CHAPTER 4.10 Public Services and Utilities

4.10.1 Introduction

This chapter describes the existing conditions relating to public services and utilities within the Fish Habitat Flows and Water Rights Project (Proposed Project) area. Section 4.10.2, "Environmental Setting," describes the regional and project area environmental setting, focusing on public water utilities and other water users. Section 4.10.3, "Regulatory Framework" details the federal, state, and local laws related to public water utilities. Potential impacts to these resources resulting from the Proposed Project are analyzed in Section 4.10.4.

4.10.2 Environmental Setting

The environmental setting for public services and utilities includes all areas that could be affected by activities associated with the Proposed Project. The Proposed Project would generally be located in the Russian River watershed in Mendocino County and Sonoma County, California. Environmental impacts of the Proposed Project would potentially occur at Lake Mendocino, Lake Sonoma, in and along the Russian River downstream of Lake Mendocino/Coyote Valley Dam to the Pacific Ocean, and in and along Dry Creek downstream of Lake Sonoma/Warm Springs Dam. However, potential impacts related to public water utilities and other holders of water rights are generally limited to the Russian River.

Public Services and Utilities

Water

Mendocino County

There are many water service providers in Mendocino County, including cities, special districts, and private water purveyors. There are 123 public water systems on record in Mendocino County (Mendocino County, 2009). Of these, 41 were community systems ranging in number of connections from 15 to 5,486 for the City of Ukiah.

Many residents of Mendocino County live outside of water and wastewater districts service areas. Water supplies for these areas generally are from wells and springs. The yields from these sources may vary from year to year. Deficiencies may occur, especially during years of low rainfall.

East Sanel Water District and River Estates Mutual Water Company are public entities that divert water from the Russian River. Their water right permits contain terms that prohibit diversions when Russian River instream flows are less than specified minimum amounts. Details of such permit conditions are described in Section 4.10.3, "Regulatory Framework".

Sonoma County

The Water Agency provides water to most cities in Sonoma County that receive water from the Russian River downstream of the confluence with Dry Creek. Please see Chapter 3, "Background and Project Description," for more details of the Water Agency's facilities and service area. Sources of potable water in the project area within the areas of Sonoma County that do not receive water from the Water Agency or other public water systems include public and private wells (PRMD, 2012). Public water systems that divert water from the Russian River and have conditions in their water right permits prohibiting diversions when Russian River instream flows are less than specified minimum amounts include Occidental Community Service District, Rains Creek Water District, and Palomino Lakes Mutual Water Company. Details of such permit conditions are described in Section 4.10.3, "Regulatory Framework".

Sewer

Wastewater management services generally consist of collection, treatment, storage, and disposal systems and facilities. Wastewater collection services generally occur with underground pipes and pumps that transfer wastewater from public and private buildings and residences to wastewater treatment plants. Wastewater treatment generally occurs through a series of processes at treatment plants, mostly in above-ground facilities. Wastewater storage generally occurs at or near treatment plants in ponds or reservoirs. Wastewater disposal generally occurs through pipelines that convey treated effluent from treatment plants and storage ponds to receiving waters including rivers and streams, or that distribute treated effluent as recycled water through pipelines to irrigation areas or other uses (e.g., the Geysers) (PRMD, 2012).

Mendocino County

Public sewer services in Mendocino County in the project vicinity are provided by cities, special districts, and some private water purveyors (Mendocino County, 2009). There are 13 major wastewater systems in the County of Mendocino, four of which primarily serve the incorporated cities, but also serve some unincorporated areas. The public facility within the Proposed Project area is the City of Ukiah Wastewater Treatment Plant, which also processes wastewater collected by the Ukiah Valley Sanitation District. The City of Ukiah Wastewater Treatment Plant discharges treated effluent to the Russian River. Sewage disposal in the remainder of the county is generally handled by private onsite facilities, primarily septic tank and leach field systems, although alternative engineered wastewater systems may be used.

