EL DORADO AGRICULTURAL WATER QUALITY MANAGEMENT CORP
PROTECTING OUR PRECIOUS RESOURCE

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July 2, 2015

Bruce Houdesheldt
Director Regulatory Affairs
Northern California Water Association
455 Capitol Mall, Suite 335
Sacramento, CA 95814

Re: El Dorado County Reduced Monitoring Plan Submittal

Dear Bruce:

Attached please find the Reduced Monitoring Plan (RMP) submittal for El Dorado County Agricultural Water Quality Management Corporation (Coalition). The Coalition would like to thank the NCWA for the chance to participate in this program and we are requesting the attached plan be forwarded to the Regional Board as soon as possible for consideration and approval.

Please contact me at (530) 626-9285 if you have any questions or need any further information to ensure our RMP is approved.

Sincerely,

Carolyn Mansfield

Carolyn Mansfield
Board President

Officers: Carolyn Mansfield, President; Maryann Argyres, Secretary; Dedrian Kobervig, Treasurer
Directors: Randy Hansen, Tom Heflin, Norman Krizl, Linnea Marenco, Kirk Taylor, Bob Witters

REDUCED MONITORING/MANAGEMENT PRACTICES VERIFICATION PLAN

Prepared by the

El Dorado County Agricultural Water Quality Management Corporation

Representing the

El Dorado Subwatershed,

a Member of the

Sacramento Valley Water Quality Coalition

In response to the

California Regional Water Quality Control Board
Central Valley Region

Order R5-2014-0030

Waste Discharge Requirements General Order
For
Growers in the Sacramento River Watershed
That Are Members of a Third-Party Group

Attachment B
Monitoring and Reporting Program

Executive Summary. The El Dorado County Agricultural Water Quality Management Corporation (EDCAWQMC) was incorporated in California as a non-profit, mutual benefit, membership corporation in 2008 to formally represent the El Dorado Subwatershed growers while complying with the Irrigated Lands Regulatory Program as a member of the Sacramento Valley Water Quality Coalition (SVWQC). This plan describes the EDCAWQMC approach to implementing the Reduced Monitoring/Management Practices Verification option to Surface Water Monitoring as described in Part III.C.1.a of Attachment B of Order No. R5-2014-0030. This Plan encompasses the entire geographic area of the Subwatershed. It includes:

1. A Subwatershed description including: climate, topography, soils, hydrology, intensity of agricultural operations, agricultural commodities, and agricultural resources;
2. A description of the low threat of pesticide discharges to surface water by addressing the historical types and amounts applied by commodity including potential toxicity to aquatic life and human health.
3. A summary of previous monitoring results that confirms a low threat to surface water quality resulting from irrigated agricultural operations.
4. A summary of management practices that are employed to minimize the impact of waste discharged by irrigated agricultural operations into the waters of the state;
5. The methodology that will be used to document, and report the implementation of the plan including the verification process; and
6. A description of the education and outreach strategy that will promote the implementation and maintenance of appropriate management practies.

1. Subwatershed Description

The Subwatershed encompasses approximately 1.1 million acres in two primary river watersheds, the South Fork American River and Cosumnes River, of El Dorado County as well as limited portions of the Middle and North Forks American River. The Subwatershed extends from the crest of the Sierra Nevada Mountains in the east to the Sacramento county line in the west and from the Placer county line in the north to the Amador county line in the south. The topography is characterized by hilly to mountainous terrain with elevations ranging from approximately 400 to 10,000 feet above sea level. Irrigated agricultural use occurs on less than 4,000 acres, or less than 0.4% of the watershed area, and is primarily situated at elevations ranging from 1,000 to 3,500 feet above sea level.

1.1 Climate - In general, the climate of the Subwatershed growing region can be described as Mediterranean with warm, dry summers and cool to cold, wet winters. Average rainfall is about 40 inches per year in Placerville, which is the county seat and located just about in the middle of the irrigated agricultural area. Seasonal rainfall occurs during the late fall, winter, and early spring so irrigation water needs to be applied in the summer season to non-endemic crops. Average maximum temperatures vary from the summertime mid 90's (^{o} F) to the winter upper 40's (^{o} F); however, spring frosts are a significant hazard to a majority of the crops grown in the Subwatershed at elevations above 2,000 feet. Frost-free days during the growing season range from 275 days at the lower elevations to less than 50 days at the upper elevations.

1.2 Topography - The Subwatershed forms a gently sloping ramp that connects the flat Central Valley with the high rugged crest of the Sierra Nevada Range. Most irrigated agricultural operations occur on that part of the ramp between elevations of 1,000 and 3,500 feet generally on gentle sloping to steep hillsides (Figure 1-_to be supplied_). Westerly flowing streams and rivers have excised deep canyons into the slope that act as conduits for air drainage and so have a dramatic affect on the temperatures of surrounding areas.

1.3 Soils - Soil characteristics play a significant role in both agricultural productivity and water quality conditions in the Subwatershed. Almost all soils are sandy to clay loams that formed in place by weathering of the underlying bedrock. In general, the soils are very shallow to deep and well- to excessively-drained. Young volcanic rock, granitic rock, and slate have produced the soils best suited for agricultural crops. Soil depth influences what types and where crops can be planted. Crop root zones range from 6 inches for some berries to greater than 4 feet for grapes. Ridge tops tend to have thin soils that are not conducive for agricultural operations. Hillside soils are often ideal for planting, but erosion control and instability issues must be addressed. Commercial crops are grown on over 40 soil types as described in “Soil Survey of El Dorado Area, California.” Soil type transitions are abrupt which further limits the production area on any given parcel.

1.4 Hydrology and Irrigation Water - The hydrology of the Subwatershed is characterized mainly by natural watercourses: the American River, the Cosumnes River and their tributaries. Distinct, identifiable ground water basins do not exist in the Subwatershed. Agricultural irrigation water is generally provided by one of three methods: 1) one of two water purveyors; El Dorado Irrigation District (EID) in the Apple Hill, Placerville and Gold Hill areas (Figure 1-3), and Georgetown Divide Public Utility District (GDPUD) in the North County (Figure 1-4); 2) wells drilled into granitic fissures (also known as fractured rock), often to a depth of over 300 feet and which frequently run dry; and, to a much lesser degree 3) ponds or springs. The majority of the irrigation water supplied by EID is potable and meets or exceeds all drinking water standards.

1.4.1 Water Quality – The quality of the waters of the State within El Dorado County are considered excellent as proven by the ILRP monitoring results over the past 5 years. This data is further supported by the test results from the two major commercial water purveyors: EID and GDPUD. Additional water quality data obtained by the Sacramento Municipal Utility District (SMUD) also supports this declaration.

1.4.2 Pilot Watershed Management Practices Program – El Dorado entered into the Pilot Program in 2010 and completed it in 2014. All Pilot Program requirements were completed within the alloted timeframes and all required reports have been submitted.

1.4.3 El Dorado Irrigation District Data - These reports list all detections of various constituents while all other tests with non-detectable measurements are not reported. All of the tested constituents meet or exceeds all state and federal drinking water standards. (Attachment 1)

1.4.4 Georgetown Divide Public Utilities District Data – This report lists all constituents tested and the results of these tests. The only constituents with detectable levels are by products of drinking water disinfection, and these meet or exceed all state and federal drinking water standards. All others are at non-detectable levels, including inorganic chemicals as well as organic chemicals and some pesticides. (Attachment 2)

1.4.5 SMUD Data - The SMUD water quality data were collected as part of the FERC Project No. 2101 re-licensing requirement. The data were collected for the years 2002, 2003, and 2004 with the report published in 2005. Data collected represents the project area. The primary points of interest for EDCAWQMC are reference sites #43 and #46. Site 43 is located at the base of Slab Creek Reservoir dam and Site 46 is located down-stream at the confluence of Rock Creek and the SFAR. The in-flows from both North Canyon Creek and Coon Hollow Creek into the SFAR occur between these two reference sites. (Attachment 3)

The data monitored included basic water parameters, elemental analysis, fecal coliform/E. coli, and petroleum hydrocarbon. Pesticides were not included in this analysis since SMUD does not use pesticides in the project area. Once again this data demonstrates that this area of California has excellent water quality.

1.5 Agricultural Operations - Irrigated agricultural operations in the Subwatershed are typically small family-owned and operated farms. The average parcel size is less than 20 acres that includes an agricultural production area of less than 12 acres. Typically, the agricultural production areas are limited by topography and soil conditions. Many operations are smaller than 10 acres and very few are greater than 25 acres (extremely small relative to the typical California family farm). There are a number of large parcels that have small acreages in irrigated agricultural operations. Further, most growers live on the agricultural parcels. These growers strive to ensure and/or enhance the quality of life on these parcels for themselves and their heirs. This includes protecting the environment, wildlife and water quality.

1.5.1 Irrigation Methods - All commodities within the Subwatershed are irrigated by one of three methods: high-volume sprinklers; micro-sprinklers; or drip irrigation. High-volume sprinklers are only used in areas served by EID or GDPUD because the volume of water necessary to operate is beyond the

capability of most wells. Many growers who historically used these systems for irrigation have replaced them with the more efficient micro-sprinklers or drip systems; however, many of these growers have maintained the high-volume systems for frost protection. Table 1-1, provided by EID, demonstrates that a variety of irrigation methods are used by their customers on all commodities, and methods used have changed over time. The irrigation management practices identified in section 3.2 may be applied to any commodity grown in the Subwatershed depending on topography, water supply and soil type.

1.5.2 Frost Protection Methods - Many growers in the higher elevations, where late frost is a danger (an elevation band from 2,000 to 3,000 feet above sea level), have invested in frost protection systems. These systems include over-head sprinklers and, in very rare instances, wind machines. The majority of sprinkler frost protection systems were designed by the NRCS in the mid- to late-1970's. Crop damaging frost events are very unpredictable in both timing and duration. Water is applied to developing buds when temperatures drop below 28-29 °F and remain on until the temperature exceeds 30-32 °F. Some years temperatures never reach critical thresholds while other years it may happen two to three times. The freeze event duration also can vary from 2 to 12 hours while normal irrigation events during the summer range from 24 to 48 hours with these systems. The sediment control management practices identified in section 3.3 will minimize the discharge of sediment during these unpredictable events.

1.5.3 Pesticide Application Methods - Due to the topography and small production areas pesticides are applied with ground-based equipment. This equipment ranges from 4-gallon backpack liquid sprayers to 400-gallon air-blast liquid sprayers as well as sulfur dust applicators. The smaller equipment is normally used with hand-wand or downward facing nozzle(s) or boom(s) for herbicide applications targeting specific plants or in-row strip spraying in production areas. Application volumes range from 4 to 50 gallons per acre. The downward application nearly eliminates the potential for drift and off-site migration. Air-blast sprayers are used to apply fungicides and insecticides at rates from 100 to 400 gallons per acre depending on the equipment and pesticides being applied. The pesticide management practices identified in section 3.1 will minimize the discharge of pesticidesinto adjacent waters.

1.5.4 Nutrient Application Methods - Nutrients and soil amendments are applied: 1) by hand; 2) mechanically (spreaders); 3) air-blast sprayers; or 4) through irrigation systems (fertigation). The largest commercial commodity in the Subwatershed is wine grapes where nutrient management is critical to fruit quality as opposed to quantity. This limits the amount of nitrogen to ≤50 pounds per acre per year. Tree crops require 1- to 2- pounds per tree per year.

1.6 Agricultural Commodities - The primary commercial commodities are generally permanent crops consisting of fruit and nut orchards, wine grapes, Christmas trees, berries with a few vegetables as well as irrigated pastures. Irrigated agricultural operations are concentrated within seven geographically distinct agricultural districts (Figure 1-2) that were identified and established by El Dorado County to protect and enhance agricultural activities. Due to the availability of commercial irrigation water nearly all major crops are produced in the Camino/Fruitridge District, one of the two largest. The lack of commercial water results in wine grapes, which require much less water, and dry farmed walnuts dominating the Somerset/Fairplay District, the second of the two largest. It is estimated that for all commercial crops other than wine grapes, 80% of the sales are through direct marketing either at on-site ranch marketing shops or farmer's markets.

1.6.1 Orchards - Irrigated orchard crops include, in descending order of total acreage: apples, pears, peaches, plums, cherries, olives, nectarines and walnuts (the majority of walnut orchards in the Subwatershed are dry farmed). It has been estimated that it takes roughly 2-3 acre-feet of water per acre of orchard per year to produce a commercial crop of apples or pears in the Apple Hill area (part of the Camino/Fruitridge Agricultural District). As the elevation decreases the amount of water needed increases. Therefore, the majority of these crops are grown where water purveyor supplied water is available: Camino/Fruitridge and Gold Hill Agricultural Districts which are served by EID.

1.6.2 Wine Grapes - Well over 60 varieties of wine grapes are grown in the Subwatershed. It has been estimated that it takes roughly 0.5-1.0 acre-feet of water per acre of vineyard per year to produce a commercial crop of wine grapes in the Apple Hill area. Therefore, vineyards are found throughout the Subwatershed between elevations of 1,000 and 3,500 feet but are the primary irrigated agricultural crop in the Somerset/Fairplay District where water is scarce and there are no commercial purveyors.

1.6.3 Christmas Trees - There are over 30 Christmas Tree farms in the Subwatershed. These farms are generally at the higher elevations although there are a number of farms in the Apple Hill/Camino area. Irrigation practices vary considerably with the elevation of the farms and the age of the trees, and the availaility of water.

1.6.4 Berries - A small number of acres of blueberries, raspberries, blackberries and strawberries are grown for Direct Market sales, primarily in the Camino/Fruitridge and Gold Hill Agricultural Districts.

1.6.5 Irrigated Pastures and Hay - Irrigated pasture land is generally limited in the Subwatershed due to the availability and cost of water. Most of the

irrigated pasture is located north of Highway 50 and is serviced by EID or GDPUD.

1.6.6 Minor Vegetable Crops - A very small number of acres of summer and winter squash as well as other summer vegetables are grown for sale at Farmers' Markets and through on site Ranch Marketing activities.

1.7 Agricultural Resources - Growers use a number of conservation resources available in El Dorado County. These include, but are not limited to, the following: Irrigation Management Service (IMS) program, University of California Cooperative Extension (UCCE), El Dorado County Agriculture Department, Natural Resource Conservation Service (NRCS), Resource Conservation Districts (RCDs), and privately owned businesses.

1.7.1 Irrigation Management System (Neutron Probes) - The IMS program is offered by EID and the EDCWA. The program uses a neutron probe weekly to monitor soil-moisture levels during the irrigation season. This soil-moisture data is used by the growers to schedule irrigation events and set irrigation run-times. The EID program is an in-house program while the EDCWA program hires outside contractors. The two programs monitored over 460 sites during the 2009 growing season. The EID program is free to commercial growers while the EDCWA charges the grower $250 per site.

1.7.2 University of California Coperative Extension (UCCE) - UCCE has been one of the most valuable assets to the agricultural community within the county. Part of the UCCE mission is to provide science-based information and educational programs to solve local issues in areas of agriculture and natural resources. UCCE also conducts original research that allows growers to modify and/or adopt new conservation strategies. The first integrated pest management (IPM) book (Pear Pest Management) was written by the UCCE county director Dick Bethel in 1978 based on research conducted primarily in El Dorado County. This publication served as the template for the current IPM manuals developed for various commodities. In addition, Mr. Bethel was awarded the grant that provided the foundation for EID's IMS program.

1.7.3 El Dorado County Agriculture Department - This department is responsible for pesticide regulation in the county. This includes issuing permits and gathering the monthly pesticide use reports. In 2004, this department became responsible for issuing grading permits for agricultural operations if more than 1 acre of native vegetation is removed to develop a commercial operation. The purpose of this permit is to mitigate soil erosion through the implementation of appropriate management practice(s) based on site-specific conditions.[15] This permitting process also includes site visits to ensure that management practice(s) are in place.

1.7.4 National Rescouces Conservation Service (NRCS) - The NRCS uses the following principles as a guide to help private landowners develop and implement conservation strategies. The principles are: 1) Assess the resources on the land, the conservation problems and opportunities; 2) Draw on various sciences and disciplines and integrate all their contributions into a plan for the whole property; 3) Work closely with land users so that the plans for conservation mesh with their objectives; and 4) Through implementing conservation on individual properties, contribute to the overall quality of life in the watershed or region. In addition, NRCS can provide funding to implement some of these strategies as conditions allow.

1.7.5 Resource Conservation District - RCDs are empowered to conserve resources within their districts by implementing projects on public and private lands and to educate landowners and the public about resource conservation. Beyond this, RCDs are given the right to form associations to coordinate resource conservation efforts on a larger level. The core functions of a district revolve around its right to use diverse means to further resource conservation within their districts. Further, the El Dorado and Georgetown RCDs were initially responsible for the ILRP coordination within the county.

1.7.6 Privately Owned Businesses - There are a number of private businesses that operate within El Dorado County that assist growers with resource management strategies. These include:

1.7.6.1 Vineyard Management Consultants - These individuals work with growers of various size and complexity to assist the owners in producing marketable grapes. This may include marketing, irrigation management, cover cropping, sediment control, nutrient control, and pest control recommendations to name a few.

1.7.6.2 Orchard Management Consultants - Due to the various commodities produced in El Dorado County, there are a few individuals that provide the same functions in an orchard setting as found in a vineyard setting.

1.7.6.3 Pest Control Advisors (PCA) - There are state-licensed PCAs that assist growers with pest control activities that may include pesticide timing and material recommendations based on trap and/or degree-day monitoring. Individuals are available for both orchard and vineyard operations.

2. Pesticides

2.1 Pesticide Application History - The main year-to-year pests for nearly all commodities are weeds, bacteria, fungi and insects. Pesticide application timing is based on pest pressures, environmental conditions, and/or computer models. Herbicides are applied in the early to late spring to control weeds along crop rows to reduce or eliminate water and nutrient competition. Spot spraying to control weeds during the summer may take place depending on the weed and environmental pressures.

Orchard growers mainly apply pesticides to control bacteria, fungi and insects depending on the time of year. Fungal pests are controlled through dormant, delayed dormant, bloom and post-bloom applications. Pests of concern include brown rot, scab and powdery mildew. Most dormant applications use a contact fungicide while the remaining applications utilize systemic fungicides. Most control applications are completed by June 1. Bacterial pest controls are typically applied at the same time as fungicides during the bloom and post-bloom applications as a tank mix. The main two bacterial pests are canker and fire blight. Insect pests vary based upon the commodity with most applications during the delayed dormant and pre-harvest timeframes.

Normal grape pests include fungi and insects. Pest pressures occur from bud break to several weeks prior to harvest, generally from April 1 through mid to late July depending on varietal and location of the vineyard. Contact fungicide, mainly sulfur, is applied through full bloom at which time systemic materials are applied. Fungal pressures are monitored and applications are based on environmental conditions and pest pressure. Application scheduling varies from 3 to 5 weeks between events. Insect control applications are random throughout the growing season based on environmental conditions and pest pressures.

Attached is the El Dorado County 2013 pesticide report that discusses the pesticides used in El Dorado County by commodity. It also shows that El Dorado ranks number 42 of 58 counties in pesticide usage in California. (Attachment 4)

3. Historical Monitoring Results

3.1 North Canyon Creek – To date, there have been no exceedances in water quality objectives at North Canyon Creek.

3.2 Coon Hollow Creek - To date, there have been no exceedances in water quality objectives at Coon Hollow Creek. In February 2011, the management plan for toxicity to the water flea at Coon Hollow Creek was deemed complete and no further actions were not required. (Attachment 5)

4. Management Practices

4.1 Pesticide Management - Manage pesticides and pesticide use so that applications are targeted to an identified pest and conducted so as to minimize the

potential for off site movement. This will eliminate, reduce, or slow the direct discharge of pesticide(s) to adjacent watercourses.

4.2 Irrigation Water Management - Manage irrigation systems and events so as to eliminate, reduce, or slow the direct discharge of runoff to adjacent watercourses

4.3 Erosion and Sediment Control Management - Manage erosion so as to eliminate, reduce, or slow the direct discharge of sediment to adjacent watercourses.

4.4 Nutrient Management - Manage soil amendment(s) and crop nutrient(s) to prevent excess applications and minimize the potential for off site movement.

5. Documentation and Reporting

5.1 Farm Evaluations – Farm Evaluations (FEs) were mailed to all coalition members on December 29, 2014 with a required return date of February 2, 2015. As FEs were returned to the coalition, the data was input into the SVWAC database. This was completed and uploaded to SVWQC on June 8, 2015. The El Dorado Coalition only had 4 members that have not returned their FEs.

5.2 Annual Report - The EDCAWQMC will prepare an annual report that meets the conditions stipulated by SVWQC after its discussions with the Regional Board staff. The annual report will be provided in a manner that will keep individual landowner information confidential. It is anticipated that the report will identify: the number and percentage of members who have responded to the survey; the number and percentage of irrigated acres represented by the responding members; a summary showing the number and percentages of the management practices that have been or are scheduled to be adopted by the responding members; and a summary of the members and acreages that have been independently verified. This report will demonstrate that our members are complying with the requirements of the Pilot Program.

6. Education and Outreach

The initial outreach to members will be at the Annual Meeting of Members in January, 2010. This will be followed immediately by a newsletter to all members describing the program and the responsibilities of the land owners. Continuing education and outreach will be accomplished through workshops, classes and field demonstrations of management practice implementation. Whenever possible, EDCAWQMC will partner with government and non-government organizations to accomplish the education and outreach portion of the program.

Figure 1-1 Map of El Dorado County

Figure 1-2 Map of El Dorado County Agricultural Districts

Figure 1-3 Map of EID Area of Service

Figure 1-4 Map of GDPUD Area of Service

Figure 1.1 Map of El Dorado County

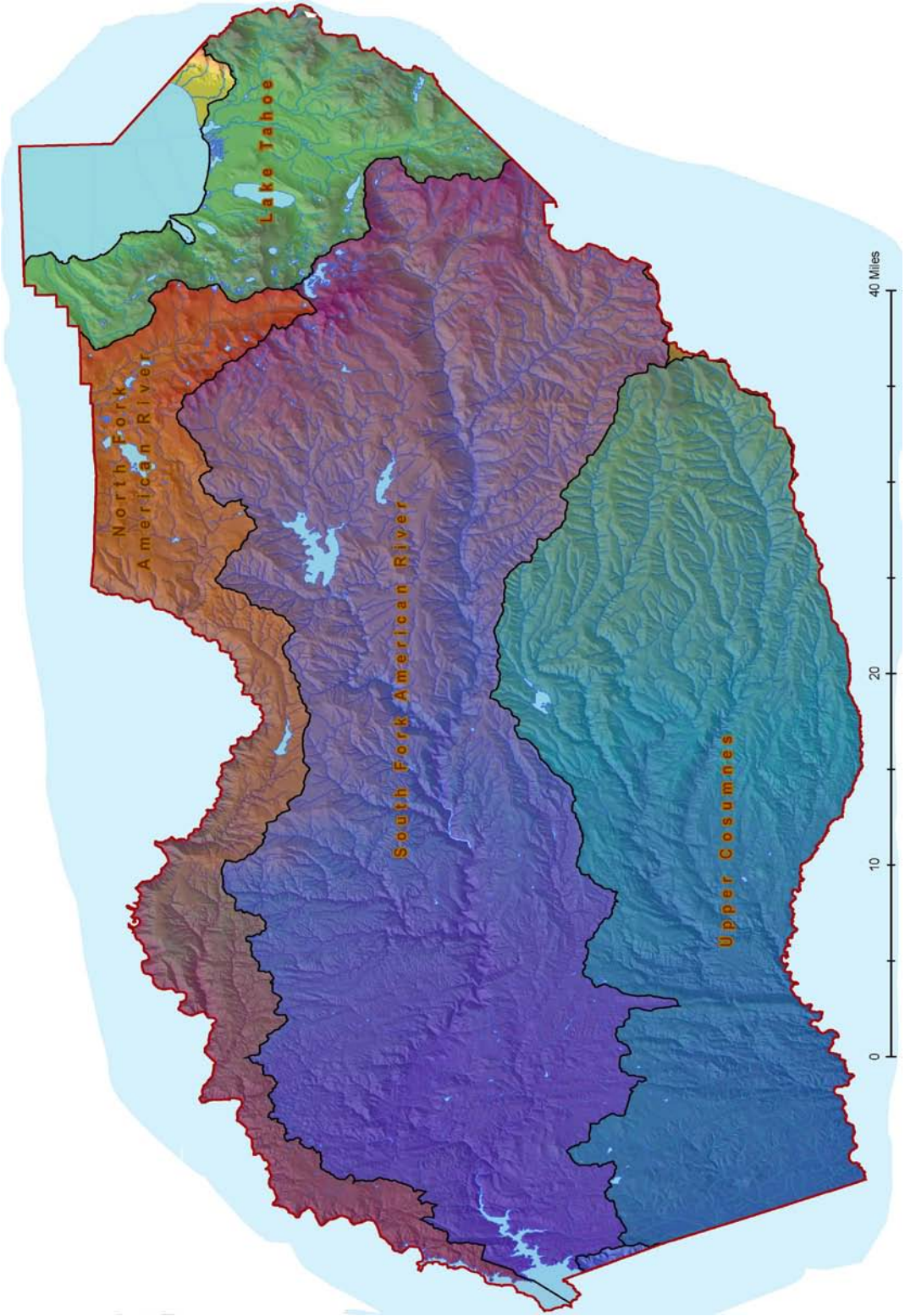


Figure 1-2 Map of El Dorado County Agricultural Districts

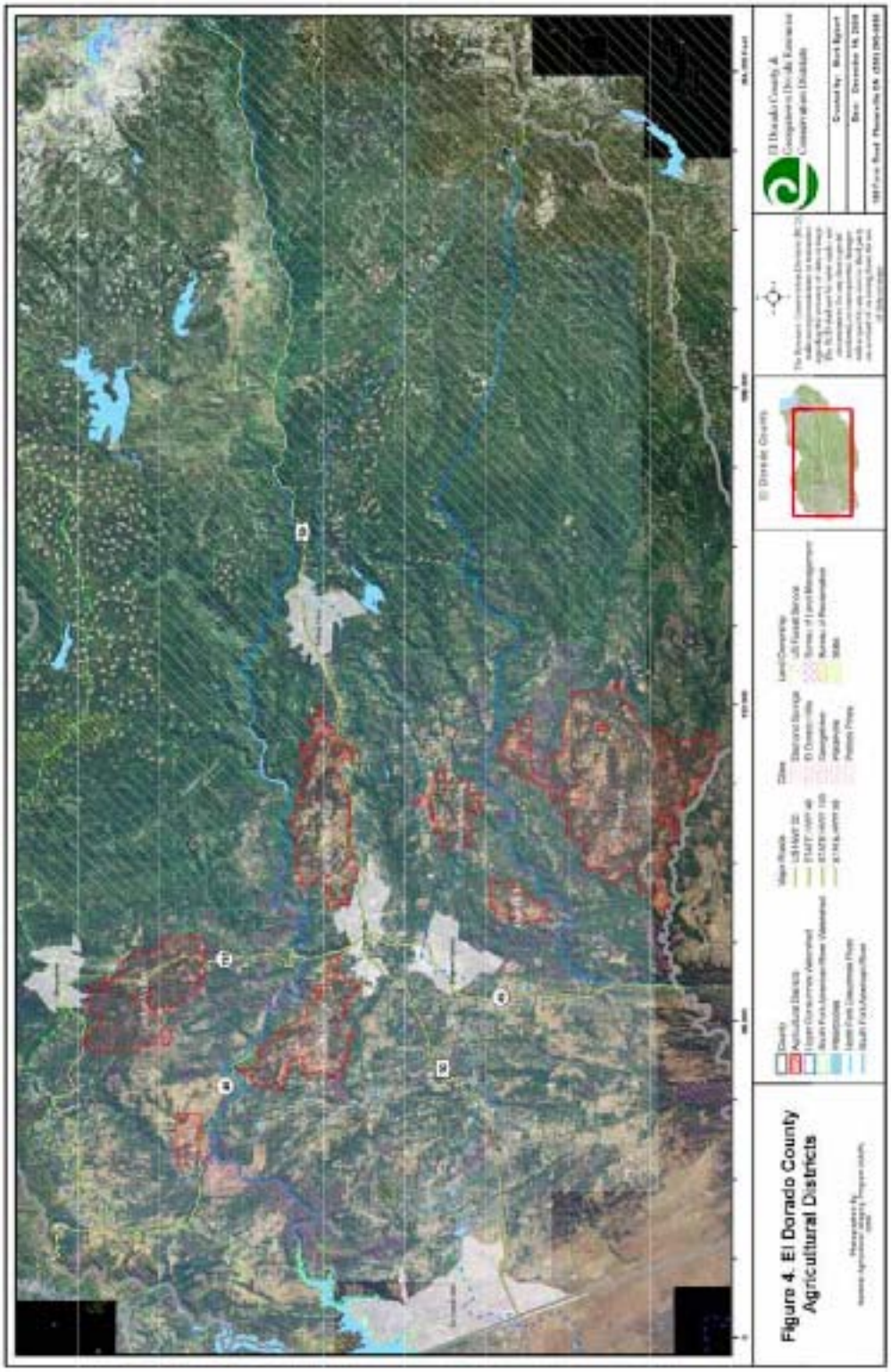


Figure 1-3 Map of EID Area of Service

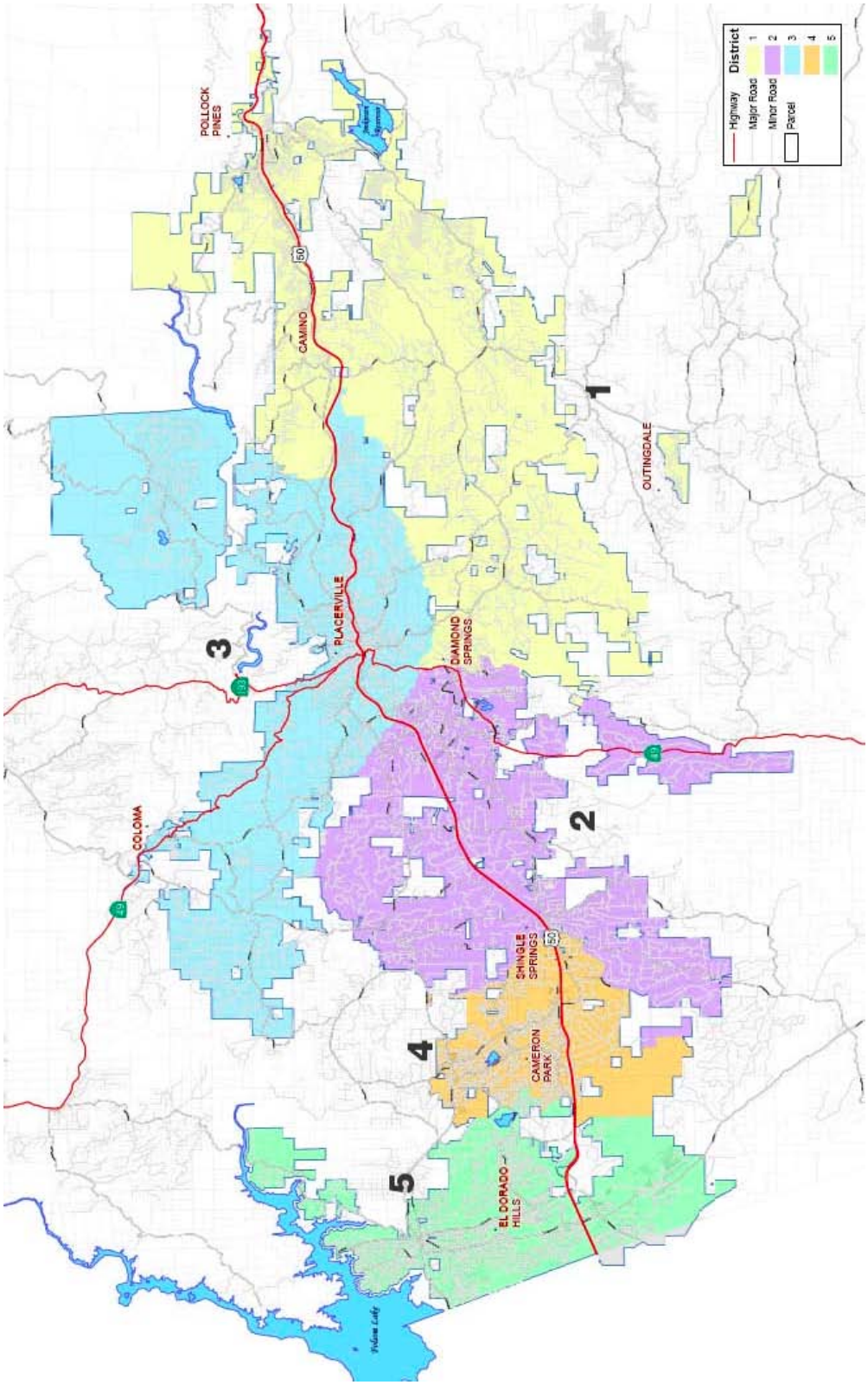
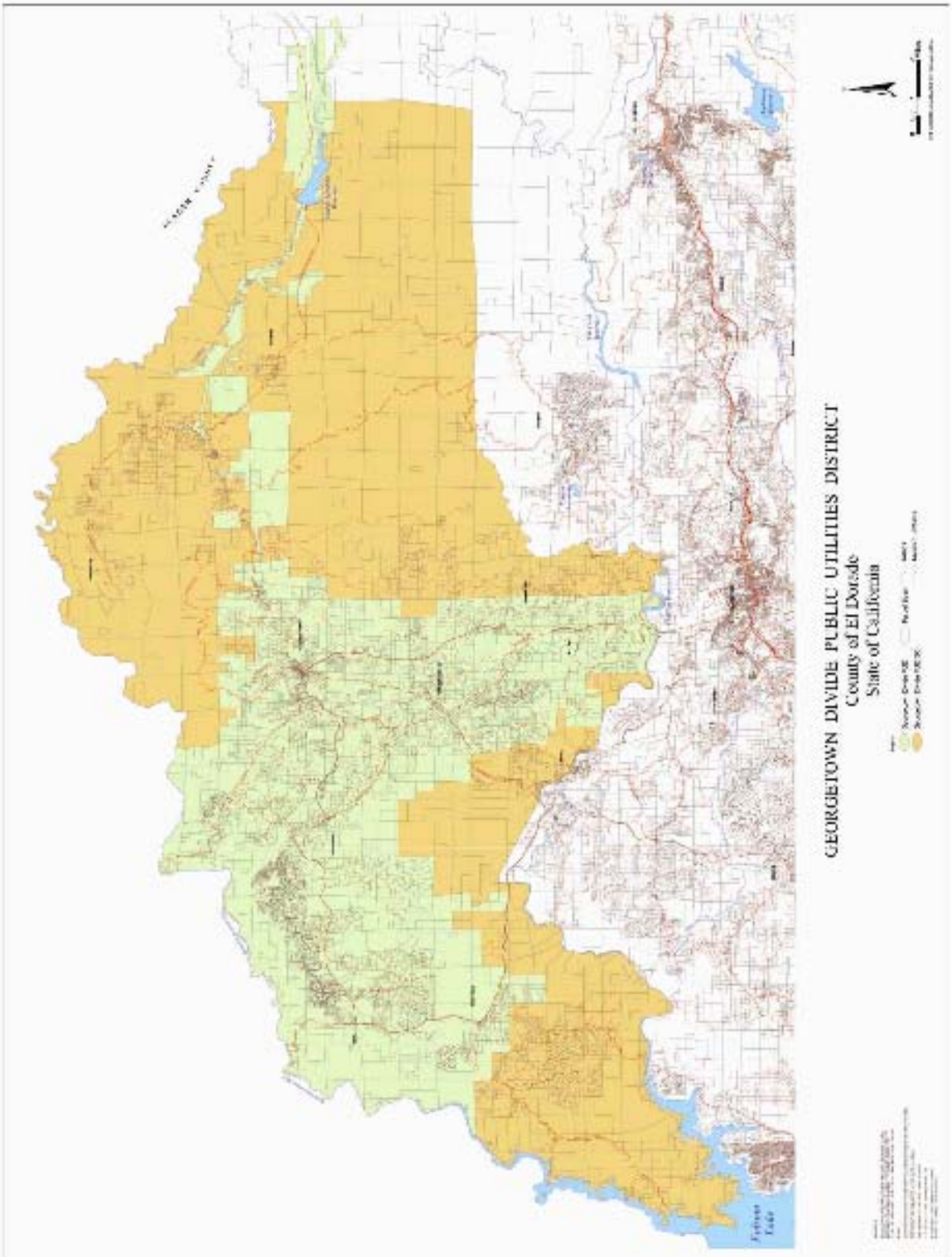


Figure 1-4 Map of GDPUD Area of Service



EL DORADO IRRIGATION DISTRICT

2014 Water Quality Report

Water testing performed in 2014

Main Water System

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

About the Water Quality Report

The Water Quality Report is an annual summary of the results of ongoing tests for contaminants in drinking water. The report is designed to inform you of the quality of your drinking water. Each year, the State Water Resources Control Board and U.S. Environmental Protection Agency require EID to compile and distribute a report to all of our water customers. The report includes a comparison of the District's water quality to state and federal standards.

