
Water Quality Conditions in El Dorado County

8.1 INTRODUCTION

This section presents a broad overview of general water quality conditions in the major watersheds that produce essential water supplies in El Dorado County and a description of current state and federal regulatory programs to protect the water quality of the primary water sources to purveyors. The purpose of this section is to describe general water quality conditions at a regional level and current challenges in maintaining or improving watershed conditions. Most of the water used by water purveyors in El Dorado County is generated in the headwaters of the El Dorado and Tahoe National Forests and Desolation Wilderness where there are few direct discharges of treated wastewater into the primary sources of drinking water. El Dorado County's western slope is mainly reliant upon water supplied by the purveyors in this plan, with some residents dependent on groundwater. This water comes from the Middle Fork American River, South Fork American River, Folsom Reservoir, Weber Creek, the Silver Fork of the American River, and the North and Middle Forks of the Cosumnes River.

Several Federal Energy Regulatory Commission (FERC) hydroelectric power projects are operated within the American River watershed. Hydroelectric power is produced in the South Fork American River (SOFAR) watershed by utilities including Sacramento Municipal Utilities District (SMUD), Pacific Gas & Electric (PG&E), and El Dorado Irrigation District (EID). PG&E operates the Chili Bar Project (FERC 2155) to produce hydropower at Chili Bar powerhouse. The Chili Bar Project was originally licensed on December 20, 1954. SMUD operates the Upper American River Project (UARP, FERC 2101), which was originally licensed in 1957, to generate hydropower at nine powerhouses within the SOFAR watershed, including White Rock, Slab Creek, Jaybird, Camino, Jones Fork, Ice House, Union Valley, Robbs Peak, and Loon Lake powerhouses. SMUD is currently conducting intensive studies for re-licensing of the UARP project. EID operates FERC Project 184 to generate hydropower at the El Dorado Powerhouse near Pollock Pines. The project includes Lake Aloha, Echo Lake, Caples Lake, Silver Lake and seven diversions on various creeks within the watershed. Project 184 was originally licensed in 1922 and recently re-licensed by FERC in October

of 2006⁴³. Placer County Water Agency (PCWA) generates power on the Middle Fork American River (MFAR). PCWA operates the Middle Fork Project (FERC 2079) to produce hydroelectric power through a series of reservoirs and powerhouses. The MFAR project was constructed in 1963. PCWA has recently initiated re-licensing studies and meetings for a new FERC license, as their license expires in 2013.

8.1.1 REGULATORY SETTING

Water quality policy and regulation in the state of California are governed by the State Water Resources Control Board (SWRCB), Division of Water Quality through the power of the Porter-Cologne Water Quality Control Act (PCWQCA) and federal Clean Water Act (CWA). The PCWQCA, passed in 1970, created the SWRCB and nine Regional Water Quality Control Boards. The SWRCB sets statewide policy on water rights and water quality. The Regional Boards regulate discharge of wastes to land through Waste Discharge Requirements (WDR) under PCWQCA or issues surface water discharge permits via the National Pollution Discharge Elimination System (NPDES). The Environmental Protection Agency (EPA) delegated authority to the SWRCB to administer the CWA in California. El Dorado County is within the jurisdictional boundaries of the Central Valley Regional Water Quality Control Board (CVRWQCB).

The CVRWQCB issues NPDES permits for both wastewater and stormwater discharges to surface waters to protect water quality.

The water quality of lakes, streams, and reservoirs used for FERC projects is regulated under section 401(a) of the CWA. Under this provision, the Commission may not issue a license for a hydroelectric project unless the state water quality certifying agency has either issued a water quality certification for the project or has waived certification by failing to act on a request for certification within a reasonable period of time, not to exceed one year. Section 401(d) of the CWA provides that the certification shall become a condition of any federal license that authorizes construction or operation of the project. Water purveyors that use a surface water resource are required, under the California Surface Water Treatment Rule (SWTR), to conduct and prepare a sanitary survey of the source's watershed. Surveys must be conducted every 5 years and include tests for giardia, fecal coliform and other important indicators of sanitary quality. The initial sanitary survey of the American River watershed was completed in 1993 and was updated in 1998 and 2003³².

