



CENTRAL VALLEY REGIONAL
WATER QUALITY CONTROL BOARD

AMENDMENTS TO THE WATER QUALITY CONTROL
PLAN FOR THE SACRAMENTO AND
SAN JOAQUIN RIVER BASINS

FOR

THE CONTROL OF DIAZINON AND CHLORPYRIFOS
DISCHARGES

MARCH 2013 DRAFT STAFF REPORT

APPENDIX A

**SUMMARY OF MONITORING PROGRAMS, STUDIES, AND
DATABASES USED AS SOURCES OF DIAZINON AND
CHLORPYRIFOS CONCENTRATION DATA**

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Table A-1. List of Data Resources

| Reference List | Agency | Title | Monitoring Time Period | Sample Frequency and type of water | Monitoring Segment |
|----------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------|---------------------------|
| NAWQA, 2010 | United State Geological Survey (USGS) | National Water Quality Assessment data, USGS. http://infotrek.er.usgs.gov/traverse/f?p=136:9:0::NO::# | Jan 2000 to Sept 2009 | Various | see Table A-1 |
| ILRP, 2011 | California Central Valley Regional Water Quality Control Board (CVRWQC) | CVRWQC Irrigated Lands Regulatory Program (ILRP) Water Quality Monitoring. Monitoring data are available at http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_monitoring/data/program_participants/index.shtml | July 2004 to Aug 2010 | Various | See Table A-2 |
| ILRP UCD Phases I&II, 2011 | California Central Valley Regional Water Quality Control Board (CVRWQC) | CVRWQC Irrigated Lands Regulatory Program (ILRP) Water Quality Monitoring. Monitoring data are available at http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_monitoring/data/program_participants/index.shtml | Aug 2003 to Nov 2007 | Various | See Table A-3 |

| Reference List | Agency | Title | Monitoring Time Period | Sample Frequency and type of water | Monitoring Segment |
|-----------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| DPR SWDB, 2007 | California Department of Pesticides Regulation (DPR) | Surface Water Database by California Department of Pesticides Regulation. Electronic data files and cover letter from California Department of Pesticide Regulation to Central Valley Regional Water Quality Control Board. 16 February 2007. http://www.cdpr.ca.gov/docs/emon/surfwtr/surfddata.htm | Jan 2000 to 2006 | Various | See Table A-4 |
| Pesticides TMDL&UCD, 2002 to 2008 | California Central Valley Regional Water Quality Control Board (CVRWQC) | CVRWQC Pesticides TMDL Program contracted the Water Quality Monitoring to John Muir Institute of the Environment at University of California, Davis from 2003 to 2006. Monitoring reports by John Muir Institute of the Environment, U.C. Davis. Davis, CA. | June 2002 to Aug 2006 | Various (Daily, biweekly, monthly) Storm events and Irrigation seasons | See Table A-5 |
| Smalling, K. L., et al., 2005 | United State Geological Survey (USGS) and Bay-Delta | Analysis of Pesticides in Surface Water and Sediment from Yolo Bypass, California, 2004–2005, Prepared in cooperation with the California Bay-Delta Authority, Scientific Investigation Report 2005-5220, USGS, 2005 | Feb 2004 to Jan 2005 | Various | Cache Creek, Sac River at Knight Landing, Landing Ridge Cut, Putah Creek, Willow Slough Bypass |

| Reference List | Agency | Title | Monitoring Time Period | Sample Frequency and type of water | Monitoring Segment |
|----------------------------------|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------|
| Kelley K., 2011 | California Department of Pesticides Regulation (DPR) | Monitoring Pesticides in the Sacramento and San Joaquin Rivers, 2005 to 2007, California Environmental Protection Agency, California Department of Pesticides Regulation, Environmental Monitoring Branch Surface Water Protection Program, 1001 I street, Sacramento, CA 95812. Aug 11, 2011 Report 232_239, | Dec 2005 to Nov 2007 | Various (storm events), Weekly, daily during storm event | Sac River at Freeport, Knight Landing, and Yolo bypass; San Joaquin River at Vernalis |
| Ensminger M and K. Kelley, 2011a | California Department of Pesticides Regulation, | Monitoring Urban Pesticides Runoff in California 2008 -2009, California Department of Pesticides Regulation, Environmental Monitoring Branch Surface Water Protection Program, 1001 I street, Sacramento, CA 95812. March 2011. Report 249 | Apr 2008 to Aug 2009 | Two storm events and one dry flow | Four storm drains in Pleasant Grove Creek, Roseville |