Where Your Water Comes From

EID has rights to approximately 75,000 acre-feet of water from various sources in the Sierra Nevada foothills. (An acre-foot equals one acre of land covered by a foot of water; there are 325,851 gallons in an acre-foot.) Jenkinson Lake, at the center of Sly Park Recreation Area, provides nearly one half of the Main System's water supply and is treated at the Reservoir A water treatment plant in Pollock Pines. Forebay Reservoir in Pollock Pines delivers water to the Reservoir 1 water treatment plant under a pre-1914 water right from the high-alpine streams and lakes that are part of our Project 184 hydropower system. We have a water contract with the Bureau of Reclamation at Folsom Lake, which Reclamation operates as part of the state's Central Valley Water Project. We also hold ditch water rights (Weber, Slab, and Hangtown creeks), water rights at Weber Reservoir, and a water right under Permit 21112 for Project 184 water—all of which is delivered from Folsom Lake through the El Dorado Hills water treatment plant.

About EID

EID is a multi-service, water-based public utility serving about 118,000 people in El Dorado County. The District holds water rights in the Sierra Nevada foothills that date back to the Gold Rush. Today EID provides a unique combination of services—from drinking water and water for pastures, orchards, and vineyards to wastewater treatment, recycled water for irrigated landscapes and back and front yards, hydroelectric and solar power generation, water efficiency programs, and outstanding recreation in Sierra Nevada alpine and western slope environments.

Information about potential sources of pollution

The State Water Resources Control Board (State Board) requires water providers to conduct a source water assessment to help protect the quality of water supplies. The assessment describes where a water system's drinking water comes from, the types of polluting activities that may threaten the quality of the source water, and an evaluation of the water's vulnerability to the threats.

Updated assessments of EID's drinking water sources were completed in 2006, 2008, and 2013. Our source water is considered most vulnerable to recreation, residential sewer, septic system, and urban runoff activities, which are associated with constituents detected in the water supply. Our source water is also considered most vulnerable to illegal activities, dumping, fertilizer, pesticide and herbicide application, forest activities, and wildfires, although constituents associated with these activities were not detected. Copies of the assessments are available at the State Water Resources Control Board, Division of Drinking Water, P.O. Box 997377, Sacramento, CA 95899-7377. To view them, contact Ali Rezvani, DDW Sacramento District Engineer, at 916-445-5285, or Dana Strahan, EID Drinking Water Division Operations Manager, at 530-642-4060.

Testing the water

To help ensure that safe water is delivered to our customers, EID's water quality monitoring program includes taking samples of raw and treated water throughout the year from many locations in the District's service area. Analyses cover more than 100 different constituents. Analysis of the water is performed at state-certified commercial labs. The state of California allows us to monitor for some contaminants less than once a year because the concentrations of the contaminants do not change frequently. Some of our data, although representative, may be more than a year old. The table below lists all constituents that were detected in 2014 under our monitoring and testing program. The information shows that EID meets or exceeds all state and federal drinking water standards. When available, the data reported reflects the treated water supply.

A Note for Sensitive Populations

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. EID is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, test methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline, or at www.epa.gov/safewater/lead.

Questions?

For more information from EID about this report, contact Dana Strahan, Water Division Operations Manager, at 530-642-4060.

For information from the State Water Resources Control Board, Division of Drinking Water, contact Ali Rezvani, DDW Sacramento District Engineer, at 916-445-5285.

Safe Drinking Water Hotline: 1-800-426-4791

The following definitions help explain information in the table on the next page.

Maximum contaminant level (MCL): The highest level of a contaminant allowed in drinking water. Primary MCLs are set as close to the PHG or MCLGs as is economically and technologically feasible. Secondary MCLs (SMCL) are set to protect the odor, taste, and appearance of drinking water.

Maximum contaminant level goal (MCLG): The level of contaminant in drinking water below which there is no known or expected risk to health. The U.S. Environmental Protection Agency (EPA) sets these levels.

Maximum residual disinfectant level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for the control of microbial contaminants.

Maximum residual disinfectant level goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary drinking water standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Public health goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. The California Environmental Protection Agency sets PHGs.

Regulatory action level (AL): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements for water systems.

Treatment technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Turbidity: Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

Main Water System - Source Water Quality

Primary Standards - Health Based (units)	Primary MCL	PHG (MCLG)	Highest Single Measurement	Lowest Monthly Percentage of Samples Meeting Limits	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Turbidity							
Highest single measurement of the Treated Surface Water (NTU)	TT = 1.0	n/a	0.19	n/a	No	2014	Soil runoff
Lowest Monthly % of theTreated Surface Water Meeting NTU Requirements	TT = 95% of samples ≤ 0.3 NTU	n/a	n/a	100%	No	2014	Soil runoff
Secondary Standards - Aesthetic (units)	**Secondary MCL**	**PHG (MCLG)**	**Range of Detection**	**Average Level**	**MCL Violation?**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Chloride (mg/L)	500	n/a	4-6	5.1	No	2014	Runoff/leaching from natural deposits; seawater influence
Corrosivity (L.I.)	Non-corrosive	n/a	(-1.0) - (-0.63)	-0.84	No	2014	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
Odor-Threshold (units)	3	n/a	1-3	2	No	2014	Naturally-occurring organic materials
Specific Conductance (µmhos/cm)	1600	n/a	42-100	66	No	2014	Substances that form ions when in water; seawater influence
Sulfate (mg/L)	500	n/a	0-3.2	1.6	No	2014	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	1000	n/a	50-68	57	No	2014	Runoff/leaching from natural deposits
Other Parameters (units)	**Notification Level**	**PHG (MCLG)**	**Range of Detection**	**Average Level**	**MCL Violation?**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Alkalinity (mg/L)	Unregulated	n/a	11-34	20	n/a	2014	No Known Typical Source of Constituent
Bicarbonate (mg/L)	Unregulated	n/a	14-40	26	n/a	2014	
Calcium (mg/L)	Unregulated	n/a	2.3-7.2	4.3	n/a	2014	
Chlorate (ug/L)	800	n/a	ND-300	95	n/a	2013	
Hardness as CaCO3 (mg/L)	Unregulated	n/a	10-30	18	n/a	2014	
Hardness as CaCO3 (grains/gal)	Unregulated	n/a	0.59-1.76	1.06	n/a	2014	
Hexavalent Chromium (ug/L)	Unregulated	0.02	ND-0.07	ND	n/a	2013	
Magnesium (mg/L)	Unregulated	n/a	0.7-2.9	1.6	n/a	2014	
N-nitroso-dimethylamine (NDMA)(ug/L)	0.01	0.003	ND-0.003	ND	n/a	2010	
Orthophosphate (mg/L)	Unregulated	n/a	ND-0.28	0.13	n/a	2014	
pH (pH units)	Unregulated	n/a	7.4-8.8	8.3	n/a	2014	
Sodium (mg/L)	Unregulated	n/a	6.8-8.6	7.7	n/a	2014	
Strontium (ug/L)	Unregulated	n/a	ND-53	35	n/a	2013	
Vanadium (ug/L)	50	n/a	ND-0.63	0.18	n/a	2013	
Disinfection Byproduct Precursors (units)	**Action Level**	**PHG (MRDLG)**	**Range of Detection**	**Lowest 4-RAA Quarterly Average**	**MCL Violation?**	**Most Recent Sampling Date**	**Typical Source of Constituent**
Total Organic Carbon [TOC] Filtered water (mg/L)	TT= Removal	n/a	0.93-2.3	n/a	n/a	2014	Various natural and manmade sources
Total Organic Carbon [TOC] Removal Ratio (Actual/Required)	TT=>1.0	n/a	n/a	1.0	No	2014	Various natural and manmade sources

Main Water System - Distribution System Water Quality

Microbiological Constituents (units)	Primary MCL	PHG (MCLG)	Value	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Total Coliform Bacteria > 40 Samples/Month (Present / Absent)	No more than 5% positive monthly sample	(0)	Highest number of monthly samples positive was 1%	No	2014	Naturally present in the environment

Disinfection Byproducts and Disinfectant Residuals (units)	Primary MCL (MRDL)	PHG (MRDLG)	Range of Detection	Highest Running Annual Average (RAA)	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Chlorine [as Cl_2] (mg/L)	(4.0)	(4)	0.49-0.63	0.55	No	2014	Drinking water disinfectant added for treatment
HAA5 [Total of five Haloacetic Acids] (ug/L)	60	n/a	23-99	55 *	No	2014	Byproduct of drinking water disinfection
TTHMs [Total of four Trihalomethanes] (ug/L)	80	n/a	42-94	69*	No	2014	Byproduct of drinking water chlorination

Inorganic Constituents (units)	Action Level	PHG (MCLG)	Sampe Data	90th % Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Copper (mg/L)[at the tap]	1.3	0.3	None of the 56 samples collected exceeded the action level	0.16	No	2014	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ug/L)[at the tap]	15	0.2	1 of the 56 samples collected exceeded the action level	ND	No	2014	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Other Parameters (units)	Notification Level	PHG (MCLG)	Range of Detection	Average Level	MCL Violation?	Most Recent Sampling Date	Typical Source of Constituent
Chlorate (ug/L)	800	n/a	74-240	131	n/a	2013	No Known Typical Source of Constituent
Hexavalent Chromium (ug/L)	Unregulated	0.02	0.06-0.09	0.08	n/a	2013	No Known Typical Source of Constituent
N-nitroso-dimethylamine (NDMA) (ug/L)	0.01	0.003	ND-0.002	ND	n/a	2010	No Known Typical Source of Constituent
Strontium (ug/L)	Unregulated	n/a	38-55	45	n/a	2013	No Known Typical Source of Constituent
Vanadium (ug/L)	50	n/a	0.38-0.72	0.50	n/a	2013	No Known Typical Source of Constituent

Footnotes:
Unregulated contaminant monitoring helps EPA and the State Board to determine where certain contaminants occur and whether the contaminants need to be regulated.

*Highest Locational Running Annual Average (LRAA)

KEY

NA=not applicable
ND=not detected
NR=not reportable

NTU=nephelometric turbidity unit (measure of clarity)
mg/L=milligrams/liter
µg/L=micrograms/liter
µmho/cm=micromhos per centimeter

Your Drinking Water—What You Should Know

The sources of drinking water-both tap and bottled-include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity.

The following contaminants may be present in source water before it is treated.

- **Microbial contaminants** such as viruses and bacteria from sewage treatment plants, septic systems, livestock operations, and wildlife.
- **Inorganic contaminants** such as salts and metals that occur naturally or stem from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
- **Pesticides and herbicides** from sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic chemical contaminants** such as synthetic and volatile organic chemicals that are byproducts of industrial processes and petroleum production or that come from gas stations, urban stormwater runoff, agricultural applications, and septic systems.
- **Radioactive contaminants** that occur naturally or are the result of oil and gas production and mining.

To ensure that tap water is safe to drink, the U.S. Environmental Protection Agency and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

NOTE: Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Contact the U.S. Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 for more about contaminants and potential health effects.

Get Involved

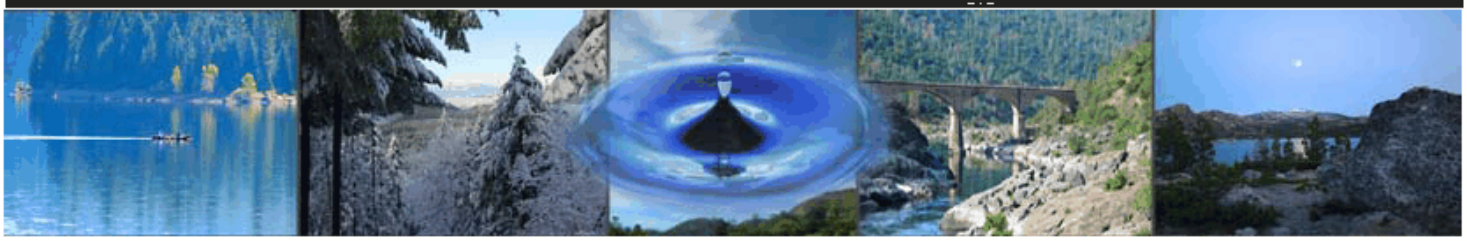
The El Dorado Irrigation District Board of Directors meetings are open to the public and are held on the second and fourth Mondays of each month. Meetings begin at 9:00 a.m. in the Placerville headquarters building at 2890 Mosquito Road. Go to the District website at www.eid.org to learn more.

The information provided in this report is required by law to be issued to every water user. Property owners: please share this information with your tenants.

Jenkinson Lake at Sly Park Recreation Area in Pollock Pines

In accordance with the Americans with Disabilities Act and California law, it is the policy of the El Dorado Irrigation District to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you are a person with a disability and require information or materials in an appropriate alternative format; or if you require any other accommodation, please contact the ADA Coordinator at the number or address below at least 72 hours prior to the meeting or when you desire to receive services. Advance notification within this guideline will enable the District to make reasonable arrangements to ensure accessibility. The District ADA Coordinator can be reached by phone at (530) 642-4045 or e-mail at adacoordinator@eid.org.

Georgetown Divide Public Utility District



Domestic Water | **Irrigation Service** | **On-Site Waste Disposal**

1946~ 2014 Reflecting on the Past. Planning for the Future.

The Georgetown Divide Public Utility District is pleased to present this information to our customers, which includes two documents mandated by the California Department of Public Health, the **Annual Water Quality Report /Consumer Confidence Report** and **a State Notification Letter** regarding the District's water treatment processes.

DEAR WATER USER,

This report provides a snapshot of your water quality. We are pleased to report that in 2014 as in years past, your water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards. The District vigilantly safeguards its water supplies and once again, our water system has not violated a maximum contaminant level or any other water quality standard. Included in these pages are details on where your water comes from, what it contains and how it compares to state standards. For additional information on water quality, customers may contact GDPUD at (530) 333-4356.

About Contaminants

If present, elevated levels of lead can cause serious health problems especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. GDPUD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Some People Are More Vulnerable

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA and Centers for Disease Control (CDC) guidelines on appropriate means to lessen risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791) or find it on EPA's website www.water.epa.gov/drink/index.cfm.

Natural Materials Can Enter Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, reservoirs and canals. As water travels over the surface of the land it dissolves naturally occurring minerals and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial Processes and petroleum production, and can also come from gas stations, urban stormwater runoff, septic systems and agricultural application.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

(Continued on back page)

GDPUD Consumer Confidence Report

2014 Calendar Year (Reported in 2015)

Primary Drinking Water Standards--Health Related

Parameters/ Constituents	Unit	MCL	PHG or (MCLG)	Your Water: Walton Lake WTP Service Area	Your Water: Auburn Lake Trails WTP Service Area	Meets Standards	Typical Source of Contaminant
Microbiological Primary Drinking Water Standards							
Turbidity	NTU	TT=1 NTU	0.1	0.30 highest (0.040 average)	0.34 highest (0.03 average)	YES	Soil runoff
		TT=95% of samples < 0.3 NTU	n/a	100%	100%		
TURBIDITY NOTE: *Turbidity is a measurement of the cloudiness of the water or the level of suspended matter in the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants. In reporting turbidity, the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits are specified.*							
Total Coliform Bacteria (Total Coliform Rule) (weekly)		no more than one positive monthly sample	0	0	0	YES	Naturally present in the environment.
Fecal Coliform and E. Coli (Total Coliform Rule) (weekly)		A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or E. Coli positive	0	0	0	YES	Human and animal fecal waste
COLIFORM NOTE: *Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present.*							
Inorganic Chemicals- Source Water Results							
Aluminum (2011)	ppb	1000	600	ND	ND	YES	**Note on Inorganic**
Disinfection By-products, Disinfectant Residuals, and Disinfection Byproduct Precursors							
TTHMs (Total Trihalomethanes)	ppb	80	NA	22.5 LRAA (13.0-36.0 range)	44.0 LRAA (27.0-56.0 range)	YES	By product of drinking water disinfection
Haloacetic Acids	ppb	60	NA	14.2 LRAA (9.7-17.4 range)	20.9 LRAA (10.8-32.9 range)	YES	By product of drinking water disinfection
Chlorine	ppm	MRDL = 4.0	MRDLG=4	0.84 average (0.63-1.03 range)	0.80 average (0.54-1.11 range)	YES	Drinking water disinfectant added for treatment

Secondary Drinking Water Standards--Aesthetic

Parameters/ Constituents	Unit	MCL	PHG or (MCLG)	Your Water: Walton Lake WTP Service Area	Your Water: Auburn Lake Trails WTP Service Area	Meets Standards	Typical Source of Contaminant
Source Water Results							
Note: There are no PHG's or MCLG's for constituents with secondary drinking water standards because these are not health-based, but set on the basis of aesthetics.							
Aggressive Index		NS		9.3 (slightly corrosive)	9.12 (slightly corrosive)	YES	Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.
Iron	ppb	300		ND	100	YES	Leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	ppm	1000		18	21	YES	Runoff/leaching from natural deposits
Specific Conductance (EC)	micromhos	1600		22	38	YES	Substances that form ions when in water; seawater influence
Chloride	ppm	500		0.91	1.00	YES	Run-off/leaching from natural deposits; seawater influence
Sulfate	ppm	500		0.54	0.81	YES	Run-off/leaching from natural deposits' industrial wastes.
Additional Constituents-Source Water Results							
Alkalinity as Calcium Carbonate	ppm	NS	NS	15	14	YES	Naturally occurring in water
Calcium	ppm	NS	NS	2.3	3.0	YES	Naturally occurring in water
pH (daily treated water)	units	6.5-8.5	NS	8.18 average (7.9 - 8.2 range)	8.03 average (7.9 - 8.3 range)	YES	Naturally occurring in water
Sodium	ppm	NS	NS	1.6	1.5	YES	Sodium refers to the salt present in the water and is generally naturally occurring.
Total Hardness	ppm	NS	NS	9.0	21.0	YES	Naturally occurring in water, generally from magnesium and calcium.

Definitions

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's (or MCLG's) as is economically and technologically feasible. Secondary MCL's are set to protect the odor, taste, and appearance of drinking water.

MCLG: Maximum Contaminant Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's are set by the U.S. Environmental Protection Agency.

MRDL: Maximum Residual Detection Limit. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG: Maximum Residual Detection Limit Goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NTU: Nephelometric Turbidity Units. A measurement of water clarity.

Primary Drinking Water Standard: MCL's for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

PHG: Public Health Goal; The level of a contaminant in drinking water below which there is no known or expected risk to health. PHG's are set by the California Environmental Protection Agency.

RAL: Regulatory Action Level is the concentration of a contaminant which if exceeded, triggers treatment or other requirements that a system must follow.

ND: Non-Detected

NS: No Standard

NA: Not Applicable

ppm: parts per million

ppb: parts per billion

mg/L: milligrams per liter (1 mg/L = 1 ppm)

pCi/l: pico curies per liter

TOC: Total Organic Carbon

TT: Treatment Technique is a required process intended to reduce the level of a contaminant in drinking water.

LRAA: Locational Running Annual Average

How Data is Collected and Reported—The tables presented on these pages list all of the drinking water contaminants that were detected during the 2014 calendar year. The presence of these contaminants does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in these tables was also collected during 2014. Last year, the District conducted more than 140 tests for 72 contaminants, none of which were detected in our source water.

OLDER WATER TREATMENT PROCESS DOES NOT MEET NEW STATE STANDARDS

Dear Customer,

The Georgetown Divide Public Utility District takes great pride in the high quality of the water we supply to our customers. In our many years of service, our water has always met or exceeded state and federal public health standards. Even though our water continues to meet all of these standards, one of the methods in our water treatment process has become outdated under today's state standards. This is not surprising in a smaller, rural community where water treatment plants are older (the Auburn Lake Trails plant was built in 1971). It is financially challenging for a district with a small customer base to pay for millions of dollars in water system improvements. Ten years ago, on February 9, 2004, the California Department of Public Health, Office of Drinking Water issued an administrative order (No. 01-09-04CO-002) that instructs the district to comply with state regulations regarding the filtration of drinking water. Printed here is the state's public notification message:

NOTIFICATION OF FAILURE TO COMPLY WITH DRINKING WATER TREATMENT STANDARDS

"The Georgetown Divide Public Utility District is providing this notice at the direction of the State of California Department of Public Health, Division of Drinking Water and Environmental Management (Department) to bring to your attention certain matters regarding the treatment of your drinking water supply. The Department establishes standards for the quality of drinking water, including regulations for the quality of water supplies drawn from lakes and streams (i.e., surface water). If such water is inadequately treated, microbiological contaminants in the water may cause disease. Disease-causing organisms, if present, can cause symptoms including diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue. (These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water.) Since it is infeasible to analyze treated water for all disease-causing organisms that may be present, the Department has established enforceable requirements (Surface Water Treatment Regulations) for treating surface water to reduce the risk of these adverse health effects. The regulations include specific criteria for filtering and disinfecting surface water to remove or destroy microbiological contaminants. Drinking water that is treated to meet these criteria is considered to be safe. The Georgetown Divide Public Utility District water treatment plants use a filtration technology that is not among those listed in the Surface Water Treatment Regulations. Because the District has not demonstrated to the Department that its treatment plants provide a degree of treatment equivalent to the listed technologies, the plants are not considered to be in compliance with the Department's regulations. The District is currently working toward bringing the ALT water treatment plant into compliance with the regulations or constructing new facilities that will comply with the regulations. It is estimated that all improvements to the system will be made in 2016**.** The District will keep you informed on a regular basis of progress made to resolve this issue. If you have any questions regarding this notification, or our service, please call GDPUD at (530) 333-4356".

District Summary

The Walton Lake water treatment plant was upgraded in 2005 which brought the plant into compliance with State regulations. The Auburn Lake Trails (ALT) water treatment plant was considered to be state of the art when it was built, but the "in-line filtration" technology does not meet current standards. Your Board of Directors wants to provide the best possible service to customers but is also very concerned about costs and resulting impacts on water rates. The district is making significant progress with the ALT water treatment plant project. The new Auburn Lake Trails Water Treatment Plant, which will meet state and federal surface water treatment standards when complete, is on track to be completed in 2016**.** In the meantime, you may consider your water safe to drink.

Mailing Address: P. O. Box 4240, Georgetown, CA 95634-4240 / **Physical Address** : 6425 Main St.
Phone: (530) 333-4356 **www.gd-pud.org** Fax (530) 333-9442

GEORGETOWN DIVIDE
PUBLIC UTILITY DISTRICT

PO BOX 4240, GEORGETOWN, CA 95634-4240

OFFICE HOURS: M—F 7:45 AM—4:30 PM

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Your GDPUD Board Members

The Board meets regularly on the second Tuesday of each month, at 2:00 p.m. at the District offices, located at 6425 Main Street in Georgetown.

Your Board members are:

- Norm Krizl, President
- Carl Hoelscher, Vice President
- Maria Capraun, Treasurer
- Jesse Hanschild, Director
- Lon Uso, Director

Continued from page 1)

WATERSHED HEALTH

Water Source Assessment

Source water protection is the primary barrier for providing safe drinking water. A contaminant that does not enter the water source does not need to be removed. An assessment of the district's drinking water source was completed in December 2002. The source is considered most vulnerable to the following activities for which no associated contaminants have been detected in the water supply: historic gas stations, historic mining operations, wastewater treatment systems, forest management activities, recreational use, storm drain and storm water discharges and illegal dumping. You may request a copy of the complete assessment or a summary at the GDPUD office or by contacting Bruce Berger, the CDPH Sanitary Engineer, at (916) 449-5666.

Water Quality Rules Explained

In order to ensure that tap water is safe to drink, the EPA and CA Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. California notification levels are available on the Department's website www.cdph.ca.gov/certlic/drinkingwater/Pages/NotificationLevels.aspx

Your Water Supply

Your water originates in the Sierra, flows into Stumpy Meadows Reservoir and is transported through a Gold Rush-era canal system and pipes to the Walton Lake and Auburn Lake Trails water treatment plants. The Walton Lake plant serves the communities of Georgetown, Garden Valley, Kelsey and Greenwood. The Auburn Lake Trails plant serves Auburn Lake Trails, Cool and Pilot Hill. Both plants use a multi-barrier process to ensure the quality of your drinking water. Each plant uses liquid bleach to disinfect raw water before it undergoes treatment. The treatment process involves coagulation for the removal of fine particles, filtration using sand and anthracite, disinfection, and reduction of corrosivity through use of sodium carbonate. Treated water is stored in tanks and piped to customers.

Este informa contiene informacion muy importante sobre su aqua beber. Traduzcalo o hable con alquien que lo entiende bien.

3.6 Water Quality Study Plan

This study is designed to provide information regarding overall water quality in the vicinity of the Sacramento Municipal Utility District's Upper American River Project (UARP) and Pacific Gas and Electric Company's Chili Bar Project (projects), identify potential water quality problems related to the projects, and where the projects can control such factors, develop resource measures for the protection, mitigation and enhancement of water quality. Basic *in situ* water quality information will be gathered in projects reservoirs and in bypassed stream reaches to evaluate general aquatic ecosystem conditions. Under this study plan, water quality constituents will be sampled at times and in locations that may best identify water quality problems (Triage Sampling), and where problems are identified, follow-up investigations will proceed immediately and to the extent needed to clearly identify the problem and potential resource measures (Contingency Sampling). Some immediate Contingency Sampling activities are identified in this plan, but the full extent of Contingency Sampling cannot be identified until a specific problem is identified and an appropriate course of action determined by the Aquatics TWG. For instance, if warranted, Contingency Sampling may include multi-season or multi-year sampling. In addition to water column analysis, the potential for metals within projects waters to bioaccumulate through the aquatic food chain will be evaluated using fish tissue analysis in representative reservoirs. The Licensees recognize that the sampling program described in this Water Quality Study Plan could ultimately be as broad or broader in scope than the May 3, 2002 program discussed with the resource agencies, and are fully committed to implementing such a program if warranted.

3.6.1 Pertinent Issue Questions

The Water Quality Study Plan addresses the following Aquatic/Water Issue Questions:

Is operation of the Project protective of Basin Plan Designated beneficial uses?

39. How does the Project affect water quality (e.g. turbidity) and sedimentation, specifically at Slab Creek Reservoir, as operation of this reservoir affects sediment transport into Chili Bar Reservoir? How can we manage that impact if it exists? What are the historic events that have affected sedimentation?
41. Do the waters below the Project reservoirs meet the water quality objectives of the Basin Plan? How can the Project be managed to help meet them?
45 What type of long-term sediment and water quality strategies, operational practices and maintenance strategies exist?
46. Do the waters within the reservoirs and the diverted reaches adequately protect all designated beneficial uses?
47. Identify the Project-related pollution events that may have occurred in the watershed.
55. What are the (Project induced) effects of recreation (including on water and upslope activities) on water quality in the reservoirs and stream reaches (e.g. dispersed recreation and outhouses)?
60. What is the location of all spoil piles within the Project area and what are the effects on water quality?

Note that Issue Questions 39 and 45 as they relate to sediment are addressed in the Channel Morphology Study Plan, and Issue Questions 55 and 60 as they relate to upslope Project facilities, including spoil piles, are addressed in the Project Sources of Sediment Study Plan. Water temperature in both streams and reservoirs as well as pH, dissolved oxygen and conductivity in reservoirs are addressed in detail in the Water Temperature Study Plan and are included in this study to the extent that concurrent sampling will take place along with dependent constituents.

3.6.2 Background

Attachment 1 provides an overview of water quality constituents that are of primary interest in this study. Included in Attachment 1 for each constituent is a discussion of why it is important and sampling periods that may best represent seasons when the constituent would appear within the water column. Samples will be collected in those periods shown in Attachment 1 and described below. Initial water quality screening efforts will incorporate the concept of seasonality and will apply a general sampling approach that brackets projects-affected stream reaches and selectively samples impounded waters. However, because historical data collected on the South Fork Silver Creek below Ice House Reservoir and on Silver Creek below Union Valley Reservoir during dam construction (1959-

1961), and on the South Fork of the American River upstream of and just downstream of Slab Creek Reservoir (1992) during dredging of the reservoir may indicate that elevated levels of trace metals within the watershed (including Aluminum, Arsenic, Cadmium, Copper, Iron, Lead, Manganese, Mercury, Selenium, Silver, and Zinc) occurred during those periods, initial sampling efforts will include a focus on metals. To strengthen data collected in the initial triage approach to water column sampling and to determine potential bioaccumulation of metals within the aquatic food chain, fish tissues will be analyzed.

3.6.3 Study Objectives

The study objectives are to:

1. Characterize water quality under current Project operations by directly monitor water quality and using historical information as well as information from the Water Temperature, Channel Morphology, Project Sources of Sediment and Aquatic Bioassessment studies, among other studies.

2. Determine if Basin Plan water quality objectives (and other applicable water quality criteria) are met and assess whether Basin Plan designated beneficial uses are protected. Note that the SWRCB will ultimately determine if Basin Plan designated beneficial uses are protected during the 401 process.

3. Identify any project-controllable resource measures for the protection, mitigation and enhancement of water quality.

3.6.4 Study Area and Sampling Locations

The study area includes all reservoirs associated with the projects (Rubicon, Rockbound, Buck Island, Loon Lake, Gerle Creek, Ice House, Union Valley, Junction, Camino, Brush Creek, Slab Creek and Chili Bar) excluding Robbs Peak Forebay due to its small size (30 acre-feet), and all stream reaches identified by the Aquatic TWG and Plenary Group (Rubicon Dam, Rockbound Dam, Buck Island Dam, Rubicon Tunnel Outlet, Loon Lake Dam, Gerle Creek Dam, Robbs Peak Dam, Ice House Dam, Junction Dam, Camino Dam, South Fork American, Brush Creek Dam, Slab Creek Dam and the Reach below Chili Bar Dam). The study area also includes, to the extent necessary, tributary inflows into the reservoirs and reaches. Sampling locations are listed in Attachment 2.

3.6.5 Information Needed From Other Studies

Information needed from other UARP relicensing studies includes:

1. Location of Project-related recreation facilities from the UARP Relicensing recreation studies

2. Results of the Water Temperature Study to assess compliance with the Basin Plan water temperature standards

3. Results of the Channel Morphology and Project Sources of Sediment studies
4. Flow data from the Hydrology Study

5. Results of the Aquatic Bioassessment Study to corroborate the results of the Water Quality Study

6. Results from other resource studies to assess level of protection provided for Basin Plan Designated Beneficial Uses

The output of this Water Quality study may be used in other studies to assist in determining the overall health of the aquatic ecosystem.

3.6.6 Study Methods And Schedule

The study methods will include the following subtasks:

Gather Historic Information: Interviews will be done with SMUD Operations staff, ENF, SWRCB, RWQCB and CDFG staff and others to identify any Project-related historic pollution events, and any water quality data routinely collected by SMUD (such as turbidity levels upstream and downstream of Slab Creek Reservoir) or others. Also, these interviews will help determine if there are any historical water quality data available other than what is reported in SMUD's Initial Information Package (SMUD 2001) and what has been discussed with the Aquatic TWG to date. Documentation of pollution events (i.e. reports of events and follow-up actions), potential affects of the projects, as well as other historical water quality data will be collected. An inventory shall be prepared of all historic pollution events identified and any mitigation actions taken, including reference sources and a companion map that presents locations of documented events and geographic expanse of known effects.

Water Quality Data Collection

Laboratory Reporting: The laboratory will provide for each constituent sample, the laboratory's current method detection limit, reporting limit, practical quantitation limit, and J-value as appropriate. The lab will attempt to obtain, and report at detection limits at or below the adjusted maximum regulatory criteria. (See glossary of terms included as Attachment 4)

Sample *In situ* Field Parameters: Basic water quality parameters, including temperature, dissolved oxygen, conductivity, and pH will be measured at all general sampling locations and specified bypassed stream reach stations (identified in Attachment 2) once each during the spring runoff, the summer low-flow period, the fall season, and following the first major rain event. Reservoir stations will include *in situ* profiles and stream stations will be sampled from the shoreline in moving flow with the sampler upstream of the meter. Turbidity and TSS will be analyzed in the laboratory.

Sample Standard Water Quality Parameters: Attachment 1 lists seasonal sampling periods for each constituent to be analyzed in the water quality screening effort. For planning purposes, sampling for the fall turnover season is expected to be conducted in 2002, first major rain event sampling will be conducted in November/December 2002, and the spring runoff sampling period will occur in April/May 2003. The summer low-flow sampling period will occur in August/early September 2003. The Licensees will sample once in each specified sampling period beginning with the summer low flow period in 2002. The constituents that will be sampled in each seasonal period are those that behave in a manner most likely to be represented during the designated sampling period(s) and those constituents required for analyzing standard constituents (indicated by an "X" in Attachment 1). Sampling for these constituents can be divided into two phases: Triage and Contingency.

a) Triage Sampling: Triage sampling is designed to screen for water quality problems associated with the projects. Water quality samples will be collected once immediately downstream of each projects facility, in each projects reservoir and in the major inflows to each reservoir (Attachment 2). It is expected that many of the water quality sampling locations will correspond to water temperature monitoring locations. Interested Aquatic TWG and Plenary Group Participants will be invited into the field to confirm the sampling locations before sampling locations are finalized. One sample will be taken from the riverbank in flowing water (sampler upstream) downstream of each project facility and in major inflows to each reservoir (Attachment 2). During the summer low flow period when the reservoirs may be stratified, water quality samples will be collected in the upper epilimnion and in the hypolimnion a few feet above the reservoir bottom. During the fall turnover, spring runoff and first major storm critical periods when the reservoirs are not stratified, one sample will be collected at a point approximately one-third the total depth below the surface. Timing of reservoir turnover will be determined by thermographic profiles in Loon Lake Reservoir (representing Rubicon, Rockbound, Buck Island, Gerle and Loon Lake reservoirs), Union Valley Reservoir (Junction and Union Valley reservoirs), and Slab Creek Reservoir (Brush Creek, Camino, Chili Bar and Slab Creek reservoirs),

conducted at intervals no greater than once weekly beginning October 1 and continuing through fall turnover. For this purpose, turnover will assume to occur when the thermocline has broken down (less than 1°C change in temperature per meter). The Licensees will determine whether Loon Lake or Union Valley reservoir profiling will act as a surrogate for commencing Ice House Reservoir fall turnover sampling after the September reservoir water temperature profiling is done per the Water Temperature Study Plan. Timing of the first major rain event will be assessed by the Licensees, who will provide the criteria for this event to the Aquatic TWG. When each sample is collected, a multi-parameter water analyzer will be used *in situ* to measure instantaneous water temperature, specific conductance, dissolved oxygen and pH At the same time, a grab sample will be collected in accordance with approved field sampling protocols. One Secchi depth measurement will be taken at each reservoir sampling location. Instruments will be calibrated prior to each field visit according to manufacturer's specifications. The date and time that the sample is collected, sampling site, jar number and other pertinent information will be recorded in the field for each sample, and the site will be located using a GPS unit. The grab sample jar will be labeled, preserved, stored and delivered to a State certified water quality laboratory and the contents analyzed using laboratory methods adequately sensitive to detect constituents at or below regulatory criteria levels. Where applicable, samples will be stored per laboratory standard operating procedures. Compliance with laboratory-approved storage procedures and with maximum holding periods allowed by lab method(s) used will be documented, and a chain-of-custody record will be maintained for each sample jar.