Sonoma County

Parts of the project area are located within unincorporated areas of Sonoma County where sewage disposal is served by sanitation districts or zones or is handled by private onsite facilities, primarily consisting of septic tanks and leach field systems (PRMD, 2006) (PRMD, 2012). Public facilities within the Proposed Project area are the City of Cloverdale Sewer Treatment Plant, Geyserville Sanitation Zone, City of Healdsburg Wastewater Treatment Plant, Windsor Treatment Plant, Laguna Subregional Wastewater Treatment Plant, Forestville Wastewater Treatment Plant, Graton Wastewater Treatment Plant, Occidental County Sanitation District and Russian River County Sanitation District Wastewater Treatment Plant. Public facilities within the Proposed Project area that discharge to the Russian River are the City

of Cloverdale Sewer Treatment Plant, City of Healdsburg Wastewater Treatment Plant, and Russian River County Sanitation District Wastewater Treatment Plant.

4.10.3 Regulatory Framework

State

State Water Resources Control Board

The State Water Resources Control Board (SWRCB) has statutory authority over post-1914 appropriative water rights in California. The Division of Water Rights is responsible for issuing water right permits and licenses and for approving modifications of terms in existing water right permits and licenses. California water right permits and licenses authorize diversions of specified amounts of water from specified watercourses and contain terms and conditions on the diversions and use of the water.

The SWRCB, in coordination with nine Regional Water Quality Control Boards (RWQCBs), regulates water quality, including issuance of Waste Discharge Requirements (WDRs) and National Pollution Discharge Elimination System (NPDES) permits. WDRs and NPDES permits for discharges in the project area are issued by the North Coast RWQCB. The NPDES program regulates point source discharges from wastewater treatment plants directly to surface waters. Each NPDES permit contains limits on allowable concentrations contained in the discharge, and typically a self-monitoring and surveillance program. Water Quality Control Plans, also referred to as Basin Plans, are prepared by each RWQCB for its respective region. The plans designate beneficial uses for specific surface and groundwater resources and establish water quality objectives and implementation programs. The Regional Boards issue WDRs and NPDES permits consistent with the applicable basin plans for major point-source discharges, such as municipal wastewater treatment plants and industrial facilities.

Water Rights and Minimum Bypass Flow Terms

Appropriative water right permits and licenses issued by the SWRCB authorize the diversion and use of water. Water-right permits are for water rights under development and water-right licenses are for fully developed and perfected rights. All appropriative water right permits and licenses contain specific terms and conditions. Water right permits and licenses specify the amount of water that may be diverted and used for a specified purpose at a specific point of diversion from a specified source during a specified season.

Water right permits and licenses also may have terms that restrict or prohibit diversions under specified conditions. One type of term is a minimum bypass flow requirement, which specifies a flow rate below which diversions under the water right are not authorized. There are hundreds water-right permits and licenses for diversions from the Upper Russian River in Ukiah Valley in Mendocino County down to the community of Monte Rio on the Lower Russian River. The minimum bypass flow amounts in permits with such terms range from 125 to 200 cfs.

The SWRCB has two standard terms that are used for water-right permits for diversions in the Russian River watershed to establish minimum bypass flow requirements –Terms 60 and 68.

These terms prohibit diversions when the flow at the nearest streamflow gage is less than 150 cfs for diversions from the upper reaches of the Russian River (Upper Russian River) and 125 cfs for the diversions from lower reaches of the Russian River, downstream of the confluence with Dry Creek (Lower Russian River). None of the water right permits for diversions from Dry Creek contain such bypass flow terms. Some water right permits for diversions from the Russian River have other minimum bypass flow amounts, but Terms 60 and 68 are the most common terms. Terms 60 and 68 specify minimum bypass flow requirements that apply year-round. However, some water-right permits have minimum bypass flow terms that apply only during a specified diversion season or that specify different bypass flow requirements for different seasons.

