:**

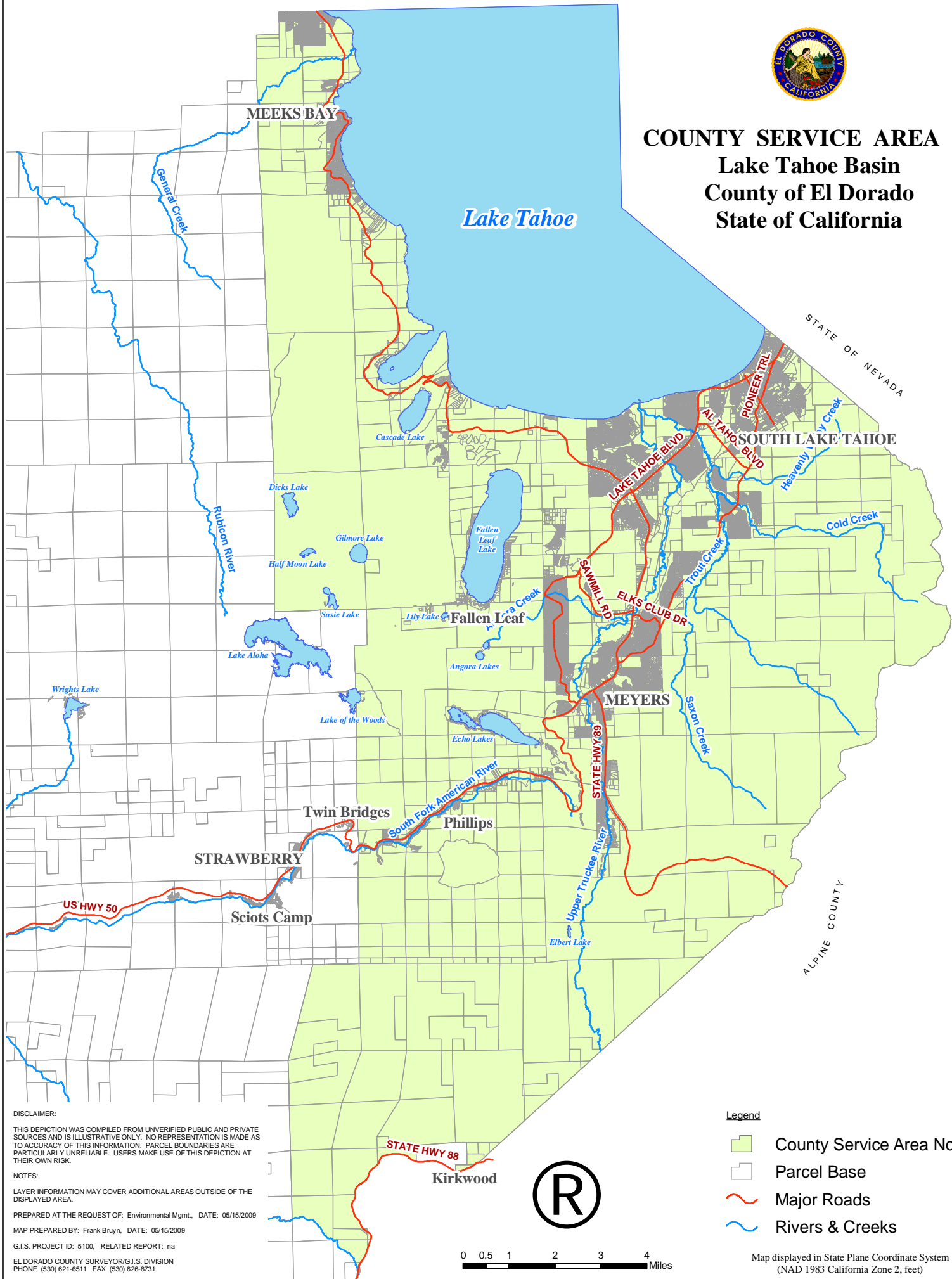
Best Management Practices for Mosquito Control in California. 2011. Available by download from the California Department of Public Health—Vector-Borne Disease Section at <http://www.westnile.ca.gov/resources.php> under the heading *Mosquito Control and Repellent Information*. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the El Dorado County EMD & VCD at (530) 573-3197 (Tahoe), or (530) 621-5300 (Western Slope).

California Mosquito-borne Virus Surveillance and Response Plan. 2010. [Note: this document is updated annually by CDPH]. . 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 and Guidelines*. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the El Dorado County EMD & VCD at (530) 573-3197 (Tahoe), or (530) 621-5300 (Western Slope).

MVCAC NPDES Coalition Monitoring Plan. 2011. [In development at the time of this draft]



**COUNTY SERVICE AREA #3**  
**Lake Tahoe Basin**  
**County of El Dorado**  
**State of California**



**DISCLAIMER:**  
 THIS DEPICTION WAS COMPILED FROM UNVERIFIED PUBLIC AND PRIVATE SOURCES AND IS ILLUSTRATIVE ONLY. NO REPRESENTATION IS MADE AS TO ACCURACY OF THIS INFORMATION. PARCEL BOUNDARIES ARE PARTICULARLY UNRELIABLE. USERS MAKE USE OF THIS DEPICTION AT THEIR OWN RISK.

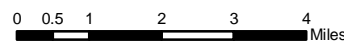
**NOTES:**  
 LAYER INFORMATION MAY COVER ADDITIONAL AREAS OUTSIDE OF THE DISPLAYED AREA.