Triage sampling for MTBE and TPH will only be conducted on the epilimnion and hypolimnion stations of Loon Lake, Ice House, and Union Valley reservoirs where significant boat traffic occurs. Concurrent with the timing of seasonal grab samples, fecal coliform screening samples will be collected in surface waters at near-shore locations proximal to reservoir recreation facilities and in diverted stream reaches identified as high-use dispersed recreation areas by the Recreation TWG (Attachment 5 (a), Bacteria Screening Stations – to be drafted and approved by Aquatic TWG, in consultation with Recreation TWG). For the fecal coliform screening purposes (as compared to the detailed coliform program described below), the SWRCB and Licensees agree that EPA Method 9221 may be used and that the samples may be held for up to 24 hours before processing. For the screening analysis, the TWG agreed to use E. coli analyses instead of fecal coliform, as long as it was used consistently throughout the screening effort. Additionally, the SWRCB and Licensees agree that no chlorophyll-a sampling will be collected during initial triage efforts. Instead, the Aquatic TWG will review the Secchi disk and nutrient data for each reservoir for indications of excessive production (eutrophication). If such indications occur (low Secchi depth reading as compared to other reservoirs and high nutrient concentrations), the Licensees in consultation with the Aquatic TWG will develop a contingency Sampling Plan that may include chlorophyll-a sampling, and phytoplankton/zooplankton sampling.

For the grab samples, the lab will be instructed to immediately analyze the samples taken below the projects' facilities and in the reservoirs, including both epilimnion and hypolimnion samples collected during periods of reservoir stratification using the methods described in Attachment 3. The resulting data will be provided by email to the Aquatic TWG as soon as available from the lab. If SWRCB or other Aquatics TWG participants determine that data indicate that a problem might occur with one or more of the constituents (indicated by levels approaching regulatory numerical criteria thresholds, algae bloom noted in reservoirs or channel, or as otherwise identified by the Aquatic TWG), Contingency Sampling as described below will be initiated immediately.

b) Contingency Sampling: Contingency Sampling will focus on the specific water quality constituent(s) and areas where Triage Sampling data indicates a water quality problem might exist. It will include near-term and long-term activities to explore the problem. The near-term steps will include immediately directing the water quality lab to analyze the water quality samples taken from major inflows to the reservoirs for the constituent for which a problem is indicated. Because of the short laboratory holding times of certain constituents, SMUD and the laboratory will initiate special procedures to ensure that information is not lost due to expiration of the holding times. Constituents with short holding times include certain nutrients (e.g., Nitrate/Nitrite and Orthophosphate have 48

hour holding times) and TSS and TDS (7-day holding time). In these instances, the laboratory will be directed either to analyze for the specific constituents immediately upon arrival or to chemically preserve the samples for later analysis. Chemical preservation will only be performed in circumstances where the preservation does not influence the detection limit of the analytical technique. In addition, the Licensees will confer with the Aquatic TWG to identify any other locations (including downstream of the projects facilities and in tributaries to the reach) where additional samples should immediately be taken for the constituent. Some examples of where additional samples might be collected are listed in Attachment 2. The long-term activity will include developing a sampling program for the constituent at other times of the year or in multiple years, or in additional source or downstream locations if warranted based on the results of the near-term activities.

Fecal Coliform Sampling Program: A focused fecal coliform sampling effort will be conducted to demonstrate compliance with Basin Plan objectives requisite for protection of waters used for contact recreational activities. Samples will be taken at specified near-shore locations in the vicinity of reservoir recreation facilities and along diverted stream reaches known to be high dispersed-use areas (Attachment 5 (b), Fecal Coliform Program Sampling Stations – to be specified by Aquatics TWG, following consultation with the Recreation TWG). Samples will be collected no less than five times within a thirty-day period that includes either the Independence Day Holiday or the Labor Day Holiday.

Fish Tissue Analysis: Fish tissues will be sampled to assess potential bioaccumulation of metals in resident fish within specific reservoirs of the projects. Resident fish will be collected from locations within the Ice House, Union Valley, Slab Creek and Chili Bar Reservoirs, in accordance with CDFG Water Pollution Control Laboratory practices, and will be analyzed for Cadmium, Mercury, Arsenic, Nickel, Selenium, Chromium, Silver, Copper, Lead and Zinc, consistent with protocols of the SWRCB Toxic Substances Monitoring Program. Prior to initiating the tissue sampling effort, Licensees and their consultants shall provide to SWRCB staff and Aquatic TWG members a sampling plan that will meet the SWRCB and CDFG protocols.

QA/QC: All samples will be collected, handled and delivered to the lab consistent with specific EPA methods or other approved sampling/handling protocols including but not limited to Standard Methods for the Examination of Water and Wastewater. Appropriate QA/QC methods and documentation will be followed. Field QA/QC methods may somewhat vary by chemical constituents, but certain methods will be uniformly applied to all field sampling. Clean sampling techniques will be applied throughout the sampling effort. All sample bottles will be prepared by a California state-certified laboratory (ELAP). (Note that, due to the screening nature of the sampling, the Licensees and SWRCB agree that the single event fecal coliform/E. coli screening samples may be analyzed by a lab in Placerville, CA, if it is determined that the lab is reliable and even if it is not State certified.) The laboratory will prepare all sample bottles and, where necessary, place the appropriate amount and type of preservative in sample bottles. All field crew members collecting samples will be wearing gloves. All sample collection systems (e.g., Van dorn sampler) will be rinsed between sampling events with de-ionized water, and rinsed again with a portion of the sample water before filling of the sample jar. The labeled samples will be placed in closed, lightproof coolers filled with ice. Samples will delivered to the laboratory daily during sampling trips. The maximum holding times are indicated in Attachment 3. Iced samples are delivered to the laboratory within no more than 24 hours and typically within 12 hours of sample collection. In the case of mercury, EPA method 245.7 with a method detection limit of 10 parts per trillion (nanograms per liter) will be used as long as it is acceptable to the SWRCB. If this method is not acceptable to the SWRCB, a much more stringent field sampling regime will be followed in the future (EPA method 1631/1669). Quality control in the field will be assured by accurate and thoroughly completed sample labels, field sheets, chain of custody and sample log forms. Sample labels will include sample identification code, date, time, stream/lake name, sampling location, collector's name, sample type and preservative if applicable. Calibration of field instrumentation for field measurements of dissolved oxygen, temperature, pH, and conductivity will be done daily according to the manufacturer's instructions. Where appropriate, a two-point calibration will be applied. Hydrolabs deployed for continuous monitoring will be calibrated prior to initial deployment and at each data down loading interval (approximately every two weeks).

As discussed above, the result of the study will be presented to the Aquatic TWG as soon as available.

3.6.7 Analysis

All historical and newly gathered data will be summarized to characterize existing water quality conditions, and will be compared to regulatory criteria, standards and goals as identified by the SWRCB and members of the Aquatic TWG. As stated above, to assess compliance with Basin Plan water temperature and sediment objectives, the data from the Water Temperature, Channel Morphology, Project Sources of Sediment and Aquatic Bioassessment studies will be used. Further, the results of this study will be discussed with the results of the Hydrology Study.

3.6.8 Study Output

The Licensees and their consultants will provide data updates to the Aquatics TWG throughout the period of the water quality sampling program. A draft written water quality report will be presented to the Aquatics TWG for review and consideration no later than December of 2003. Based on one complete field season of data, and findings in the draft report, the SWRCB and members of the Aquatics TWG will determine the need for additional seasons of data collection and/or special constituent study. Final study output will be a written report that includes the issues addressed, objectives, study area including sampling locations, methods, laboratory reports and QA/QC, analysis, and results. A summary of results will be provided in tabloid format that shall include specific method detection limits for each constituent and analytical data reported. This report will include relevant graphs depicting the seasonal relationship between DO, temperature and pH at all locations. Additional graphs will be provided to more clearly demonstrate any changes in specific water quality parameters over time, depth, or longitudinal movement of flow through the system. Discussion appropriate to results and supportive of analyses and conclusions will be provided. All reports will be prepared in a format so that they can easily be incorporated into the SMUD's draft environmental assessment that will be submitted to FERC with Pacific Gas and Electric Company's Chili Bar license application.

3.6.9 Preliminary Estimated Study Cost

A cost estimate for this study will be developed after the Plenary Group has approved the study plan.

3.6.10 TWG/Plenary Endorsement

The Aquatic TWG approved this plan, as amended and with the understanding that the Licensees and SWRCB needed to resolve some items, on August 28, 2002 with the changes as noted. The participants at the meeting who said they could "live with" this study plan were USFS, CDFG, NMFS, PG&E and SMUD. None of the participants at the meeting said they could not "live with" this study plan. The Plenary Group approved this Study Plan on September 4, 2002, with the understanding that the Licensees and SWRCB would resolve their issues. The Plan was discussed again at the September 18, 2002 Aquatic TWG meeting and some modifications were made.

Since the SWRCB did not approve the study plan on August 28, 2002, the study plan was again discussed, revised and ultimately approved by the Aquatic TWG on December 2, 2002. The following TWG participants stated they could "live with" the study plan: USFS, PG&E, SWRCB, SMUD.

Given the changes in the text, the study plan was again presented to the Plenary Group on January 8, 2003 for final approval. The following participants stated they could "live with" the study plan: SWRCB, SMUD, USFS, PG&E, PCWA, GDPUD, Friends of El Dorado County, Camp Lotus, EID, and other participants. No one present at the meeting said they could not "live with" the study plan

3.6.11 Literature Cited

Regional Water Quality Control Board. 1998. Water Quality Control Plan (Basin Plan) for the Central Valley Region – Sacramento River and San Joaquin River Basins. Published by the California Regional Water Quality Control Board, Central Valley Region and the State Water Resources Control Board, Sacramento.

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Standard Methods for the Examination of Water and Wastewater. 1992. American Public Health Association.

U.S. Environmental Protection Agency. 1961. STORET Water Quality Data Base.

Jordan, W.P. and Brown, R.J. 1993. American River Aquatic Sampling Report for November 1992. Prepared by Institute of Chemical Biology, University of San Francisco, for Sacramento Municipal Utility District.

Attachment 1 – Water Quality Sampling Periods
Attachment 2 – Water Quality Sampling Locations
Attachment 3 – Water Quality Analytical Methods
Attachment 4 – Glossary of Analytical Laboratory Terminology and Reporting Terms
Attachment 5 – Location of Fecal Coliform Sampling Stations (Developed by Aquatic TWG in consultation with the Recreation TWG)
Attachment 6 – Mercury in Tissue Sampling Protocol

ATTACHMENT 1

Water quality worksheet for the W Q Study Plan developed for relicensings of Sacramento Municipal Utility District's Upper American River Project and Pacific Gas and Electric Company's Chili Bar Project. (The column "What is it and why it is important" is provided as reference only.)

Constituent [4]	*What is It and Why is It Important?*	*SamplingPeriods* [1,2]			
		Spring Runoff [3]	*Summer Low Flow*	*Fall Turn-over*	*First Major Rain*
Water Temperature *	Temperature strongly influences aquatic biota. Increasing temperature results in lower dissolved oxygen concentrations. Temperature stratification in reservoirs can influence biological and chemical stratification in the reservoirs. Summer sampling is of most interest do to increased solar radiation and warmer water temperatures in riverine and reservoir reaches.	X	X	X	X
Dissolved Oxygen *	A measure of oxygen dissolved in water, measured as both ppm and saturation. In productive waters, large variation in dissolved oxygen can occur over a 24-hour period. Dissolved oxygen exhibits greatest fluctuations during periods of high photosynthetic activity (high DO) and high biotic activity and /or decomposition (low DO) in both riverine and reservoir reaches. Greatest fluctuations occur in late summer/early fall.	9.3-11.1 mg/L X	X	X	X
pH *	Logarithm of the reciprocal of the hydrogen ion concentration. This affects the solubility of metals in sediment and suspended material as well as toxicity of some compounds. A pH of 7 is neutral, a low pH is acidic, and a high pH is alkaline. Most aquatic biota require pH range of 6.5-8.5. 24-hour diurnal variations may exist most likely during late summer/early fall (similar to the dissolved oxygen diurnal patterns).	6.8-7.1 Units X	X	X	X
Turbidity	Measures inverse of water clarity, and affected by suspended and colloidal organic and inorganic matter. NTU scale is logarithmic. Elevated levels may cause gill abrasion in fish, reductions in incubation success, and impacts to benthic organisms.	<0.5-2 NTU's X	X	X	X
Hardness	Dependent primarily on amount of calcium and magnesium in water. Water with concentrations of 0 to 75 mg/l of calcium carbonate is considered "soft," and those between 150 and 300 are considered "hard." Good quality domestic water is usually less than 250 mg/l, and water above 500 mg/l encourages precipitation and scale. Often total alkalinity (see below) and hardness exhibit similar patterns. Regression models have been developed that have shown a positive linear relation between hardness and various trace metal concentrations.	4.5-7.2 mg/L X	X	X	X

ATTACHMENT 1 (continued)

Constituent [4]	*What is It and Why is It Important?*	*Sampling Periods* [1,2]			
		Spring Runoff [3]	*Summer Low Flow*	*Fall Turn-over*	*First Major Rain*
Specific Conductance *	Capacity to conduct an electric current and quick measure of ion concentration, and indicates total dissolved matter (metals and nutrients) and alkalinity. Streams with mixed fish populations usually have specific conductance between 150 and 500 µmhos/cm. Sierra streams usually have low specific conductance; hence the need to augment ion concentration by salt blocks when electrofishing.	12-24 µhmos/cm X	X	X	X
Total Suspended Solids (TSS)	A measure of solids in water which can be removed by filtration. The origin of suspended matter may be man-made wastes or natural sources such as silt. Elevated TSS concentrations generally occur during peak runoff. Over time, amounts of inert solids in excess of 90 mg/l can be lethal to fish.	<5-45 mg/L X	X	X	X
Total Dissolved Solids (TDS)	A measure of the amount of material dissolved in water mostly inorganic salts-carbonates, bicarbonates, chlorides, sulfates, phosphates, nitrates, calcium, magnesium, manganese, sodium, potassium, and other cations. Most major ions are conservative; calcium, magnesium, carbonate levels can be affected by pH extremes. TDS will vary seasonally, generally based on flow regimes.	<10-21 mg/L X	X	X	
TOC.	TOC requires less sample and can be more reliable than BOD tests. Also, BOD typically used in systems that receive waste effluent.		X	X	
Nitrate/Nitrite	Nitrate result from normal decomposition of organic mater, and is a common form in which nitrogen is added to fertilizer. In general, nitrogen enters a watershed that has little human activity as rain.. In rivers with little human activity, total nitrogen is around 0.12 mg/l with nitrate representing about 85% of the nitrogen.	<0.52 -0.63 mg/L X	X	X	X
Total Kjeldahl Nitrogen	The total concentration of nitrogen in a sample present as ammonia or bound in organic compounds.		X	X	
Ammonia	Ammonia occurs as a result of organic decomposition and is common in sewage, fertilizers. Form of nitrogen most readily taken up by plants. Can be toxic to fish at low concentrations. Ammonia will often be converted to nitrate in the presence of oxygen.	<0.05 -0.076 mg/L X	X	X	

ATTACHMENT 1 (continued)

Constituent [4]	*What is It and Why is It Important?*	*Sampling Periods* [1,2]			
		Spring Runoff [3]	*Summer Low Flow*	*Fall Turn-over*	*First Major Rain*
Total Phosphorous	Measure of the total amount of phosphorus – both biologically available and bound in organic compounds. Phosphorous results from normal decomposition of organic mater. In lakes, an N:P ratio greater than 16:1 indicates that phosphorous, rather than nitrogen, is limiting for production, which is typical in oligotrophic lakes in the Sierras.	<0.05 mg/L X	X	X	X
Dissolved Ortho-phosphate	Biologically available phosphorus – in the form of PO_4.	<0.2 mg/L	X	X	
Total Alkalinity (measured as $CaCO_3$)	Measures water's ability to neutralize acids (buffer capacity), and reduces toxicity of some metals. Levels above 400-600 mg/l may be harmful to crops and humans. Alkalinity of natural waters is due primarily to the presence of hydroxides, bicarbonates, carbonates and occasionally borates, silicates and phosphates.	<5-26 mg/L X	X	X	X
Calcium	Essential macronutrient, 5th most common element, and considered nontoxic. It is present in most natural systems introduced as water passes over calcium-rich formations. Contributes considerable to hardness (Sierra waters typically have low hardness) and may range from 0 to 200 mg/l naturally.	0.5-19 mg/L X	X	X	X
Chloride	Unlike free chlorine (which is toxic), the chloride ion is required by cells during photosynthesis.	0.32-0.92 mg/L X	X		
Magnesium	Essential macronutrient, primary component in photosynthetic pigments, 8th most common element. It is present in most natural systems, contributes considerable to hardness (Sierra waters typically have low hardness) and may range from 0 to several hundred mg/l naturally.	<0.5-0.63 mg/L X	X	X	
Potassium	Unlike terrestrial plants, K plays a minor role in plant growth. Needed in for enzyme activation.	<0.5 mg/L X	X		
Sodium	Sixth most abundant element and present in most waters naturally. Has low toxicity.	<0.5-2.1 mg/L X	X		
Sulfate		1.1-1.4 mg/L X	X	X	
Aluminum (Al)	Third most abundant metal in earth's crust. Not known to have a nutritional function in organisms. Enters system from leaching over aluminum-containing soils. Toxic in high concentrations and acidic (pH below 6.2) environments. In these cases, aluminum precipitates on fish gills, interfering with the transfer of calcium and sodium between blood and water. Also, in high concentrations may reduce primary productivity in lakes by combining with phosphates.	<0.05-0.130 mg/L as total Al X	X	X	X

ATTACHMENT 1 (continued)

Constituent [4]	*What is It and Why is It Important?*	*Sampling Periods* [1,2]			
		Spring Runoff [3]	*Summer Low Flow*	*Fall Turn-over*	*First Major Rain*
Arsenic (As)	Known carcinogen and a poison. Low levels occur naturally in surface water. Higher temperatures increase toxicity. Not affected by hardness.	<0.005 mg/L as total As X	X	X	
Barium (Ba)	16th most common element in nature, but only trace amounts usually found in surface waters.	<0.02 mg/L as total Ba X	X	X	
Cadmium (Cd)	Toxic metal and known human carcinogen, with bioaccumaltive properties carcinogen, with bioaccumaltive properties. Drinking water in the US has a mean of about 0.008 mg/l of total cadmium.	<0.0005 mg/L as total Cd X	X	X	
Copper (Cu)	Essential macronutrient for plants and animals. Generally considered to have low concentrations in oligotrophic aquatic systems of granitic alpine likes, which can limit photosynthesis. High concentrations of copper (usually as $CuSO_4$) are used to control algal blooms. Bradford et al (1968)[10] reported a mean concentration of 0.0012 mg/l of total Cu in 170 high Sierra lakes in CA. Exposure to levels less than 10 ppb (1µ/L) cause chronic toxicity symptoms in freshwater fish.	<0.001 mg/L as total Cu X	X	X	
Cyanide (CN)	Lethal toxin. Although not a metal, can combine to from alkali metal salts, and immobile metallocyanide. Often associated with gold extraction. At pH of 9.2 or less >90% occurs as free cyanide (CN^- or HCN). In general, cyanide has low persistance in surface waters (although may persist in groundwater). Cyanide has shown to adversely affect fish reproduction affecting the viability of the eggs. Not considered to be carcinogenic nor does it bioaccumulate.		X	X	
Iron (Fe)	Essential macronutrient for plants and animals. Enters watercourses from leaching of natural deposits in the form of relatively insoluble crystalines (i.e iron pyrite), particulates (organic matter or hydroxides) and soluble iron (ferric and ferrous iron). Hydrated ferric iron forms insoluable compounds and is deposited on sediments as a rust-colored layer called *ocher* ($Fe(OH)_3$). Bradford et al (1968) [5] reported a mean concentration of 0.0013 mg/l of total Fe in 170 high Sierra lakes in CA.	<0.1-0.120 mg/L as total Fe X	X	X	
Lead (Pb)	Toxic element that accumulates in animals, and toxicity is influenced by pH, alkalinity and hardness. Concentrations in natural waters usually less than 0.02 mg/l.	<0.0005-0.0028 mg/L as total Pb X	X	X	X

ATTACHMENT 1 (continued)

Constituent [4]	*What is It and Why is It Important?*	*Sampling Periods* [1,2]			
		Spring Runoff [3]	*Summer Low Flow*	*Fall Turn-over*	*First Major Rain*
Manganese (Mn)	Necessary macronutrient for plants and animals (needed as a cofactor in several enzyme systems, including those involved in respiration and nitrogen metabolism), and normally present in surface waters in various oxidation states as soluble complexes or suspended particles. Rarely exceeds 1 mg/l in natural waters. Bradford et al(1968) [5] reported a mean concentration of 0.0003 mg/l of total Mn in 170 high Sierra lakes in CA.	<.0.01-0.016 mg/L as total Mn	X	X	
Mercury (Hg)	Organic and inorganic salts very toxic and mercury naturally associated with Sierra soils. Mercury bioaccumulation within the aquatic food chain has potential to cause risks to piscivorous wildlife and human health.	<0.0002 mg/L as total Hg	X	X	X
Nickel (Ni)	Seldom found in natural waters, but may enter due to leaching of nickel-bearing geologic formations, such as serpentine rock and soils, which are common in Sierras. Toxicity related to hardness and may be mobilized with low pH conditions.	<0.01 mg/L as total Ni X	X		
Selenium (Se)	Essential macronutrient but may affect normal embryo development and be toxic in higher concentrations.	<0.002 –0.004 mg/L as total Se	X	X	
Silver (Ag)	Considered one of the most toxic heavy metal ions, but because monovalent silver ion is easily reduced it is not readily accessible to living organisms in the natural environment. Toxicity increases with hardness.	<0.0005 mg/L as total Ag	X	X	X
Zinc (Zn)	Essential macronutrient element for human growth and many aquatic organisms. Bradford et al (1968) [5] reported a mean concentration of 0.0015 mg/l of total Zn in 170 high Sierra lakes in CA.	<0.02 mg/L as total Zn	X	X	
Total Coliform Bacteria	Non-pathogenic microorganisms used in testing water to indicate the presence of pathogenic bacteria. This test is not recommended, as it will not provide any additional information over the fecal coliform or E. coli bacterial tests.			X	X
Fecal Coliform/E. coli Bacteria	A group of bacteria normally present in large numbers in the intestinal tracts of humans and other warm-blooded animals. Bacteria levels are of interest primarily during high recreational periods at local beaches, or during high runoff in areas with potential for inputs of untreated animal wastes. (USEPA tests have now shown E. coli to have better correlation with water contact and sickness.)	X[1]	X	X	X
Oil & Grease	Enters system from man.		X	X	X

[1] Assuming data gathered is not duplicative of El Dorado County's sampling efforts for three sites below Chili Bar Reservoir

ATTACHMENT 1 (continued)

Constituent [4]	***What is It and Why is It Important?***	***Sampling Periods*** [1,2]			
		Spring Runoff [3]	***Summer Low Flow***	***Fall Turn-over***	***First Major Rain***
MTBE	Methyl-*tert*-butyl ether used as a gas additive to make fuel burn more efficient. Is a possible carcinogen, and is being phased out in California.		X	X	
Total Petroleum Hydrocarbon	Enters system from man.	<0.050 mg/L	X	X	

1. Sampling Periods are defined as spring runoff (April/May), summer low flow (August/early September), fall turnover (October/ November), and first major rain (November/December).
2. Sampling strategies are defined by X's or numerically. "X" indicates those periods in which SMUD proposes to sample for this constituent.
3. The numerical ranges represent actual values obtained during the June 10, 2002 sampling event at 10 water sampling sites: Gerle Creek below Loon Lake, SF Rubicon below Gerle Creek, SF Silver Creek below Ice House, Silver Creek below Junction Dam, Silver Creek below Camino Dam, SFAR above Camino Powerhouse, SFAR above Camino Powerhouse, Brush Creek below Brush Creek Reservoir, SFAR below Slab Creek Dam, and SFAR & Whiterock Powerhouse Discharge.
4. All constituents designated with * are identified as *In situ* sampling parameters, and shall be included as standard sampling parameters at all triage sampling stations plus the designated bypass reach stations identified as WQ Monitoring Stations 9, 13, and 36 on Table 2.

ATTACHMENT 2

Water quality sampling locations for relicensing of Sacramento Municipal Utility District's Upper American River Project and Pacific Gas and Electric Company's Chili Bar Project.

Water Quality Monitoring Station	*Triage Sampling*	*Contingency Sampling*	
	*Take & Analyze **	*Take with Triage Samples & Analyze if Problem*	*Take & Analyze if Problem*
1. Rubicon River inflow to Rubicon Resv.		X	
R-1. Rubicon Resv. mid-lake	1/3 depth / Epilimnion+hypolimnion		
2. Rubicon R. outflow from Rubicon Resv.	X		
3. Rubicon R. upstream of Rubicon Springs			X
3a. Fox Lake reach flow from Rubicon Resv		X	
4. Highland inflow to Rockbound Resv.		X	
R-2. Rockbound Lake mid-resv.	1/3 depth / Epilimnion+hypolimnion		
5. Rubicon outflow from Rockbound Lk.	X		
R-3. Buck Island Resv. mid-lake	1/3 depth / Epilimnion+hypolimnion		
6. Little Rubicon outflow from Buck Is. Lk.	X		
R-4a Loon Lake Resv. near dam	1/3 depth / Epilimnion+hypolimnion		
R-4b Loon Lk. mid-resv. in west body	1/3 depth / Epilimnion+hypolimnion		
R-4c Loon Lk. upper resv. N-E body	1/3 depth / Epilimnion+hypolimnion		
7. Gerle Ck. outflow from Loon Lake	X		
8. Jerrett Ck. upstream of Gerle Ck. con.			X
9. Gerle Ck. downstream of Jerret confl.	In situ *only*		X
10. Barts/Dellar Ck. upstream of Gerle Ck.			X
11. Gerle Ck. dwnstrm of Barts/Dellar conf.			X
12. Rocky Basin Ck. upstream of Gerle			X
13. Gerle Ck. dwnstrm of Rocky Basin conf	*In situ* only		X
14. Gerle Ck. inflow to Gerle Ck. Resv.	X		
R-5. Gerle Ck. Reservoir mid-resv.	1/3 depth / Epilimnion+hypolimnion		
15. Gerle Ck outflow from Gerle Ck Resv	X		
16. Gerle Ck Canal inflow to Robb's Frby	X		
17. S.F. Rubicon inflow to Robb's Foreb		X	
18. S.F. Rubicon upstream of Gerle Ck con.			X
19. S.F. Rubicon dwnstrm of Gerle Ck con.			X
20. S.F. Rubicon upstrm of Rubicon River	X		
21. Tells Ck. upstrm of Union Valley Resv.		X	
22. Big Silver Ck. upstrm of Union Valley		X	
23. Jones Fk Silver Ck inflow to Un.V. Res		X	
R-6a Union Valley Resv. near dam	1/3 depth / Epilimnion+hypolimnion		
R-6b Union Valley Resv. mid-resv.	1/3 depth / Epilimnion+hypolimnion		
R-6c Union Valley Resv. (Robb's Pk. PH tailrace zone)	1/3 depth / Epilimnion+hypolimnion		

ATTACHMENT 2 (continued)

Water Quality Monitoring Station	*Triage Sampling*	*Contingency Sampling*	
	*Take & Analyze **	*Take with Triage Samples & Analyze if Problem*	*Take & Analyze if Problem*
R-6d Union Valley Resv. Jones Fork arma	1/3 depth / Epilimnion+hypolimnion		
24. S.F. Silver Ck. upstrm of Ice House Res.		X	
R-7a Ice House Reservoir near dam	1/3 depth / Epilimnion+hypolimnion		
R-7b Ice House Reservoir mid-resv.	1/3 depth / Epilimnion+hypolimnion		
R-7c Ice House Reservoir upper lake body	1/3 depth / Epilimnion+hypolimnion		
25. S.F. Silver Ck. outflow from Ice House	X		
26a. S.F. Silver 3-4 mi. dwnstr of IH Resv	*In situ* only		X
26b. S.F. Silver upstrm of Big Hill Cnyn.			X
27. S.F. Silver Ck inflow to Junction Resv.	X		
28. Little Silver Ck. inflow to Junction Resv		X	
R-8 Junction Reservoir, mid-resv btwn arms	1/3 depth / Epilimnion+hypolimnion		
29. Silver Ck. outflow from Junction Resv.	X		
30. Onion Ck. upstream of Silver Creek			X
31. Silver Ck dwnstrm of Onion Ck confl.			X
32. Silver Ck. inflow to Camino Resv.	X		
33. Jay Bird Ck. inflow to Camino Resv.		X	
R-9. Camino Reservoir mid-resv.	1/3 depth / Epilimnion+hypolimnion		
34. Silver Ck. outflow from Camino Resv.	X		
36. Silver Ck. Immediately upstrm of SFAR	X		
37. SFAR upstream of Silver Ck confluence			X
38. SFAR upstream of Camino Powerhouse		X	
39. Brush Ck. inflow to Brush Ck. Resv.		X	
R-10. Brush Creek Resv. mid-resv. site	1/3 depth / Epilimnion+hypolimnion		
40. Brush Ck. outflow from Brush Ck Resv.	X		
41. SFAR dwnstrm of Camino Powerhouse	X		
R-11a Slab Creek Reservoir mid-resv. site	1/3 depth / Epilimnion+hypolimnion		
R-11b Slab Creek Resv. upper-resv. site	1/3 depth / Epilimnion+hypolimnion		
42. Slab Ck. inflow to Slab Ck. Reservoir		X	
43. SFAR outflow from Slab Ck Resv – upstream of Iowa- Brushy Cnyn Ck confl.	X		
44. SFAR between Slab Ck Res & Rock Ck			X
45. Rock Creek upstream of SFAR confl.			X
46. SFAR downstream of Rock Ck. confl.	X		
47. SFAR downstream of White Rock P.H.	X		
R-12a Chili Bar Reservoir near dam	1/3 depth / Epilimnion+hypolimnion		
R-12b Chili Bar Reservoir mid-resv. site	1/3 depth / Epilimnion+hypolimnion		
48. SFAR outflow from Chili Bar Resv.	X		
49. SFAR upstream of Dutch Creek			X
50. SFAR at Coloma gaging station			X

ATTACHMENT 2 (continued)

Water Quality Monitoring Station	***Triage Sampling***	***Contingency Sampling***	
	Take & Analyze *	***Take with Triage Samples & Analyze if Problem***	***Take & Analyze if Problem***
51. SFAR dwnstrm of Greenwood Creek, near ex-USGS 11445500	X		
52. SFAR upstream of Weber Creek			X
53. Weber Ck upstream of confl. w/ SFAR			X
54. SFAR below Weber Creek confluence in a riverine environment	X		

* During periods of reservoir stratification, samples will be collected within the upper epilimnion layer and also in the hypolimnion layer a few feet above the reservoir bottom. When reservoir profile is mixed, samples will be collected at a point below the water surface equivalent to approximately one-third the total water column depth.

ATTACHMENT 3

Water Quality Analytical Method and Maximum Lab Holding Times

Constituent	Method	Hold time
Al	EPA 200.8 and 245.7	180 d
As	EPA 200.8 and 245.7	180 d
Ba	EPA 200.8 and 245.7	180 d
Cd	EPA 200.8 and 245.7	180 d
Cu	EPA 200.8 and 245.7	180 d
Fe	EPA 200.8 and 245.7	180 d
Pb	EPA 200.8 and 245.7	180 d
Mn	EPA 200.8 and 245.7	180 d
Hg	EPA 245.7	28 d
Ni	EPA 200.8 and 245.7	180 d
Se	EPA 200.8 and 245.7	180 d
Ag	EPA 200.8 and 245.7	180 d
Zn	EPA 200.8 and 245.7	180 d
Oil and grease	EPA 1664	28 d
MTBE	SW 5030B/SW 83260B	14 d
TPH	SW 5030B/SW 8021B/9015	14 d
Nitrate-Nitrite	EPA 300.0	48 h
Ammonia as N	EPA 350.2	28 d
TKN as N	EPA 351.3	28 d
Total phosphorous	EPA 365.2	28 d
Orthophosphate	EPA 365.3	48 h
TOC	EPA 415.1	28 d
Hardness	EPA 130.2	180 d
Total Alkalinity	EPA 310.1	14 d
TSS	EPA 160.2	7 d
TDS	EPA 160.1	7 d
Cn	EPA 335.2	180 d
Ca	EPA 200.7	180 d
Mg	EPA 200.7	180 d
K	EPA 200.7	180 d
Na	EPA 200.7	180 d
chloride	EPA 200.7	28 d
sulfate	EPA 200.7	180 d
coliform/E. coli (screening)	9221/9222 D or as available	24 h
fecal coliform (regulatory)	9222	24 h

ATTACHMENT 4

Glossary of Analytical Laboratory Terminology and Reporting Terms

Method Detection Limit (MDL):

Is a measure of the method sensitivity. The MDL is the lowest concentration that can be detected by an instrument with correction for the effects of sample matrix and method-specific parameters such as sample preparation. It is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix B, revised as of May 14, 1999.

Criterion Quantitation Limit (CQL):

The level of analytical resolution needed to assess regulatory compliance. The CQL is the lowest amount of an analyte in a sample that can be quantitatively determined with suitable precision and accuracy. The desired criterion quantitation levels for the analysis of sampled constituents shall be set at 10% below the controlling (or lowest) applicable Basin Plan water quality objective, or California and National Toxics Rule criteria.

Practical Quantitation Limit (PQL):

The concentration that can be reliably measured within specified limits and accuracy during routine laboratory operating conditions. It is typically determined by a combination of the IDL (Instrument Detection Limit--the lowest the instrument is capable of seeing with specified confidence limits) and the lowest calibration standard used. The calibration level is selected (usually greater than the IDL) based upon the needs of the specific batch of samples being run (e.g. based on the levels set by the client, etc.)

Reporting Limit (RL):

The reporting limit for the laboratory. This is the lowest quantifiable (vs. estimated) concentration that the laboratory can determine, must be greater than or equal to the PQL, and is chosen based on client's needs and/or quality control. Ideally, the RL should be equal to or lower than the desired minimum CQL to meet the purposes of this monitoring. Due to the low limits that are required for the water quality analysis, the reporting limit will be set as low as possible (i.e. the same as the practical quantitation limit). If it is not possible for the laboratory to reliably measure concentrations at the desired minimum CQL for a given constituent using the most sensitive commonly available methodology, estimated concentrations will be reported down to the MDL (even though these estimated concentrations are below the "reporting limit" – See *Procedures for Reporting Results*.)

Procedures for Reporting Results:

1. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
2. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified" or DNQ. If the laboratory is unable to reliably measure concentrations at the desired minimum CQL for a given constituent (thus the RL is above the controlling applicable water quality objective or criteria), the estimated chemical concentration of the sample shall also be reported.
3. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

ATTACHMENT 5

Location of Fecal Coliform / E. coli Sampling Stations

Attachment 5. Fecal/*E.coli* Sampling Sites For "5 in 30" and "Seasonal" sampling efforts

Site #	"5 in 30"	"Seasonal"	Location/Notes
UARP			
	X[2]		Buck Island reservoir near dam at dispersed camping site
		X	Buck Island reservoir north shore beach
		X	Loon Lake reservoir near-shore at northeast end at Pleasant campground
	X		Loon Lake reservoir at Ellis Creek inflow on west side of creek
		X	Loon Lake reservoir near-shore west of main dam
	X		Gerle Creek below Loon Lake gaging station at USFS property boundary (marked)
	X		Loon Lake reservoir near-shore near Northshore campground in dispersed recreation area between RV CG and main dam
		X	Loon Lake near-shore east of Loon Lake campground
		X	Gerle Creek below Ice House Road bridge below dispersed area
	X		Gerle Creek reservoir near-shore between dock and day use area
		X	Union Valley reservoir near-shore at Wench Creek campground
		X	Union Valley reservoir near-shore at Yellowjacket campground
	X		Union Valley reservoir near-shore at Camino Cove
	X	X	Union Valley reservoir near-shore at Fashoda beach (Peninsula)
	X		Union Valley reservoir near-shore at Jones Fork campground
		X	Union Valley reservoir near-shore at West Point boat ramp
	X		Jones Fork Silver Creek at Ice House road
	X		Big Silver Creek at bike bridge
		X	Ice House reservoir at inflow of South Fork Silver creek
	X		Ice House reservoir near-shore at east end near day use area
		X	Ice House reservoir near-shore at peninsula cove on north shore mid-length of reservoir ("Highland" area)
	X		Ice House reservoir near-shore near youth camp boat storage area
		X	Ice House reservoir near-shore west of boat launch area
	X		Ice House reservoir near-shore on west end of reservoir near day use area
		X	South Fork Silver Creek downstream of SMUD gaging station
		X	Junction reservoir near boat ramp dispersed camp area
		X	Camino reservoir near road
		X	Brush Creek boat ramp
	X		Brush Creek boat ramp
		X	Slab Creek reservoir boat ramp
	X		SFAR below bridge at Camino powerhouse
Chili Bar dam and reservoir			
		X	Chili Bar reservoir near shoreline (dam road)
	X	X	SFAR at gage station below dam

[2] "5 in 30" surveys will be performed to include Labor Day for upper elevation waterways; "5 in 30" surveys will be done during July 4 weekend for lower elevation waterways.