The authorized diversion seasons in different water-right permits may be for the entire year, which is the case for many permits for municipal and domestic uses, or may be for only a few months of each year for seasonal agricultural uses, such as for frost protection during the spring and for irrigation during the summer. For example, a water rights permit may authorize diversions of 10 cfs from the Russian River during March to June for vineyard frost protection, but only when river flows are above 150 cfs. In this example, during a year with an average amount of rainfall there would be enough runoff to provide stream flows that exceed the minimum bypass flows during the early spring, but stream flows might drop below 150 cfs later in the spring. Because the Russian River is under a managed flow regime, the likelihood of flows dropping below the minimum bypass flow also depends on the amounts of minimum instream flows maintained by the Water Agency.

Regional Water Quality Control Board - North Coast Region

The project area is situated within the jurisdiction of the North Coast Regional Water Quality Control Board (NCRWQCB). The NCRWQCB has the authority to implement water quality objectives through WDRs and NPDES permits for discharges to waters at locations within its jurisdiction. Water quality objectives for the Russian River and its tributaries are specified in the Water Quality Control Plan for the North Coast Region (Basin Plan) prepared by the NCRWQCB in compliance with the federal Clean Water Act and the Porter-Cologne Act (NCRWQCB, 2011).

4.10.4 Impact Analysis

This section describes the impact analysis relating to public services and utilities for the Proposed Project. It describes the methods used to determine the impacts of the project and lists the criteria used to determine whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts are included, where applicable.

Significance Criteria

The criteria used to determine the significance of an impact are based on the environmental checklist in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. The following criteria are relevant to the Proposed Project:

1. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

2. Violate any water quality standards or waste discharge requirements.

Because the Proposed Project would not need any water supplies, the first of these criteria does not apply to this analysis and is not discussed further. Specifically, implementation of the Proposed Project would not require any water supply. Instead, under the Proposed Project, the Water Agency would continue to make releases from Lake Mendocino and Lake Sonoma to maintain the minimum instream flow requirements specified in the Water Agency's water right permits and for downstream beneficial uses, including diversions for municipal, domestic, and industrial purposes.

Because the Fish Flow Project would change instream flows in a manner that may reduce instream flows below the minimum bypass-flow amounts specified in the water-right permits with minimum bypass flow terms, an additional criterion has been established to evaluate such impacts associated with the Proposed Project. This criterion provides that project implementation would have a significant impact on public services and utilities if the project would:

- Adversely affect when holders of water-right permits may divert water from the Russian River due to minimum bypass flow terms in their water-right permits.

Methodology

The impact analysis below compares the Proposed Project and the No Project 1 and No Project 2 alternatives with Baseline Conditions. Water Agency staff contacted local water users and SWRCB staff, reviewed water right documents and other in-house documents, and conducted a search of the SWRCB's electronic Water Rights Information Management System (eWRIMS) database of water rights to identify water-right permits that authorize diversions from the Russian River. The results of this research were used to determine the number of water right permits that include minimum bypass flow terms.

The Russian River ResSim model was used to evaluate the occurrence of instream flows and the potential impacts discussed in this section. Details about the Russian River ResSim model are provided in Appendix C. The outputs of the Russian River ResSim model correspond with existing United States Geological Survey (USGS) discharge gaging stations or the confluences of major water bodies. Reach gains from unimpaired flows and losses due to human water use or natural processes are defined at each downstream junction. The model accounts for system losses including municipal diversions, agricultural diversions, reservoir surface evaporation, and water balance losses. Water demands for municipal and industrial water use were estimated for 15 of the public water systems in the Russian River basin for which metered pumping data was available (Appendix C, Table 3-2). For these water systems, their water supplies are primarily composed of surface water and groundwater wells diverting underflow along the mainstem corridor of the Russian River or Dry Creek. Existing water demands for these water service providers were established using recent metered water production records provided by the public agencies. Baseline demands were estimated through an analysis of production records

from the five-year period from 2009 to 2013. Over this period, the Russian River system experienced dry, normal, and wet years. Public water systems not accounted for in this analysis were indirectly accounted for in the estimation of water balance losses.

Agricultural diversions of Russian River surface flows and underflow were estimated using land use data and applied water estimates by crop type from 2002 to 2008. These demand estimates were confined to a region defined as the Applied Water Analysis Zone (AWAZ), within which diversions or consumption of water is either known or presumed to have immediate effects on surface water flows. Agricultural diversions not accounted for in this analysis were indirectly accounted for in the estimation of water balance losses.