| Reference List | Agency | Title | Monitoring Time Period | Sample Frequency and type of water | Monitoring Segment |
|----------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Ensminger M and K. Kelley, 2011b | California Department of Pesticides Regulation, | Monitoring Urban Pesticides Runoff in Northern California, 2009 to 2010, California Department of Pesticides Regulation, Environmental Monitoring Branch Surface Water Protection Program, 1001 I street, Sacramento, CA 95812. May 2011. Report 264 | Oct 2009 to June 2010 | Daily sampling during two storm events; urban | Storm Drains from Pleasant Grove Creek, Dry Creek , Sacramento River, Alder/Willow Creek |
| CIWQS, 2011 | California State Water Resources Control Board | California Integrated Water Quality System (CIWQS), http://ciwqs.waterboards.ca.gov/ | Jan 2010 to Sept 2011 | Various, WWTP effluent and receiving water data | Effluents of WWTPs and receiving water from Cities of Linda, Jackson, Rio Vista, Sacramento, Turlock, and Yuba. |
| SRWP, 2002 to 2007 | Sacramento River Watershed Program | Sacramento River Watershed Program (SRWP), Proposition 50 Grant monitoring data and reports by Larry Walker Associates, 2002 to 2007 | Oct 2002 to Aug 2007 | Various (Storm events), | Sac River, Yuba River, Arcade Creek, Colusa Basin Drain, Feather River; American River |

| Reference List | Agency | Title | Monitoring Time Period | Sample Frequency and type of water | Monitoring Segment |
|-------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| SVWQC, 2008 | Sacramento Valley Water Quality Coalition | Diazinon Runoff Management Plan for Orchard Growers in the Sacramento Valley: 2006, 2007, and 2008. Annual Reports for SVWQC prepared by Larry Walker Associates, 2006 to 2008 | 2006 report: Jan 2006 to Mar 2006; 2007 report: Feb 2007; 2008 report: Jan to Feb 2008 | Storm events, daily | Sac River at Colusa, Colusa Basin Drain at Knight Landing, Sac Slough, Feather River above Yuba City and near Verona |
| Sacramento Region, 2007 | Sacramento City Storm water | Memorandum by B. Laurenson, Larry Walker Associates, "Evaluation of additional pesticides Monitoring data-2007 update" dated on May 25, 2007 | Dec 2003 to Feb 2007 | Various | Chicken Rancho Slough, Elk Grove, Elder Creek, Morrison Creek, Natomas Drain, Willow Creek, Arcade Creek |
| SRCSD CMP, 2011 | Sacramento Regional County Sanitation District Coordinated Monitoring Program (SRCSD CMP); | Sacramento Regional County Sanitation District (SRCSD) Coordinated Monitoring Program (CMP) reports by Camp Dresser & McKee Inc. and Larry Walker Associates from 2006 and 2011 | July 2000 to Feb 2011 | Various | Freeport, River Mile 44, Nimbus, Veterans bridge, Discovery Park |

| Reference List | Agency | Title | Monitoring Time Period | Sample Frequency and type of water | Monitoring Segment |
|-------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------|
| SRCSD, NPDES, 2011 | Sacramento Regional County Sanitation District (SRCSD) | Sacramento Regional County Sanitation District (SRCSD) NPDES monitoring reports, 2002 to 2008. Data were obtained from Kathy Harder, staff of NPDES permit unit, CVWQCB. | Oct 2002 to June 2008 | Various | Effluents of Sacramento WWTP |
| City of Modesto, 2011a | NPDES storm water permits from San Joaquin | NPDES storm water monitoring reports | Jan 2002 to Feb 2011 | Various | Receiving waters: Dry Creek and Tuolumne River Up and Down stream; Storm Drains |
| City of Modesto, 2011b | NPDES permit for City of Modest WWTP | NPDES WWTP permit | Oct 2006 to Mar 2010 | Twice per year. | Effluent of Secondary facility , receiving waters: San Joaquin River at West Main Bridge |
| City of Stockton, 2011a | Storm water monitoring | NPDES Storm Water permit | Apr 2003 to June 2006 | Monthly | Receiving water: Mosher Slough, Smith Canal, Duck Creek. Urban storm discharges: Storm Drains |
| City of Stockton, 2011b | Wastewater Treatment Plant | NPDES WWTP permit required effluent monitoring data | Feb 2002 to Nov 2008 | Monthly | WWTP Effluent |