The downstream reach			
	X		SFAR downstream of Miner's cabin (in coordination with BLM)
	X		SFAR at County Park parking lot
	X	X	SFAR downstream of Greenwood Creek
	X		SFAR upstream of Hastings Creek (in coordination with BLM)
	X		SFAR downstream of Weber Creek (in coordination with BLM)
		X	SFAR upstream of Salmon Falls (above inundation zone)

ATTACHMENT 6

SMUD UARP WATER QUALITY MONITORING PROJECT
FISH TISSUE STUDY

RESERVIORS SAMPLED	DAYS EFFORT
Slab Creek/Chili Bar	2
Union Valley/Ice House	1
Gerle/Loon Lake	2

TARGET SPECIES - Indigenous predator, either trout or bass.

Brown and Brook Trout are not hatchery raised and are good target species. Rainbows are often planted as catchables, but some occur as wild fish. The hatchery fish are identified by their fins. Wild fish have sharp edges on their fins, the rays are straight and the fins often have white tips. Hatchery raised fish have deformed fins, the rays are crooked and the edges are often fleshy. Hatchery trout that have survived several years after planting show regeneration of their fins. The new growth shows some characteristics of wild trout fins.

Bass (Largemouth or Smallmouth)
Probably only smallmouth bass will be found in these reservoirs and lakes.

Six fish of similar size (25% rule) will be collected from each reservoir and composited into one sample.

COLLECTION METHODS

The preferred method of collecting fish samples is electro fishing from a boat. This is effective along the shoreline and especially near the mouths of inflowing streams. To do this, there must be boat launching available and the water must have enough dissolved solids to carry an electric current. Alternatively, a gill net will be fished overnight.

Sampling should be completed by September 1, 2003.

SAMPLE PREPARATION

Fish will be dissected and homogenized using clean techniques according to DFG Fish and Wildlife Water Pollution Control Laboratory standard operating procedures. Liver and fillets will be composited and homogenized separately.

SAMPLE ANALYSIS - $386/sample or composite

Fish tissues will be analyzed for trace elements by ICP-MS at the DFG Marine Pollution Studies Laboratory at Moss Landing.

Tissue	Trace Elements Analyzed
Fillets	mercury, selenium, arsenic, cadmium, nickel
Liver	silver, chromium, copper, lead, zinc

ESTIMATED COMPLETION DATE – November 1, 2003

MERCURY IN TISSUE

1.0 SCOPE AND APPLICATION

This is an atomic spectroscopy method for the determination of mercury in fish tissue.

2.0 SUMMARY OF METHOD

2.1 Fish tissue is digested with concentrated nitric acid.

The mercury ions are reduced to elemental mercury with stannous chloride. The mercury vapor is analyzed by cold vapor atomic spectroscopy.

2.2 The detection limit for this method is approximately 0.02 µg/g wet weight for a 1.0 g sample.

3.0 INTERFERENCES

Certain volatile organic materials that absorb at this wavelength (253.7 nm) may cause interference. A preliminary run without reagents should determine if this type of interference is present. Chlorine causes severe interference.

4.0 APPARATUS AND MATERIALS

4.1 Digestion tubes: polypropylene digestion vessels - Cat. # SC499 or SC500 from Environmental Express

4.2 Ribbed watch glass - Cat. # SC505 from Environmental Express

4.3 50 ml Rohre/Tube - Cat. # 62.559 from Sarstedt (Aktiengesellschaft & Co)

4.4 15 ml Rohre/Tube - Cat. # 62.554.01 from Sarstedt (Aktiengesellschaft & Co)

4.5 Filter papers - Cat. # 1004 090 from Whatman, for use if filtration is needed for the sample

4.6 Hot block for metals digestions - Cat. # SC154 from Environmental Express

4.7 Teflon spatulas

4.8 Mercury lamp

4.9 Compressed argon

4.10 Atomic Spectroscopy Perkin Elmer equipped with: flow injection mercury system 400 (FIMS 400), data system, programmable autosampler (AS-90 series).

5.0 REAGENTS

5.1 Type II water

5.2 Stannous chloride dihydrate, crystal ("Baker Analyzed" JT3980-11), 25%$SnCl_2$*2H_2O in 20% HCl. Dissolve 50g $SnCl_2$*2H_2O in 40 ml HCl. Mix and allow to stand until $SnCl_2$*2H_2O has dissolved and solution is clear. Bring to volume (200 ml) with type II water. PREPARE FRESH DAILY. (approximately 800 ml needed for the set of 32 tubes of sample, 5 tubes for standard curve and quality control)

5.3 Mercury Standard Solution (stock) – J.T. Baker, 1000 ppm

5.4 Mercury Standard Solution (intermediate) - 1.0 ppm in 1.0% nitric acid.
Partially fill a 1000 ml volumetric flask with Type II water. Add 1 ml of 1000 ppm $HgCl_2$. Bring to volume (1000 ml) with Type II water.

5.5 Mercury calibration standards: Partially fill each volumetric flask with Type II water, add the appropriate volume of 1.0 ppm $HgCl_2$ standard and 40 ml concentrated nitric acid and bring to volume with Type II water. As solution cools, it will be necessary to add water to keep level at 100 ml. Mix well.

0.0010 ppm: Add 0.10 ml of 1.0 ppm $HgCl_2$
0.0050 ppm: Add 0.50 ml of 1.0 ppm $HgCl_2$
0.0100 ppm: Add 1.00 ml of 1.0 ppm $HgCl_2$
0.0250 ppm: Add 2.50 ml of 1.0 ppm $HgCl_2$
0.0005 ppm: Add 5.00 ml of 0.01 ppm $HgCl_2$

5.6 Mercury Check Standard and Spike Standard: E.M. Science, 1000ppm.

5.7 Intermediate solution (A): 100.0 ppm in 1.0% nitric acid. Partially fill a 100 ml volumetric flask with Type II water. Add 10.0 ml of 1000 ppm $HgCl_2$. Bring to volume with Type II water.

5.8 Intermediate solution (B): 1.0 ppm in 1.0% nitric acid. Partially fill a 100 ml volumetric flask with Type II water. Add 1.0 ml of solution (A). Bring to volume with Type II water.

5.9 Check Standard: 0.010 ppm in 40% nitric acid. Partially fill a 100 ml volumetric flask with Type II water. Add 1.0 ml of solution (B). Bring to volume withType II water.

5.10 Hydrochloric acid (HCl), concentrated, reagent grade.

5.11 Nitric acid (HNO_3), concentrated, reagent grade.

6.0 SAMPLE COLLECTION, PRESERVATION, AND HANDLING

6.1 All samples must have been collected using a sampling plan that addresses the considerations discussed in this manual.

6.2 All sample containers must be prewashed with detergents, acids, and Type II water. Plastic and glass containers are both suitable.

6.3 Nonaqueous samples shall be frozen, when possible, and analyzed as soon as possible.

7.0 PROCEDURE FOR SAMPLE PREPARATION

Preparation of samples:

7.1 With each set of analyses, prepare 2 method blanks, 2 standard reference materials (~ 0.25 g dry tissue - Dorm 2 or NBS 1566a), 2 matrix spike, 2 laboratory control spike, and one duplicate for every 10 samples.

7.2 Samples with equal weight of water added: Place 2.0 ± 0.5 g into clean digestion tube.

7.3 Samples without added water: Place 1.0 ± 0.5 g into clean digestion tube.
7.4 Add 10 ml concentrated nitric acid and let stand overnight.

7.5 The next day, digest samples in a programmable hot block. The parameters for heating are as follows:

Ramp: 5^0 C / min.
Set temperature: 105-108^0 C.
Hold: 2 ½ hours

7.6 Allow the tubes to cool, then add Type II water to the calibration mark (25ml). Vortex tubes to mix well.

7.7 Moisture Determination, if required

1. Number an aluminum weighing dish to correspond to the sample beaker number.

2. Weigh the aluminum weighing dish and record its weight.

3. Tare the aluminum weighing dish.

4. Weigh ~ 3g (minimum 1g) tissue and record the weight.

5. Place moisture samples in a 70°C oven for 48 hours.

6. After cooling samples, weigh and record the dry weights.

Percent Moisture Calculation

$$1 - \frac{\text{(Dry sample weight plus aluminum dish)} - \text{(Aluminum dish weight)}}{\text{(Wet sample weight)} \times \text{(F)}} \times 100$$

F = the added water factor = 0.6666 when added water equals one half of the sample weight (i.e. flesh samples - Selenium Verification Program)

0.5 when added water equals the sample weight (i.e. flesh samples - Toxic Substance Monitoring Program) 1 when water was not added to the sample (i.e. liver and sediment samples)

8.0 ANALYTICAL PROCEDURE

8.1 Prepare reagents:

8.1.1 25% $SnCl_2$ (see Section 5.2)
8.1.2 Rinse water -3.0% HCl (Prepare 1000 ml: 30 ml HCl add to 970 ml Type II water)
8.1.3 Reagent blank solution - 40% HNO_3 (Prepare 500 ml: 200 ml HNO_3 add to 300 ml Type II water)

8.1.4 Calibration standards (see Section 5.5)
8.1.5 Check standard (see Section 5.9)

8.2 Transfer calibration standards and check standard to 50 ml Rohre/Tube, samples to 15 ml Rohre/Tube. The tubes should be numbered to correspond to sample number.

8.3 Operation of FIMS 400 and auto sampler

8.3.1 Switch on the fume ventilation system, then the carrier gas supply (argon), adjust the pressure to 52 psig and finally switch on FIMS 400.

8.3.2 Switch on the computer, printer and start Windows.

8.3.3 In the Program Manager, double-click on AA 2.50.

8.3.4 When ”AA WinLab” appears, proceed as follows:

- From the Tools menu, choose Open Workspace, or on the Toolbar, click on WkSpace.
- Select **hgtissue.fms**, then click on OK. The window appears.
- On the Toolbar, click on MethEd. Select **Tissue Hg Test**. All of the desired parameters have been entered for

  Inst – Instrument parameters
  Calib – Calibration parameters
  FIAS – FIAS program instructions
  Checks – Analytical checks for sample and calibration solutions
  QC – Locations of quality control solutions and instructions for performing quality control procedures
  Options – Remarks about the Method and options for saving and printing data

  - Saving a method: From the File menu, choose Save As Method. A dialog appears. If you want to save the Method under a new name, type a name for the file, then press Enter or click on OK. To save the Method with the original name, press Enter or click on OK.
  - Click on SampInfo on the Toolbar to enter the pertinent information (e.g. description, batch ID, analyst, the first sample ID should be at auto sampler location # 9).
  - Saving a sample information file: From the File menu, choose Save As ► Sample Infor File. A dialog appears. If you want to save the Sample Infor File under a new name, type a name for the file, then press Enter or click on OK.
  - Printing the Autosampler Loading List: From the File menu, choose Print ► Autosampler Loading List.
  - Select the name of the Results Data Set where you will save the results. If the data set exists, new data will be added to it.
  - Select the Save Data check box if you want the results saved in the data set specified.
  - Select the Print Log check if you want the results to be printed.

- Select the Off After Analysis: Lamp, Pumps check boxes to switch these items off at the end of the analysis.
- On the Automated Analysis window, check on "use Entire Sample Infor File" column.

- Click on the tab containing "Analyze": click on "Analyze all"after the reagents have been prepared, the signal has been optimized, the FIMS 400 flows have been set, the autosampler has been turn on, and the samples have been loaded.

8.3.5 To optimize the signal

- The absorbance values for each replicate should be similar. If the absorbance for the first replicate is higher than that for the subsequent ones, lengthen the Fill step on the FIAS page of the Method. If the absorbance of the first is replicate is lower, Lengthen the Prefill step.

- Ensure that the Read Delay (0 s) and Read Time (15 s) values are set correctly on the Inst page of the Method.

- Slight adjustments to the gas flow may improve sensitivity. If the peak maximum appears too early, slightly decrease the carrier gas flow. If the peak maximum appears too late, slightly increase the carrier gas flow.

  Note: If the carrier gas flow is too high, the mercury vapor is dispersed too rapidly. If the flow is too low, mercury vaporflows into the cell too slowly. In both situations the signal and sensitivity are low. A flow in the range 40-70 ml/min is generally suitable.

- A slight decrease in the outflow from the gas/liquid separator may improve sensitivity.

  Note: If the outflow from the gas/liquid separator is too high, mercury vapor may escape through the waste outlet. If the out-flow is too low, the fluid level may rise so high that moisture escapes into the sample transfer tube and the FIMS-cell. If liquid does enter the FIMS-cell, you must clean the cell as described in FIMS: Installation, Maintenance, System Description.

- Slight adjustments to the carrier and reductant flows may improve sensitivity.

- If the FIMS-cell is contaminated, e.g. because liquid has entered the cell, you must clean the cell as described in FIMS: Installation, Maintenance, System Description.

8.3.6 To set up the FIMS – 400

- The carrier gas stream has a large influence on sensitivity. If he flow is too high, the atom or hydride cloud is dispersed too

- rapidly. If the flow is too low, the resulting signal and sensitivity are lower. A flow of 50-100 mL/min for the carrier stream is suitable. If there is no gas flow, the automatic gas valve may be closed. To start the flow, in the FIAS Control window, click on Valve Fill/Inject.

- Place the inlets of the carrier pump tube (yellow/blue), reductant pump tube (red/red) and sampling tube (leading to the FIAS valve) in containers of deionized water.

- Swing the pump pressure levers over to press the pump tube magazines against the rollers.

- On the Toolbar, click on FIAS. Then, in the FIAS Control window:

- Click on Valve Fill/Inject to set the valve to the Fill position. Type 100 for Pump # 1 Speed, and type 120 for Pump # 2 Speed. Click on Pump # 1 and Pump # 2 to start the pumps.

- The flows should be checked before every run. When checking flows, only use P-2. P-1 is dry except when sample is being pumped. The carrier pump tube (yellow/blue) should have a flow of 9-11 ml/min; the reductant pump tube (red/red) should have a flow of 5-7 ml/min. It is recommended that the tubes be replaced after two runs and that they are reversed when they are run the 2 nd time.

- After setting the flows, position the reagents.

- For gas/liquid separator, put filter paper's shiny side up

8.3.7 Sample Changer

- Load the sample carousel with standards, reagent blank solution and samples. Set in place the rinse solution (MQ H_2O) at location 0.

8.3.8 Initiate the run

- On the Toolbar, click on Analyses, select Autozero signal to zero the instrument.

- To analyze all the solutions: In the Automated Analysis Control window, click on Analyze All. All the solutions will be analyzed. The calibration solutions will be analyzed first, immediately followed by the samples and any other solutions (QC, reslope etc.).

PRECAUTIONS:

Check that the drain tube is connected to the gas / liquid separator and freely drains into collection vessel. The end of the drain tube must not be submerged in liquid. The exhaust hood over the FIMS should be left on at all times.

8.3.9 Post run: Rinsing procedure after automatic analyses

- Place the inlets of the carrier and reagent (e.g. reductant, buffer) tubes in a container of deionized water.

- On the Toolbar, click on Auto.

- In the Automated Analysis Control window, click on Analyze page tab.

  – Click on Select Location. In the dialog box, select the Go to wash option, then click on OK.

- In the Automated Analysis Control window, click on Move Probe Up/Down to raise the sampling probe.
- Place a beaker with the first rinse solution in the wash location (usually location 0).
- Click on Move Probe Up/Down to lower the probe into the rinse solution.

- On the Toolbar, click on FIAS.
- In the FIAS Control window:
- Click on Valve Fill/Inject to turn the valve to the Fill position. (The position is shown in the Status display of the window.)
- In the FIAS Control window:
- Click on the Pump 1 and Pump 2 buttons to start the pump.
- In the FIAS Control window, click on Valve Fill/Inject a number of times while the pumps are running. This ensures that sample channel and the inside of the FIAS-valve are rinsed effectively. Rinse the tubing with the de-ionized water for as long as necessary to remove all traces of the previous reagent.

8.3.10 Quality Control

- All quality control data should be maintained and available for easy reference or inspection.
- Calibration curves must be composed of a minimum of blank and three standards. After running the calibration curve, analyze an initial calibration blank and an initial calibration check standard (ICB, ICV). A continuing calibration blank (CCB) and a continuing calibration check standard (CCV) should be analyzed. This check standard is used to check the validity of the calibration curve standard and therefore should be obtained different vendor. The CCV result must be within 85-115% of the expected concentration. After the last sample in the run, a final FCB and FCV should be analyzed.
- Dilute samples if they are more concentrated than the highest standard.
- Analyze a minimum of two blanks per sample batch to determine if contamination or any memory effects occur.
- Analyze two standard reference material (SRMs) of a comparable matrix with each set of samples.
- Analyze on duplicate sample for every ten samples.
- Analyze a matrix spike (MS) and matrix spike duplicate (MSD) with each run.
- Analyze a laboratory control spike (LCS) and laboratory control spike duplicate with each run.

9.0 REFERENCES

9.1 Evans, S.J., Johnson, M.S., Leah, R.T. 1986. Determination of Mercury in Fish Tissue, a Rapid, Automated Technique for Routine Analysis. Varian Publication Number AA-60.

9.2 Perkin Elmer, Publication B3118.20. FIMS Flow Injection Mercury System. Setting Up and Performing Analyses. Atomic Spectroscopy.

Analyst:_____ Date:_____

Reviewed by:_____ Date:_____

Laboratory Director:_____ Date:_____

The top five pesticides used in El Dorado County in 2013 and the top five sites upon which these pesticides were used. The ranking of sites and pesticides is determined by total acres treated by active ingredient used. The cumulative acres treated are mostly agricultural. The number of acres treated means the cumulative number of acres treated. The acres treated in each application are summed even when the same field is treated more than once in a year. (For example, if one acre is treated three times in a year with an individual active ingredient, it is counted as three acres treated.) Chemical names that end with an " * " are adjuvants. Data are from the Department of Pesticide Regulation's Pesticide Use Report.

County Chemical	Commodity	Pounds	Num. Apps.	Acres
EL DORADO				
SULFUR	GRAPE, WINE	20,918	611	5,141
	PEACH	324	22	45
	NECTARINE	144	15	18
	GRAPE	58	9	12
	PEAR	6	2	1
	ALL OTHER SITES	20	3	1
TOTAL AI		21,469	662	5,217
GLYPHOSATE, ISOPROPYLAMINE SALT	GRAPE, WINE	2,300	218	1,727
	FOREST, TIMBERLAND	4,690	51	1,276
	APPLE	163	32	102
	RANGELAND	82	29	78
	UNCULTIVATED AG	93	6	70
	ALL OTHER SITES	9,580	108	287
TOTAL AI		16,908	444	3,540
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE)*	GRAPE, WINE	831	175	1,792
	FOREST, TIMBERLAND	299	55	1,294
	RANGELAND	63	49	200
	UNCULTIVATED AG	23		90
	PASTURELAND	7	1	40
	ALL OTHER SITES	1,091	11	58
TOTAL AI		2,314	291	3,473
MINERAL OIL	GRAPE, WINE	3,734	196	1,682
	APPLE	9,429	159	605
	PEAR	1,609	21	77
	WALNUT	8	7	72
	PEACH	687	31	38
	ALL OTHER SITES	2,921	33	55
TOTAL AI		18,388	447	2,528
METHYLATED SOYBEAN OIL*	FOREST, TIMBERLAND	4,237	74	2,114
	N-OUTDR TRANSPLANTS	8	3	45
	GRAPE, WINE	10	1	6
	ALL OTHER SITES	3,547		
TOTAL AI		7,802	78	2,165
ALL OTHER AIS		75,794	3,576	27,741
EL DORADO TOTAL		142,675	5,449	43,416

The top five pesticides used in El Dorado County in 2013 and the top five sites upon which these pesticides were used. The ranking of sites and pesticides is determined by total pounds of active ingredient used. The cumulative acres treated are mostly agricultural. The number of acres treated means the cumulative number of acres treated. The acres treated in each application are summed even when the same field is treated more than once in a year. (For example, if one acre is treated three times in a year with an individual active ingredient, it is counted as three acres treated.) Chemical names that end with an " * " are adjuvants. Data are from the Department of Pesticide Regulation's Pesticide Use Report.

County Chemical	Commodity	Pounds	Num. Apps.	Acres
EL DORADO				
SULFUR	GRAPE, WINE	20,918	611	5,141
	PEACH	324	22	45
	NECTARINE	144	15	18
	GRAPE	58	9	12
	VERTEBRATE CONTROL	13		
	ALL OTHER SITES	13	5	2
TOTAL AI		21,469	662	5,217
MINERAL OIL	APPLE	9,429	159	605
	GRAPE, WINE	3,734	196	1,682
	RIGHTS OF WAY	1,776		
	PEAR	1,609	21	77
	PEACH	687	31	38
	ALL OTHER SITES	1,153	40	128
TOTAL AI		18,388	447	2,528
GLYPHOSATE, ISOPROPYLAMINE SALT	RIGHTS OF WAY	5,168	8	56
	FOREST, TIMBERLAND	4,690	51	1,276
	LANDSCAPE MAINTENANCE	3,857	4	11
	GRAPE, WINE	2,300	218	1,727
	PEAR	172	11	42
	ALL OTHER SITES	721	152	428
TOTAL AI		16,908	444	3,540
PETROLEUM DISTILLATES, REFINED	GRAPE, WINE	11,394	184	1,363
	N-OUTDR PLANTS IN CONTAINERS	27	4	6
	PEACH	19	2	1
	APPLE	11	2	< 1
	TOMATO	2	1	< 1
	ALL OTHER SITES	2	1	< 1
TOTAL AI		11,454	194	1,369
GLYPHOSATE, POTASSIUM SALT	FOREST, TIMBERLAND	5,590	21	650
	LANDSCAPE MAINTENANCE	4,640	1	1
	RIGHTS OF WAY	525	4	4
	GRAPE, WINE	178	14	53
	N-OUTDR PLANTS IN CONTAINERS	58	11	16
	ALL OTHER SITES	34	2	19
TOTAL AI		11,024	53	743
ALL OTHER AIS		63,432	3,649	30,018
EL DORADO TOTAL		142,675	5,449	43,416

The top five sites in total pesticide use in El Dorado County in 2013 and the top five pesticides used on each of these sites. The ranking of sites and pesticides is determined by total acres treated by active ingredient used. The cumulative acres treated are mostly agricultural. The number of acres treated means the cumulative number of acres treated. The acres treated in each application are summed even when the same field is treated more than once in a year. (For example, if one acre is treated three times in a year with an individual active ingredient, it is counted as three acres treated.) Chemical names that end with an " * " are adjuvants. Data are from the Department of Pesticide Regulation's Pesticide Use Report.

County Commodity	Chemical	Pounds	Num. Apps.	Acres
EL DORADO				
GRAPE, WINE	SULFUR	20,918	611	5,141
	ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE)*	831	175	1,792
	GLYPHOSATE, ISOPROPYLAMINE SALT	2,300	218	1,727
	MINERAL OIL	3,734	196	1,682
	PETROLEUM DISTILLATES, REFINED	11,394	184	1,363
	ALL OTHER AIS	7,586	1,706	13,355
TOTAL SITE		46,764	3,090	25,059
FOREST, TIMBERLAND	METHYLATED SOYBEAN OIL*	4,237	74	2,114
	STRYCHNINE	4	77	1,995
	CITRIC ACID	57	67	1,840
	CALCIUM CHLORIDE*	21	67	1,840
	ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE)*	299	55	1,294
	ALL OTHER AIS	15,539	186	4,619
TOTAL SITE		20,157	411	10,618
APPLE	MINERAL OIL	9,429	159	605
	SPINETORAM	44	95	425
	MANCOZEB	1,831	81	421
	MYCLOBUTANIL	59	60	348
	PETROLEUM OIL, PARAFFIN BASED	5,716	35	330
	ALL OTHER AIS	4,647	332	1,147
TOTAL SITE		21,725	762	3,275
RANGELAND	CLOPYRALID, MONOETHANOLAMINE SALT	61	31	545
	TRICLOPYR, BUTOXYETHYL ESTER	146	100	331
	ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE)*	63	49	200
	DIMETHYLPOLYSILOXANE	< 1	48	199
	BUTYL ALCOHOL*	7	40	195
	ALL OTHER AIS	151	46	176
TOTAL SITE		427	226	1,252
WALNUT	COPPER HYDROXIDE	185	8	74
	MINERAL OIL	8	7	72
	ALPHA-PINENE BETA-PINENE COPOLYMER*	21	4	72
	N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXY-ETHYLENE)ETHYL)ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS*	1	4	72
	TALL OIL FATTY ACIDS*	< 1	4	72
	ALL OTHER AIS	793	9	149
TOTAL SITE		1,009	24	295
ALL OTHER SITES		52,594	936	2,916
EL DORADO TOTAL		142,675	5,449	43,416

The top five sites in total pesticide use in El Dorado County in 2013 and the top five pesticides used on each of these sites. The ranking of sites and pesticides is determined by total pounds of active ingredient used. The cumulative acres treated are mostly agricultural. The number of acres treated means the cumulative number of acres treated. The acres treated in each application are summed even when the same field is treated more than once in a year. (For example, if one acre is treated three times in a year with an individual active ingredient, it is counted as three acres treated.) Chemical names that end with an " * " are adjuvants. Data are from the Department of Pesticide Regulation's Pesticide Use Report.

County Commodity	Chemical	Pounds	Num. Apps.	Acres
EL DORADO				
GRAPE, WINE	SULFUR	20,918	611	5,141
	PETROLEUM DISTILLATES, REFINED	11,394	184	1,363
	MINERAL OIL	3,734	196	1,682
	KAOLIN	2,924	17	129
	GLYPHOSATE, ISOPROPYLAMINE SALT	2,300	218	1,727
	ALL OTHER AIS	5,493	1,864	15,018
TOTAL SITE		46,764	3,090	25,059
APPLE	MINERAL OIL	9,429	159	605
	PETROLEUM OIL, PARAFFIN BASED	5,716	35	330
	LIME-SULFUR	2,303	15	105
	MANCOZEB	1,831	81	421
	PETROLEUM OIL, UNCLASSIFIED	1,444	28	102
	ALL OTHER AIS	1,002	444	1,713
TOTAL SITE		21,725	762	3,275
LANDSCAPE MAINTENANCE	GLYPHOSATE, POTASSIUM SALT	4,640	1	1
	GLYPHOSATE, ISOPROPYLAMINE SALT	3,857	4	11
	METHYLATED SOYBEAN OIL*	2,341		
	ORYZALIN	1,726		
	CHLOROTHALONIL	1,445		
	ALL OTHER AIS	6,622	7	86
TOTAL SITE		20,632	12	98
FOREST, TIMBERLAND	GLYPHOSATE, POTASSIUM SALT	5,590	21	650
	GLYPHOSATE, ISOPROPYLAMINE SALT	4,690	51	1,276
	METHYLATED SOYBEAN OIL*	4,237	74	2,114
	TRICLOPYR, BUTOXYETHYL ESTER	2,044	34	610
	2,4-D, 2-ETHYLHEXYL ESTER	1,024	21	822
	ALL OTHER AIS	2,573	210	5,147
TOTAL SITE		20,157	411	10,618
RIGHTS OF WAY	GLYPHOSATE, ISOPROPYLAMINE SALT	5,168	8	56
	MINERAL OIL	1,776		
	METHYLATED SOYBEAN OIL*	1,206		
	OXYFLUORFEN	975		
	GLYPHOSATE, DIMETHYLAMINE SALT	903	2	5
	ALL OTHER AIS	3,451	19	140
TOTAL SITE		13,479	29	201
ALL OTHER SITES		19,919	1,145	4,164
EL DORADO TOTAL		142,675	5,449	43,416

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
ABAMECTIN					
Asian Pear		0.04	2	3.50	A
Grape, Wine		9.35	60	491.82	A
N-Outdr Plants In Containers		< 0.01	1	3,150.00	S
Pear		0.43	5	34.00	A
Structural Pest Control		< 0.01			
Chemical Total		9.84	68		
ABAMECTIN, OTHER RELATED					
Structural Pest Control		< 0.01			
Chemical Total		< 0.01			
ACEPHATE					
Landscape Maintenance		60.38			
N-Grnhs Flower		9.00		448.00	U
		0.02	1	0.01	A
Total Pounds On This Commodity	9.03				
Structural Pest Control		106.78			
Chemical Total		176.19	1		
ACETAMIPRID					
Apple		3.37	14	36.10	A
Grape, Wine		6.36	13	147.00	A
Structural Pest Control		0.87			
Walnut		1.59	2	21.50	A
Chemical Total		12.19	29		
ACIBENZOLAR-S-METHYL					
Landscape Maintenance		0.94			
Chemical Total		0.94			
ALKYL (50%C14, 40%C12, 10%C16) DIMETHYLBENZYL AMMONIUM CHLORIDE					
Structural Pest Control		0.02			
Chemical Total		0.02			
ALPHA-ALKYL (C9-C11)-OMEGA-HYDROXYPOLY(OXYETHYLENE)					
Apple		161.30	5	22.00	A
Grape, Wine		111.42	115	848.05	A
Rights Of Way		18.46			
Chemical Total		291.18	120		
ALPHA-ALKYL (C9-C16)-OMEGA-HYDROXYPOLY(OXYETHYLENE)					
Grape, Wine		2.67	3	18.00	A
Landscape Maintenance		1.27			
Rights Of Way		0.29			
Chemical Total		4.23	3		
ALPHA-PINENE BETA-PINENE COPOLYMER					
Apple		18.62	16	71.00	A
Grape, Wine		216.83	115	1,106.63	A
Nectarine		1.69	1	2.50	A

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Peach		0.33	1	0.50	A
Walnut		20.77	4	72.00	A
Chemical Total		258.24	137		
ALKYL (C8,C10) POLYGLUCOSIDE					
Landscape Maintenance		0.53			
Chemical Total		0.53			
D-TRANS ALLETHRIN					
Structural Pest Control		0.08			
Chemical Total		0.08			
ALLYLOXYPOLYETHYLENE GLYCOL ACETATE					
Apple		0.42	1	5.00	A
Grape, Wine		7.65	13	116.50	A
Landscape Maintenance		19.67			
N-Grnhs Flower		2.61		110.00	U
Nectarine		1.14	10	13.50	A
Peach		1.47	13	17.75	A
Chemical Total		32.97	37		
ALUMINUM PHOSPHIDE					
Grape, Wine		0.84	1	0.50	A
Landscape Maintenance		3.17			
Olive		1.47	23	11.50	A
Pome Fruit		0.35	8	0.80	A
Rangeland		0.79	1	2.00	A
Stone Fruit		0.46	14	1.40	A
Structural Pest Control		180.41			
Vertebrate Control		0.23			
Chemical Total		187.73	47		
AMINOPYRALID, TRIISOPROPANOLAMINE SALT					
Forest, Timberland		22.12	5	180.80	A
Landscape Maintenance		67.68			
Pastureland		1.36	2	9.00	A
Rangeland		5.51	12	38.90	A
Regulatory Pest Control		4.88			
Rights Of Way		74.09			
		4.70	3	48.00	A
Total Pounds On This Commodity	78.79				
Chemical Total		180.33	22		
AMMONIUM NITRATE					
Grape, Wine		1.44	30	197.82	A
Landscape Maintenance		0.25			
Chemical Total		1.69	30		
AMMONIUM PROPIONATE					
Landscape Maintenance		0.31			
Chemical Total		0.31			

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
AMMONIUM SULFATE				
Grape, Wine	36.90	31	201.42	A
Landscape Maintenance	0.59			
Chemical Total	37.49	31		
ATRAZINE				
Rights Of Way	2.94	1	2.00	A
Chemical Total	2.94	1		
ATRAZINE, OTHER RELATED				
Rights Of Way	0.06	1	2.00	A
Chemical Total	0.06	1		
AZADIRACHTIN				
Landscape Maintenance	0.02			
Chemical Total	0.02			
AZINPHOS-METHYL				
Apple	2.25	3	4.50	A
Chemical Total	2.25	3		
AZOXYSTROBIN				
Grape, Wine	0.42	2	2.00	A
Landscape Maintenance	36.67			
Structural Pest Control	< 0.01			
Chemical Total	37.09	2		
BACILLUS PUMILUS, STRAIN QST 2808				
Grape, Wine	2.55	3	27.50	A
Chemical Total	2.55	3		
BACILLUS THURINGIENSIS (BERLINER), SUBSP. ISRAELENSIS, SEROTYPE H-14				
Public Health	23.35			
Chemical Total	23.35			
BACILLUS THURINGIENSIS, SUBSP. ISRAELENSIS, STRAIN AM 65-52				
Public Health	0.89			
Chemical Total	0.89			
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, SEROTYPE 3A,3B				
Landscape Maintenance	3.27			
Chemical Total	3.27			
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES				
Apple	0.14	1	0.10	A
Nectarine	0.59	2	0.60	A
Peach	19.27	12	24.50	A
Pear	0.61	3	1.05	A

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Plum	0.35	3	0.60	A
Chemical Total	20.96	21		
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN SA-11				
Landscape Maintenance	< 0.01			
Chemical Total	< 0.01			
BENEFIN				
Landscape Maintenance	8.16			
Chemical Total	8.16			
BENSULIDE				
Landscape Maintenance	19.80			
Chemical Total	19.80			
BENZOIC ACID				
Landscape Maintenance	8.27			
Rights Of Way	0.44			
Chemical Total	8.71			
BIFENAZATE				
Apple	0.28	3	4.50	A
Grape, Wine	110.88	44	365.07	A
Pear	0.06	1	1.00	A
Chemical Total	111.22	48		
BIFENTHRIN				
Landscape Maintenance	10.15			
N-Grnhs Flower	0.53			
N-Outdr Plants In Containers	< 0.01	1	150.00	S
Structural Pest Control	1,024.18			
Chemical Total	1,034.87	1		
N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXYETHYLENE)ETHYL)ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS				
Apple	0.79	16	71.00	A
Grape, Wine	16.73	126	1,172.63	A
Nectarine	0.07	1	2.50	A
Peach	0.01	1	0.50	A
Walnut	0.88	4	72.00	A
Chemical Total	18.48	148		
N,N-BIS-(2-(OMEGA-HYDROXYPOLY(OXYETHYLENE)/POLY (OXYPROPYLENE))ETHYL)ALKYL (C8-C18) AMINE				
Grape, Wine	6.17	2	31.40	A
Chemical Total	6.17	2		
BORAX				
Structural Pest Control	0.99			
Chemical Total	0.99			