Water balance loss is the additional observed loss that cannot be accounted for from reported municipal diversions and agricultural diversions as described previously. Water balance losses were quantified as part of an analysis that incorporated multiple datasets including observed Russian River and Dry Creek instream flows, observed releases from Lake Mendocino and Lake Sonoma, estimated reach gains as quantified by unimpaired flows, known metered municipal diversions as described previously, and estimated diversions from agriculture as described previously. Water balance losses were estimated for the years 1970 to 2013. This analysis showed that water balance loss trends have changed over time with increasing losses through the 1980s and 1990s and then a reduction in losses, likely due to conservation efforts, for the more recent period since 2000. To estimate Baseline Condition water balance losses, this analysis was completed for 2002 to 2013 because this period is considered to be representative of current watershed conditions. Although water balance losses cannot be directly accounted for by metered diversions or estimated agricultural diversions from the Russian River and Dry Creek, it is assumed that this water balance loss is the result of the cumulative impacts of water losses not directly quantified by other means. These losses include water consumed by riparian vegetation, additional direct diversions not accounted for by other methods, water being pumped from groundwater wells and diverted from tributaries. Monthly water balance loss patterns were estimated for each model reach for wet and dry years. For further details regarding the development of water balance losses, see Appendix C.

Impacts and Mitigation Measures

This section presents a detailed discussion of potential public services and utilities-related impacts associated with the project alternatives, including the Proposed Project, the No Project 1 Alternative, and the No Project 2 Alternative. Each impact discussion includes an analysis of the impact, a summary statement of the impact and its significance, and proposed mitigation measures, where applicable. Impacts are summarized and categorized as either “no impact,” “less than significant,” “less than significant with mitigation,” “significant and unavoidable,” or “beneficial.”

Impact 4.10.1. Changes in minimum instream flow requirements could adversely affect when water right permit holders may divert water from the Russian River while complying with the minimum bypass flow terms in their water-right permits. (Significant and Unavoidable)

There are at least 68 water right permits (5 for public agencies and utilities and 63 for private individuals and companies) that authorize diversions of water from the Russian River and that have minimum bypass flow terms (Table 4.10-1). Of these permits, there are 59 that contain either Term 60 or 68. Across these water right permits, there is a wide range in terms affecting water use, period of use, diversion rate, annual amount, and storage.

The five public entities with water right permits that have minimum bypass flow terms and that authorize diversions from the Russian River are public water suppliers and an irrigation district. Two of the public water suppliers are mutual water companies that provide public utility services to local communities (Table 4.10-2). East Sanel Irrigation District's water right permit authorizes it to divert water from April 1 to October 31 from the Russian River near Hopland for irrigation and stock watering purposes and has a term with a required minimum bypass flow of 150 cfs. This irrigation district augments its water supplies with diversions under a contract from the Mendocino County Russian River Flood Control and Water Conservation Improvement District (Mendocino District). Rains Creek Water District's water right permit authorizes it to divert water year-round from the Russian River in the Geyserville area for domestic and industrial use and has a term with a required minimum bypass flow of 150 cfs. Occidental Community Service District (OCSD) has a water right permit that authorizes diversions year-round from the Russian River at Monte Rio for the purposes of municipal use and fire protection and has a term with required minimum bypass flows of 140 cfs between November 1 and June 30. OCSD's Permit 21214, however, is currently suspended and OCSD's water supply needs are provided under an agreement with Camp Meeker Recreation and Parks District (CMPRD), which sells OCSD water that CMPRD purchases under an agreement with the Water Agency. The Water Agency also has an agreement with OCSD, but this agreement will not become effective until the SWRCB approves the Water Agency's petition to add the Occidental point of diversion to the authorized points of diversion in the Water Agency's water right permits.