| Reference List | Agency | Title | Monitoring Time Period | Sample Frequency and type of water | Monitoring Segment |
|----------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------|
| Weston, D.P. and M.J. Lydy, 2010 | UC Berkeley | Urban and agricultural sources of pyrethroid insecticides to the Sacramento-San Joaquin Delta. Data were obtained from Dr. Weston. | Jan 2008 to Nov 2008 | 3 to 5 occasions in dry and wet seasons | POTW effluents and Storm drains in the cities of Sacramento WWTP, Vacaville, and Stockton |

Table A-1 Monitoring Waterbody Segments in the USGS_NAWQA dataset

| Watershed | Waterbody Segment (NAWQA data) | # of sample |
|------------------|--------------------------------------------------------|--------------------|
| Delta | Yolo Bypass | 2 |
| Delta | Cosumnes River | 26 |
| Delta | Sac River (in Delta) Freeport | 225 |
| SAC | Sac River (Red_Bluff to Knight_L) | 8 |
| SAC | Feather River, Lower | 20 |
| SAC | Sac Slough | 65 |
| SAC | Arcade Creek | 161 |
| SJR | Storm Drain Inlet in Wentworth Modesto | 2 |
| SJR | Hospital Creek | 4 |
| SJR | Ingram Creek | 4 |
| SJR | Los Banos Creek | 4 |
| SJR | Olive Ave Drain | 4 |
| SJR | Spanish Grant Drain | 4 |
| SJR | Westport Drain | 4 |
| SJR | Bear Creek in SJR | 6 |
| SJR | McHenry Storm Drain | 19 |
| SJR | Newman Wasteway | 21 |
| SJR | Harding Drain | 22 |
| SJR | Livingston Canal nr Livingston | 24 |
| SJR | Highline Canal | 34 |
| SJR | Dry Creek within Tuolumne | 44 |
| SJR | Mud Slough | 44 |
| SJR | Salt Slough | 44 |
| SJR | San Joaquin River (Tuolumne River to Stanislaus River) | 44 |
| SJR | Culvert Discharge to Mustang Crk | 50 |
| SJR | Del Puerto Creek | 68 |
| SJR | San Joaquin River (Merced River to Tuolumne River) | 90 |
| SJR | Mustang Creek | 106 |
| SJR | San Joaquin River (Bear Creek to Mud Slough) | 119 |
| SJR | Stanislaus River | 128 |
| SJR | Tuolumne River, Lower | 144 |
| SJR | Orestimba Creek | 272 |
| SJR | Merced River | 346 |
| SJR | San Joaquin River (Stanislaus River to Delta Boundary) | 486 |

Table A-2. Monitoring Waterbody Segments in the ILRP dataset

| Watershed | Waterbody Segment (ILP data) | # of samples |
|------------------|-----------------------------------------------|---------------------|
| Delta | Bear Creek in Delta | 12 |
| Delta | Big Indian Creek | 4 |
| Delta | Cache Creek | 34 |
| Delta | Calaveras River (above Diverting Canal) | 2 |
| Delta | Cosumnes River | 32 |
| Delta | Delta Drain- Terminous Tract off Glasscock Rd | 18 |
| Delta | Delta Drain- Terminous Tract off Guard Rd | 16 |
| Delta | Drain 14 at Lone Tree Creek | 1 |
| Delta | Drain at Woodbridge Rd | 34 |
| Delta | Drain to Stanislaus River | 3 |
| Delta | Dry Creek in Delta | 12 |
| Delta | Duck Creek | 81 |
| Delta | French camp slough | 93 |
| Delta | Grand Island Drain nr Leary Rd | 24 |
| Delta | Grant Line Canal | 122 |
| Delta | Kellogg Creek | 62 |
| Delta | Laguna Creek | 34 |
| Delta | LittleJohns Creek | 78 |
| Delta | Lone Tree Creek | 90 |
| Delta | Marsh Creek | 34 |
| Delta | Mokelumne River | 62 |
| Delta | Mormon Slough | 42 |
| Delta | Potato Slough | 18 |
| Delta | Roberts Island Drain | 118 |
| Delta | Sand Creek | 43 |
| Delta | Shag Slough | 66 |
| Delta | South Webb Tract Drain | 32 |
| Delta | Storm Drain to Marsh Creek | 3 |
| Delta | Sweany Creek | 2 |
| Delta | Terminous Tract Drain at Hwy 12 | 82 |
| Delta | Toe Drain | 8 |
| Delta | Tule Canal | 34 |
| Delta | Ulati Creek | 58 |