8.1.2 WATERSHED SETTING

Middle Fork American (MFAR)

The MFAR and Rubicon River are characterized primarily by steep, canyon-bound channels with step-pool morphology. A portion of the watershed lies in a transient rain-on-snow zone, which occurs at elevations between 3,500 and 6,000 feet. The MFAR watershed is dominated by a Mediterranean climate (warm, dry summers and cool to cold, wet winters). Air temperatures vary widely during the year and there is no appreciable precipitation in the summer except for scattered thunderstorms. Average annual precipitation is in the form of rain and snow, which ranges from 60 to 65 inches per year with the majority of it falling between November and April (El Dorado National Forest 2001). Lands within the MFAR are managed by both the El Dorado and Tahoe National Forests. Major reservoirs in this watershed include Duncan Creek, French Meadows, Hell Hole, Interbay and Ralston Afterbay, which are operated by PCWA and Stumpy Meadows operated by the GDPUD.

Few studies exist on the water quality conditions of the Middle Fork of the American River. Consequently, little information is available. The entire watershed is located in the high elevations of the El Dorado and Tahoe National Forests. The MFAR, like many western Sierra rivers, has a rich history of gold mining activity during California's gold rush. Remnants of the gold mining era such as large piles of dredge tailings and mining equipment can still be seen today in certain reaches of the MFAR. Today, multiple activities in the watershed threaten water quality, such as logging, road building, cattle grazing and fires. Residual mercury from mining activities also negatively affects quality in the watershed.

Rubicon River

The Rubicon's headwaters are in the Desolation Wilderness in the El Dorado National Forest. From its headwaters, the Rubicon River flows generally north for about 8 miles to Rubicon Reservoir, then northwest about five miles to the mouth of the Little Rubicon River, then five miles to Hell Hole Reservoir, part of PCWA's Middle Fork American River Project (FERC Project No. 2079). The combined forks form the Middle Fork of the American River, which flows into Folsom Reservoir. The Rubicon is heavily used by off-highway recreational vehicles. This use has resulted in a trail closure in the past due to biological contamination. This issue is being addressed through greater user education and signage.

South Fork American (SOFAR)

The SOFAR headwaters are located in the Desolation Wilderness in El Dorado National Forest. El Dorado National Forest manages the watershed lands and oversees activities such as timber harvest, recreation (off-road and passive) mining and other activities that may impact water quantity and quality through forest management plans. Headwater elevations range from 9,000 to 10,000 feet above sea level. Snowmelt in the watersheds provides most of the stream flow and sheet runoff in lower elevations. Major reservoirs and lakes in this watershed include Union Valley, Camino, Slab Creek, Brush Creek, and Junction reservoirs, as well as Ice House, Lake Aloha, Caples, Silver and Folsom Reservoirs. Waters from Echo Lake are transferred from Echo Creek, a tributary to the Truckee River, to the SOFAR, which drains into Folsom Reservoir along with the Middle and North Forks of the American River.

EID diverts water from the SOFAR and its tributaries and from Folsom reservoir for a portion of its water supply. Folsom Reservoir is part of the Central Valley Project (CVP), a multi-purpose project authorized by Congress in 1937 to serve water supply, hydropower generation, flood control, navigation, fish and wildlife, recreation, and water quality control purposes, and is now operated and maintained by the US Bureau of Reclamation (USBR). The CVP stores and transfers water from the Sacramento, San Joaquin and Trinity River basins to the Sacramento and San Joaquin Valley.

EID diverts water directly out of the SOFAR at the El Dorado Canal diversion dam. A portion of this water is used for irrigation and domestic use and the remainder is returned to the river at the El Dorado Powerhouse.