The mutual water companies with these permit terms are River Estates and Palomino Lakes (Table 4.10-2). River Estates diverts water for municipal use from November 1 to June 30 from the Russian River in the Hopland area. Its water right permit contains a term prohibiting diversions when the Water Agency is making releases from Lake Mendocino to maintain senior water rights and minimum instream flow requirements. River Estates augments its water supply needs with diversions under a contract from the Mendocino District. Palomino Lakes Mutual Water Company diverts water year-round from the Russian River near Geyserville area for fire protection and domestic uses. Its water right permit contains Term 68, which requires minimum bypass flows of 150 cfs.

The 63 private water right permit holders with these permit terms are comprised of landowners, vineyards, and other businesses. The authorized uses in these permits, which may be for seasonal or year-round diversions, include irrigation, frost protection, heat control, livestock watering, industrial, domestic, fire protection, and recreation.

Table 4.10-1. Summary of water right permits with minimum bypass flow terms for diversions from the Russian River.

Location on Russian River where bypass term is measured (USGS River Gage)	Minimum Bypass Flow Requirement (cfs)						
	125	140	150	165	165 / 200[1]	Varies[2]	Total
Public Entities Water Right Permit Holders							
Ukiah Valley (Hopland)			1			1	2
Alexander Valley (Cloverdale)			2				2
Healdsburg (Healdsburg)							
Lower Russian River (Hacienda Bridge)		1					1
Subtotal		1	3			1	5
Private Water Right Permit Holders							
Ukiah Valley (Hopland)			13	1	1	2	17
Alexander Valley (Cloverdale)			11				11
Healdsburg (Healdsburg)			29				29
Lower Russian River (Hacienda Bridge)	6						6
Subtotal	6		53	1	1	2	63

[1] Minimum bypass flow term sets minimum flow requirement that varies based on time of year.
[2] Minimum bypass flow term does not have specific value, but requires review of status of managed river conditions.

The potential impacts to holders of such permits for diversions from the Russian River are described below and in Tables 4.10-2 and 4.10-3. Potential impacts are summarized by general location and gaging station along the Russian River that are compliance points specified in the terms of water right permits, including Ukiah Valley (Hopland), Alexander Valley (Cloverdale/Geyserville), Healdsburg, and lower Russian River (Hacienda Bridge/Guerneville). Of the 63 private holders of water-right permits with minimum bypass flow terms, potential impacts are related to the authorized diversion season. Table 4.10.4 summarizes the number of permits authorized to divert water from the Russian River by month.

No Project 1 Alternative: The No Project 1 Alternative would have the same minimum instream flow requirements for the Russian River as under Baseline Conditions and would result in a slight changes in when water right permit holders may divert water from the Russian River while complying with minimum bypass flow terms. For the Lower Russian River, private water right permits with minimum bypass flow terms may have decreases in days available for diversions of up to 1 to 2 percent over the year. OCSD's water right permit has a minimum bypass flow term of 140 cfs from November 1 to June 30 and may have its authorized diversion days reduced by 1 percent over the year when the permit becomes effective. There would be no change in diversion availability for water rights in the Upper Russian River for public and private right permits holders.

Table 4.10-2. Percent changes in the occurrence of when public holders of water right permits may divert water from the Russian River while complying with the permits' minimum bypass flow terms. Existing diversions under Baseline Conditions are the estimated number of days available when a permit holder may divert water from the Russian River. The percent change in the number of days available for diversions over Baseline Conditions is shown for a specified season of diversion under the Proposed Project and No Project 2 Alternative. Negative (-) values indicate a decrease in the number of days available for diversions.