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
BORIC ACID					
Structural Pest Control		960.39			
Chemical Total		960.39			
BOSCALID					
Grape, Wine		180.24	120	1,080.21	A
Landscape Maintenance		7.73			
Nectarine		1.31	4	7.50	A
Peach		3.21	10	18.50	A
Chemical Total		192.49	134		
BRODIFACOUM					
Structural Pest Control		0.02			
Chemical Total		0.02			
BROMADIOLONE					
Structural Pest Control		0.10			
Vertebrate Control		< 0.01			
Chemical Total		0.11			
BROMETHALIN					
Landscape Maintenance		< 0.01			
Structural Pest Control		0.01			
Chemical Total		0.02			
BUPROFEZIN					
Grape, Wine		152.56	42	417.70	A
Chemical Total		152.56	42		
2-BUTOXYETHANOL					
Apple		3.31	3	12.50	A
Chemical Total		3.31	3		
BUTYL ALCOHOL					
Forest, Timberland		0.19	2	369,600.00	S
		0.05	3	3.00	A
Total Pounds On This Commodity	0.24				
Grape, Wine		76.45	102	864.00	A
Landscape Maintenance		10.72			
N-Grnhs Flower		0.19		80.00	U
Nectarine		0.07	4	0.40	A
Pastureland		0.74	1	40.00	A
Rangeland		6.73	40	195.27	A
Rights Of Way		13.83			
Chemical Total		108.97	152		
CALCIUM CHLORIDE					
Forest, Timberland		20.53	67	1,839.71	A
Landscape Maintenance		47.94			
Rights Of Way		1.99			
Chemical Total		70.46	67		

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
CAPSICUM OLEORESIN				
Structural Pest Control	< 0.01			
Chemical Total	< 0.01			
CAPTAN				
Apple	6.45	4	6.00	A
Grape, Wine	0.78	1	0.50	A
Chemical Total	7.23	5		
CAPTAN, OTHER RELATED				
Apple	0.15	4	6.00	A
Grape, Wine	0.02	1	0.50	A
Chemical Total	0.17	5		
CARBARYL				
Apple	17.48	6	21.50	A
Landscape Maintenance	6.98			
Structural Pest Control	10.32			
Chemical Total	34.78	6		
CARBON				
Landscape Maintenance	0.04			
Vertebrate Control	3.22			
Chemical Total	3.26			
CARFENTRAZONE-ETHYL				
Grape, Wine	1.83	22	120.35	A
Landscape Maintenance	2.96			
N-Grnhs Flower	< 0.01	1	0.05	A
Nectarine	0.17	6	9.00	A
Peach	0.17	6	10.25	A
Plum	1.29	3	11.00	A
Pluot	0.02	1	1.00	A
Structural Pest Control	< 0.01			
Chemical Total	6.45	39		
CASTOR OIL ETHOXYLATE				
Grape, Wine	21.43	21	174.68	A
Chemical Total	21.43	21		
CHENOPODIUM AMBROSIODES NEAR AMBROSIODES				
Grape, Wine	29.33	2	38.00	A
Chemical Total	29.33	2		
CHLORANTRANILIPROLE				
Apple	14.73	48	156.00	A
Asian Pear	0.34	2	3.50	A
Cherry	0.07	1	1.00	A
Landscape Maintenance	15.68			
Nectarine	0.77	6	8.75	A
Peach	1.38	11	16.75	A

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Pear		2.48	8	27.00	A
Plum		1.25	6	15.00	A
Pluot		0.09	1	1.00	A
Structural Pest Control		0.76			
Chemical Total		37.55	83		
CHLORFENAPYR					
N-Outdr Plants In Containers		< 0.01	1	146.00	U
Structural Pest Control		28.78			
Chemical Total		28.78	1		
CHLOROPHACINONE					
Landscape Maintenance		0.01			
Structural Pest Control		< 0.01			
Chemical Total		0.01			
CHLOROTHALONIL					
Christmas Tree		44.08	4	28.00	A
Landscape Maintenance		1,444.86			
Peach		10.99	4	4.00	A
Chemical Total		1,499.92	8		
CHLORPYRIFOS					
Christmas Tree		4.00	1	4.00	A
Landscape Maintenance		0.12			
Structural Pest Control		< 0.01			
Chemical Total		4.13	1		
CHLORSULFURON					
Landscape Maintenance		32.41			
Regulatory Pest Control		0.91			
Rights Of Way		16.05			
		1.45	3	48.00	A
Total Pounds On This Commodity	17.51				
Chemical Total		50.83	3		
CITRIC ACID					
Forest, Timberland		57.02	67	1,839.71	A
Grape, Wine		9.16	3	12.13	A
Landscape Maintenance		133.31			
Rights Of Way		5.53			
Chemical Total		205.02	70		
CLOFENTEZINE					
Peach		0.97	1	5.00	A
Chemical Total		0.97	1		
CLOPYRALID, MONOETHANOLAMINE SALT					
Landscape Maintenance		279.68			
Pastureland		0.56	2	3.00	A
Rangeland		60.77	31	544.75	A
Rights Of Way		335.67			

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Uncultivated Non-Ag		6.39		51.00	A
Chemical Total		683.08	33		
CLOPYRALID,TRIETHYLAMINE SALT					
Landscape Maintenance		4.45			
Chemical Total		4.45			
CLOTHIANIDIN					
Landscape Maintenance		2.88			
Chemical Total		2.88			
COCONUT DIETHANOLAMIDE					
Landscape Maintenance		0.12			
Structural Pest Control		0.13			
Chemical Total		0.25			
COPPER					
Structural Pest Control		0.10			
Chemical Total		0.10			
COPPER AMMONIUM CARBONATE					
N-Outdr Plants In Containers		0.02		8.00	U
Chemical Total		0.02			
COPPER AMMONIUM COMPLEX					
Landscape Maintenance		0.55			
Chemical Total		0.55			
COPPER DIAMMONIUM DIACETATE COMPLEX					
Landscape Maintenance		13.62			
Chemical Total		13.62			
COPPER ETHANOLAMINE COMPLEXES, MIXED					
Landscape Maintenance		8.91			
Water Area		265.58	8	232.50	A
		151.92		30.00	U
Total Pounds On This Commodity	417.50				
Chemical Total		426.41	8		
COPPER HYDROXIDE					
Apple		5.50	10	12.20	A
Asian Pear		0.02	2	0.20	A
Cherry		13.22	6	14.20	A
Grape		0.03	2	0.50	A
Grape, Wine		105.69	41	231.79	A
Landscape Maintenance		18.41			
N-Grnhs Flower		0.32		74.00	U
N-Outdr Plants In Containers		9.22	3	4.50	A
Nectarine		23.86	10	14.25	A
Peach		54.25	30	30.55	A
Pear		2.78	5	2.70	A
Plum		8.62	5	8.20	A

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Pluot	2.58	2	2.00	A
Pome Fruit	0.34	2	0.50	A
Stone Fruit	3.08	8	2.20	A
Tomato	1.05	1	1.00	A
Walnut	185.43	8	74.31	A
Chemical Total	434.41	135		
COPPER NAPHTHENATE				
Structural Pest Control	2.69			
Chemical Total	2.69			
COPPER OXYCHLORIDE				
Apple	1.60	6	10.45	A
Asian Pear	0.02	2	0.20	A
Cherry	14.65	6	14.20	A
Grape, Wine	63.09	25	146.35	A
N-Grnhs Flower	0.36		74.00	U
Nectarine	10.48	5	8.00	A
Peach	17.90	14	13.90	A
Pear	0.48	2	2.00	A
Plum	9.55	5	8.20	A
Pluot	2.86	2	2.00	A
Walnut	2.41	4	2.31	A
Chemical Total	123.40	71		
COPPER SULFATE (BASIC)				
Grape	0.99	1	0.25	A
Grape, Wine	5.33	1	4.00	A
Chemical Total	6.32	2		
COPPER SULFATE (PENTAHYDRATE)				
Walnut	49.50	1	20.00	A
Chemical Total	49.50	1		
COYOTE URINE				
Landscape Maintenance	0.35			
Chemical Total	0.35			
CYFLUFENAMID				
Grape, Wine	0.23	5	10.00	A
Chemical Total	0.23	5		
CYFLUTHRIN				
Landscape Maintenance	3.97			
N-Grnhs Flower	< 0.01	1	0.01	A
Structural Pest Control	17.22			
Chemical Total	21.19	1		
BETA-CYFLUTHRIN				
Landscape Maintenance	4.17			
Rights Of Way	1.28			
Structural Pest Control	102.80			

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Chemical Total	108.26			
CYPERMETHRIN				
Landscape Maintenance	0.72			
Structural Pest Control	326.08			
Chemical Total	326.80			
(S)-CYPERMETHRIN				
Structural Pest Control	< 0.01			
Chemical Total	< 0.01			
CYPRODINIL				
Grape, Wine	35.23	18	140.25	A
Chemical Total	35.23	18		
2,4-D, DIMETHYLAMINE SALT				
Forest, Timberland	1.23	1	2.00	A
Landscape Maintenance	11.54			
Pastureland	3.25	2	5.50	A
Rangeland	8.47	3	3.00	A
Rights Of Way	4.50			
Ryegrass	11.29	1	14.00	A
Structural Pest Control	4.09			
Chemical Total	44.38	7		
2,4-D, 2-ETHYLHEXYL ESTER				
Forest, Timberland	1,023.62	21	822.00	A
Landscape Maintenance	32.09			
N-Grnhs Flower	0.01	1	0.05	A
Structural Pest Control	0.15			
Chemical Total	1,055.87	22		
2,4-D, ISOOCTYL ESTER				
Forest, Timberland	88.39	3	53.00	A
Chemical Total	88.39	3		
DAMINOZIDE				
N-Grnhs Flower	0.15	1	0.05	A
Chemical Total	0.15	1		
DAZOMET				
N-Outdr Plants In Containers	1,089.00	2	3.38	A
Soil Fumigation/Preplant	1,089.00	2	3.38	A
Chemical Total	2,178.00	4		
DDVP				
Structural Pest Control	< 0.01			
Chemical Total	< 0.01			
DDVP, OTHER RELATED				
Structural Pest Control	< 0.01			

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Chemical Total	< 0.01			
DELTAMETHRIN				
Landscape Maintenance	0.84			
Structural Pest Control	22.81			
Chemical Total	23.65			
DELTAMETHRIN, OTHER RELATED				
Structural Pest Control	< 0.01			
Chemical Total	< 0.01			
DIATOMACEOUS EARTH				
Structural Pest Control	5.34			
Chemical Total	5.34			
DIAZINON				
Apple	101.50	20	62.50	A
Plum	16.00	3	8.00	A
Pluot	2.00	1	1.00	A
Structural Pest Control	1.37			
Chemical Total	120.87	24		
DICAMBA				
Landscape Maintenance	2.82			
N-Grnhs Flower	< 0.01	1	0.05	A
N-Outdr Flower	0.06			
N-Outdr Transplants	0.05			
Structural Pest Control	< 0.01			
Chemical Total	2.93	1		
DICAMBA, DIMETHYLAMINE SALT				
Landscape Maintenance	1.53			
N-Grnhs Flower	0.19			
N-Grnhs Transplants	0.06			
N-Outdr Flower	0.21			
Structural Pest Control	0.37			
Chemical Total	2.35			
DICHLOBENIL				
Sewage System	783.09		12,278.73	C
Chemical Total	783.09			
DIDECYL DIMETHYL AMMONIUM CHLORIDE				
Structural Pest Control	< 0.01			
Chemical Total	< 0.01			
DIETHYLENE GLYCOL				
Grape, Wine	0.06	1	6.00	A
Landscape Maintenance	2.83			
Rangeland	0.80	8	4.10	A
Regulatory Pest Control	7.40			
Rights Of Way	1.31			

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Chemical Total		12.40	9		
DIFENACOUM					
Structural Pest Control		< 0.01			
Chemical Total		< 0.01			
DIFENOCONAZOLE					
Grape, Wine		5.64	7	80.50	A
Landscape Maintenance		1.47			
Chemical Total		7.11	7		
DIFETHIALONE					
Structural Pest Control		0.06			
Chemical Total		0.06			
DIFLUBENZURON					
Nectarine		0.75	3	4.00	A
Peach		2.51	8	11.25	A
Structural Pest Control		0.46			
Chemical Total		3.72	11		
DIKEGULAC SODIUM					
Landscape Maintenance		2.61			
Chemical Total		2.61			
DIMETHENAMID-P					
Landscape Maintenance		8.25			
Chemical Total		8.25			
DIMETHYL ALKYL TERTIARY AMINES					
Landscape Maintenance		9.00			
Rights Of Way		0.48			
Chemical Total		9.49			
DIMETHYLPOLYSILOXANE					
Forest, Timberland		< 0.01	2	369,600.00	S
		< 0.01	3	3.00	A
Total Pounds On This Commodity	< 0.01				
Grape, Wine		1.13	121	1,051.01	A
Landscape Maintenance		0.98			
N-Grnhs Flower		< 0.01		80.00	U
Nectarine		< 0.01	4	0.40	A
Pastureland		< 0.01	1	40.00	A
Rangeland		0.09	48	199.37	A
Rights Of Way		0.24			
Uncultivated Ag		0.10		89.50	A
Chemical Total		2.55	179		
DIMETHYL SILICONE FLUID EMULSION					
Grape, Wine		0.37	3	30.00	A
Chemical Total		0.37	3		

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DINOTEFURAN					
Landscape Maintenance		10.20			
N-Grnhs Flower		16.41		627.00	U
N-Outdr Flower		0.03		3.00	U
Structural Pest Control		0.06			
Chemical Total		26.70			
DIOCTYL PHTHALATE					
Rights Of Way		0.26			
Chemical Total		0.26			
DIPHACINONE					
Landscape Maintenance		0.05			
Public Health		< 0.01			
Structural Pest Control		0.01			
Vertebrate Control		< 0.01			
Chemical Total		0.06			
DIPHACINONE, SODIUM SALT					
Structural Pest Control		< 0.01			
Chemical Total		< 0.01			
DIQUAT DIBROMIDE					
Landscape Maintenance		11.90			
Regulatory Pest Control		3.80			
Rights Of Way		10.15			
Uncultivated Non-Ag		0.16	2	1.00	A
Water Area		216.29	1	93.50	A
		15.50		2.00	U
Total Pounds On This Commodity	231.79				
Chemical Total		257.81	3		
DISODIUM OCTABORATE TETRAHYDRATE					
Structural Pest Control		550.10			
Chemical Total		550.10			
DITHIOPYR					
Landscape Maintenance		77.62			
		22.00	1	65.00	A
Total Pounds On This Commodity	99.62				
N-Grnhs Flower		0.40			
N-Outdr Flower		1.15			
Rights Of Way		579.58			
Chemical Total		680.75	1		
DIURON					
Landscape Maintenance		265.46			
		16.00	1	5.00	A
Total Pounds On This Commodity	281.46				
Chemical Total		281.46	1		

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
E,E-8,10-DODECADIEN-1-OL				
Apple	9.59	22	85.00	A
Asian Pear	0.35	2	3.50	A
Pear	1.05	5	12.00	A
Chemical Total	10.99	29		
DODECYLBENZENE SULFONIC ACID				
Landscape Maintenance	0.52			
Structural Pest Control	0.58			
Chemical Total	1.10			
ALPHA-(PARA-DODECYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE)				
Grape, Wine	0.67	1	12.00	A
Chemical Total	0.67	1		
2-(2,4-DP), DIMETHYLAMINE SALT				
Landscape Maintenance	0.08			
Chemical Total	0.08			
EDTA, TETRASODIUM SALT				
Landscape Maintenance	0.03			
Structural Pest Control	0.04			
Chemical Total	0.07			
EMAMECTIN BENZOATE				
Landscape Maintenance	1.08			
Chemical Total	1.08			
EMULSIFIABLE METHYLATED VEGETABLE OIL				
Grape, Wine	6.29	7	40.15	A
Chemical Total	6.29	7		
ENDOTHALL, DIPOTASSIUM SALT				
Water Area	71.92		62.00	A
Chemical Total	71.92			
ENDOTHALL, MONO [N,N-DIMETHYL ALKYLAMINE] SALT				
Water Area	6.81		2.00	U
Chemical Total	6.81			
EPN				
Landscape Maintenance	0.19			
Chemical Total	0.19			
ESFENVALERATE				
Christmas Tree	1.37	4	28.00	A
N-Outdr Transplants	1.89	1	22.00	A
Rights Of Way	0.02			
Structural Pest Control	1.76			
Chemical Total	5.03	5		

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
ETHEPHON					
Landscape Maintenance		213.03			
		20.09	1	6.00	A
Total Pounds On This Commodity	233.12				
Chemical Total		233.12	1		
ETOFENPROX					
Structural Pest Control		0.05			
Chemical Total		0.05			
ETHOFUMESATE					
Landscape Maintenance		13.52			
Chemical Total		13.52			
ETHYLENE GLYCOL					
Landscape Maintenance		1.51			
Peach		3.05	2	5.00	A
Chemical Total		4.56	2		
ETHYLENE GLYCOL MONOMETHYL ETHER					
Grape, Wine		2.98	3	44.37	A
Landscape Maintenance		3.61			
Chemical Total		6.59	3		
ETOXAZOLE					
Grape, Wine		0.27	1	1.00	A
Chemical Total		0.27	1		
FATTY ACIDS, METHYL ESTERS					
Forest, Timberland		17.74	2	39.27	A
Landscape Maintenance		93.72			
Chemical Total		111.46	2		
FATTY ACIDS, MIXED					
Grape, Wine		1.09	5	235.00	A
Landscape Maintenance		6.96			
N-Grnhs Flower		0.08		2.00	U
Rangeland		1.44	9	4.25	A
Rights Of Way		2.33			
Chemical Total		11.90	14		
FATTY ACIDS, C16-C18 AND C18-UNSATURATED, METHYL ESTERS					
Grape, Wine		28.26	11	66.00	A
Water Area		0.02		1.00	U
Chemical Total		28.28	11		
FENARIMOL					
Apple		0.03	1	0.50	A
Grape, Wine		6.33	54	356.95	A
Pear		0.02	1	0.50	A
Chemical Total		6.37	56		

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
FENHEXAMID					
Grape, Wine		56.49	15	113.49	A
Chemical Total		56.49	15		
FENPROPATHRIN					
Cherry		1.49	2	7.00	A
Chemical Total		1.49	2		
FENPYROXIMATE					
Grape, Wine		11.56	17	155.68	A
Chemical Total		11.56	17		
FIPRONIL					
Landscape Maintenance		< 0.01			
Structural Pest Control		402.73			
Chemical Total		402.73			
FLUAZIFOP-P-BUTYL					
Landscape Maintenance		0.17			
Chemical Total		0.17			
FLUDIOXONIL					
Landscape Maintenance		19.07			
Structural Pest Control		< 0.01			
Chemical Total		19.08			
FLUMIOXAZIN					
Grape, Wine		97.41	66	379.17	A
Landscape Maintenance		1.75			
Rights Of Way		2.72			
Chemical Total		101.89	66		
FLUOXASTROBIN					
Landscape Maintenance		2.44			
Chemical Total		2.44			
FLURIDONE					
Landscape Maintenance		4.68			
Water Area		1.69		13.00	A
		0.30		2.00	U
Total Pounds On This Commodity	1.99				
Chemical Total		6.66			
FLUROXYPYR, 1-METHYLHEPTYL ESTER					
Landscape Maintenance		25.30			
Chemical Total		25.30			
FLUTOLANIL					
Landscape Maintenance		108.50			
Chemical Total		108.50			

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
TAU-FLUVALINATE					
Landscape Maintenance		0.52			
N-Outdr Plants In Containers		0.20	1	1.00	A
		0.06	2	10,500.00	S
Total Pounds On This Commodity	0.26				
Chemical Total		0.78	3		
FORAMSULFURON					
Landscape Maintenance		0.44			
Chemical Total		0.44			
FOSETYL-AL					
Landscape Maintenance		140.00			
Chemical Total		140.00			
FOX URINE					
Landscape Maintenance		0.15			
Chemical Total		0.15			
GIBBERELLINS					
Cherry		0.10	4	11.00	A
Grape, Wine		0.18	6	24.95	A
Chemical Total		0.28	10		
GLUFOSINATE-AMMONIUM					
Apple		19.09	8	38.00	A
Grape, Wine		122.57	46	244.83	A
Chemical Total		141.66	54		
GLYPHOSATE, DIMETHYLAMINE SALT					
Forest, Timberland		139.75	11	41.40	A
Rights Of Way		892.98			
		10.24	2	4.80	A
Total Pounds On This Commodity	903.22				
Chemical Total		1,042.97	13		
GLYPHOSATE, ISOPROPYLAMINE SALT					
Apple		162.85	32	102.00	A
Apricot		3.86	1	4.00	A
Asian Pear		7.04	4	7.00	A
Blackberry		1.51	1	1.00	A
Blueberry		7.54	3	5.00	A
Cherry		7.72	3	8.00	A
Christmas Tree		13.92	3	8.00	A
Forest, Timberland		4,689.82	51	1,275.51	A
Grape, Wine		2,299.75	218	1,727.46	A
Landscape Maintenance		3,796.65			
		60.83	4	11.25	A
Total Pounds On This Commodity	3,857.48				
N-Grnhs Flower		1.99	3	0.25	A
N-Outdr Plants In Containers		28.34	7	190,000.00	S
		5.61	2	1.75	A

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Total Pounds On This Commodity	33.94				
N-Outdr Transplants		20.84	1	15.00	A
Nectarine		22.00	7	11.00	A
Olive		2.35	5	3.50	A
Pastureland		9.65	5	15.50	A
		4.33	10	47,889.00	S
Total Pounds On This Commodity	13.97				
Peach		88.52	18	42.62	A
Pear		172.25	11	41.50	A
Persimmon		0.96	1	1.00	A
Plum		24.00	4	13.00	A
Pluot		2.00	1	1.00	A
Pome Fruit		0.38	1	0.25	A
Pumpkin		8.00	1	5.00	A
Rangeland		81.96	29	78.39	A
Regulatory Pest Control		96.67			
Rights Of Way		5,039.31			
		128.52	8	56.30	A
Total Pounds On This Commodity	5,167.83				
Stone Fruit		1.73	3	1.25	A
Structural Pest Control		16.17			
Uncultivated Ag		93.05	6	69.50	A
Uncultivated Non-Ag		1.27	1	0.50	A
Water Area		6.31		28.00	A
Chemical Total		16,907.69	444		
GLYPHOSATE, MONOAMMONIUM SALT					
Landscape Maintenance		43.82			
Uncultivated Non-Ag		4.08	2	1.00	A
Chemical Total		47.89	2		
GLYPHOSATE, POTASSIUM SALT					
Apple		0.69	1	2.00	A
Christmas Tree		33.10	1	17.00	A
Forest, Timberland		5,589.61	21	650.11	A
Grape, Wine		177.76	14	52.86	A
Landscape Maintenance		4,639.66			
		0.26	1	1.00	A
Total Pounds On This Commodity	4,639.91				
N-Outdr Plants In Containers		57.96	11	16.00	A
Rights Of Way		522.65			
		2.11	4	4.00	A
Total Pounds On This Commodity	524.77				
Chemical Total		11,023.80	53		
HALOSULFURON-METHYL					
Landscape Maintenance		162.55			
N-Grnhs Flower		0.02			
N-Grnhs Transplants		0.02			
Chemical Total		162.60			
HEPTYL BUTYRATE					
Structural Pest Control		0.02			
Chemical Total		0.02			

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
HEXAZINONE					
Christmas Tree		3.56	2	3.50	A
Forest, Timberland		29.36	5	135.80	A
Chemical Total		32.93	7		
HYDRAMETHYLNON					
Structural Pest Control		0.63			
Chemical Total		0.63			
HYDROPRENE					
Structural Pest Control		17.55			
Chemical Total		17.55			
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE					
Apple		1.46	1	5.00	A
Forest, Timberland		155.34	15	453.37	A
Grape, Wine		26.44	13	116.50	A
Landscape Maintenance		67.96			
N-Grnhs Flower		39.33		594.00	U
Nectarine		3.93	10	13.50	A
Peach		5.08	13	17.75	A
Rights Of Way		11.95			
Chemical Total		311.48	52		
IMAZAMOX, AMMONIUM SALT					
Water Area		0.04		3.50	A
Chemical Total		0.04			
IMAZAPYR, ISOPROPYLAMINE SALT					
Forest, Timberland		128.76	18	379.84	A
Landscape Maintenance		1.04			
Chemical Total		129.80	18		
IMIDACLOPRID					
Grape, Wine		17.08	36	258.37	A
Landscape Maintenance		68.71			
N-Grnhs Flower		16.95		461.00	U
		0.93			
Total Pounds On This Commodity	17.88				
N-Grnhs Plants In Containers		0.03	1	0.13	A
N-Grnhs Transplants		0.48			
N-Outdr Flower		0.27		30.00	U
		0.25			
Total Pounds On This Commodity	0.52				
Structural Pest Control		174.82			
Chemical Total		279.52	37		
INDAZIFLAM					
Landscape Maintenance		0.47			
Rights Of Way		2.61			
Structural Pest Control		0.69			

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Chemical Total	3.78			
INDOXACARB				
Landscape Maintenance	< 0.01			
Structural Pest Control	40.16			
Chemical Total	40.16			
IPRODIONE				
Landscape Maintenance	72.31			
Chemical Total	72.31			
IRON PHOSPHATE				
Landscape Maintenance	0.82			
Structural Pest Control	0.12			
Chemical Total	0.94			
ISOOCTYL PHTHALATE				
Grape, Wine	3.02	3	44.37	A
Landscape Maintenance	3.66			
Chemical Total	6.68	3		
ISOPROPYL ALCOHOL				
Grape, Wine	9.74	23	234.98	A
Landscape Maintenance	28.31			
Peach	0.55	2	5.00	A
Regulatory Pest Control	1.17			
Rights Of Way	0.35			
Structural Pest Control	0.25			
Uncultivated Ag	1.98		89.50	A
Chemical Total	42.36	25		
ISOXABEN				
Grape, Wine	44.33	21	120.74	A
Landscape Maintenance	45.56			
Rights Of Way	45.94			
Uncultivated Non-Ag	0.25	1	0.50	A
Chemical Total	136.07	22		
KAOLIN				
Grape, Wine	2,924.10	17	129.11	A
Walnut	712.50	2	35.30	A
Chemical Total	3,636.60	19		
KEROSENE				
Landscape Maintenance	16.01			
Rights Of Way	0.86			
Chemical Total	16.87			
KRESOXIM-METHYL				
Apple	11.36	18	62.00	A
Grape, Wine	40.93	41	278.31	A

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Chemical Total	52.28	59		
LAMBDA-CYHALOTHRIN				
Landscape Maintenance	0.25			
N-Outdr Transplants	0.39	1	8.00	A
Structural Pest Control	30.33			
Chemical Total	30.98	1		
LAURYL ALCOHOL				
Apple	5.38	22	85.00	A
Asian Pear	0.20	2	3.50	A
Pear	0.59	5	12.00	A
Chemical Total	6.17	29		
LECITHIN				
Forest, Timberland	6.10	2	50.00	A
Grape, Wine	27.09	11	234.00	A
Landscape Maintenance	30.87			
N-Outdr Transplants	16.76	3	45.00	A
Rights Of Way	0.29			
Chemical Total	81.11	16		
LIME-SULFUR				
Apple	2,302.60	15	105.00	A
Grape	2.74	3	0.15	A
Grape, Wine	52.34	10	5.68	A
N-Grnhs Flower	4.62		74.00	U
Peach	3.94	7	0.57	A
Pear	773.12	4	28.00	A
Pome Fruit	0.86	1	0.10	A
Stone Fruit	0.86	1	0.10	A
Chemical Total	3,141.09	41		
LIMONENE				
Structural Pest Control	13.37			
Water Area	0.08		1.00	U
Chemical Total	13.46			
MALATHION				
Blackberry	1.96	1	1.50	A
Structural Pest Control	24.18			
Chemical Total	26.14	1		
MANCOZEB				
Apple	1,830.66	81	420.50	A
Landscape Maintenance	262.27			
Pear	4.50	1	1.00	A
Chemical Total	2,097.42	82		
MCPA, DIMETHYLAMINE SALT				
Landscape Maintenance	9.60			
N-Grnhs Flower	1.90			
N-Grnhs Transplants	0.59			

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N-Outdr Flower	2.11			
Chemical Total	14.20			
MCPA, 2-ETHYL HEXYL ESTER				
Landscape Maintenance	0.01			
Chemical Total	0.01			
MCPA, ISOOCTYL ESTER				
Landscape Maintenance	0.87			
N-Outdr Flower	0.95			
N-Outdr Transplants	0.75			
Chemical Total	2.57			
MCPP, DIMETHYLAMINE SALT				
Landscape Maintenance	0.09			
Chemical Total	0.09			
MCPP, POTASSIUM SALT				
Landscape Maintenance	11.38			
Chemical Total	11.38			
MCPP-P, DIMETHYLAMINE SALT				
Landscape Maintenance	1.90			
N-Grnhs Flower	0.38			
N-Grnhs Transplants	0.12			
N-Outdr Flower	0.42			
Structural Pest Control	1.09			
Chemical Total	3.90			
MECOPROP-P				
Landscape Maintenance	8.07			
N-Grnhs Flower	< 0.01	1	0.05	A
Structural Pest Control	0.04			
Chemical Total	8.12	1		
MEFENOXAM				
Landscape Maintenance	16.36			
N-Outdr Plants In Containers	0.03	2	0.25	A
Chemical Total	16.40	2		
MEFENOXAM, OTHER RELATED				
Landscape Maintenance	0.50			
N-Outdr Plants In Containers	< 0.01	2	0.25	A
Chemical Total	0.51	2		
MESOTRIONE				
Landscape Maintenance	0.03			
Chemical Total	0.03			
METALDEHYDE				
Landscape Maintenance	0.18			

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N-Grnhs Flower	0.15	2	0.15	A
Chemical Total	0.32	2		
METAM-SODIUM				
Sewage System	469.86		12,278.73	C
Chemical Total	469.86			
METCONAZOLE				
Landscape Maintenance	10.57			
Chemical Total	10.57			
METHOPRENE				
Public Health	0.19			
Structural Pest Control	0.04			
Chemical Total	0.23			
S-METHOPRENE				
Public Health	2.28			
Structural Pest Control	0.01			
Chemical Total	2.29			
METHOXYFENOZIDE				
Grape, Wine	21.39	10	94.69	A
Chemical Total	21.39	10		
METHYL ANTHRANILATE				
Cherry	2.01	2	7.00	A
Structural Pest Control	7.39			
Chemical Total	9.40	2		
METHYLATED SILICA				
Regulatory Pest Control	< 0.01			
Chemical Total	< 0.01			
METHYLATED SOYBEAN OIL				
Forest, Timberland	4,237.08	74	2,114.41	A
Grape, Wine	9.87	1	6.00	A
Landscape Maintenance	2,341.08			
N-Outdr Transplants	8.38	3	45.00	A
Rights Of Way	1,205.58			
Chemical Total	7,801.98	78		
METHYL CELLULOSE				
Rights Of Way	0.26			
Chemical Total	0.26			
METHYL PARATHION				
Landscape Maintenance	0.37			
Chemical Total	0.37			
METHYL SILICONE RESINS				

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Landscape Maintenance		0.08			
Regulatory Pest Control		0.06			
Rights Of Way		0.02			
Chemical Total		0.16			
S-METOLACHLOR					
Landscape Maintenance		36.97			
Chemical Total		36.97			
METRAFENONE					
Grape, Wine		67.83	26	271.50	A
Chemical Total		67.83	26		
MINERAL OIL					
Apple		9,481.93	167	642.80	A
Asian Pear		139.96	6	8.20	A
Cherry		156.68	6	14.20	A
Grape, Wine		3,914.77	208	1,809.53	A
Landscape Maintenance		35.99			
N-Outdr Plants In Containers		0.45		20.00	U
Nectarine		253.52	19	29.75	A
Peach		707.96	38	52.95	A
Pear		1,609.06	21	76.55	A
Plum		279.72	10	23.20	A
Pluot		49.93	3	3.00	A
Public Health		260.94			
Rights Of Way		1,775.89			
Walnut		8.03	7	72.30	A
Chemical Total		18,674.82	485		
MORPHOLINE					
Grape, Wine		1.31	3	44.37	A
Landscape Maintenance		1.58			
Rights Of Way		0.11			
Chemical Total		3.00	3		
MSMA					
Landscape Maintenance		1.52			
Chemical Total		1.52			
MUSCALURE					
Structural Pest Control		0.04			
Chemical Total		0.04			
MYCLOBUTANIL					
Apple		58.60	60	348.00	A
Apricot		3.15	3	21.00	A
Grape, Wine		148.26	145	1,314.25	A
Landscape Maintenance		1.50			
N-Grnhs Flower		0.71			
		0.20		12.00	U
Total Pounds On This Commodity	0.91				
N-Outdr Flower		0.40			

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
		0.04		2.00	U
Total Pounds On This Commodity	0.44				
Nectarine		1.30	10	12.50	A
Peach		2.00	12	20.00	A
Pumpkin		3.60	1	3.00	A
Chemical Total		219.75	231		
MYRISTYL ALCOHOL					
Apple		1.09	22	85.00	A
Asian Pear		0.04	2	3.50	A
Pear		0.12	5	12.00	A
Chemical Total		1.25	29		
NAA, AMMONIUM SALT					
Apple		0.27	4	13.50	A
Landscape Maintenance		2.47			
Chemical Total		2.75	4		
1-NAPHTHALENEACETAMIDE					
Apple		2.35	3	14.00	A
Chemical Total		2.35	3		
NAPROPAMIDE					
Blackberry		6.00	1	1.00	A
Blueberry		18.00	2	3.00	A
Structural Pest Control		0.06			
Chemical Total		24.06	3		
NONANOIC ACID					
Landscape Maintenance		0.77			
Chemical Total		0.77			
NONANOIC ACID, OTHER RELATED					
Landscape Maintenance		0.04			
Chemical Total		0.04			
4-NONYLPHENOL, FORMALDEHYDE RESIN, PROPOXYLATED					
Apricot		3.58	3	21.00	A
Grape, Wine		115.82	78	874.01	A
Chemical Total		119.40	81		
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE)					
Apricot		4.33	3	21.00	A
Forest, Timberland		297.59	53	1,285.85	A
		1.67	2	369,600.00	S
Total Pounds On This Commodity	299.26				
Grape, Wine		831.43	175	1,791.51	A
Landscape Maintenance		621.31			
N-Grnhs Flower		2.62		122.00	U
Nectarine		0.62	4	0.40	A
Pastureland		6.66	1	40.00	A
Peach		1.39	2	5.00	A

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Rangeland		62.68	49	199.52	A
Regulatory Pest Control		13.56			
Rights Of Way		428.42			
		18.76	2	32.00	A
Total Pounds On This Commodity	447.18				
Structural Pest Control		< 0.01			
Uncultivated Ag		22.94		89.50	A
Chemical Total		2,313.99	291		
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE), BRANCHED					
Grape, Wine		2.06	3	44.37	A
Landscape Maintenance		2.49			
Chemical Total		4.54	3		
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY(OXYETHYLENE), PHOSPHATE ESTER					
Landscape Maintenance		0.22			
Chemical Total		0.22			
NONYL PHENOXY POLYOXYETHYLENE ETHANOL-IODINE COMPLEX					
Grape, Wine		79.89	25	307.01	A
Chemical Total		79.89	25		
NOVIFLUMURON					
Landscape Maintenance		< 0.01			
Structural Pest Control		0.28			
Chemical Total		0.28			
N-OCTYL BICYCLOHEPTENE DICARBOXIMIDE					
Structural Pest Control		2.49			
Chemical Total		2.49			
OLEIC ACID					
Grape, Wine		4.23	3	44.37	A
Landscape Maintenance		5.12			
Rights Of Way		0.37			
Chemical Total		9.72	3		
OLEIC ACID, ETHYL ESTER					
Grape, Wine		13.51	1	21.00	A
Rangeland		40.54	1	54.00	A
Chemical Total		54.06	2		
OLEIC ACID, METHYL ESTER					
Forest, Timberland		466.02	15	453.37	A
Grape, Wine		12.48	3	18.00	A
Landscape Maintenance		358.87			
Rights Of Way		131.20			
		5.92	3	3.00	A
Total Pounds On This Commodity	137.12				
Chemical Total		974.49	21		