Silver Creek

Silver Creek's headwaters begin in Desolation Wilderness at the confluence of Tells Creek, Big Silver Creek, and Jones Fork Silver Creek at Union Valley Reservoir. Silver Creek flows approximately 14.6 miles from this point to its terminus at the SOFAR. Three UARP dams operate on the creek: Camino, Junction, and Union Valley dams³³. Ice House Reservoir is also in the watershed on the South Fork of Silver Creek.

Silver Fork American River

The Silver Fork of the American River begins in the El Dorado National Forest, near Kyburz, California. Flows in the river are regulated by Silver Lake and Caples Lake.

North Fork of the Cosumnes River

Several creeks tributary to the North Fork Cosumnes River are important for domestic water supply for El Dorado Irrigation District. Jenkinson Lake (Sly Park Reservoir) is EID's largest water supply, providing 23,000 acre-feet per year to EID's system. Water is supplied to Sly Park Reservoir from Sly Park Creek and Hazel Creeks. Water is also diverted into Sly Park Creek from Camp Creek via the Camp Creek diversion dam and tunnel.

The Grizzly Flats Community Services District (GFCSD) obtains its water supply by direct diversion of stream flows from North Canyon and Big Canyon Creeks, which are tributaries to the North Fork Cosumnes River. Flows are diverted through the Eagle Ditch and are delivered to a 30 acre-foot earthen reservoir before being treated to meet drinking standards.

8.1.3 WATER QUALITY

Water quality conditions in Folsom Reservoir are very good, reflecting the high quality inputs from the three forks of the American River. Water is typically soft, with hardness levels between 30-50 mg/l and few instances of organic chemicals detected. Dissolved oxygen conditions are suitable to sustain both cold and warm water fisheries.

There are very few point sources of pollution in the SOFAR watershed above Folsom Reservoir. The City of Placerville is the only significant NPDES discharger in the watershed and EID operates a spray field in the Camino area under a WDR permit. The City's plant on Hangtown Creek is currently undergoing an upgrade that will improve the discharge water quality to Title 22 standards.

Substantial water quality measurements and analysis have been recently conducted in the watershed as part of SMUD's FERC re-licensing process for its UARP. SMUD created a Water Quality Technical Working Group to prepare a technical work plan to assess water quality conditions in the areas affected by the Project. Much of this 2004 study is focused on the hydropower project and potential effects on water quality. The study sampled all 12 reservoirs in the UARP project for hardness, total suspended and dissolved solids (TSS/TDS), metals, nitrates, and organic compounds such as motor oil and grease. A review of the water quality technical study reveals that, as expected, water quality in the watershed is excellent given the wilderness setting of the watershed, the lack of point-source discharges and abundance of undeveloped lands. Waters are generally clear and cold with low concentrations of nutrients and high oxygen content³³.

Dissolved oxygen (DO) saturation in the upper reaches of most of the reservoirs is around 85 percent. The percent saturation is used as an indicator of the amount of oxygen in a water body at any given time. The 85 percent saturation limit was set in the basin plan to protect aquatic life. This concentration of DO is considered adequate to support coldwater trout fisheries. Maximum nitrate concentration in all of the reservoirs is below the 1.0 mg/l threshold considered to support algal growth. Specific conductance or conductivity was lower in upper-elevation reservoirs than reservoirs at lower elevations. Specific conductance is an indication of how well water can conduct an electrical current, indicating the presence of dissolved ions. It is also an indirect measure of the presence of dissolved salts such as chloride, nitrate, sulfate, phosphate, sodium, magnesium, calcium, and iron, and can be used as an indicator of water pollution.

All bacteria samples taken meet the Basin Plan Water Quality Objective for fecal coliform geometric mean (less than 200 organisms/100 ml). However, single sample criterion (less than 400 organisms/100 ml) was exceeded on several mid-summer sampling dates at several sites in the watershed. For example, on June 23, 2003, Union Valley Reservoir exceeded criterion for fecal coliform at three sites: Camino Cove (3180 organisms/100ml), Jones Fork Campground (550 organisms/100 ml), and Fashoda Beach (600 organisms/100ml). On July 22, 2003, Jones Fork of Silver Creek at Ice House Road had 1500 organisms /100ml Big Silver Creek at Bike Bridge had 1160 organisms /100ml. The fecal coliform counts were generally lower for sites upstream than downstream³³.