| Watershed | Waterbody Segment (ILP data) | # of samples |
|------------------|-------------------------------------------|---------------------|
| Delta | Unnamed Drain to Lone Tree Creek | 63 |
| Delta | Walthall Slough | 48 |
| Delta | Willow Slough | 8 |
| Delta | Willow Slough Bypass | 44 |
| Delta | Z Drain Dixon RCD | 32 |
| SAC | Anderson Creek | 14 |
| SAC | Burch Creek | 4 |
| SAC | Butte Creek | 24 |
| SAC | Butte Slough | 28 |
| SAC | Colusa Basin Drain | 86 |
| SAC | Coon Creek | 70 |
| SAC | Coyote Creek | 22 |
| SAC | Feather River, Lower | 29 |
| SAC | Freshwater Creek | 30 |
| SAC | Gilsizer Slough | 34 |
| SAC | Logan Creek | 30 |
| SAC | Lower Honcut Creek | 16 |
| SAC | Lower Snake River | 32 |
| SAC | Lurline Creek | 30 |
| SAC | Pine Creek | 30 |
| SAC | Rough and Ready Pumping Plant | 44 |
| SAC | Sac River (Above RedBluff) Below Keswick | 29 |
| SAC | Sac River (Red Bluff to Delta) Vet Bridge | 30 |
| SAC | Sac River (Red Bluff to KnightL) Colusa | 30 |
| SAC | Sac River (Red Bluff to KnightL) Hamilton | 30 |
| SAC | Sacramento Slough | 44 |
| SAC | Stone Corral Creek | 10 |
| SAC | Stony Creek | 36 |
| SAC | Wadsworth Canal | 34 |
| SAC | Walker Creek | 46 |
| SAC | Yuba River | 30 |
| SJR | Ash Slough | 24 |
| SJR | August Rd Drain | 4 |
| SJR | Bear Creek in SJR | 62 |
| SJR | Berenda Slough | 21 |
| SJR | Black Rascal Creek | 46 |

| Watershed | Waterbody Segment (ILP data) | # of samples |
|------------------|----------------------------------------------------|---------------------|
| SJR | Blewett Drain at Hwy 132 | 11 |
| SJR | Cottonwood Creek (Madera County) | 54 |
| SJR | Deadman Creek | 143 |
| SJR | Del Puerto Creek | 93 |
| SJR | Delta Mendota Canal | 68 |
| SJR | Drain to Stanislaus River | 3 |
| SJR | Dry Creek (Madera County) | 42 |
| SJR | Dry Creek within Tuolumne | 73 |
| SJR | Duck Slough (Merced County) | 149 |
| SJR | Hatch Drain at Tuolumne Rd | 26 |
| SJR | Highline Canal | 122 |
| SJR | Hilmar Drain | 60 |
| SJR | Hospital Creek | 64 |
| SJR | Howard Lateral | 28 |
| SJR | Ingram Creek | 68 |
| SJR | Jones Drain | 45 |
| SJR | Lateral 2 1/2 near Keys Rd | 34 |
| SJR | Livingston Drain | 26 |
| SJR | Lone Willow Slough | 10 |
| SJR | Los Banos Creek | 180 |
| SJR | Marshall Rd Drain | 62 |
| SJR | Merced River | 82 |
| SJR | Miles Creek | 29 |
| SJR | Mootz Drain | 46 |
| SJR | Mud Slough | 132 |
| SJR | Mustang Creek | 34 |
| SJR | Newman Wasteway | 70 |
| SJR | Orestimba Creek | 155 |
| SJR | Poso Slough | 17 |
| SJR | Prairie Flower Drain | 67 |
| SJR | Ramona Lake | 58 |
| SJR | Salado Creek | 7 |
| SJR | Salt Slough | 216 |
| SJR | San Joaquin River (Bear Creek to Mud Slough) | 132 |
| SJR | San Joaquin River (Mendota Pool to Bear Creek) | 70 |
| SJR | San Joaquin River (Merced River to Tuolumne River) | 53 |

| Watershed | Waterbody Segment (ILP data) | # of samples |
|------------------|-------------------------------------|---------------------|
| SJR | Silva Drain | 43 |
| SJR | South Slough | 18 |
| SJR | Turner Slough | 47 |
| SJR | Westley Wasteway | 54 |
| SJR | Westport Drain | 26 |