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
ORGANOSILICONE, POLY OXYALKYLENE ETHER COPOLYMER					
Grape, Wine		1.50	1	6.00	A
Chemical Total		1.50	1		
ORYZALIN					
Apricot		4.16	1	4.00	A
Blueberry		4.16	1	2.00	A
Cherry		1.04	1	1.00	A
Christmas Tree		50.62	2	21.00	A
Grape, Wine		234.58	34	162.69	A
Landscape Maintenance		1,726.40			
N-Outdr Plants In Containers		22.43	5	140,000.00	S
		1.00	1	1.00	A
Total Pounds On This Commodity	23.43				
N-Outdr Transplants		16.64	1	15.00	A
Olive		2.78	3	2.00	A
Rights Of Way		572.07			
Stone Fruit		0.73	1	0.50	A
Uncultivated Ag		9.36	1	9.00	A
Uncultivated Non-Ag		3.12	2	1.16	A
Chemical Total		2,649.09	53		
OXADIAZON					
Landscape Maintenance		0.02			
N-Grnhs Flower		0.23	6	0.40	A
Chemical Total		0.25	6		
OXYFLUORFEN					
Grape, Wine		230.66	96	762.10	A
Landscape Maintenance		50.63			
N-Outdr Plants In Containers		5.51	5	7.00	A
N-Outdr Transplants		13.41	1	15.00	A
Rights Of Way		975.15			
Chemical Total		1,275.36	102		
PACLOBUTRAZOL					
Landscape Maintenance		2.63			
		0.25	1	3.00	A
Total Pounds On This Commodity	2.88				
N-Grnhs Flower		0.01	3	0.16	A
Chemical Total		2.90	4		
PARAQUAT DICHLORIDE					
Apple		2.06	1	2.00	A
Asian Pear		2.06	1	2.00	A
Grape, Wine		26.59	9	48.15	A
Chemical Total		30.70	11		
PCNB					
Landscape Maintenance		540.00			
Chemical Total		540.00			

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PENDIMETHALIN				
Apple	0.42	1	0.50	A
Grape, Wine	191.00	25	149.84	A
Landscape Maintenance	406.81			
Peach	2.10	1	2.00	A
Rights Of Way	56.82			
Chemical Total	657.14	27		
PERMETHRIN				
Cherry	1.23	2	7.00	A
Landscape Maintenance	78.57			
Structural Pest Control	602.58			
Chemical Total	682.37	2		
PERMETHRIN, OTHER RELATED				
Structural Pest Control	< 0.01			
Chemical Total	< 0.01			
PETROLEUM DISTILLATES				
Grape, Wine	91.60	3	17.50	A
Structural Pest Control	0.31			
Chemical Total	91.91	3		
PETROLEUM DISTILLATES, REFINED				
Apple	10.56	2	0.20	A
Grape, Wine	11,393.93	184	1,362.71	A
N-Outdr Plants In Containers	26.71	4	5.50	A
Peach	19.35	2	0.50	A
Squash	1.76	1	0.25	A
Tomato	1.76	1	0.25	A
Chemical Total	11,454.07	194		
PETROLEUM OIL, PARAFFIN BASED				
Apple	5,716.17	35	330.00	A
Asian Pear	0.31	1	2.00	A
Landscape Maintenance	31.95			
Nectarine	0.44	1	0.10	A
Peach	29.61	2	8.00	A
Pear	1,756.06	9	56.50	A
Plum	1.40	2	0.40	A
Rights Of Way	5.30			
Chemical Total	7,541.24	50		
PETROLEUM OIL, UNCLASSIFIED				
Apple	1,443.96	28	101.60	A
Grape	1.80	2	0.50	A
Grape, Wine	0.41	1	0.30	A
Landscape Maintenance	97.60			
N-Grnhs Flower	7.07			
N-Grnhs Plants In Containers	3.53			
Nectarine	14.14	2	1.00	A
Peach	4.36	2	4.50	A
Pear	7.09	1	1.00	A

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Plum	0.04	1	0.20	A
Pome Fruit	0.34	1	0.25	A
Stone Fruit	0.34	1	0.25	A
Chemical Total	1,580.68	39		
PHENOTHRIN				
Structural Pest Control	0.16			
Chemical Total	0.16			
PHENYLETHYL PROPIONATE				
Landscape Maintenance	0.01			
Structural Pest Control	66.84			
Chemical Total	66.85			
PHOSMET				
Apple	17.85	3	6.10	A
Peach	0.02	1	0.10	A
Pear	2.80	1	1.00	A
Chemical Total	20.67	5		
PHOSPHORIC ACID				
Grape, Wine	1.04	9	45.75	A
Landscape Maintenance	0.10			
Structural Pest Control	0.11			
Chemical Total	1.25	9		
PIPERONYL BUTOXIDE				
Public Health	2.09			
Structural Pest Control	120.70			
Chemical Total	122.79			
PIPERONYL BUTOXIDE, OTHER RELATED				
Public Health	0.52			
Structural Pest Control	29.89			
Chemical Total	30.41			
POLYACRYLAMIDE POLYMER				
Landscape Maintenance	0.14			
Rights Of Way	0.49			
Structural Pest Control	0.59			
Chemical Total	1.22			
POLYALKENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE				
Forest, Timberland	37.55	24	678.89	A
Grape, Wine	0.01	1	1.00	A
Landscape Maintenance	27.40			
N-Grnhs Flower	0.28		40.00	U
Rights Of Way	6.00			
Chemical Total	71.25	25		
POLYBUTENES				
Grape, Wine	5.05	11	66.00	A

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Chemical Total	5.05	11		
POLYETHER MODIFIED POLYSILOXANE				
Grape, Wine	0.34	7	40.15	A
Chemical Total	0.34	7		
POLYETHYLENE GLYCOL				
Grape, Wine	35.43	19	187.01	A
Uncultivated Ag	12.51		89.50	A
Chemical Total	47.94	19		
POLYETHYLENE GLYCOL DIACETATE				
Apple	0.04	1	5.00	A
Grape, Wine	0.70	13	116.50	A
Landscape Maintenance	1.79			
N-Grnhs Flower	0.24		110.00	U
Nectarine	0.10	10	13.50	A
Peach	0.13	13	17.75	A
Chemical Total	3.00	37		
POLY-I-PARA-MENTHENE				
Apple	12.67	5	14.00	A
Grape	5.46	3	12.00	A
Grape, Wine	130.37	45	355.70	A
Nectarine	16.06	10	14.00	A
Peach	18.50	10	17.00	A
Plum	14.31	3	10.00	A
Pluot	1.45	1	1.00	A
Walnut	16.65	2	36.00	A
Chemical Total	215.47	79		
POLYOXIN D, ZINC SALT				
Landscape Maintenance	5.85			
Chemical Total	5.85			
POLYOXYETHYLENE DIOLEATE				
Grape, Wine	2.40	2	27.00	A
Rangeland	7.09	1	54.00	A
Chemical Total	9.49	3		
POLYOXYETHYLENE POLYOXYPROPYLENE				
Apple	2.19	3	12.50	A
Chemical Total	2.19	3		
POLYOXYETHYLENE SORBITOL, MIXED ETHER ESTER				
Apple	1.51	1	2.00	A
Asian Pear	1.51	1	2.00	A
Landscape Maintenance	155.76			
Rights Of Way	25.90			
Chemical Total	184.69	2		
POLYOXYETHYLENE SORBITAN MONOOLEATE				

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Grape, Wine		0.68	1	21.00	A
Rangeland		2.03	1	54.00	A
Chemical Total		2.70	2		
POLYOXYETHYLENE SOYBEAN OIL FATTY ACID ESTER					
Grape, Wine		160.73	21	174.68	A
Chemical Total		160.73	21		
POLYPROPYLENE GLYCOL					
Landscape Maintenance		0.02			
Rights Of Way		0.03			
Chemical Total		0.04			
POLYSACCHARIDE POLYMER					
Landscape Maintenance		0.02			
Chemical Total		0.02			
POTASH SOAP					
Landscape Maintenance		4.16			
Chemical Total		4.16			
POTASSIUM BICARBONATE					
Grape, Wine		138.09	17	96.40	A
Pome Fruit		0.13	1	0.05	A
Stone Fruit		0.13	1	0.05	A
Vegetable		0.13	1	0.05	A
Chemical Total		138.47	20		
POTASSIUM HYDROXIDE					
Grape, Wine		0.34	2	8.53	A
Chemical Total		0.34	2		
POTASSIUM NITRATE					
Grape, Wine		3.27	2	8.53	A
Chemical Total		3.27	2		
POTASSIUM PHOSPHITE					
Landscape Maintenance		187.81			
		15.63	1	3.00	A
Total Pounds On This Commodity	203.44				
N-Grnhs Flower		15.79		56.00	U
N-Outdr Flower		0.48		20.00	U
Walnut		10.52	2	36.00	A
Chemical Total		230.22	3		
PRALLETHRIN					
Structural Pest Control		0.03			
Chemical Total		0.03			
PRODIAMINE					
Landscape Maintenance		98.92			

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N-Outdr Flower	2.58			
Structural Pest Control	0.04			
Chemical Total	101.54			
PROPAMOCARB HYDROCHLORIDE				
Landscape Maintenance	29.76			
Chemical Total	29.76			
PROPICONAZOLE				
Cherry	1.00	3	9.00	A
Landscape Maintenance	389.88			
Nectarine	1.04	8	10.50	A
Peach	5.27	23	47.75	A
Chemical Total	397.19	34		
PROPIONIC ACID				
Grape, Wine	24.41	8	216.00	A
Landscape Maintenance	8.13			
Chemical Total	32.54	8		
PROPOXUR				
Structural Pest Control	0.13			
Chemical Total	0.13			
PROPYLENE GLYCOL				
Apple	2.09	3	12.50	A
Grape, Wine	0.03	1	1.00	A
Landscape Maintenance	0.09			
N-Grnhs Flower	0.09		40.00	U
Chemical Total	2.31	4		
PYRACLOSTROBIN				
Grape, Wine	91.55	120	1,080.21	A
Landscape Maintenance	24.43			
Nectarine	0.66	4	7.50	A
Peach	1.63	10	18.50	A
Chemical Total	118.27	134		
PYRAFLUFEN-ETHYL				
Grape, Wine	0.63	10	128.65	A
Chemical Total	0.63	10		
PYRETHRINS				
Grape, Wine	2.21	7	45.90	A
Landscape Maintenance	< 0.01			
N-Grnhs Flower	0.05		30.00	U
Public Health	0.26			
Structural Pest Control	40.02			
Chemical Total	42.54	7		
PYRIPROXYFEN				
Landscape Maintenance	< 0.01	1	1.00	A

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Structural Pest Control	0.31			
Chemical Total	0.32	1		
QST 713 STRAIN OF DRIED BACILLUS SUBTILIS				
Grape, Wine	11.66	9	72.05	A
Chemical Total	11.66	9		
QUINCLORAC				
Landscape Maintenance	12.84			
N-Grnhs Flower	0.14			
N-Grnhs Transplants	0.38			
Chemical Total	13.35			
QUINCLORAC, DIMETHYLAMINE SALT				
Landscape Maintenance	0.52			
Chemical Total	0.52			
QUINOXYFEN				
Cherry	1.33	4	14.00	A
Grape, Wine	85.72	112	965.53	A
Chemical Total	87.05	116		
REYNOUTRIA SACHALINENSIS				
Grape, Wine	0.54	1	2.00	A
Chemical Total	0.54	1		
RIMSULFURON				
Grape, Wine	2.90	6	53.30	A
Chemical Total	2.90	6		
SAFLUFENACIL				
Apple	0.04	1	1.00	A
Chemical Total	0.04	1		
SETHOXYDIM				
Grape, Wine	30.87	7	27.66	A
Landscape Maintenance	0.02			
Chemical Total	30.89	7		
SILICA AEROGEL				
Public Health	10.45			
Structural Pest Control	5.04			
Chemical Total	15.49			
SILICONE DEFOAMER				
Landscape Maintenance	0.01			
Structural Pest Control	0.02			
Chemical Total	0.03			
SIMAZINE				
Apple	9.45	3	3.50	A

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Grape, Wine	583.20	21	189.50	A
Landscape Maintenance	199.18			
Uncultivated Ag	84.11		28.00	A
Uncultivated Non-Ag	0.70	1	0.33	A
Chemical Total	876.64	25		
SODIUM BROMIDE				
Water (Industrial)	4.93		1.00	A
Chemical Total	4.93			
SODIUM CARBONATE PEROXYHYDRATE				
Landscape Maintenance	86.38			
Chemical Total	86.38			
SODIUM CHLORATE				
Landscape Maintenance	17.82			
Chemical Total	17.82			
SODIUM DIISOOCTYLSULFOSUCCINATE				
Grape, Wine	0.40	3	44.37	A
Landscape Maintenance	0.48			
Rights Of Way	0.03			
Chemical Total	0.92	3		
SODIUM HYPOCHLORITE				
Water (Industrial)	3.40		1.00	A
Chemical Total	3.40			
SODIUM NITRATE				
Landscape Maintenance	0.23			
Vertebrate Control	17.09			
Chemical Total	17.33			
SODIUM POLYACRYLATE				
Landscape Maintenance	< 0.01			
Chemical Total	< 0.01			
SODIUM XYLENE SULFONATE				
Landscape Maintenance	0.16			
Structural Pest Control	0.18			
Chemical Total	0.34			
SPINETORAM				
Apple	43.54	95	424.50	A
Asian Pear	0.64	3	6.00	A
Nectarine	0.55	4	7.00	A
Peach	2.38	8	20.25	A
Pear	8.74	15	72.00	A
Plum	0.78	3	10.00	A
Pluot	0.08	1	1.00	A
Chemical Total	56.70	129		

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SPINOSAD				
Apple	< 0.01	4	0.40	A
Grape, Wine	0.15	3	3.00	A
Nectarine	1.30	7	9.50	A
Olive	< 0.01	3	6.00	A
Peach	1.52	8	11.75	A
Chemical Total	2.97	25		
SPIROMESIFEN				
Landscape Maintenance	0.05			
Chemical Total	0.05			
SPIROTETRAMAT				
Apple	0.07	1	5.00	A
Grape, Wine	1.98	16	144.69	A
Chemical Total	2.05	17		
STREPTOMYCES LYDICUS WYEC 108				
Landscape Maintenance	< 0.01			
Chemical Total	< 0.01			
STREPTOMYCIN SULFATE				
Apple	6.13	17	51.00	A
Asian Pear	0.28	1	2.50	A
Landscape Maintenance	0.22			
Pear	10.08	7	31.00	A
Chemical Total	16.72	25		
STRYCHNINE				
Apple	0.02	6	39.50	A
Christmas Tree	< 0.01	2	2.00	A
Forest, Timberland	4.25	77	1,994.74	A
Landscape Maintenance	< 0.01			
Pear	< 0.01	1	1.00	A
Structural Pest Control	0.06			
Chemical Total	4.33	86		
STYRENE BUTADIENE COPOLYMER				
Grape, Wine	0.04	1	1.00	A
Chemical Total	0.04	1		
SULFAQUINOXALINE				
Structural Pest Control	< 0.01			
Chemical Total	< 0.01			
SULFENTRAZONE				
Landscape Maintenance	1.14			
Chemical Total	1.14			
SULFLURAMID				
Structural Pest Control	< 0.01			

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Chemical Total		< 0.01			
SULFOMETURON-METHYL					
Landscape Maintenance		11.04			
Rights Of Way		34.46			
		2.91	3	48.00	A
Total Pounds On This Commodity	37.37				
Chemical Total		48.41	3		
SULFOSULFURON					
Landscape Maintenance		0.09			
Chemical Total		0.09			
SULFUR					
Grape		57.90	9	12.12	A
Grape, Wine		20,922.09	615	5,158.98	A
Landscape Maintenance		0.17			
Nectarine		143.52	15	18.20	A
Peach		324.00	22	44.50	A
Pear		5.60	2	1.00	A
Plum		3.20	3	0.60	A
Vertebrate Control		12.88			
Chemical Total		21,469.36	666		
SULFUR DIOXIDE					
Fumigation, Other		30.94			
Industrial Site		1.00		36.00	U
Regulatory Pest Control		0.06	1	20.00	U
Chemical Total		32.00	1		
SULFURYL FLUORIDE					
Structural Pest Control		685.92			
Chemical Total		685.92			
TALL OIL					
Grape, Wine		21.43	21	174.68	A
Landscape Maintenance		6.56			
Rights Of Way		0.04			
Structural Pest Control		< 0.01			
Chemical Total		28.03	21		
TALL OIL FATTY ACIDS					
Apple		0.26	16	71.00	A
Forest, Timberland		530.34	24	820.83	A
Grape, Wine		3.05	115	1,106.63	A
Nectarine		0.02	1	2.50	A
Peach		< 0.01	1	0.50	A
Rights Of Way		211.52			
Walnut		0.29	4	72.00	A
Chemical Total		745.49	161		
TEBUCONAZOLE					

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Grape, Wine		23.49	22	209.80	A
Landscape Maintenance		3.53			
Nectarine		0.20	2	1.00	A
Chemical Total		27.22	24		
TETRACONAZOLE					
Grape, Wine		12.64	42	367.89	A
Chemical Total		12.64	42		
TETRAMETHRIN					
Structural Pest Control		< 0.01			
Chemical Total		< 0.01			
ALPHA-[PARA-(1,1,3,3-TETRAMETHYLBUTYL)PHENYL]-OMEGA-HYDROXYPOLY(OXYETHYLENE)					
Landscape Maintenance		0.61			
Structural Pest Control		0.67			
Chemical Total		1.29			
TETRAPOTASSIUM PYROPHOSPHATE					
Landscape Maintenance		0.08			
Structural Pest Control		0.09			
Chemical Total		0.17			
THIAMETHOXAM					
Landscape Maintenance		7.05			
Structural Pest Control		7.58			
Chemical Total		14.62			
THIOPHANATE-METHYL					
Apple		0.18	1	0.10	A
Landscape Maintenance		23.83			
N-Outdr Plants In Containers		0.75	3	0.37	A
		0.25	1	5,000.00	S
Total Pounds On This Commodity	1.00				
Peach		0.53	1	0.25	A
Pear		0.09	1	0.05	A
Chemical Total		25.62	7		
THYME					
Landscape Maintenance		0.02			
Structural Pest Control		111.39			
Chemical Total		111.42			
THYMOL					
Beehive		39.66	7	1,010.00	U
Chemical Total		39.66	7		
TRIADIMEFON					
Landscape Maintenance		118.10			
Chemical Total		118.10			

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TRICLOPYR, BUTOXYETHYL ESTER					
Forest, Timberland		2,036.70	30	594.00	A
		7.03	4	686,400.00	S
Total Pounds On This Commodity	2,043.73				
Landscape Maintenance		242.70			
N-Outdr Flower		0.08			
N-Outdr Transplants		0.07			
Pastureland		43.03	10	134.00	A
Rangeland		146.27	100	331.12	A
Rights Of Way		149.07			
		9.25	3	3.00	A
Total Pounds On This Commodity	158.33				
Structural Pest Control		0.34			
Uncultivated Non-Ag		34.98	1	50.00	A
Chemical Total		2,669.52	148		
TRICLOPYR, TRIETHYLAMINE SALT					
Forest, Timberland		35.84	1	15.26	A
Landscape Maintenance		170.73			
Rights Of Way		55.71			
Uncultivated Non-Ag		4.71		6.00	A
Chemical Total		267.00	1		
TRIETHANOLAMINE					
Landscape Maintenance		0.21			
Structural Pest Control		0.23			
Chemical Total		0.43			
TRIFLOXYSTROBIN					
Apple		3.81	18	60.00	A
Grape, Wine		25.67	73	606.86	A
Landscape Maintenance		17.92			
Peach		0.02	1	0.25	A
Chemical Total		47.42	92		
TRIFLUMIZOLE					
Grape, Wine		58.84	37	274.13	A
Chemical Total		58.84	37		
TRIFLURALIN					
Landscape Maintenance		29.00			
Uncultivated Non-Ag		2.92	1	5.48	A
Chemical Total		31.91	1		
ALPHA-2,6,8-TRIMETHYL-4-NONYLOXY-OMEGA-HYDROXYPOLY (OXYETHYLENE)					
Grape, Wine		0.02	1	1.00	A
Chemical Total		0.02	1		
TRINEXAPAC-ETHYL					
Landscape Maintenance		41.94			
		0.08	1	3.00	A

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Chemical Commodity		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Total Pounds On This Commodity	42.02				
Chemical Total		42.02	1		
TRITICONAZOLE					
Landscape Maintenance		60.03			
Chemical Total		60.03			
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)					
Forest, Timberland		533.39	26	870.83	A
Grape, Wine		0.66	7	40.15	A
Landscape Maintenance		18.12			
N-Outdr Transplants		8.38	3	45.00	A
Rangeland		2.08	8	4.10	A
Rights Of Way		71.26			
Water Area		0.01		1.00	U
Chemical Total		633.91	44		
VINCLOZOLIN					
Landscape Maintenance		9.44			
Chemical Total		9.44			
VINYL POLYMER					
Grape, Wine		0.59	7	40.15	A
Chemical Total		0.59	7		
WARFARIN					
Structural Pest Control		< 0.01			
Chemical Total		< 0.01			
XYLENE					
Landscape Maintenance		0.28			
Chemical Total		0.28			
YUCCA SCHIDIGERA					
Grape, Wine		3.86	12	54.00	A
Nectarine		0.01	1	0.10	A
Peach		0.78	2	7.50	A
Pear		0.11	2	1.00	A
Plum		0.05	2	0.40	A
Chemical Total		4.80	19		
ZINC PHOSPHIDE					
Apple		0.80	2	20.00	A
Landscape Maintenance		15.88			
Structural Pest Control		0.35			
Chemical Total		17.03	2		
ZIRAM					
Apple		278.16	14	61.00	A
Landscape Maintenance		2.47			
Peach		30.41	3	5.50	A

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Chemical Commodity	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Chemical Total	311.04	17		
El Dorado County Total	143,501.60	5,461		

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Commodity Chemical	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
APPLE				
ACETAMIPRID	3.37	14	36.10	A
ALPHA-ALKYL (C9-C11)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	161.30	5	22.00	A
ALPHA-PINENE BETA-PINENE COPOLYMER	18.62	16	71.00	A
ALLYLOXYPOLYETHYLENE GLYCOL ACETATE	0.42	1	5.00	A
AZINPHOS-METHYL	2.25	3	4.50	A
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES	0.14	1	0.10	A
BIFENAZATE	0.28	3	4.50	A
N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXYETHYLENE)ETHYL) ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS	0.79	16	71.00	A
2-BUTOXYETHANOL	3.31	3	12.50	A
CAPTAN	6.45	4	6.00	A
CAPTAN, OTHER RELATED	0.15	4	6.00	A
CARBARYL	17.48	6	21.50	A
CHLORANTRANILIPROLE	14.73	48	156.00	A
COPPER HYDROXIDE	5.50	10	12.20	A
COPPER OXYCHLORIDE	1.60	6	10.45	A
DIAZINON	101.50	20	62.50	A
E,E-8,10-DODECADIEN-1-OL	9.59	22	85.00	A
FENARIMOL	0.03	1	0.50	A
GLUFOSINATE-AMMONIUM	19.09	8	38.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT	162.85	32	102.00	A
GLYPHOSATE, POTASSIUM SALT	0.69	1	2.00	A
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE	1.46	1	5.00	A
KRESOXIM-METHYL	11.36	18	62.00	A
LAURYL ALCOHOL	5.38	22	85.00	A
LIME-SULFUR	2,302.60	15	105.00	A
MANCOZEB	1,830.66	81	420.50	A
MINERAL OIL	9,481.93	167	642.80	A
MYCLOBUTANIL	58.60	60	348.00	A
MYRISTYL ALCOHOL	1.09	22	85.00	A
NAA, AMMONIUM SALT	0.27	4	13.50	A
1-NAPHTHALENEACETAMIDE	2.35	3	14.00	A
PARAQUAT DICHLORIDE	2.06	1	2.00	A
PENDIMETHALIN	0.42	1	0.50	A
PETROLEUM DISTILLATES, REFINED	10.56	2	0.20	A
PETROLEUM OIL, PARAFFIN BASED	5,716.17	35	330.00	A
PETROLEUM OIL, UNCLASSIFIED	1,443.96	28	101.60	A
PHOSMET	17.85	3	6.10	A
POLYETHYLENE GLYCOL DIACETATE	0.04	1	5.00	A
POLY-I-PARA-MENTHENE	12.67	5	14.00	A
POLYOXYETHYLENE POLYOXYPROPYLENE	2.19	3	12.50	A
POLYOXYETHYLENE SORBITOL, MIXED ETHER ESTER	1.51	1	2.00	A
PROPYLENE GLYCOL	2.09	3	12.50	A
SAFLUFENACIL	0.04	1	1.00	A
SIMAZINE	9.45	3	3.50	A
SPINETORAM	43.54	95	424.50	A
SPINOSAD	< 0.01	4	0.40	A
SPIROTETRAMAT	0.07	1	5.00	A
STREPTOMYCIN SULFATE	6.13	17	51.00	A
STRYCHNINE	0.02	6	39.50	A
TALL OIL FATTY ACIDS	0.26	16	71.00	A
THIOPHANATE-METHYL	0.18	1	0.10	A

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TRIFLOXYSTROBIN	3.81	18	60.00	A
ZINC PHOSPHIDE	0.80	2	20.00	A
ZIRAM	278.16	14	61.00	A
Site Total	21,777.81	762		
APRICOT				
GLYPHOSATE, ISOPROPYLAMINE SALT	3.86	1	4.00	A
MYCLOBUTANIL	3.15	3	21.00	A
4-NONYLPHENOL, FORMALDEHYDE RESIN, PROPOXYLATED	3.58	3	21.00	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	4.33	3	21.00	A
ORYZALIN	4.16	1	4.00	A
Site Total	19.08	8		
ASIAN PEAR				
ABAMECTIN	0.04	2	3.50	A
CHLORANTRANILIPROLE	0.34	2	3.50	A
COPPER HYDROXIDE	0.02	2	0.20	A
COPPER OXYCHLORIDE	0.02	2	0.20	A
E,E-8,10-DODECADIEN-1-OL	0.35	2	3.50	A
GLYPHOSATE, ISOPROPYLAMINE SALT	7.04	4	7.00	A
LAURYL ALCOHOL	0.20	2	3.50	A
MINERAL OIL	139.96	6	8.20	A
MYRISTYL ALCOHOL	0.04	2	3.50	A
PARAQUAT DICHLORIDE	2.06	1	2.00	A
PETROLEUM OIL, PARAFFIN BASED	0.31	1	2.00	A
POLYOXYETHYLENE SORBITOL, MIXED ETHER ESTER	1.51	1	2.00	A
SPINETORAM	0.64	3	6.00	A
STREPTOMYCIN SULFATE	0.28	1	2.50	A
Site Total	152.81	24		
BEEHIVE				
THYMOL	39.66	7	1,010.00	U
Site Total	39.66	7		
BLACKBERRY				
GLYPHOSATE, ISOPROPYLAMINE SALT	1.51	1	1.00	A
MALATHION	1.96	1	1.50	A
NAPROPAMIDE	6.00	1	1.00	A
Site Total	9.47	3		
BLUEBERRY				
GLYPHOSATE, ISOPROPYLAMINE SALT	7.54	3	5.00	A
NAPROPAMIDE	18.00	2	3.00	A
ORYZALIN	4.16	1	2.00	A
Site Total	29.70	6		
CHERRY				
CHLORANTRANILIPROLE	0.07	1	1.00	A
COPPER HYDROXIDE	13.22	6	14.20	A
COPPER OXYCHLORIDE	14.65	6	14.20	A
FENPROPATHRIN	1.49	2	7.00	A
GIBBERELLINS	0.10	4	11.00	A

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GLYPHOSATE, ISOPROPYLAMINE SALT		7.72	3	8.00	A
METHYL ANTHRANILATE		2.01	2	7.00	A
MINERAL OIL		156.68	6	14.20	A
ORYZALIN		1.04	1	1.00	A
PERMETHRIN		1.23	2	7.00	A
PROPICONAZOLE		1.00	3	9.00	A
QUINOXYFEN		1.33	4	14.00	A
Site Total		200.54	34		
CHRISTMAS TREE					
CHLOROTHALONIL		44.08	4	28.00	A
CHLORPYRIFOS		4.00	1	4.00	A
ESFENVALERATE		1.37	4	28.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT		13.92	3	8.00	A
GLYPHOSATE, POTASSIUM SALT		33.10	1	17.00	A
HEXAZINONE		3.56	2	3.50	A
ORYZALIN		50.62	2	21.00	A
STRYCHNINE		< 0.01	2	2.00	A
Site Total		150.65	19		
FOREST, TIMBERLAND					
AMINOPYRALID, TRIISOPROPANOLAMINE SALT		22.12	5	180.80	A
BUTYL ALCOHOL		0.19	2	369,600.00	S
		0.05	3	3.00	A
Total Pounds On This Chemical	0.24				
CALCIUM CHLORIDE		20.53	67	1,839.71	A
CITRIC ACID		57.02	67	1,839.71	A
2,4-D, DIMETHYLAMINE SALT		1.23	1	2.00	A
2,4-D, 2-ETHYLHEXYL ESTER		1,023.62	21	822.00	A
2,4-D, ISOOCTYL ESTER		88.39	3	53.00	A
DIMETHYLPOLYSILOXANE		< 0.01	2	369,600.00	S
		< 0.01	3	3.00	A
Total Pounds On This Chemical	< 0.01				
FATTY ACIDS, METHYL ESTERS		17.74	2	39.27	A
GLYPHOSATE, DIMETHYLAMINE SALT		139.75	11	41.40	A
GLYPHOSATE, ISOPROPYLAMINE SALT		4,689.82	51	1,275.51	A
GLYPHOSATE, POTASSIUM SALT		5,589.61	21	650.11	A
HEXAZINONE		29.36	5	135.80	A
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE		155.34	15	453.37	A
IMAZAPYR, ISOPROPYLAMINE SALT		128.76	18	379.84	A
LECITHIN		6.10	2	50.00	A
METHYLATED SOYBEAN OIL		4,237.08	74	2,114.41	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)		297.59	53	1,285.85	A
		1.67	2	369,600.00	S
Total Pounds On This Chemical	299.26				
OLEIC ACID, METHYL ESTER		466.02	15	453.37	A
POLYALKENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE		37.55	24	678.89	A
STRYCHNINE		4.25	77	1,994.74	A
TALL OIL FATTY ACIDS		530.34	24	820.83	A
TRICLOPYR, BUTOXYETHYL ESTER		2,036.70	30	594.00	A
		7.03	4	686,400.00	S
Total Pounds On This Chemical	2,043.73				
TRICLOPYR, TRIETHYLAMINE SALT		35.84	1	15.26	A
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)		533.39	26	870.83	A

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Commodity Chemical	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
Site Total	20,157.09	411		
FUMIGATION, OTHER				
SULFUR DIOXIDE	30.94			
Site Total	30.94			
GRAPE				
COPPER HYDROXIDE	0.03	2	0.50	A
COPPER SULFATE (BASIC)	0.99	1	0.25	A
LIME-SULFUR	2.74	3	0.15	A
PETROLEUM OIL, UNCLASSIFIED	1.80	2	0.50	A
POLY-I-PARA-MENTHENE	5.46	3	12.00	A
SULFUR	57.90	9	12.12	A
Site Total	68.92	20		
GRAPE, WINE				
ABAMECTIN	9.35	60	491.82	A
ACETAMIPRID	6.36	13	147.00	A
ALPHA-ALKYL (C9-C11)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	111.42	115	848.05	A
ALPHA-ALKYL (C9-C16)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	2.67	3	18.00	A
ALPHA-PINENE BETA-PINENE COPOLYMER	216.83	115	1,106.63	A
ALLYLOXYPOLYETHYLENE GLYCOL ACETATE	7.65	13	116.50	A
ALUMINUM PHOSPHIDE	0.84	1	0.50	A
AMMONIUM NITRATE	1.44	30	197.82	A
AMMONIUM SULFATE	36.90	31	201.42	A
AZOXYSTROBIN	0.42	2	2.00	A
BACILLUS PUMILUS, STRAIN QST 2808	2.55	3	27.50	A
BIFENAZATE	110.88	44	365.07	A
N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXYETHYLENE)ETHYL) ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS	16.73	126	1,172.63	A
N,N-BIS-(2-(OMEGA-HYDROXYPOLY(OXYETHYLENE)/POLY (OXYPROPYLENE))ETHYL)ALKYL (C8-C18) AMINE	6.17	2	31.40	A
BOSCALID	180.24	120	1,080.21	A
BUPROFEZIN	152.56	42	417.70	A
BUTYL ALCOHOL	76.45	102	864.00	A
CAPTAN	0.78	1	0.50	A
CAPTAN, OTHER RELATED	0.02	1	0.50	A
CARFENTRAZONE-ETHYL	1.83	22	120.35	A
CASTOR OIL ETHOXYLATE	21.43	21	174.68	A
CHENOPODIUM AMBROSIODES NEAR AMBROSIODES	29.33	2	38.00	A
CITRIC ACID	9.16	3	12.13	A
COPPER HYDROXIDE	105.69	41	231.79	A
COPPER OXYCHLORIDE	63.09	25	146.35	A
COPPER SULFATE (BASIC)	5.33	1	4.00	A
CYFLUFENAMID	0.23	5	10.00	A
CYPRODINIL	35.23	18	140.25	A
DIETHYLENE GLYCOL	0.06	1	6.00	A
DIFENOCONAZOLE	5.64	7	80.50	A
DIMETHYLPOLYSILOXANE	1.13	121	1,051.01	A
DIMETHYL SILICONE FLUID EMULSION	0.37	3	30.00	A
ALPHA-(PARA-DODECYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	0.67	1	12.00	A

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EMULSIFIABLE METHYLATED VEGETABLE OIL	6.29	7	40.15	A
ETHYLENE GLYCOL MONOMETHYL ETHER	2.98	3	44.37	A
ETOXAZOLE	0.27	1	1.00	A
FATTY ACIDS, MIXED	1.09	5	235.00	A
FATTY ACIDS, C16-C18 AND C18-UNSATURATED, METHYL ESTERS	28.26	11	66.00	A
FENARIMOL	6.33	54	356.95	A
FENHEXAMID	56.49	15	113.49	A
FENPYROXIMATE	11.56	17	155.68	A
FLUMIOXAZIN	97.41	66	379.17	A
GIBBERELLINS	0.18	6	24.95	A
GLUFOSINATE-AMMONIUM	122.57	46	244.83	A
GLYPHOSATE, ISOPROPYLAMINE SALT	2,299.75	218	1,727.46	A
GLYPHOSATE, POTASSIUM SALT	177.76	14	52.86	A
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE	26.44	13	116.50	A
IMIDACLOPRID	17.08	36	258.37	A
ISOOCTYL PHTHALATE	3.02	3	44.37	A
ISOPROPYL ALCOHOL	9.74	23	234.98	A
ISOXABEN	44.33	21	120.74	A
KAOLIN	2,924.10	17	129.11	A
KRESOXIM-METHYL	40.93	41	278.31	A
LECITHIN	27.09	11	234.00	A
LIME-SULFUR	52.34	10	5.68	A
METHOXYFENOZIDE	21.39	10	94.69	A
METHYLATED SOYBEAN OIL	9.87	1	6.00	A
METRAFENONE	67.83	26	271.50	A
MINERAL OIL	3,914.77	208	1,809.53	A
MORPHOLINE	1.31	3	44.37	A
MYCLOBUTANIL	148.26	145	1,314.25	A
4-NONYLPHENOL, FORMALDEHYDE RESIN, PROPOXYLATED	115.82	78	874.01	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	831.43	175	1,791.51	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE), BRANCHED	2.06	3	44.37	A
NONYL PHENOXY POLYOXYETHYLENE ETHANOL-IODINE COMPLEX	79.89	25	307.01	A
OLEIC ACID	4.23	3	44.37	A
OLEIC ACID, ETHYL ESTER	13.51	1	21.00	A
OLEIC ACID, METHYL ESTER	12.48	3	18.00	A
ORGANOSILICONE, POLY OXYALKYLENE ETHER COPOLYMER	1.50	1	6.00	A
ORYZALIN	234.58	34	162.69	A
OXYFLUORFEN	230.66	96	762.10	A
PARAQUAT DICHLORIDE	26.59	9	48.15	A
PENDIMETHALIN	191.00	25	149.84	A
PETROLEUM DISTILLATES	91.60	3	17.50	A
PETROLEUM DISTILLATES, REFINED	11,393.93	184	1,362.71	A
PETROLEUM OIL, UNCLASSIFIED	0.41	1	0.30	A
PHOSPHORIC ACID	1.04	9	45.75	A
POLYALKENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE	0.01	1	1.00	A
POLYBUTENES	5.05	11	66.00	A
POLYETHER MODIFIED POLYSILOXANE	0.34	7	40.15	A
POLYETHYLENE GLYCOL	35.43	19	187.01	A
POLYETHYLENE GLYCOL DIACETATE	0.70	13	116.50	A
POLY-I-PARA-MENTHENE	130.37	45	355.70	A
POLYOXYETHYLENE DIOLEATE	2.40	2	27.00	A
POLYOXYETHYLENE SORBITAN MONOOLEATE	0.68	1	21.00	A