Total metals concentrations in the reservoirs are generally below the Primary and Secondary Maximum Contaminant Levels (MCLs) established by the California Department of Health Services. The following summary of metals samples that exceeded Primary and Secondary MCLs was extracted from the 2005 SMUD UARP Water Quality Technical Group Report:

Lead. Forty-six of the 406 lead samples (11.3% of the lead samples) were greater than the Primary MCL for lead (15 µg/l). The CTR and State Implementation Plan (SIP) are both undergoing revision by the SWRCB. These exceedances are a reflection of over protective criteria developed by the EPA, which are expected to be relaxed through the SWQCB review process. All 46 occurred in reservoirs during the 2004 sampling events (2004 Spring Runoff, 2004 Summer Low Flow, and 2004 Fall Turnover and First Major Rain). These occurrences are

summarized in **Table 8-1**, **Table 8-2** and **Table 8-3** below. Some sites have more than one value for concentration. These samples were taken from the same reservoir, but at different locations.

Table 8-1
Spring Runoff Samples Exceeding Primary MCL for Lead of 15 µg/l

Date (Spring)	Location	Lead Concentration (µg/l)
May 3, 2004	Slab Creek	65 and 86
May 3, 2004	Chili Bar	20
May 5, 2004	Union Valley	15, 25 and 47
May 5, 2004	Junction	15
May 6, 2004	Loon Lake	47, 48 and 91
May 11, 2004	Ice House	18 and 54
May 12, 2004	Rockbound	19
May 12, 2004	Buck Island	97

Table 8-2
Summer Low Flow Samples Exceeding Primary MCL for Lead of 15 µg/l

Date (Summer)	Location	Lead Concentration (µg/l)
September 13, 2004	Slab Creek	66, 110, and 110
September 13, 2004	Chili Bar	33, 42, 42 and 46
September 14, 2004	Union Valley	24, 47, 28
September 14, 2004	Junction	68
September 15, 2004	Gerle Creek	59
September 20, 2004	Brush Creek	48, and 85
September 20, 2004	Ice House	47, 33, 47, 36 and 120
September 21, 2004	Rockbound	39 and 54
September 21, 2004	Buck Island	49
September 22, 2004	Loon Lake	51, 100, 140 and 190

Table 8-3
First Rain/Fall Turnover samples exceeding Primary MCL for Lead of 15 µg/l

Date (Fall)	Location	Lead Concentration (µg/l)
October 25, 2004	Slab Creek	31
November 1, 2004	Brush Creek	53
November 1, 2004	Ice House	47
November 2, 2004	Rockbound	43
November 8, 2004	Union Valley	150
November 10, 2004	Loon Lake	41

Mercury. Eight of the 215 mercury samples (3.7% of the mercury samples) were equal to or exceeded the Primary MCL (2.0 µg/l). All eight occurred in reservoirs samples collected during 2003. **Table 8-4** summarizes these occurrences.

Table 8-4
Mercury (Hg) Samples Exceeding Primary MCL of 2.0 µg/l

Date	Location	Mercury Concentration (µg/l)
September 15, 2003	Slab Creek	2.4 and 5.6
September 15, 2003	Chili Bar	3.3 and 4.1
September 16, 2003	Loon Lake	5.7 and 2.2
September 18, 2003	Union Valley	2.1
September 18, 2003	Ice House	3.4

Aluminum. Three of the 398 aluminum samples (0.7 % of all aluminum samples) were greater than the Secondary MCL for aluminum (200 µg/l). All three occurred in stream reaches, including the Rubicon Dam Reach (230 µg/l), Chili Bar down stream from the dam (290 µg/l, and Slab Creek Reach Downstream from the Rock Creek confluence (230 µg/l).