Table A-3 Monitoring Waterbody Segments in the ILP UCD Phases I & II dataset

| Watershed | Waterbody Segment (ILRP UCD) | # of samples |
|------------------|---------------------------------------------------|---------------------|
| Delta | Bear Creek in Delta | 50 |
| Delta | Calaveras River (above Diverting Canal) | 62 |
| Delta | Drain at Robben Rd. & Midway Rd. | 6 |
| Delta | Drain to Grant Line Canal off Wing Levee Rd. | 24 |
| Delta | Drain to North Canal at South Bonetti Rd. | 24 |
| Delta | Drain to SJRiver off South Manthey Rd. | 26 |
| Delta | Lateral to Gordon Slough at Rd 19 | 2 |
| Delta | LittleJohns Creek | 4 |
| Delta | Lone Tree Creek | 1 |
| Delta | Mormon Slough | 10 |
| Delta | Paddy Creek | 8 |
| Delta | Pixley Slough | 70 |
| Delta | Roberts Island Drain | 4 |
| Delta | Sycamore Slough | 18 |
| Delta | Ulatis Creek | 8 |
| Delta | Unnamed Canal at Howard Rd | 8 |
| Delta | Unnamed canal at West end of Woodbridge Rd | 10 |
| Delta | West Adams Canal | 10 |
| Delta | Willow Slough | 10 |
| Delta | Winters Canal | 18 |
| SAC | Antelope Creek | 20 |
| SAC | Bear River, Lower (below Camp Far West Reservoir) | 8 |
| SAC | Butte Creek | 16 |
| SAC | China Slough | 6 |

| Watershed | Waterbody Segment (ILRP UCD) | # of samples |
|------------------|------------------------------------------------------------------------|---------------------|
| SAC | Colusa Basin Drain | 16 |
| SAC | Comanche Creek (from Little Chico Creek to Angel Slough, Butte County) | 8 |
| SAC | Drain to Walker Cr at County Rd | 4 |
| SAC | Hamilton Slough | 10 |
| SAC | Howard Slough | 8 |
| SAC | Hunters Creek | 8 |
| SAC | Jack Slough | 8 |
| SAC | Lurline Creek | 8 |
| SAC | Main Drainage Canal | 25 |
| SAC | Mud Creek | 8 |
| SAC | North Main Canal at Sankey Rd. | 8 |
| SAC | N-S Ditch along Natomas Rd | 8 |
| SAC | Sac Slough | 2 |
| SAC | Salt Creek | 16 |
| SAC | Simmerly Slough | 8 |
| SAC | Spring Creek | 82 |
| SAC | Stone Corral Creek | 16 |
| SAC | Stony Creek | 18 |
| SAC | Tributary Home Colony Canal | 8 |
| SAC | Unnamed Canal at Hwy 45 | 8 |
| SAC | Unnamed Ditch at SW corner of Levee and Riego Rd | 6 |
| SAC | Unnamed Drain of Walker Creek on Co. Rd. 28 | 18 |
| SAC | Yankee Slough | 10 |
| SJR | Berenda Creek (Madera County) | 36 |
| SJR | Boundary Drain | 8 |
| SJR | Cottonwood Creek (Madera County) | 6 |
| SJR | Dry Creek within Tuolumne | 10 |
| SJR | Duck Slough (Merced County) | 18 |
| SJR | El Nido Canal | 8 |
| SJR | Hospital Creek | 2 |
| SJR | Ingalsbe Slough | 10 |
| SJR | Island Field Drain at Catrina Rd | 8 |
| SJR | Lateral 5 at Paradise Road | 8 |
| SJR | Lateral 6 at Central Avenue | 8 |
| SJR | Livingston Canal | 16 |

| Watershed | Waterbody Segment (ILRP UCD) | # of samples |
|------------------|-------------------------------------|---------------------|
| SJR | Lower Lateral 2 at Grayson Road | 8 |
| SJR | Orestimba Creek | 10 |
| SJR | Owens Creek | 8 |
| SJR | Poso Drain | 10 |
| SJR | Stevinson Lower Lateral | 10 |
| SJR | TID Lateral #2 on Service Road | 8 |