Public Entity	Gage Location	Flow Diversion (cfs)	Season of Diversion	Annual Limit (acre-feet)	Minimum Bypass Flow (cfs)	Existing Diversion under Baseline Conditions (days)[2]	Change in number of days available for diversions (%)		Alternate Water Supply
							Proposed Project	No Project 2	
East Sanel Irrigation District	Hopland	2.95	April 1 - Oct 31	598	150	169	-64%	-22%	Mendocino District contract of 245 ac-ft.
Rains Creek Water District	Geyserville	0.08	year-round	35	150	299	-38%[1]	-11%[1]	None
Occidental Community Services District	Guerneville	0.16	year-round	65	140 (Nov 1 - Jun 30)	235	-10%	-7%	Camp Meeker and SCWA Water Supply Agreement
River Estates Mutual Water Company	Hopland	0.11	Nov 1 – June 30	24	Conditional on not diverting water intended for wetlands, habitat or recreation	Varies	0%	0%	Mendocino District contract of 26 ac-ft.
Palomino Lakes Mutual Water Company	Geyserville	0.43	year-round	182	150	299	-38%[1]	-11%[1]	None

[1] Impact analyzed at USGS Cloverdale gage.
[2] Number of days available for diversion under Baseline Conditions based on water right permit terms.

Table 4.10-3. Percent changes in the occurrence of when private holders of water-right permits may divert water from the Russian River while complying with the permits' minimum bypass flow terms. There are 63 private water right permit holders. Baseline Conditions are the number of days in a month a water right holder may divert under existing flows. The change, presented as the percent change in the number of days available for diversion over Baseline Conditions, is shown for a specified month of diversion under the Proposed Project and No Project 2 Alternative. Negative (-) values indicate a decrease in the number of days available for diversions. Positive values indicate an increase in the number of days available for diversions. Double dashes indicate there are no authorized diversions. See Table 4.10.4 for a list of monthly authorized diversions.

Month	Ukiah Valley (Hopland) [1]						Alexander Valley (Cloverdale) (150 cfs) [1]		Healdsburg (150 cfs) [1]		Lower Russian River (Hacienda Bridge) (125 cfs) [1]	
	(150 cfs)		(165 cfs)		(200 cfs)							
	Baseline (days)[2]	Change[3]	Baseline (days)[2]	Change[3]	Baseline (days)[2]	Change[3]	Baseline (days)[2]	Change[3]	Baseline (days)[2]	Change[3]	Baseline (days)[2]	Change[3]
Proposed Project												
Jan	29	-9%	29	-10%	26	--	29	-4%	30	-1%	31	0%
Feb	26	1%	26	1%	26	--	27	0%	27	1%	28	1%
Mar	30	-2%	30	-4%	29	--	30	0%	31	0%	31	0%
Apr	27	-14%	27	--	27	-43%	28	-2%	29	0%	30	0%
May	27	-73%	27	--	27	-88%	28	-47%	29	-17%	30	-12%
Jun	23	-92%	23	--	16	--	23	-85%	23	-67%	27	-67%
Jul	24	-96%	24	--	19	--	24	-100%	24	-99%	27	-99%
Aug	24	-60%	24	--	22	--	24	-93%	24	-100%	27	-100%
Sep	24	-52%	23	--	20	--	23	-69%	23	-99%	27	-99%
Oct	20	-71%	20	--	2	--	20	-71%	21	-73%	28	-42%
Nov	18	-29%	18	--	7	--	19	-21%	21	-9%	29	1%
Dec	24	-11%	24	-13%	19	--	25	-6%	26	0%	31	-1%
No Project 2 Alternative												
Jan	29	0%	29	0%	26	--	29	0%	30	0%	31	-1%
Feb	26	0%	26	0%	26	--	27	0%	27	0%	28	-1%
Mar	30	0%	30	--	29	--	30	0%	31	0%	31	0%
Apr	27	0%	27	--	27	0%	28	0%	29	0%	30	0%
May	27	-56%	27	--	27	-84%	28	-27%	29	-4%	30	-4%
Jun	23	-73%	23	--	16	--	23	-73%	23	-44%	27	-37%
Jul	24	-36%	24	--	19	--	24	-46%	24	-93%	27	-91%
Aug	24	1%	24	--	22	--	24	-32%	24	-100%	27	-100%
Sep	24	2%	23	--	20	--	23	2%	23	-99%	27	-99%
Oct	20	18%	20	--	2	--	20	-1%	21	-34%	28	-43%
Nov	18	38%	18	--	7	--	19	34%	21	28%	29	-2%
Dec	24	16%	24	16%	19	--	25	13%	26	11%	31	-2%

[1] Location of diversion (USGS gage station) and Russian River minimum bypass flow term stated in water right permit.