Table 8-5
Aluminum (Al) Samples Exceeding Secondary MCL of 200 µg/l

Date	Location	Aluminum Concentration (µg/l)
October 7, 2002	Rubicon Dam Reach	230
November 12, 2002	Chili Bar down stream from the dam	290
May 11, 2003	Slab Creek Reach Downstream from the Rock Creek confluence	230

Iron. Seventeen of the 382 iron samples (4.4% of all iron samples) were equal to or greater than Secondary MCL for iron (300 µg/l). Ten of these occurred in river-reach samples and seven in reservoir samples. **Table 8-6** summarizes these occurrences.

Table 8-6
Iron (Fe) Samples Exceeding Secondary MCL of 300 µg/l

Date	Location	Concentration of Fe (µg/l)
September 17, 2003	Rubicon Reservoir	390
September 17, 2003	Rubicon Dam Reach	340
September 18, 2003	South Fork Silver Creek downstream from Ice House Dam	300
May 4, 2004	SFAR upstream of Camino Powerhouse	500
May 4, 2004	SFAR downstream of Camino Powerhouse	460
May 5, 2004	South Fork Silver Creek downstream of Junction Dam	440
May 5, 2004	South Fork at Hwy 50 and Ice House Road	310
September 13, 2004	Chili Bar	380
September 14, 2004	South Fork Silver Creek outflow from Junction Dam	440
September 15, 2004	South Fork Silver Creek outflow from Icehouse Reservoir	380
September 20, 2004	Ice House Reservoir	340
September 21, 2004	Rockbound Reservoir	330
September 21, 2004	Rubicon Reservoir	540
September 21, 2004	Rubicon River outflow from Rubicon Reservoir	340
October 24, 2004	South Fork Silver Creek outflow from Ice House Reservoir	990
November 1, 2004	Ice House Reservoir	980
November 1, 2004	Ice House Reservoir	580

Several UARP Reservoirs and Rivers, including the Rubicon River outflow from the Rubicon River, Gerle Creek outflow from Loon Lake, Gerle Creek inflow and outflow from Gerle Creek Reservoir, and portions of Silver Creek near Camino Dam and Powerhouse exceeded criteria for dissolved copper set by the California Toxics Rule (CTR). The CTR and SIP are both undergoing revision by the SWRCB. These exceedances are a reflection of over protective criteria developed by the EPA, which are expected to be relaxed through the SWQCB review process. In general, water quality conditions in the upper watershed are very good. The lakes have good clarity and high oxygen levels and the fisheries are productive (SMUD, 2005).

FERC licensees are required to implement a water quality monitoring plan as a condition of the issuance of the FERC license. For instance, SMUD employs a technical working group to develop a water quality study plan to address specific issues pertaining to water quality in the UARP reservoirs. This plan provides a framework for studying the water quality of the project reservoirs, rivers and

streams, and includes sampling locations, methods and a sampling schedule for measuring basic water quality parameters such as temperature, dissolved oxygen, conductivity, and pH. Grab samples are taken to analyze turbidity and total suspended solids.

In addition to basic water quality parameter testing, fish tissues are tested for the presence and concentration of certain constituents. For example, in the UARP, fish tissues are analyzed for bioaccumulation of metals, including cadmium, mercury, arsenic, nickel, selenium, chromium, silver, copper, lead and zinc, consistent with protocols of the SWRCB Toxic Substances Monitoring Program.