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POLYOXYETHYLENE SOYBEAN OIL FATTY ACID ESTER	160.73	21	174.68	A
POTASSIUM BICARBONATE	138.09	17	96.40	A
POTASSIUM HYDROXIDE	0.34	2	8.53	A
POTASSIUM NITRATE	3.27	2	8.53	A
PROPIONIC ACID	24.41	8	216.00	A
PROPYLENE GLYCOL	0.03	1	1.00	A
PYRACLOSTROBIN	91.55	120	1,080.21	A
PYRAFLUFEN-ETHYL	0.63	10	128.65	A
PYRETHRINS	2.21	7	45.90	A
QST 713 STRAIN OF DRIED BACILLUS SUBTILIS	11.66	9	72.05	A
QUINOXYFEN	85.72	112	965.53	A
REYNOUTRIA SACHALINENSIS	0.54	1	2.00	A
RIMSULFURON	2.90	6	53.30	A
SETHOXYDIM	30.87	7	27.66	A
SIMAZINE	583.20	21	189.50	A
SODIUM DIISOOCTYLSULFOSUCCINATE	0.40	3	44.37	A
SPINOSAD	0.15	3	3.00	A
SPIROTETRAMAT	1.98	16	144.69	A
STYRENE BUTADIENE COPOLYMER	0.04	1	1.00	A
SULFUR	20,922.09	615	5,158.98	A
TALL OIL	21.43	21	174.68	A
TALL OIL FATTY ACIDS	3.05	115	1,106.63	A
TEBUCONAZOLE	23.49	22	209.80	A
TETRACONAZOLE	12.64	42	367.89	A
TRIFLOXYSTROBIN	25.67	73	606.86	A
TRIFLUMIZOLE	58.84	37	274.13	A
ALPHA-2,6,8-TRIMETHYL-4-NONYLOXY-OMEGA-HYDROXYPOLY(OXYETHYLENE)	0.02	1	1.00	A
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)	0.66	7	40.15	A
VINYL POLYMER	0.59	7	40.15	A
YUCCA SCHIDIGERA	3.86	12	54.00	A
Site Total	46,955.65	3,102		
INDUSTRIAL SITE				
SULFUR DIOXIDE	1.00		36.00	U
Site Total	1.00			
LANDSCAPE MAINTENANCE				
ACEPHATE	60.38			
ACIBENZOLAR-S-METHYL	0.94			
ALPHA-ALKYL (C9-C16)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	1.27			
ALKYL (C8,C10) POLYGLUCOSIDE	0.53			
ALLYLOXYPOLYETHYLENE GLYCOL ACETATE	19.67			
ALUMINUM PHOSPHIDE	3.17			
AMINOPYRALID, TRIISOPROPANOLAMINE SALT	67.68			
AMMONIUM NITRATE	0.25			
AMMONIUM PROPIONATE	0.31			
AMMONIUM SULFATE	0.59			
AZADIRACHTIN	0.02			
AZOXYSTROBIN	36.67			
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, SEROTYPE 3A,3B	3.27			
BACILLUS THURINGIENSIS (BERLINER), SUBSP. KURSTAKI, STRAIN SA-11	< 0.01			
BENEFIN	8.16			

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BENSULIDE		19.80			
BENZOIC ACID		8.27			
BIFENTHRIN		10.15			
BOSCALID		7.73			
BROMETHALIN		< 0.01			
BUTYL ALCOHOL		10.72			
CALCIUM CHLORIDE		47.94			
CARBARYL		6.98			
CARBON		0.04			
CARFENTRAZONE-ETHYL		2.96			
CHLORANTRANILIPROLE		15.68			
CHLOROPHACINONE		0.01			
CHLOROTHALONIL		1,444.86			
CHLORPYRIFOS		0.12			
CHLORSULFURON		32.41			
CITRIC ACID		133.31			
CLOPYRALID, MONOETHANOLAMINE SALT		279.68			
CLOPYRALID,TRIETHYLAMINE SALT		4.45			
CLOTHIANIDIN		2.88			
COCONUT DIETHANOLAMIDE		0.12			
COPPER AMMONIUM COMPLEX		0.55			
COPPER DIAMMONIUM DIACETATE COMPLEX		13.62			
COPPER ETHANOLAMINE COMPLEXES, MIXED		8.91			
COPPER HYDROXIDE		18.41			
COYOTE URINE		0.35			
CYFLUTHRIN		3.97			
BETA-CYFLUTHRIN		4.17			
CYPERMETHRIN		0.72			
2,4-D, DIMETHYLAMINE SALT		11.54			
2,4-D, 2-ETHYLHEXYL ESTER		32.09			
DELTAMETHRIN		0.84			
DICAMBA		2.82			
DICAMBA, DIMETHYLAMINE SALT		1.53			
DIETHYLENE GLYCOL		2.83			
DIFENOCONAZOLE		1.47			
DIKEGULAC SODIUM		2.61			
DIMETHENAMID-P		8.25			
DIMETHYL ALKYL TERTIARY AMINES		9.00			
DIMETHYLPOLYSILOXANE		0.98			
DINOTEFURAN		10.20			
DIPHACINONE		0.05			
DIQUAT DIBROMIDE		11.90			
DITHIOPYR		77.62			
		22.00	1	65.00	A
Total Pounds On This Chemical	99.62				
DIURON		265.46			
		16.00	1	5.00	A
Total Pounds On This Chemical	281.46				
DODECYLBENZENE SULFONIC ACID		0.52			
2-(2,4-DP), DIMETHYLAMINE SALT		0.08			
EDTA, TETRASODIUM SALT		0.03			
EMAMECTIN BENZOATE		1.08			
EPN		0.19			
ETHEPHON		213.03			
		20.09	1	6.00	A
Total Pounds On This Chemical	233.12				
ETHOFUMESATE		13.52			

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ETHYLENE GLYCOL		1.51			
ETHYLENE GLYCOL MONOMETHYL ETHER		3.61			
FATTY ACIDS, METHYL ESTERS		93.72			
FATTY ACIDS, MIXED		6.96			
FIPRONIL		< 0.01			
FLUAZIFOP-P-BUTYL		0.17			
FLUDIOXONIL		19.07			
FLUMIOXAZIN		1.75			
FLUOXASTROBIN		2.44			
FLURIDONE		4.68			
FLUROXYPYR, 1-METHYLHEPTYL ESTER		25.30			
FLUTOLANIL		108.50			
TAU-FLUVALINATE		0.52			
FORAMSULFURON		0.44			
FOSETYL-AL		140.00			
FOX URINE		0.15			
GLYPHOSATE, ISOPROPYLAMINE SALT		3,796.65			
		60.83	4	11.25	A
Total Pounds On This Chemical	3,857.48				
GLYPHOSATE, MONOAMMONIUM SALT		43.82			
GLYPHOSATE, POTASSIUM SALT		4,639.66			
		0.26	1	1.00	A
Total Pounds On This Chemical	4,639.91				
HALOSULFURON-METHYL		162.55			
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE		67.96			
IMAZAPYR, ISOPROPYLAMINE SALT		1.04			
IMIDACLOPRID		68.71			
INDAZIFLAM		0.47			
INDOXACARB		< 0.01			
IPRODIONE		72.31			
IRON PHOSPHATE		0.82			
ISOOCTYL PHTHALATE		3.66			
ISOPROPYL ALCOHOL		28.31			
ISOXABEN		45.56			
KEROSENE		16.01			
LAMBDA-CYHALOTHRIN		0.25			
LECITHIN		30.87			
MANCOZEB		262.27			
MCPA, DIMETHYLAMINE SALT		9.60			
MCPA, 2-ETHYL HEXYL ESTER		0.01			
MCPA, ISOOCTYL ESTER		0.87			
MCPP, DIMETHYLAMINE SALT		0.09			
MCPP, POTASSIUM SALT		11.38			
MCPP-P, DIMETHYLAMINE SALT		1.90			
MECOPROP-P		8.07			
MEFENOXAM		16.36			
MEFENOXAM, OTHER RELATED		0.50			
MESOTRIONE		0.03			
METALDEHYDE		0.18			
METCONAZOLE		10.57			
METHYLATED SOYBEAN OIL		2,341.08			
METHYL PARATHION		0.37			
METHYL SILICONE RESINS		0.08			
S-METOLACHLOR		36.97			
MINERAL OIL		35.99			
MORPHOLINE		1.58			

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MSMA		1.52			
MYCLOBUTANIL		1.50			
NAA, AMMONIUM SALT		2.47			
NONANOIC ACID		0.77			
NONANOIC ACID, OTHER RELATED		0.04			
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)		621.31			
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE), BRANCHED		2.49			
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE), PHOSPHATE ESTER		0.22			
NOVIFLUMURON		< 0.01			
OLEIC ACID		5.12			
OLEIC ACID, METHYL ESTER		358.87			
ORYZALIN		1,726.40			
OXADIAZON		0.02			
OXYFLUORFEN		50.63			
PACLOBUTRAZOL		2.63			
		0.25	1	3.00	A
Total Pounds On This Chemical	2.88				
PCNB		540.00			
PENDIMETHALIN		406.81			
PERMETHRIN		78.57			
PETROLEUM OIL, PARAFFIN BASED		31.95			
PETROLEUM OIL, UNCLASSIFIED		97.60			
PHENYLETHYL PROPIONATE		0.01			
PHOSPHORIC ACID		0.10			
POLYACRYLAMIDE POLYMER		0.14			
POLYALKENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE		27.40			
POLYETHYLENE GLYCOL DIACETATE		1.79			
POLYOXIN D, ZINC SALT		5.85			
POLYOXYETHYLENE SORBITOL, MIXED ETHER ESTER		155.76			
POLYPROPYLENE GLYCOL		0.02			
POLYSACCHARIDE POLYMER		0.02			
POTASH SOAP		4.16			
POTASSIUM PHOSPHITE		187.81			
		15.63	1	3.00	A
Total Pounds On This Chemical	203.44				
PRODIAMINE		98.92			
PROPAMOCARB HYDROCHLORIDE		29.76			
PROPICONAZOLE		389.88			
PROPIONIC ACID		8.13			
PROPYLENE GLYCOL		0.09			
PYRACLOSTROBIN		24.43			
PYRETHRINS		< 0.01			
PYRIPROXYFEN		< 0.01	1	1.00	A
QUINCLORAC		12.84			
QUINCLORAC, DIMETHYLAMINE SALT		0.52			
SETHOXYDIM		0.02			
SILICONE DEFOAMER		0.01			
SIMAZINE		199.18			
SODIUM CARBONATE PEROXYHYDRATE		86.38			
SODIUM CHLORATE		17.82			
SODIUM DIISOOCTYLSULFOSUCCINATE		0.48			
SODIUM NITRATE		0.23			
SODIUM POLYACRYLATE		< 0.01			
SODIUM XYLENE SULFONATE		0.16			

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SPIROMESIFEN		0.05			
STREPTOMYCES LYDICUS WYEC 108		< 0.01			
STREPTOMYCIN SULFATE		0.22			
STRYCHNINE		< 0.01			
SULFENTRAZONE		1.14			
SULFOMETURON-METHYL		11.04			
SULFOSULFURON		0.09			
SULFUR		0.17			
TALL OIL		6.56			
TEBUCONAZOLE		3.53			
ALPHA-[PARA-(1,1,3,3-TETRAMETHYLBUTYL)PHENYL]-OMEGA-HYDROXYPOLY(OXYETHYLENE)		0.61			
TETRAPOTASSIUM PYROPHOSPHATE		0.08			
THIAMETHOXAM		7.05			
THIOPHANATE-METHYL		23.83			
THYME		0.02			
TRIADIMEFON		118.10			
TRICLOPYR, BUTOXYETHYL ESTER		242.70			
TRICLOPYR, TRIETHYLAMINE SALT		170.73			
TRIETHANOLAMINE		0.21			
TRIFLOXYSTROBIN		17.92			
TRIFLURALIN		29.00			
TRINEXAPAC-ETHYL		41.94			
		0.08	1	3.00	A
Total Pounds On This Chemical	42.02				
TRITICONAZOLE		60.03			
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)		18.12			
VINCLOZOLIN		9.44			
XYLENE		0.28			
ZINC PHOSPHIDE		15.88			
ZIRAM		2.47			
Site Total		21,171.98	12		
N-GRNHS FLOWER					
ACEPHATE		9.00		448.00	U
		0.02	1	0.01	A
Total Pounds On This Chemical	9.03				
ALLYLOXYPOLYETHYLENE GLYCOL ACETATE		2.61		110.00	U
BIFENTHRIN		0.53			
BUTYL ALCOHOL		0.19		80.00	U
CARFENTRAZONE-ETHYL		< 0.01	1	0.05	A
COPPER HYDROXIDE		0.32		74.00	U
COPPER OXYCHLORIDE		0.36		74.00	U
CYFLUTHRIN		< 0.01	1	0.01	A
2,4-D, 2-ETHYLHEXYL ESTER		0.01	1	0.05	A
DAMINOZIDE		0.15	1	0.05	A
DICAMBA		< 0.01	1	0.05	A
DICAMBA, DIMETHYLAMINE SALT		0.19			
DIMETHYLPOLYSILOXANE		< 0.01		80.00	U
DINOTEFURAN		16.41		627.00	U
DITHIOPYR		0.40			
FATTY ACIDS, MIXED		0.08		2.00	U
GLYPHOSATE, ISOPROPYLAMINE SALT		1.99	3	0.25	A
HALOSULFURON-METHYL		0.02			
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE		39.33		594.00	U

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IMIDACLOPRID		16.95		461.00	U
		0.93			
Total Pounds On This Chemical	17.88				
LIME-SULFUR		4.62		74.00	U
MCPA, DIMETHYLAMINE SALT		1.90			
MCPP-P, DIMETHYLAMINE SALT		0.38			
MECOPROP-P		< 0.01	1	0.05	A
METALDEHYDE		0.15	2	0.15	A
MYCLOBUTANIL		0.71			
		0.20		12.00	U
Total Pounds On This Chemical	0.91				
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)		2.62		122.00	U
OXADIAZON		0.23	6	0.40	A
PACLOBUTRAZOL		0.01	3	0.16	A
PETROLEUM OIL, UNCLASSIFIED		7.07			
POLYALKENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE		0.28		40.00	U
POLYETHYLENE GLYCOL DIACETATE		0.24		110.00	U
POTASSIUM PHOSPHITE		15.79		56.00	U
PROPYLENE GLYCOL		0.09		40.00	U
PYRETHRINS		0.05		30.00	U
QUINCLORAC		0.14			
Site Total		124.00	18		
N-GRNHS PLANTS IN CONTAINERS					
IMIDACLOPRID		0.03	1	0.13	A
PETROLEUM OIL, UNCLASSIFIED		3.53			
Site Total		3.57	1		
N-GRNHS TRANSPLANTS					
DICAMBA, DIMETHYLAMINE SALT		0.06			
HALOSULFURON-METHYL		0.02			
IMIDACLOPRID		0.48			
MCPA, DIMETHYLAMINE SALT		0.59			
MCPP-P, DIMETHYLAMINE SALT		0.12			
QUINCLORAC		0.38			
Site Total		1.64			
N-OUTDR FLOWER					
DICAMBA		0.06			
DICAMBA, DIMETHYLAMINE SALT		0.21			
DINOTEFURAN		0.03		3.00	U
DITHIOPYR		1.15			
IMIDACLOPRID		0.27		30.00	U
		0.25			
Total Pounds On This Chemical	0.52				
MCPA, DIMETHYLAMINE SALT		2.11			
MCPA, ISOOCTYL ESTER		0.95			
MCPP-P, DIMETHYLAMINE SALT		0.42			
MYCLOBUTANIL		0.40			
		0.04		2.00	U
Total Pounds On This Chemical	0.44				
POTASSIUM PHOSPHITE		0.48		20.00	U
PRODIAMINE		2.58			
TRICLOPYR, BUTOXYETHYL ESTER		0.08			

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Site Total		9.02			
N-OUTDR PLANTS IN CONTAINERS					
ABAMECTIN		< 0.01	1	3,150.00	S
BIFENTHRIN		< 0.01	1	150.00	S
CHLORFENAPYR		< 0.01	1	146.00	U
COPPER AMMONIUM CARBONATE		0.02		8.00	U
COPPER HYDROXIDE		9.22	3	4.50	A
DAZOMET		1,089.00	2	3.38	A
TAU-FLUVALINATE		0.20	1	1.00	A
		0.06	2	10,500.00	S
Total Pounds On This Chemical	0.26				
GLYPHOSATE, ISOPROPYLAMINE SALT		28.34	7	190,000.00	S
		5.61	2	1.75	A
Total Pounds On This Chemical	33.94				
GLYPHOSATE, POTASSIUM SALT		57.96	11	16.00	A
MEFENOXAM		0.03	2	0.25	A
MEFENOXAM, OTHER RELATED		< 0.01	2	0.25	A
MINERAL OIL		0.45		20.00	U
ORYZALIN		22.43	5	140,000.00	S
		1.00	1	1.00	A
Total Pounds On This Chemical	23.43				
OXYFLUORFEN		5.51	5	7.00	A
PETROLEUM DISTILLATES, REFINED		26.71	4	5.50	A
THIOPHANATE-METHYL		0.75	3	0.37	A
		0.25	1	5,000.00	S
Total Pounds On This Chemical	1.00				
Site Total		1,247.53	51		
N-OUTDR TRANSPLANTS					
DICAMBA		0.05			
ESFENVALERATE		1.89	1	22.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT		20.84	1	15.00	A
LAMBDA-CYHALOTHRIN		0.39	1	8.00	A
LECITHIN		16.76	3	45.00	A
MCPA, ISOOCTYL ESTER		0.75			
METHYLATED SOYBEAN OIL		8.38	3	45.00	A
ORYZALIN		16.64	1	15.00	A
OXYFLUORFEN		13.41	1	15.00	A
TRICLOPYR, BUTOXYETHYL ESTER		0.07			
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)		8.38	3	45.00	A
Site Total		87.55	8		
NECTARINE					
ALPHA-PINENE BETA-PINENE COPOLYMER		1.69	1	2.50	A
ALLYLOXYPOLYETHYLENE GLYCOL ACETATE		1.14	10	13.50	A
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES		0.59	2	0.60	A
N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXYETHYLENE)ETHYL) ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS		0.07	1	2.50	A
BOSCALID		1.31	4	7.50	A
BUTYL ALCOHOL		0.07	4	0.40	A
CARFENTRAZONE-ETHYL		0.17	6	9.00	A
CHLORANTRANILIPROLE		0.77	6	8.75	A

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COPPER HYDROXIDE		23.86	10	14.25	A
COPPER OXYCHLORIDE		10.48	5	8.00	A
DIFLUBENZURON		0.75	3	4.00	A
DIMETHYLPOLYSILOXANE		< 0.01	4	0.40	A
GLYPHOSATE, ISOPROPYLAMINE SALT		22.00	7	11.00	A
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE		3.93	10	13.50	A
MINERAL OIL		253.52	19	29.75	A
MYCLOBUTANIL		1.30	10	12.50	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)		0.62	4	0.40	A
PETROLEUM OIL, PARAFFIN BASED		0.44	1	0.10	A
PETROLEUM OIL, UNCLASSIFIED		14.14	2	1.00	A
POLYETHYLENE GLYCOL DIACETATE		0.10	10	13.50	A
POLY-I-PARA-MENTHENE		16.06	10	14.00	A
PROPICONAZOLE		1.04	8	10.50	A
PYRACLOSTROBIN		0.66	4	7.50	A
SPINETORAM		0.55	4	7.00	A
SPINOSAD		1.30	7	9.50	A
SULFUR		143.52	15	18.20	A
TALL OIL FATTY ACIDS		0.02	1	2.50	A
TEBUCONAZOLE		0.20	2	1.00	A
YUCCA SCHIDIGERA		0.01	1	0.10	A
Site Total		500.31	131		
OLIVE					
ALUMINUM PHOSPHIDE		1.47	23	11.50	A
GLYPHOSATE, ISOPROPYLAMINE SALT		2.35	5	3.50	A
ORYZALIN		2.78	3	2.00	A
SPINOSAD		< 0.01	3	6.00	A
Site Total		6.61	34		
PASTURELAND					
AMINOPYRALID, TRIISOPROPANOLAMINE SALT		1.36	2	9.00	A
BUTYL ALCOHOL		0.74	1	40.00	A
CLOPYRALID, MONOETHANOLAMINE SALT		0.56	2	3.00	A
2,4-D, DIMETHYLAMINE SALT		3.25	2	5.50	A
DIMETHYLPOLYSILOXANE		< 0.01	1	40.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT		9.65	5	15.50	A
		4.33	10	47,889.00	S
Total Pounds On This Chemical	13.97				
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)		6.66	1	40.00	A
TRICLOPYR, BUTOXYETHYL ESTER		43.03	10	134.00	A
Site Total		69.57	32		
PEACH					
ALPHA-PINENE BETA-PINENE COPOLYMER		0.33	1	0.50	A
ALLYLOXYPOLYETHYLENE GLYCOL ACETATE		1.47	13	17.75	A
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES		19.27	12	24.50	A
N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXYETHYLENE)ETHYL) ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS		0.01	1	0.50	A
BOSCALID		3.21	10	18.50	A

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CARFENTRAZONE-ETHYL	0.17	6	10.25	A
CHLORANTRANILIPROLE	1.38	11	16.75	A
CHLOROTHALONIL	10.99	4	4.00	A
CLOFENTEZINE	0.97	1	5.00	A
COPPER HYDROXIDE	54.25	30	30.55	A
COPPER OXYCHLORIDE	17.90	14	13.90	A
DIFLUBENZURON	2.51	8	11.25	A
ETHYLENE GLYCOL	3.05	2	5.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT	88.52	18	42.62	A
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE	5.08	13	17.75	A
ISOPROPYL ALCOHOL	0.55	2	5.00	A
LIME-SULFUR	3.94	7	0.57	A
MINERAL OIL	707.96	38	52.95	A
MYCLOBUTANIL	2.00	12	20.00	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	1.39	2	5.00	A
PENDIMETHALIN	2.10	1	2.00	A
PETROLEUM DISTILLATES, REFINED	19.35	2	0.50	A
PETROLEUM OIL, PARAFFIN BASED	29.61	2	8.00	A
PETROLEUM OIL, UNCLASSIFIED	4.36	2	4.50	A
PHOSMET	0.02	1	0.10	A
POLYETHYLENE GLYCOL DIACETATE	0.13	13	17.75	A
POLY-I-PARA-MENTHENE	18.50	10	17.00	A
PROPICONAZOLE	5.27	23	47.75	A
PYRACLOSTROBIN	1.63	10	18.50	A
SPINETORAM	2.38	8	20.25	A
SPINOSAD	1.52	8	11.75	A
SULFUR	324.00	22	44.50	A
TALL OIL FATTY ACIDS	< 0.01	1	0.50	A
THIOPHANATE-METHYL	0.53	1	0.25	A
TRIFLOXYSTROBIN	0.02	1	0.25	A
YUCCA SCHIDIGERA	0.78	2	7.50	A
ZIRAM	30.41	3	5.50	A
Site Total	1,365.58	258		
PEAR				
ABAMECTIN	0.43	5	34.00	A
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES	0.61	3	1.05	A
BIFENAZATE	0.06	1	1.00	A
CHLORANTRANILIPROLE	2.48	8	27.00	A
COPPER HYDROXIDE	2.78	5	2.70	A
COPPER OXYCHLORIDE	0.48	2	2.00	A
E,E-8,10-DODECADIEN-1-OL	1.05	5	12.00	A
FENARIMOL	0.02	1	0.50	A
GLYPHOSATE, ISOPROPYLAMINE SALT	172.25	11	41.50	A
LAURYL ALCOHOL	0.59	5	12.00	A
LIME-SULFUR	773.12	4	28.00	A
MANCOZEB	4.50	1	1.00	A
MINERAL OIL	1,609.06	21	76.55	A
MYRISTYL ALCOHOL	0.12	5	12.00	A
PETROLEUM OIL, PARAFFIN BASED	1,756.06	9	56.50	A
PETROLEUM OIL, UNCLASSIFIED	7.09	1	1.00	A
PHOSMET	2.80	1	1.00	A
SPINETORAM	8.74	15	72.00	A

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STREPTOMYCIN SULFATE	10.08	7	31.00	A
STRYCHNINE	< 0.01	1	1.00	A
SULFUR	5.60	2	1.00	A
THIOPHANATE-METHYL	0.09	1	0.05	A
YUCCA SCHIDIGERA	0.11	2	1.00	A
Site Total	4,358.11	104		
PERSIMMON				
GLYPHOSATE, ISOPROPYLAMINE SALT	0.96	1	1.00	A
Site Total	0.96	1		
PLUM				
BACILLUS THURINGIENSIS, SUBSP. KURSTAKI, STRAIN ABTS-351, FERMENTATION SOLIDS AND SOLUBLES	0.35	3	0.60	A
CARFENTRAZONE-ETHYL	1.29	3	11.00	A
CHLORANTRANILIPROLE	1.25	6	15.00	A
COPPER HYDROXIDE	8.62	5	8.20	A
COPPER OXYCHLORIDE	9.55	5	8.20	A
DIAZINON	16.00	3	8.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT	24.00	4	13.00	A
MINERAL OIL	279.72	10	23.20	A
PETROLEUM OIL, PARAFFIN BASED	1.40	2	0.40	A
PETROLEUM OIL, UNCLASSIFIED	0.04	1	0.20	A
POLY-I-PARA-MENTHENE	14.31	3	10.00	A
SPINETORAM	0.78	3	10.00	A
SULFUR	3.20	3	0.60	A
YUCCA SCHIDIGERA	0.05	2	0.40	A
Site Total	360.57	48		
PLUOT				
CARFENTRAZONE-ETHYL	0.02	1	1.00	A
CHLORANTRANILIPROLE	0.09	1	1.00	A
COPPER HYDROXIDE	2.58	2	2.00	A
COPPER OXYCHLORIDE	2.86	2	2.00	A
DIAZINON	2.00	1	1.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT	2.00	1	1.00	A
MINERAL OIL	49.93	3	3.00	A
POLY-I-PARA-MENTHENE	1.45	1	1.00	A
SPINETORAM	0.08	1	1.00	A
Site Total	61.00	11		
POME FRUIT				
ALUMINUM PHOSPHIDE	0.35	8	0.80	A
COPPER HYDROXIDE	0.34	2	0.50	A
GLYPHOSATE, ISOPROPYLAMINE SALT	0.38	1	0.25	A
LIME-SULFUR	0.86	1	0.10	A
PETROLEUM OIL, UNCLASSIFIED	0.34	1	0.25	A
POTASSIUM BICARBONATE	0.13	1	0.05	A
Site Total	2.40	14		
PUBLIC HEALTH				
BACILLUS THURINGIENSIS (BERLINER), SUBSP. ISRAELENSIS, SEROTYPE H-14	23.35			

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BACILLUS THURINGIENSIS, SUBSP. ISRAELENSIS, STRAIN AM 65-52	0.89			
DIPHACINONE	< 0.01			
METHOPRENE	0.19			
S-METHOPRENE	2.28			
MINERAL OIL	260.94			
PIPERONYL BUTOXIDE	2.09			
PIPERONYL BUTOXIDE, OTHER RELATED	0.52			
PYRETHRINS	0.26			
SILICA AEROGEL	10.45			
Site Total	300.98			
PUMPKIN				
GLYPHOSATE, ISOPROPYLAMINE SALT	8.00	1	5.00	A
MYCLOBUTANIL	3.60	1	3.00	A
Site Total	11.60	2		
RANGELAND				
ALUMINUM PHOSPHIDE	0.79	1	2.00	A
AMINOPYRALID, TRIISOPROPANOLAMINE SALT	5.51	12	38.90	A
BUTYL ALCOHOL	6.73	40	195.27	A
CLOPYRALID, MONOETHANOLAMINE SALT	60.77	31	544.75	A
2,4-D, DIMETHYLAMINE SALT	8.47	3	3.00	A
DIETHYLENE GLYCOL	0.80	8	4.10	A
DIMETHYLPOLYSILOXANE	0.09	48	199.37	A
FATTY ACIDS, MIXED	1.44	9	4.25	A
GLYPHOSATE, ISOPROPYLAMINE SALT	81.96	29	78.39	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	62.68	49	199.52	A
OLEIC ACID, ETHYL ESTER	40.54	1	54.00	A
POLYOXYETHYLENE DIOLEATE	7.09	1	54.00	A
POLYOXYETHYLENE SORBITAN MONOOLEATE	2.03	1	54.00	A
TRICLOPYR, BUTOXYETHYL ESTER	146.27	100	331.12	A
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)	2.08	8	4.10	A
Site Total	427.26	226		
REGULATORY PEST CONTROL				
AMINOPYRALID, TRIISOPROPANOLAMINE SALT	4.88			
CHLORSULFURON	0.91			
DIETHYLENE GLYCOL	7.40			
DIQUAT DIBROMIDE	3.80			
GLYPHOSATE, ISOPROPYLAMINE SALT	96.67			
ISOPROPYL ALCOHOL	1.17			
METHYLATED SILICA	< 0.01			
METHYL SILICONE RESINS	0.06			
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	13.56			
SULFUR DIOXIDE	0.06	1	20.00	U
Site Total	128.51	1		
RIGHTS OF WAY				
ALPHA-ALKYL (C9-C11)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	18.46			
ALPHA-ALKYL (C9-C16)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	0.29			

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AMINOPYRALID, TRIISOPROPANOLAMINE SALT		74.09			
		4.70	3	48.00	A
Total Pounds On This Chemical	78.79				
ATRAZINE		2.94	1	2.00	A
ATRAZINE, OTHER RELATED		0.06	1	2.00	A
BENZOIC ACID		0.44			
BUTYL ALCOHOL		13.83			
CALCIUM CHLORIDE		1.99			
CHLORSULFURON		16.05			
		1.45	3	48.00	A
Total Pounds On This Chemical	17.51				
CITRIC ACID		5.53			
CLOPYRALID, MONOETHANOLAMINE SALT		335.67			
BETA-CYFLUTHRIN		1.28			
2,4-D, DIMETHYLAMINE SALT		4.50			
DIETHYLENE GLYCOL		1.31			
DIMETHYL ALKYL TERTIARY AMINES		0.48			
DIMETHYLPOLYSILOXANE		0.24			
DIOCTYL PHTHALATE		0.26			
DIQUAT DIBROMIDE		10.15			
DITHIOPYR		579.58			
ESFENVALERATE		0.02			
FATTY ACIDS, MIXED		2.33			
FLUMIOXAZIN		2.72			
GLYPHOSATE, DIMETHYLAMINE SALT		892.98			
		10.24	2	4.80	A
Total Pounds On This Chemical	903.22				
GLYPHOSATE, ISOPROPYLAMINE SALT		5,039.31			
		128.52	8	56.30	A
Total Pounds On This Chemical	5,167.83				
GLYPHOSATE, POTASSIUM SALT		522.65			
		2.11	4	4.00	A
Total Pounds On This Chemical	524.77				
2-(3-HYDROXYPROPYL)-HEPTA-METHYL TRISILOXANE, ETHOXYLATED, ACETATE		11.95			
INDAZIFLAM		2.61			
ISOPROPYL ALCOHOL		0.35			
ISOXABEN		45.94			
KEROSENE		0.86			
LECITHIN		0.29			
METHYLATED SOYBEAN OIL		1,205.58			
METHYL CELLULOSE		0.26			
METHYL SILICONE RESINS		0.02			
MINERAL OIL		1,775.89			
MORPHOLINE		0.11			
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)		428.42			
		18.76	2	32.00	A
Total Pounds On This Chemical	447.18				
OLEIC ACID		0.37			
OLEIC ACID, METHYL ESTER		131.20			
		5.92	3	3.00	A
Total Pounds On This Chemical	137.12				
ORYZALIN		572.07			
OXYFLUORFEN		975.15			
PENDIMETHALIN		56.82			
PETROLEUM OIL, PARAFFIN BASED		5.30			

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POLYACRYLAMIDE POLYMER		0.49			
POLYALKENE OXIDE MODIFIED HEPTAMETHYL TRISILOXANE		6.00			
POLYOXYETHYLENE SORBITOL, MIXED ETHER ESTER		25.90			
POLYPROPYLENE GLYCOL		0.03			
SODIUM DIISOOCTYLSULFOSUCCINATE		0.03			
SULFOMETURON-METHYL		34.46			
		2.91	3	48.00	A
Total Pounds On This Chemical	37.37				
TALL OIL		0.04			
TALL OIL FATTY ACIDS		211.52			
TRICLOPYR, BUTOXYETHYL ESTER		149.07			
		9.25	3	3.00	A
Total Pounds On This Chemical	158.33				
TRICLOPYR, TRIETHYLAMINE SALT		55.71			
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)		71.26			
Site Total		13,478.78	29		
RYEGRASS					
2,4-D, DIMETHYLAMINE SALT		11.29	1	14.00	A
Site Total		11.29	1		
SEWAGE SYSTEM					
DICHLOBENIL		783.09		12,278.73	C
METAM-SODIUM		469.86		12,278.73	C
Site Total		1,252.95			
SOIL FUMIGATION/PREPLANT					
DAZOMET		1,089.00	2	3.38	A
Site Total		1,089.00	2		
SQUASH					
PETROLEUM DISTILLATES, REFINED		1.76	1	0.25	A
Site Total		1.76	1		
STONE FRUIT					
ALUMINUM PHOSPHIDE		0.46	14	1.40	A
COPPER HYDROXIDE		3.08	8	2.20	A
GLYPHOSATE, ISOPROPYLAMINE SALT		1.73	3	1.25	A
LIME-SULFUR		0.86	1	0.10	A
ORYZALIN		0.73	1	0.50	A
PETROLEUM OIL, UNCLASSIFIED		0.34	1	0.25	A
POTASSIUM BICARBONATE		0.13	1	0.05	A
Site Total		7.34	29		
STRUCTURAL PEST CONTROL					
ABAMECTIN		< 0.01			
ABAMECTIN, OTHER RELATED		< 0.01			
ACEPHATE		106.78			
ACETAMIPRID		0.87			
ALKYL (50%C14, 40%C12, 10%C16) DIMETHYLBENZYL AMMONIUM CHLORIDE		0.02			
D-TRANS ALLETHRIN		0.08			
ALUMINUM PHOSPHIDE		180.41			

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Commodity Chemical	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
AZOXYSTROBIN	< 0.01			
BIFENTHRIN	1,024.18			
BORAX	0.99			
BORIC ACID	960.39			
BRODIFACOUM	0.02			
BROMADIOLONE	0.10			
BROMETHALIN	0.01			
CAPSICUM OLEORESIN	< 0.01			
CARBARYL	10.32			
CARFENTRAZONE-ETHYL	< 0.01			
CHLORANTRANILIPROLE	0.76			
CHLORFENAPYR	28.78			
CHLOROPHACINONE	< 0.01			
CHLORPYRIFOS	< 0.01			
COCONUT DIETHANOLAMIDE	0.13			
COPPER	0.10			
COPPER NAPHTHENATE	2.69			
CYFLUTHRIN	17.22			
BETA-CYFLUTHRIN	102.80			
CYPERMETHRIN	326.08			
(S)-CYPERMETHRIN	< 0.01			
2,4-D, DIMETHYLAMINE SALT	4.09			
2,4-D, 2-ETHYLHEXYL ESTER	0.15			
DDVP	< 0.01			
DDVP, OTHER RELATED	< 0.01			
DELTAMETHRIN	22.81			
DELTAMETHRIN, OTHER RELATED	< 0.01			
DIATOMACEOUS EARTH	5.34			
DIAZINON	1.37			
DICAMBA	< 0.01			
DICAMBA, DIMETHYLAMINE SALT	0.37			
DIDECYL DIMETHYL AMMONIUM CHLORIDE	< 0.01			
DIFENACOUM	< 0.01			
DIFETHIALONE	0.06			
DIFLUBENZURON	0.46			
DINOTEFURAN	0.06			
DIPHACINONE	0.01			
DIPHACINONE, SODIUM SALT	< 0.01			
DISODIUM OCTABORATE TETRAHYDRATE	550.10			
DODECYLBENZENE SULFONIC ACID	0.58			
EDTA, TETRASODIUM SALT	0.04			
ESFENVALERATE	1.76			
ETOFENPROX	0.05			
FIPRONIL	402.73			
FLUDIOXONIL	< 0.01			
GLYPHOSATE, ISOPROPYLAMINE SALT	16.17			
HEPTYL BUTYRATE	0.02			
HYDRAMETHYLNON	0.63			
HYDROPRENE	17.55			
IMIDACLOPRID	174.82			
INDAZIFLAM	0.69			
INDOXACARB	40.16			
IRON PHOSPHATE	0.12			
ISOPROPYL ALCOHOL	0.25			
LAMBDA-CYHALOTHRIN	30.33			
LIMONENE	13.37			
MALATHION	24.18			