PREPARED AT THE REQUEST OF: Environmental Mgmt., DATE: 05/15/2009  
 MAP PREPARED BY: Frank Bruyn, DATE: 05/15/2009

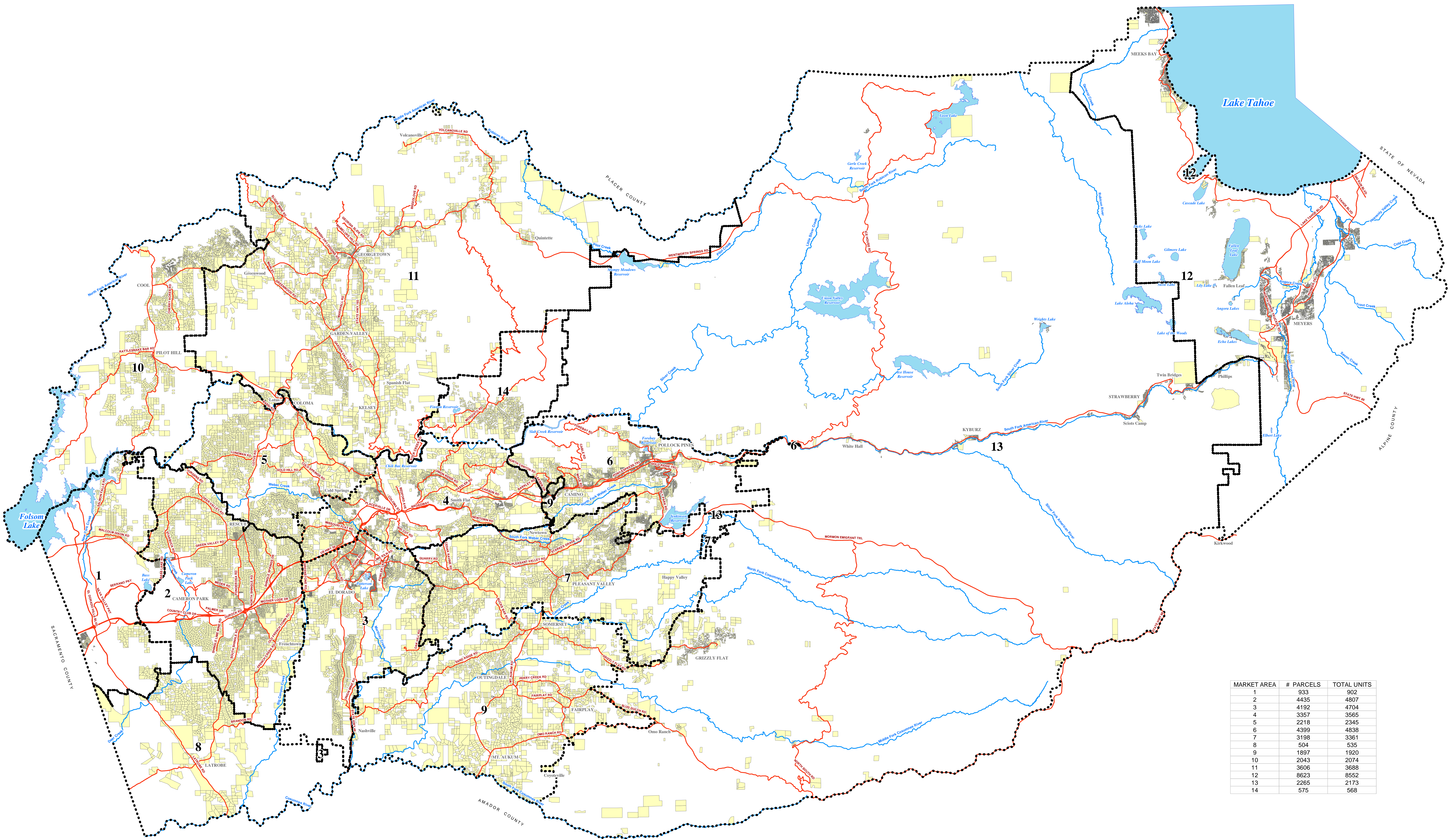
G.I.S. PROJECT ID: 5100, RELATED REPORT: na  
 EL DORADO COUNTY SURVEYOR/G.I.S. DIVISION  
 PHONE (530) 621-6511 FAX (530) 626-8731

**Legend**

- County Service Area No. 3
- Parcel Base
- Major Roads
- Rivers & Creeks

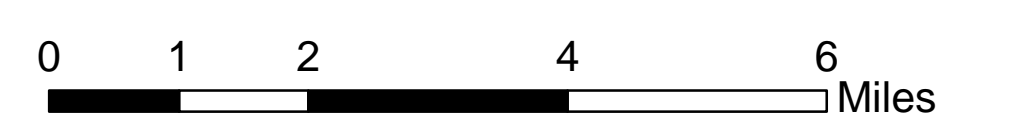


Map displayed in State Plane Coordinate System  
 (NAD 1983 California Zone 2, feet)



MARKET AREA	# PARCELS	TOTAL UNITS
1	933	902
2	4435	4807
3	4192	4704
4	3357	3565
5	2218	2345
6	4399	4838
7	3198	3361
8	504	535
9	1897	1920
10	2043	2074
11	3606	3688
12	8623	8552
13	2265	2173
14	575	568

- Legend**
- Residential Developed Parcels
  - Market Area Boundary
  - Major Roads
  - Rivers & Creeks



Map displayed in State Plane Coordinate System (NAD 1983 California Zone 2, feet)

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**NOTES:**  
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 MAP PREPARED BY: Frank Bruyn, DATE: 01/14/2011  
 G.I.S. PROJECT ID: 56676, RELATED REPORT: na  
 EL DORADO COUNTY SURVEYOR/G.I.S. DIVISION  
 PHONE: (530) 621-6511 FAX: (530) 628-9731



## MARKET AREAS W/ SELECTED PARCELS County of El Dorado State of California