At least a moderate level of recreational fishing occurs at 6 of the 13 reservoirs: Loon Lake, Gerle Creek, Union Valley, Ice House, Slab Creek and Chili Bar. SMUD collected fish from these reservoirs and analyzed filets for metals covered by the USEPA SVs for recreation (arsenic, cadmium, mercury and selenium) and/or by the SWRCB MTRLs (arsenic, cadmium, mercury, and nickel). Of the 30 filets examined, none had metal concentrations equal to or greater than the SWRCB MTRL values. Two samples exceeded the USEPA SV of 0.026 ppm for arsenic; at Union Valley Reservoir (0.06 ppm) and Ice House Reservoir (0.16 ppm). Two samples exceeded the USEPA SVs for both the Target Analytes and Green Areas of 0.4 ppm for mercury, and three samples exceeded the National Recommended Water Quality Criteria (USEPA 2002) of 0.3 ppm for mercury: at Gerle Creek Reservoir (brown trout, 0.32 ppm), Union Valley Reservoir (smallmouth bass, 0.42 ppm) and Slab Creek Reservoir (brown trout, 0.59 ppm). However, none of the mercury samples exceeded the SWRCB's MTRL (a value of 1.0 ppm of total mercury). The results of fish tissue metals analysis for the six Project reservoirs are shown in Table 8-7:

Table 8-7

Fish Tissue Analysis of Metals in Upper American River Watershed

Station Name	Ag ppm	Al ppm	As Ppm	Cd ppm	Cr ppm	Cu ppm	Mn Ppm	Ni ppm	Pb ppm	Se ppm	Zn	Hg
Union Valley	<.002	<.02	0.06	<.004	0.086	0.47	0.13	0.009	<.0004	0.21	4.19	0.419
Ice House	<.002	<.02	0.16	<0.004	0.080	0.46	0.12	<.001	<.0004	0.19	4.32	.0036
Lab Creek	<.002	<.02	<.02	<.004	.089	0.44	0.012	<.001	<.0004	.0086	3.60	0.595
Loon Lake	<.002	.37	<.02	.0080	.094	0.48	0.037	<.001	<.0004	.032	4.92	0.137
Gerle Creek	<.002	<.02	0.028	0.0008	.093	.52	0.0009	<.001	<.0004	0.39	353	.0321
Chili Bar	<.002	3.88	<.02	0.0013	0.066	0.39	<0.006	<.001	0.0043	0.14	8.05	.0075
MDL	0.002	0.02	0.02	0.0004	0.006	0.0006	0.0006	0.001	0.0004	0.02	0.004	0.001
RL	0.006	0.06	0.06	0.0012	0.018	0.0018	0.0018	0.003	0.0012	0.06	0.012	0.003

Source: SMUD and PG&E Upper American River Project Water Quality Technical Report, May 2005.

Method: Modified EPA 1638

<value: sample below given detection limit

For Project 184, EID implements water level and stream flow monitoring at ten sites within the project, including Lake Aloha, Echo Lake, Echo Lake Outlet, Caples Lake, Caples Lake Outlet, Pyramid Creek, South Fork American at Kyburz, Silver Lake and Silver Lake Outlet, and Forebay Lake.

Additional insight into water quality conditions in the SOFAR including the lower sections of the river were found in an intensive sanitary survey conducted by a collection of major water purveyors that rely on the river for water supply. The following assessment of water quality conditions in the lower American River was extracted from the 2003 American River Sanitary Survey published by the American River Watershed Technical Group, which includes the City of Sacramento, EID and others. Some of these issues discussed are not strictly relevant to the upper watersheds in El Dorado County but are informative nonetheless.

Overall, the American River is a drinking water source of excellent quality. The raw water can be treated to meet all drinking water standards using conventional and direct filtration processes, as well as membranes. No persistently present constituents have been identified in the river that require additional treatment processes. Peaks in turbidity levels, number of organisms and organic carbon concentrations occur during wet weather and storm events. Watershed runoff and discharges that contribute to these wet weather peaks include general upper watershed runoff, urban runoff, runoff from the lower American River and occasional sanitary sewer overflows. The lower American River has a higher occurrence of sanitary sewer overflows mainly due to higher demand on sewer systems. Higher demand leads to a higher likelihood of overflow during flood events. Stewardship projects, funded by various grants, in the upper watershed are being formulated and implemented to reduce watershed erosion and thus reduce sediment loads from upper watershed runoff³².