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Commodity Chemical	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
MCPP-P, DIMETHYLAMINE SALT	1.09			
MECOPROP-P	0.04			
METHOPRENE	0.04			
S-METHOPRENE	0.01			
METHYL ANTHRANILATE	7.39			
MUSCALURE	0.04			
NAPROPAMIDE	0.06			
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	< 0.01			
NOVIFLUMURON	0.28			
N-OCTYL BICYCLOHEPTENE DICARBOXIMIDE	2.49			
PERMETHRIN	602.58			
PERMETHRIN, OTHER RELATED	< 0.01			
PETROLEUM DISTILLATES	0.31			
PHENOTHRIN	0.16			
PHENYLETHYL PROPIONATE	66.84			
PHOSPHORIC ACID	0.11			
PIPERONYL BUTOXIDE	120.70			
PIPERONYL BUTOXIDE, OTHER RELATED	29.89			
POLYACRYLAMIDE POLYMER	0.59			
PRALLETHRIN	0.03			
PRODIAMINE	0.04			
PROPOXUR	0.13			
PYRETHRINS	40.02			
PYRIPROXYFEN	0.31			
SILICA AEROGEL	5.04			
SILICONE DEFOAMER	0.02			
SODIUM XYLENE SULFONATE	0.18			
STRYCHNINE	0.06			
SULFAQUINOXALINE	< 0.01			
SULFLURAMID	< 0.01			
SULFURYL FLUORIDE	685.92			
TALL OIL	< 0.01			
TETRAMETHRIN	< 0.01			
ALPHA-[PARA-(1,1,3,3-TETRAMETHYLBUTYL)PHENYL]-OMEGA-HYDROXYPOLY(OXYETHYLENE)	0.67			
TETRAPOTASSIUM PYROPHOSPHATE	0.09			
THIAMETHOXAM	7.58			
THYME	111.39			
TRICLOPYR, BUTOXYETHYL ESTER	0.34			
TRIETHANOLAMINE	0.23			
WARFARIN	< 0.01			
ZINC PHOSPHIDE	0.35			
Site Total	5,756.08			
TOMATO				
COPPER HYDROXIDE	1.05	1	1.00	A
PETROLEUM DISTILLATES, REFINED	1.76	1	0.25	A
Site Total	2.80	2		
UNCULTIVATED AG				
DIMETHYLPOLYSILOXANE	0.10		89.50	A
GLYPHOSATE, ISOPROPYLAMINE SALT	93.05	6	69.50	A
ISOPROPYL ALCOHOL	1.98		89.50	A
ALPHA-(PARA-NONYLPHENYL)-OMEGA-HYDROXYPOLY (OXYETHYLENE)	22.94		89.50	A

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Commodity Chemical	Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
ORYZALIN	9.36	1	9.00	A
POLYETHYLENE GLYCOL	12.51		89.50	A
SIMAZINE	84.11		28.00	A
Site Total	224.04	7		
UNCULTIVATED NON-AG				
CLOPYRALID, MONOETHANOLAMINE SALT	6.39		51.00	A
DIQUAT DIBROMIDE	0.16	2	1.00	A
GLYPHOSATE, ISOPROPYLAMINE SALT	1.27	1	0.50	A
GLYPHOSATE, MONOAMMONIUM SALT	4.08	2	1.00	A
ISOXABEN	0.25	1	0.50	A
ORYZALIN	3.12	2	1.16	A
SIMAZINE	0.70	1	0.33	A
TRICLOPYR, BUTOXYETHYL ESTER	34.98	1	50.00	A
TRICLOPYR, TRIETHYLAMINE SALT	4.71		6.00	A
TRIFLURALIN	2.92	1	5.48	A
Site Total	58.57	8		
VEGETABLE				
POTASSIUM BICARBONATE	0.13	1	0.05	A
Site Total	0.13	1		
VERTEBRATE CONTROL				
ALUMINUM PHOSPHIDE	0.23			
BROMADIOLONE	< 0.01			
CARBON	3.22			
DIPHACINONE	< 0.01			
SODIUM NITRATE	17.09			
SULFUR	12.88			
Site Total	33.42			
WALNUT				
ACETAMIPRID	1.59	2	21.50	A
ALPHA-PINENE BETA-PINENE COPOLYMER	20.77	4	72.00	A
N,N-BIS-(2-OMEGA-HYDROXYPOLY(OXYETHYLENE)ETHYL) ALKYLAMINE, ALKYL DERIVED FROM TALLOW FATTY ACIDS	0.88	4	72.00	A
COPPER HYDROXIDE	185.43	8	74.31	A
COPPER OXYCHLORIDE	2.41	4	2.31	A
COPPER SULFATE (PENTAHYDRATE)	49.50	1	20.00	A
KAOLIN	712.50	2	35.30	A
MINERAL OIL	8.03	7	72.30	A
POLY-I-PARA-MENTHENE	16.65	2	36.00	A
POTASSIUM PHOSPHITE	10.52	2	36.00	A
TALL OIL FATTY ACIDS	0.29	4	72.00	A
Site Total	1,008.57	24		
WATER (INDUSTRIAL)				
SODIUM BROMIDE	4.93		1.00	A
SODIUM HYPOCHLORITE	3.40		1.00	A
Site Total	8.33			

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Commodity Chemical		Pounds Applied	Agricultural Applications	Amount Treated	Unit Type
WATER AREA					
COPPER ETHANOLAMINE COMPLEXES, MIXED		265.58	8	232.50	A
		151.92		30.00	U
Total Pounds On This Chemical	417.50				
DIQUAT DIBROMIDE		216.29	1	93.50	A
		15.50		2.00	U
Total Pounds On This Chemical	231.79				
ENDOTHALL, DIPOTASSIUM SALT		71.92		62.00	A
ENDOTHALL, MONO [N,N-DIMETHYL ALKYLAMINE] SALT		6.81		2.00	U
FATTY ACIDS, C16-C18 AND C18-UNSATURATED, METHYL ESTERS		0.02		1.00	U
FLURIDONE		1.69		13.00	A
		0.30		2.00	U
Total Pounds On This Chemical	1.99				
GLYPHOSATE, ISOPROPYLAMINE SALT		6.31		28.00	A
IMAZAMOX, AMMONIUM SALT		0.04		3.50	A
LIMONENE		0.08		1.00	U
ALPHA-UNDECYL-OMEGA-HYDROXYPOLY(OXYETHYLENE)		0.01		1.00	U
Site Total		736.46	9		
El Dorado County Total		143,501.60	5,461		

Table 1: *Total pounds of pesticide active ingredients reported in each county and rank during 2012 and 2013*

	2012 Pesticide Use		2013 Pesticide Use	
County	Pounds Applied	Rank	Pounds Applied	Rank
Alameda	289,813	39	314,537	38
Alpine	140	58	266	58
Amador	60,779	46	77,428	46
Butte	2,828,773	18	2,984,520	17
Calaveras	43,779	49	29,380	48
Colusa	2,536,185	19	2,836,263	18
Contra Costa	468,149	36	395,481	36
Del Norte	301,298	38	284,086	40
El Dorado	148,674	42	143,502	42
Fresno	33,306,325	1	34,193,393	1
Glenn	2,086,317	21	2,157,027	22
Humboldt	37,219	50	27,265	51
Imperial	5,898,441	12	4,311,787	12
Inyo	9,797	54	15,627	54
Kern	27,816,290	2	31,245,295	2
Kings	6,783,058	9	7,426,510	8
Lake	562,729	34	594,735	34
Lassen	116,780	43	136,083	43
Los Angeles	2,027,461	22	2,434,430	20
Madera	9,467,822	5	10,191,490	5
Marin	73,588	45	84,836	45
Mariposa	4,390	56	17,777	53
Mendocino	893,795	31	987,222	30
Merced	7,270,916	8	8,527,500	7
Modoc	114,997	44	87,856	44
Mono	5,489	55	11,228	56
Monterey	9,047,989	6	8,539,894	6
Napa	1,332,243	26	1,259,700	26
Nevada	46,862	48	47,547	47
Orange	992,795	28	1,075,223	29
Placer	325,016	37	303,083	39
Plumas	47,919	47	25,684	52
Riverside	2,851,900	17	2,456,875	19
Sacramento	3,266,080	13	3,640,608	13
San Benito	611,873	33	653,783	33
San Bernardino	534,780	35	572,458	35
San Diego	1,362,582	25	1,653,180	25

Table 1: (continued) *Total pounds of pesticide active ingredients reported in each county and rank during 2012 and 2013*

	2012 Pesticide Use		2013 Pesticide Use	
County	Pounds Applied	Rank	Pounds Applied	Rank
San Francisco	31,656	51	28,727	49
San Joaquin	9,562,126	4	11,017,592	4
San Luis Obispo	2,866,739	16	3,066,374	16
San Mateo	212,261	41	249,542	41
Santa Barbara	6,185,839	11	4,665,022	11
Santa Clara	906,608	30	954,486	31
Santa Cruz	1,687,988	24	1,743,083	24
Shasta	275,898	40	322,139	37
Sierra	3,307	57	4,937	57
Siskiyou	1,869,645	23	1,846,509	23
Solano	977,358	29	1,170,927	28
Sonoma	2,282,075	20	2,172,032	21
Stanislaus	6,455,449	10	6,905,458	9
Sutter	2,923,149	15	3,182,823	15
Tehama	690,489	32	854,682	32
Trinity	17,651	53	11,977	55
Tulare	14,161,509	3	14,579,963	3
Tuolumne	28,526	52	28,379	50
Ventura	7,604,327	7	6,226,684	10
Yolo	3,208,840	14	3,578,175	14
Yuba	1,129,466	27	1,244,731	27
Total	186,653,951		193,597,806	

California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair

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Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown Jr.
Governor

11 February 2011

Mr. Bruce Houdesheldt, Director, Regulatory Affairs
Northern California Water Association, SVWQC
455 Capitol Mall, Suite 335
Sacramento, CA 95814

COMPLETION OF COON HOLLOW CREEK *CERIODAPHNIA DUBIA* TOXICITY MANAGEMENT PLAN, SACRAMENTO VALLEY WATER QUALITY COALITION

Thank you for your letter dated 23 July 2010 requesting a determination be made that the Coon Hollow Creek *Ceriodaphnia dubia* Toxicity Management Plan is complete. Based on the available information, I have determined that the *Ceriodaphnia dubia* Management Plan is complete and any further actions identified in the Management Plan are not required.

The management plan requirement was originally triggered in 2007 when significant *Ceriodaphnia dubia* toxicity was observed in samples collected from Coon Hollow Creek in the El Dorado subwatershed. Between April 2007 and June 2008, a total of seven significant *Ceriodaphnia dubia* toxicity tests occurred in Coon Hollow Creek samples. Central Valley Water Board staff has prepared a memorandum that summarizes actions taken by the Coalition, as well as the data collected and analyzed for the management plan (see enclosed Staff Memorandum). The determination that the above management plan has been completed is based on the following:

1. Detailed Pesticide Use Report (PUR) data shows that applied pesticides with the highest potential to cause toxicity were monitored and were not detected in sample water.
2. Applied pesticides that were not monitored were unlikely to cause the observed toxicity.
3. One potentially toxic pesticide (carbaryl) was used on only two occasions prior to a toxicity event. It was not used prior to the remaining five toxicity events.
4. The results of six Toxicity Identification Evaluations (TIEs) were inconclusive.
5. The toxicity cannot be attributed to the presence of other monitored constituents (e.g. DDE or metals), as these were either not detected consistently, or were not present in concentrations that cause toxicity.

If you have any questions regarding this approval, please contact Mark Cady at (916) 464-4654, or by email at mcady@waterboards.ca.gov.

for Pamela C. Creedon
Executive Officer

Enclosures

cc: Valerie Zentner, EDCAWQMC
Claus Suverkropp, LWA

California Regional Water Quality Control Board
Central Valley Region
Katherine Hart, Chair

Linda S. Adams
Acting Secretary for Environmental Protection

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Edmund G. Brown Jr.
Governor

TO: Susan Fregien
Senior Environmental Scientist
Irrigated Lands Regulatory Program

FROM: Mark Cady
Environmental Scientist
Irrigated Lands Regulatory Program

DATE: 9 February 2011

SIGNATURE:

SUBJECT: Coon Hollow Creek *Ceriodaphnia dubia* Toxicity Management Plan

On 23 July 2010 the Sacramento Valley Water Quality Coalition (SVWQC) submitted a request to the Central Valley Water Board to determine that the management plan for toxicity to *Ceriodaphnia* on Coon Hollow Creek is complete. That request was based on the conclusion that the source of toxicity repeatedly measured in the Coon Hollow Creek drainage is not a result of agricultural activities. This memo reviews the conditions that led to the management plan requirements, the actions that have been taken by the Coalition since that time, and the data that has been collected and analyzed to better understand this situation. My recommendation is that the Water Board grant the Coalition's request and determine that the management plan is complete.

Background

Coon Hollow Creek is a small drainage tributary to South Canyon Creek and the South Fork of the American River in El Dorado County near the town of Camino in the Apple Hill area. This area is represented by the El Dorado County Agricultural Water Quality Management Corporation (EDCAWQMC) within the SVWQC. In their 2007 Monitoring Plan, the SVWQC established a monitoring site on Coon Hollow Creek to comply with the requirements of the Irrigated Lands Regulatory Program. This situation remained in place until May 2008 when a request by SVWQC was granted by the Central Valley Water Board to change the monitoring site to a location on North Canyon Creek, which had been the designated monitoring site before 2007.

As described in the Source Evaluation Report submitted by SVWQC to the Central Valley Water Board in March 2010, Coon Hollow Creek is part of the Coloma Drainage. The total acreage of the Coon Hollow Creek drainage is 365 acres, of which 318 are devoted to irrigated agriculture, the dominant crops being tree crops (pome and stone fruits), vineyards and Christmas trees. The Coloma Drainage contains 1629 acres of irrigated agriculture, dominated by the same three crop groups.

There are two monitoring locations that have been used in the Coon Hollow Creek drainage. The main location was first listed as a monitoring site in the SVWQC 2007 monitoring plan. This site was used for most of the monitoring and is near the bottom of

the drainage. A follow-up site was established about 2100 feet upstream where water from approximately half the drainage flows. This follow-up site was monitored for toxicity twice in 2007 as part of the source evaluation.

Management Plan History

1. As shown in Table 1, 15 total *Ceriodaphnia* toxicity tests were performed on Coon Hollow Creek samples taken on 13 different days in 2007 and 2008. Attachment A provides additional data from these samples, including field measurements and constituents detected at the time of each positive toxicity result. A Management Plan is required when significant toxicity is detected on at least two occasions within three years. Coon Hollow Creek water was significantly toxic to *Ceriodaphnia* during seven different sampling events over a period of 15 months. On three occasions, sediment was tested for *Hyallela* toxicity when water tested positive for *Ceriodaphnia* toxicity. None of these sediment samples showed toxicity. Coon Hollow Creek water was tested for *Selenastrum* toxicity on ten different occasions in 2007 and 2008. None of these samples showed toxicity to the algae. Chemical and field parameters were tested on 13 different dates during this period. The only other exceedances reported were six detections of legacy organochlorine pesticides.

Table 1: Monitoring record for *Ceriodaphnia d.* toxicity from the ILRP Analysis Database

Station Name	Sample Date	Species Name	Pct Control	Toxicity Results Unit	Significant Effect
Coon Hollow Creek	17-Apr-07	Ceriodaphnia dubia	15	% Survival	YES
Coon Hollow Creek	25-Apr-07	Ceriodaphnia dubia	20	% Survival	YES
Coon Hollow Creek FU Site 1	25-Apr-07	Ceriodaphnia dubia	0	% Survival	YES
Coon Hollow Creek	16-May-07	Ceriodaphnia dubia	100	% Survival	NO
Coon Hollow Creek	19-Jun-07	Ceriodaphnia dubia	10	% Survival	YES
Coon Hollow Creek	23-Jun-07	Ceriodaphnia dubia	16	% Survival	YES
Coon Hollow Creek FU Site 1	23-Jun-07	Ceriodaphnia dubia	105	% Survival	NO
Coon Hollow Creek	18-Jul-07	Ceriodaphnia dubia	100	% Survival	NO
Coon Hollow Creek	22-Aug-07	Ceriodaphnia dubia	58	% Survival	YES
Coon Hollow Creek	18-Sep-07	Ceriodaphnia dubia	80	% Survival	NO
Coon Hollow Creek	29-Jan-08	Ceriodaphnia Dubia	95	% Survival	NO
Coon Hollow Creek	22-Feb-08	Ceriodaphnia dubia	100	% Survival	NO
Coon Hollow Creek	20-May-08	Ceriodaphnia dubia	50	% Survival	YES
Coon Hollow Creek	29-May-08	Ceriodaphnia dubia	100	% Survival	NO
Coon Hollow Creek	18-Jun-08	Ceriodaphnia dubia	30	% Survival	YES

2. In May 2008, EDCAWQMC circulated a draft Coon Hollow Creek Watershed Management Plan. This plan did not move forward on its own, but became a source document for the Coalition's Source Evaluation Report for Coon Hollow Creek.

3. Another result of the EDCAWQMC Management Plan was the completion of the "Coon Hollow Creek Water Quality Investigation and Source Evaluation Report" by Dan Hinrichs, DJH Engineering. Dated 22 December 2008, the report was received by the Water Board on 30 January 2009. The report includes a detailed review of the data that triggered the management plan as well direct observations from the monitoring site,

large amounts of raw monitoring data and site-specific data from the Natural Resources Conservation Service such as maps, areal photographs, descriptions of soils, etc.

EDCAWQMC initially intended this report to be a first step in fulfillment of the management plan referenced in Item 2. However, Central Valley Water Board staff could not accept this report in lieu of the Coalition's approved management plan deliverables. After communicating with Water Board staff, the Coalition stated that the report was provided to the Board for informational purposes only. The Coalition integrated the findings in the report into the approved management plan process.

4. The Coalition submitted a Source Evaluation Report (SER) for the Coon Hollow Creek *Ceriodaphnia* toxicity in March, 2010. This report includes details about the management plan and summarizes essential information about the Coon Hollow Creek drainage including total acreage, major crops, irrigation practices, and potential sources of toxicity. Detailed data is presented on agricultural pesticide use in the drainage one month prior to exceedances in 2007, describing the crops pesticides were applied to, the active ingredients, the pounds of active ingredients, and the acres treated. The applied pesticides with the greatest potential to cause toxicity to *Ceriodaphnia*, were monitored at most sampling events, and were not detected in sample water. Applied pesticides that were not monitored were unlikely to cause the observed toxicity because either they were applied to very limited acreage, or they have limited potential to contribute to *Ceriodaphnia* toxicity due to low toxicity and/or a strong tendency to bind to soil particles (e.g. sulfur, pyraclostrobin, quinoxyfen). The only exception is carbaryl, a carbamate pesticide that is highly toxic to invertebrates and highly soluble in water. The PUR shows this pesticide being applied to a total of 19 acres within a month of the April 2007 toxicity events, and to six acres before the May 2008 event. This pesticide is rarely applied in this drainage and because of its short half-life in water, could only have contributed to the toxicity detected in those months—its use was not reported preceding any other toxicity detections.

   It is important to note the challenge of selecting the right chemicals to include in water quality analysis. Selection is informed by past pesticide usage as reflected in the Pesticide Use Report (PUR) database. The data is usually made available by the Department of Pesticide Regulation between a year-and-a-half to two years after the actual pesticide applications. Thus the water quality constituents analyzed are based on applications that occurred two seasons prior to the monitoring event.

   A table of reported pesticide applications within the Coon Hollow Creek drainage and in the month prior to each toxicity exceedance was created by staff and is included as Attachment B.

5. Six Toxicity Identification Evaluations (TIEs) were performed following toxicity measurements where survival of *Ceriodaphnia* was ≤ 50% of the control. None of these evaluations conclusively pointed to a cause. In fact, three of the TIE's did not show toxicity in any of the follow-up tests, while the three tests with significant results pointed to different types of toxicants (bound to particles, synergized by PBO, or neutralized by PBO), none of which could be deduced through analysis of detected constituents, or attributed to non-monitored pesticides that had been applied in the drainage.

The SER describes a number of potential sources of the toxicity results including non-agricultural pesticides or other materials coming from agrotourism or apple-handling sites. None of these potential sources can be eliminated or verified with the data collected so far. Another hypothesis is that the "difference between the sample water and the culture water hardness increased the sensitivity or decreased the fitness of the *Ceriodaphnia* in the sample waters." This supposition seems unlikely, since the toxicity has appeared intermittently, while the reported hardness of the sample water is usually between 25 and 80 mg/L as $CaCO_3$. There are sampling events where the hardness is reported in the low end of that range, and no toxicity was detected.

The following conclusion is presented in the SER:

> *Specific causes and sources of the toxicity exceedances could not be definitively identified based on the monitoring data, but potential agricultural sources appear unlikely to have caused the toxicity.*

Conclusions

Based upon a thorough review of the data presented by the Coalition in all of the documents reviewed above, and through additional research into the reported pesticide applications and monitoring data submitted by the Coalition over the fifteen-month period that toxicity was detected in monitoring samples, staff concludes that the toxicity was unlikely to have been caused by agricultural activities. Also, it does not appear that the toxicity can be attributed to the presence of legacy pesticides that had been detected in Coon Hollow Creek on six occasions. Significant *Ceriodaphnia* toxicity was detected on three of these six occasions while toxicity was tested but not detected on the other three occasions. Over the 19 months represented in the data, the toxicity detections were frequent but intermittent with no consistent trends linking the events together. The collected data does not point to any consistent toxicity source. Given the likelihood that these toxic events are unrelated to agricultural operations, staff recommends that the management plan for Ceriodaphnia toxicity on Coon Hollow creek be considered completed.

Attachment(s)

Attachment A. *Ceriodaphnia dubia* Toxicity exceedances on Coon Hollow Creek with field measurements and chemical detections

Sample Date	Species Name	Pct Control/ Result	Tox Results Unit	MDL	RL	Quality Trigger Limit[1]
17-Apr-07	Ceriodaphnia dubia	15	% Survival			
	Boron, Total, µg/L	4		0.9	1	700
	Chromium, Total, µg/L	0.8		0.3	0.5	n/a
	Color, Total, color units	7		15	20	15
	DDE(p,p'), Total, µg/L	0.0067		0.001	0.005	0.00083
	Dissolved Solids, Total, mg/L	63		4	10	125
	E. coli, Total, MPN/100 mL	100		2	2	235
	Hardness as CaCO3, Total, mg/L	36		6	10	n/a
	Lead, Total, µg/L	0.39		0.1	0.25	0.84
	Nitrate as N, Total, mg/L	1.8		0.006	0.1	10
	OrthoPhosphate as P, Total, mg/L	0.01		0.01	0.01	n/a
	Phosphorus as P, Total, mg/L	0.055		0.01	0.01	n/a
	Suspended Solids, Total, mg/L	30		4	6	n/a
	Total Organic Carbon, mg/L	1.1		0.3	0.5	n/a
	Turbidity, Total, NTU	8.2		0.02	0.05	n/a
	Zinc, Dissolved µg/L	2		0.4	10	54
	Zinc, Total, µg/L	4		0.4	10	55
25-Apr-07	Ceriodaphnia dubia	20	% Survival			
	Atrazine, Total, µg/L	0.066		0.005	0.01	1
25-Apr-07*	Ceriodaphnia dubia	0	% Survival			
19-Jun-07	Ceriodaphnia dubia	10	% Survival			
	Aluminum, Total, µg/L	26		0.6	10	87
	Barium, Total, µg/L	63		0.02	0.1	1000
	Boron, Total, µg/L	7		0.9	1	700
	Chromium, Dissolved, µg/L	0.6		0.2	0.5	n/a
	Chromium, Total, µg/L	0.7		0.2	0.5	n/a
	Color, Total, color units	13		3	3	15
	Copper, Total, µg/L	0.7		0.05	0.5	7.7
	Dissolved Solids, Total, mg/L	51		4	10	125
	E. coli, Total, MPN/100 mL	180		2	2	235
	Hardness as CaCO3, Total, mg/L	80		15	20	n/a
	Lead, Total, µg/L	0.46		0.05	0.25	2.4
	Nickel, Total, µg/L	0.7		0.09	0.5	43
	Nitrate as N, Total, mg/L	1.9		0.01	0.1	10
	Nitrogen, Total Kjeldahl, mg/L	0.07		0.07	0.1	n/a
	OrthoPhosphate as P, Total, mg/L	0.015		0.01	0.01	n/a
	Phosphorus as P, Total, mg/L	0.032		0.01	0.01	n/a
	Suspended Solids, Total, mg/L	8		2	3	n/a
	Total Organic Carbon, mg/L	0.53		0.3	0.5	n/a
	Turbidity, Total, NTU	6		0.02	0.05	n/a
	Zinc, Dissolved, µg/L	5		0.7	1	98
	Zinc, Total, µg/L	19		0.7	1	99
23-Jun-07	Ceriodaphnia dubia	16	% Survival			
22-Aug-07	Ceriodaphnia dubia	58	% Survival			
	DDE(p,p'), Total, µg/L	0.0031		0.001	0.005	0.00083
20-May-08	Ceriodaphnia dubia	50	% Survival			
	Dissolved Solids, Total, mg/L	61		10	125	125
	E. coli, Total, MPN/100 mL	11		1	235	235

Sample Date	Species Name	Pct Control/ Result	Tox Results Unit	MDL	RL	Quality Trigger Limit[1]
	Hardness as CaCO3, Total, mg/L	32		5	n/a	n/a
	Nitrate as N, Total, mg/L	1.8		0.1	10	10
	OrthoPhosphate as P, Total, mg/L	0.019		0.01	n/a	n/a
	Suspended Solids, Total, mg/L	5		3	n/a	n/a
	Zinc, Dissolved, µg/L	3		1	43	49
	Zinc, Total, µg/L	37		1	43	49
18-Jun-08	Ceriodaphnia dubia	30	% Survival			
	Dissolved Solids, Total, mg/L	65		4	10	125
	E. coli, Total, MPN/100 mL	6.2		1	1	235
	Hardness as CaCO3, Total, mg/L	54		3	5	n/a
	Lead, Total, µg/L	0.29		0.01	0.25	1.5
	Nickel, Total, µg/L	0.6		0.02	0.5	31
	Nitrate as N, Total, mg/L	1.7		0.01	0.1	10
	Suspended Solids, Total, mg/L	8		1	3	n/a
	Total Organic Carbon, mg/L	1.2		0.1	0.5	n/a
	Zinc, Dissolved, µg/L	10		0.6	1	71
	Zinc, Total, µg/L	24		0.2	1	72

* Sample from follow-up site

[1]From the SVWQC QAPP October, 2008.

"n/a" means that there is no Trigger Limit available for the listed constituent.

Attachment B. Pesticides applied in the Coon Hollow Creek Drainage one month prior to *Ceriodaphnia dubia* toxicity detections[1]

Toxicity detection date	Chemical name	Lbs chemical applied	Acres treated	Moni tored	Detected	Relative invertebrate toxicity[2]	Solubility in Water[3]
17-Apr-07	AZINPHOS-METHYL	2.00	2	Y	N	Very High	Moderate
	CAPTAN	143.28	49	N		Moderate	Low
	CARBARYL	36.78	19	N		High	High
	DIAZINON	75.00	54	Y	N	Very High	Moderate
	GLYPHOSATE, ISOPROPYLAMINE SALT	37.52	27.2	N		Low	Very High
	MANCOZEB	767.69	156.5	N		Moderate	Low
	MANGANESE SULFATE	3.82	6.5	N		Data Not Avail.	Moderate
	MYCLOBUTANIL	3.38	36.5	N		Low	High
	NAPROPAMIDE	6.00	2.5	N		Low	Moderate
	ORYZALIN	41.73	38.2	N		Low	Low
	SIMAZINE	9.00	2	N		Low	Low
	SULFUR	56.80	23.5	N		Moderate	Very Low
	TRIFLOXYSTROBIN	0.39	5	N		High	Very Low
	ZINC SULFATE	0.49	6.5			Data Not Avail.	Very High
25-Apr-07	AZINPHOS-METHYL	2.00	2	N		Very High	Moderate
	CAPTAN	160.39	58	N		Moderate	Low
	CARBARYL	36.78	19	N		High	High
	DIAZINON	2.00	5	Y	N	Very High	Moderate
	FENARIMOL	0.50	5	N		Low	Moderate
	GLYPHOSATE, ISOPROPYLAMINE SALT	37.52	27.2	N		Low	Very High
	MANCOZEB	399.09	79.5	N		Moderate	Low
	MANGANESE SULFATE	0.95	1	N		Data Not Avail.	Moderate
	MYCLOBUTANIL	9.43	89.3	N		Low	High
	ORYZALIN	29.25	35.7	N		Low	Low
	SULFUR	111.20	58.3	N		Moderate	Very Low
	TRIFLOXYSTROBIN	2.37	41	N		High	Very Low
	ZINC SULFATE	0.12	1	N		Data Not Avail.	Very High
19-Jun-07	ACETAMIPRID	6.94	57	N		Low	Very High
	AZINPHOS-METHYL	36.00	29	Y	N	Very High	Moderate
	BOSCALID	8.32	55.51	N		Low	Low
	GLYPHOSATE, ISOPROPYLAMINE SALT	15.12	22.61	N		Low	Very High
	METHOXYFENOZIDE	1.41	5	N		Low	Low
	MYCLOBUTANIL	1.20	19	N		Low	High
	PYRACLOSTROBIN	4.22	55.51	N		High	Low
	QUINOXYFEN	3.04	41	N		High	Very Low
	SULFUR	514.35	236.51	N		Moderate	Very Low
	TRIFLOXYSTROBIN	1.94	31	N		High	Very Low
	TRIFLUMIZOLE	3.55	19.51	N		Low	Moderate
23-Jun-07	ACETAMIPRID	6.94	57	N		Low	Very High
	AZINPHOS-METHYL	36.00	29	N		Very High	Moderate
	BOSCALID	6.62	38	N		Low	Low
	GLYPHOSATE, ISOPROPYLAMINE SALT	6.00	9	N		Low	Very High
	METHOXYFENOZIDE	1.41	5	N		Low	Low
	MYCLOBUTANIL	1.60	29	N		Low	High
	PYRACLOSTROBIN	3.36	38	N		High	Low
	QUINOXYFEN	3.04	41	N		High	Very Low
	SULFUR	437.90	221.13	N		Moderate	Very Low
	TRIFLOXYSTROBIN	1.94	31	N		High	Very Low
	TRIFLUMIZOLE	3.55	19.51	N		Low	Moderate
22-Aug-07	ABAMECTIN	0.06	5	N		Very High	Low
	ACETAMIPRID	4.31	44.5	N		Low	Very High
	AZINPHOS-METHYL	33.00	33	Y	N	Very High	Moderate
	BOSCALID	0.47	3	N		Low	Low

Toxicity detection date	Chemical name	Lbs chemical applied	Acres treated	Monitored	Detected	Relative invertebrate toxicity[2]	Solubility in Water[3]
	BUPROFEZIN	8.14	15.5	N		Moderate	Very Low
	IMIDACLOPRID	0.14	3	N		Low	High
	MYCLOBUTANIL	0.68	6	N		Low	High
	PYRACLOSTROBIN	0.24	3	N		High	Low
	TRIFLOXYSTROBIN	2.27	30.2	N		High	Very Low
22-Feb-08	MINERAL OIL	136.66	3	N		Data Not Avail.	Very Low
23-Feb-08	NORFLURAZON	11.79	10	N		Low	Moderate
	OXYFLUORFEN	7.70	10	N		Low	Very Low
20-May-08	ABAMECTIN	0.09	5	N		Very High	Low
	ACETAMIPRID	0.87	10	N		Low	Very High
	ATRAZINE	23.81	9	N		Low	Moderate
	AZINPHOS-METHYL	5.00	5	Y	N	Very High	Moderate
	CAPTAN	14.67	5	N		Moderate	Low
	CARBARYL	15.91	6	N		High	High
	COPPER HYDROXIDE	2.15	4	N		Data Not Avail.	Very Low
	CYPRODINIL	0.14	2	N		High	Moderate
	DIAZINON	10.00	4	Y	N	Very High	Moderate
	FENARIMOL	0.56	6	N		High	Moderate
	GLYPHOSATE, ISOPROPYLAMINE SALT	44.08	24	N		Low	Very High
	HEXAZINONE	5.62	9	N		Low	Very High
	METHOXYFENOZIDE	10.74	35	N		Low	Low
	MYCLOBUTANIL	17.48	129.51	N		Low	High
	ORYZALIN	6.24	10	N		Low	Low
	SPINETORAM	5.14	47	N		Low	Moderate
	STREPTOMYCIN SULFATE	1.57	7	N		Moderate	Moderate
	SULFUR	447.20	134.51	N		Moderate	Very Low
	TRIFLOXYSTROBIN	1.56	28	N		High	Very Low
18-Jun-08	ACETAMIPRID	0.13	1	N		Low	Very High
	ATRAZINE	26.46	10.5	N		Low	Moderate
	AZINPHOS-METHYL	55.50	50	Y	N	Very High	Moderate
	BOSCALID	2.57	29.51	N		Low	Low
	CLETHODIM	0.97	4	N		Low	Very High
	DINOTEFURAN	0.79	3	N		Very Low	Very High
	DIPHACINONE	0.00	2	N		High	Very Low
	FENARIMOL	0.27	7.13	N		High	Moderate
	GLYPHOSATE	2.88	5.8	N		Low	Very High
	HEXAZINONE	5.62	9	N		Low	Very High
	METHOXYFENOZIDE	3.53	12.5	N		Low	Low
	MYCLOBUTANIL	15.89	110	N		Low	High
	OXYFLUORFEN	7.97	1.5	N		Low	Very Low
	PARAQUAT DICHLORIDE	6.92	10	N		Low	Very High
	PYRACLOSTROBIN	1.30	29.51	N		High	Low
	QUINOXYFEN	2.88	32	N		High	Very Low
	SPINETORAM	2.95	24	N		Low	Moderate
	STRYCHNINE	0.68	16	N		High	Not Avail.
	SULFUR	706.40	263.51	N		Moderate	Very Low
	TRIFLOXYSTROBIN	0.06	1	N		High	Very Low
	TRIFLUMIZOLE	2.45	16	N		Low	Moderate

[1]Note: Pesticide use data was extracted from the California Pesticide Reporting (PUR) database, for the three PLSS sections most representative of the Coon Hollow Creek Drainage. Some chemical have been omitted from this list such as materials closely related to other chemicals on the list, but reported separately in the PUR, oils, salts and insect pheromones.

[2]Criteria for toxicity rankings were taken from the CVRWQCB report "Relative-Evaluation for Pesticides Used in the Central Valley Pesticide Basin Plan Amendment Project Area." Using 96 hour LC50 or EC50, they are Very High, <1 µg/L; High, 1 to 99 µg/L; Moderate: 100 to 999 µg/L; Low 1 to 99 mg/L.

[3]Criteria for solubility ranking are Very High >1,000 ppm; High, 100-999 ppm; Moderate 10-99 ppm; Low 1-9 ppm; and Very Low <1 ppm.