Table A4. Monitoring Waterbody Segments in the DPR Surface Water Database

| Watershed | Waterbody Segment (SWDB data) | # of samples |
|------------------|---------------------------------------------------|---------------------|
| Delta | Cache Slough | 1 |
| Delta | Sac River (in Delta) Freeport | 1 |
| Delta | Walthall Slough | 6 |
| SAC | Arcade Creek | 19 |
| SAC | Bear River, Lower (below Camp Far West Reservoir) | 2 |
| SAC | Big Chico Creek | 6 |
| SAC | Butte Creek | 2 |
| SAC | Butte Slough | 3 |
| SAC | Cherokee Canal | 1 |
| SAC | Colusa Basin Drain | 6 |
| SAC | Cross Canal | 16 |
| SAC | Deer Creek | 6 |
| SAC | Feather River, Lower | 44 |
| SAC | Gilsizer Slough | 12 |
| SAC | Jack Slough | 22 |
| SAC | Main Drain Canal | 1 |
| SAC | Mill Creek | 6 |
| SAC | Obanion Outfall | 3 |
| SAC | Sac River (above Red Bluff) Below Keswick | 1 |
| SAC | Sac River (above Red Bluff) Bend Bridge | 1 |
| SAC | Sac River (KnightL to Delta) Alamar | 66 |
| SAC | Sac River (Red Bluff to Delta) Vet Bridge | 20 |
| SAC | Sac River (Red Bluff to KnightL) Colusa | 21 |

| Watershed | Waterbody Segment (SWDB data) | # of samples |
|------------------|-----------------------------------------------------------|---------------------|
| SAC | Sac River (Red Bluff to KnightL) Hamilton | 18 |
| SAC | Sutter Bypass | 44 |
| SAC | Wadsworth Canal | 59 |
| SAC | Yuba River | 6 |
| SJR | Del Puerto Creek | 23 |
| SJR | Dry Creek (Madera County) | 4 |
| SJR | Highline Canal | 8 |
| SJR | Orestimba Creek | 80 |
| SJR | Salt Slough | 15 |
| SJR | San Joaquin River (Stanislaus River to Delta Boundary) | 73 |
| SJR | Tuolumne River, Lower | 15 |
| SJR | Turlock Irrig. Dist. Drain #3 | 19 |
| SJR | Unnamed Drain nr Paradise Ave | 17 |
| SJR | Westport Drain | 1 |

Table A5. Monitoring Waterbody Segment in the Central Valley Regional Board TMDL Program dataset

| Watershed | Waterbody Segment (TMDL data) | # of samples |
|------------------|-------------------------------------------------------|---------------------|
| Delta | Cache Slough | 96 |
| Delta | Calaveras River (Diverting Canal to SJ R) | 84 |
| Delta | Duck Slough (in Delta Waterways, northern portion) | 122 |
| Delta | Five Mile Slough | 118 |
| Delta | French Camp Slough | 124 |
| Delta | Grant Line Canal | 8 |
| Delta | LittleJohns Creek | 16 |
| Delta | Lone Tree Creek | 16 |
| Delta | Marsh Creek | 98 |
| Delta | Middle River | 8 |
| Delta | Mokelumne River | 82 |
| Delta | Mormon Slough | 16 |
| Delta | Mosher Creek | 8 |
| Delta | Mosher Slough | 116 |
| Delta | Old River | 60 |
| Delta | Paradise Cut | 42 |