Additional documentation of excellent water quality conditions in Folsom Reservoir comes from raw water chemical analyses conducted by EID, which draws water from the reservoir and treats it at their El Dorado Hills Water Treatment Plant. A cursory review of recent monthly results of chemical analysis from 1997 to 2004 reveal excellent water quality with few, if any, synthetic organic compounds (volatiles, semi-volatile compounds) detected, low concentrations of heavy metals, and good mineral quality³⁴.

As part of the effort to obtain an agricultural waiver from the RWQCB, sampling of agricultural runoff in the Apple Hill area is being done; periodic testing showed little pollution problems. The mix of residential and agricultural land use in the county suggests the low levels of pollutants are not exclusively agricultural.

8.1.4 STORMWATER

Urban storm water runoff and other non-point sources such as agricultural runoff and aerial deposition are responsible for much of the pollution observed today in major streams and lakes in the nation and California. Significant investments have been made in municipal wastewater treatment works since the enactment of the CWA's Construction Grant Program. EPA and the SWRCB have implemented a variety of regulatory programs in an attempt to reduce these sources of pollution including municipal stormwater management programs that focus on both large and small cities and industrial stormwater permits. The SWRCB has also instituted a program to control sediment and erosion from construction sites in their General Permit for Construction Activity, as sediment is a

major source of impairment to many California rivers and streams. Major sources of urban runoff in El Dorado County include the larger urbanized areas in the county including El Dorado Hills and Cameron Park and the City of Placerville.

The United States Environmental Protection Agency (EPA) established a two-phase program to address stormwater management discharges from municipal storm drainage systems (MS4s) and industrial and construction activities to surface waters. Phase 1 regulations cover municipalities with populations greater than 100,000, certain industrial processes, or construction activities disturbing an area of five acres or more. Phase 2 regulations require that stormwater management plans be developed by municipalities with populations smaller than 100,000 and construction activities disturbing one or more acres of land area. The City of Placerville and El Dorado County are required by the EPA to implement best management practices (BMPs) such as instituting erosion control and stormwater control requirements at city and county maintenance yards, parking lots and other government controlled properties to reduce their contributions to non-point source pollution and conducting public education and outreach in an attempt to reduce urban pollution of local waterways in El Dorado County. El Dorado County has implemented a Stormwater Management Plan (SWMP) to reduce the discharge of pollutants associated with the storm water drainage systems that serve Western El Dorado County. It identifies how the County will comply with the provisions of the National Pollutant Discharge Elimination System (NPDES) permit proposed by the SWRCB³⁵. It also addresses responsibilities for implementing applicable storm water management practices as well as public education and outreach, monitoring, program evaluation, and reporting activities³⁴. The City of Placerville implements its stormwater regulations through Water Quality Order No. 2003-01005-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Small MS4 Permit) under the authority of the RWQCB. Urban runoff in Placerville is discharged to Hangtown Creek. Hangtown Creek is tributary to Weber Creek and the South Fork of the American River. The City SWMP outlines BMPs for stormwater runoff management, discharge detection and elimination, stormwater management in new developments, as well as methods for monitoring and reporting of stormwater discharge pollutants³⁵.

8.1.5 CONCLUSION

The water quality of the water supply in El Dorado County is generally very good at supporting a wide variety of beneficial uses, including drinking water, wildlife and fisheries, and agricultural use. The watersheds in the county originate from high elevation, mountain snow pack, and flow down into the western slope of El Dorado County, and into Sacramento County. The lower portions of the watershed, such as that below Folsom Dam, are subject to higher levels of recreation, urbanization, and overall system demand than the upper watershed. As such, the lower portions are associated with higher levels of pollution. The quality of the streams decline as the American and Sacramento Rivers reach the urban areas of Northern California. These portions of the watershed are associated with increased recreational use and agricultural and stormwater runoff. As recreational use increases in El Dorado County, with the increase in Sacramento Region population, pressures on watershed services will increase. This could potentially affect water quality in the region. Water managers are aware of this potentiality, and projects in user education and baseline tracking are being implemented. This pro-active work will help in ensuring that customers in El Dorado County continue to receive high quality water for the foreseeable future.