| Watershed | Waterbody Segment (TMDL data) | # of samples |
|------------------|----------------------------------------------------------------------------------------------------|---------------------|
| Delta | Pixley Slough | 16 |
| Delta | Roberts Island Drain | 112 |
| Delta | Sac River (in Delta) Freeport | 35 |
| Delta | Sac River (in Delta) Rio Vista | 98 |
| Delta | Sac River (Red Bluff to Delta) Tower Bridge | 115 |
| Delta | SJ River (in Delta) Antioch | 8 |
| Delta | SJ River (in Delta) Hwy4 | 8 |
| Delta | Steamboat Slough | 56 |
| Delta | Ulatis Creek | 142 |
| SAC | American River, Lower | 28 |
| SAC | Butte Slough | 34 |
| SAC | Chicken Ranch Slough | 8 |
| SAC | Colusa Basin Drain | 86 |
| SAC | Comanche Creek (from Little Chico Creek to Angel Slough, Butte County) | 16 |
| SAC | Feather River, Lower | 48 |
| SAC | Gilsizer Slough | 24 |
| SAC | Live Oak Slough | 16 |
| SAC | Main Drain Canal | 70 |
| SAC | Morrison Slough | 16 |
| SAC | Natomas East Main Drainage Canal (aka Steelhead Creek, downstream of confluence with Arcade Creek) | 48 |
| SAC | Sac River (KnightL to Delta) Alamar | 18 |
| SAC | Sac River (Red Bluff to Delta) Vet Bridge | 52 |
| SAC | Sac River (Red Bluff to KnightL) Colusa | 82 |
| SAC | Sac Slough | 49 |
| SAC | Strong Ranch Slough | 8 |
| SAC | Sutter Bypass | 4 |
| SAC | Wadsworth Canal | 122 |
| SJR | Del Puerto Creek | 79 |
| SJR | Dry Creek within Tuolumne | 76 |
| SJR | Merced River | 190 |
| SJR | Orestimba Creek | 78 |
| SJR | Salt Slough | 36 |
| SJR | San Joaquin River (Bear Creek to Mud Slough) | 78 |

| Watershed | Waterbody Segment (TMDL data) | # of samples |
|------------------|--------------------------------------------------------|---------------------|
| SJR | San Joaquin River (Merced River to Tuolumne River) | 142 |
| SJR | San Joaquin River (Stanislaus River to Delta Boundary) | 251 |
| SJR | Stanislaus River | 392 |
| SJR | Tuolumne River, Lower | 317 |

References

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<http://infotrek.er.usgs.gov/traverse/?p=136:9:0::NO:::#>

ILRP, 2011. CVRWQC Irrigated Lands Regulatory Program (ILRP) Water Quality Monitoring. Monitoring data are available at

http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_monitoring/data/program_participants/index.shtml

ILRP UCD Phase I & II. 2011. CVRWQC Irrigated Lands Regulatory Program (ILRP) Water Quality Monitoring conducted by Univ. of California, Davis. Monitoring data are available at

http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/water_quality_monitoring/data/program_participants/index.shtml

DPR SWDB, 2007. Surface Water Database by California Department of Pesticides Regulation. Electronic data files and cover letter from California Department of Pesticide Regulation to Central Valley Regional Water Quality Control Board. 16 February 2007. <http://www.cdpr.ca.gov/docs/emon/surfwttr/surfddata.htm>

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Calanchini, H.J., A.B. Wehmann, A.M. King, E.R. Huber, R.E. Trout, and M. L. Johnson. 2003. Presence of Diazinon and Chlorpyrifos in California's Central Valley Waterways, January – March 2003. Aquatic Ecosystems Analysis Laboratory, John Muir Institute of the Environment, U.C. Davis, Davis. CA. August 2003.

Calanchini, H. and M. L. Johnson. 2005a. A Summary of the 2003 TMDL Monitoring for Diazinon and Chlorpyrifos in the Northern San Joaquin Basin, California. March – August 2003. Aquatic Ecosystems Analysis Laboratory, John Muir Institute of the Environment, U.C. Davis, Davis. CA. June 2005.

Calanchini, H. J., A. B. Wehrmann, and M.J. Johnson. 2004. A Brief Summary of the 2004 TMDL Monitoring for Diazinon in California's Sacramento Valley Waterways January – March 2004. Aquatic Ecosystems Analysis Laboratory, John Muir Institute of the Environment, U.C. Davis, Davis. CA. June 2004.

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Calanchini, H. J. and M.J. Johnson. 2005. A Summary of the 2004 TMDL Monitoring for Selected Pesticides in the Sacramento-San Joaquin Delta. January – February 2004. Aquatic Ecosystems Analysis Laboratory, John Muir Institute of the Environment, U.C. Davis, Davis. CA. September, 2005

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