[2] Number of days available for diversion under Baseline Conditions based on water right permit terms.

[3] Percent change in number of days available for diversion over Baseline Conditions (%).

Table 4.10.4: The number of private water right permits for diversions from the Russian River by month. Private permit holders (total=63) may be shown in several months depending on length of diversion season. Diversion seasons range from two months to year-round.

Month	Number of Water Right Permits Authorized by Month					
	Ukiah Valley (Hopland) [1]			Alexander Valley (Cloverdale) (150 cfs) [1]	Healdsburg (150 cfs) [1]	Lower Russian River (Hacienda Bridge) (125 cfs) [1]
	(150 cfs)	(165 cfs)	(200 cfs)			
Jan	4	2	0	7	12	2
Feb	4	2	0	7	13	2
Mar	11	2	0	9	20	2
Apr	11	0	1	10	24	4
May	13	0	1	11	27	4
Jun	6	0	0	9	21	6
Jul	2	0	0	9	21	5
Aug	2	0	0	9	21	5
Sep	5	0	0	9	22	5
Oct	4	0	0	8	19	3
Nov	5	0	0	7	13	2
Dec	4	2	0	7	13	2

[1] Location of diversion (USGS gage station) and Russian River minimum bypass flow term stated in water right permit.

Proposed Project and No Project 2 Alternative: The Proposed Project and No Project 2 Alternative would reduce minimum instream flow requirements for the Russian River, mainly during the dry season. These changes in minimum instream flow could potentially impact a water right permit holder's ability to divert water from the Russian River if flow changes drop below the minimum required bypass flow amounts (Tables 4.10-2 and 4.10-3). The severity of this impact would depend on each water right permit's terms. The season for which there is the highest potential for impact is from May to October, when instream flows in the Russian River transition from dependent on unimpaired or natural stream flow to a managed-flow system relying on releases from Lake Mendocino and Lake Sonoma to maintain minimum instream flows.

Under the Proposed Project, the times when public holders of water right permits with minimum bypass flow terms may divert during their permitted seasons of diversion could be impacted. The estimated number of days available for diversion annually would decrease by 64 percent for East Sanel Irrigation District, 38 percent for Rains Creek Water District, 10 percent for OCSD, and 38 percent for Palomino Lakes (Table 4-10.2). The times when River Estates could divert while complying with the minimum bypass flow term in its water right permit would not be impacted. The changes in minimum instream flow requirements under the Proposed Project could affect when private holders of water right permits may divert water from the Russian River while complying with the minimum bypass flow terms in their water right permits. The number of days available for diversions during the peak months of June, July, August, and September under Baseline Conditions could be reduced by 52 percent to 100 percent (diversions would not be authorized at any time in that month due to a change in minimum instream flow requirements) under the Proposed Project (Table 4.10-3).

Under the No Project 2 Alternative, the times when public holders of water right permits with minimum bypass flow terms may divert during their authorized diversion seasons could be impacted similar to or less than for the Proposed Project (Table 4.10-2). The estimated number of days available for diversions each year could decrease by 22 percent for East Sanel Irrigation District, 11 percent for Rains Creek Water District, 7 percent for OCSD, and 11 percent for Palomino Lakes (Table 4.10-2). The times when River Estates could divert water while complying with the minimum bypass flow term in its water right permit would not be impacted. Private holders of water right permits could be impacted through a reduction in the number of days available for diversions during the peak months of June, July, August, and September from 32 percent up to 100 percent (Table 4.10-3). Additionally, there are a few months that would experience nominal increases in the times available for diversions (from 1 to 2 percent).

As described in the Methodology section above and in Appendix C, the Water Agency evaluated water demands for municipal and industrial uses, agricultural diversions, and other water balance losses. Diversions made by River Estates Mutual Water Company and OCSD were included in the municipal and industrial water demand calculations in the Russian River ResSim model for Baseline Conditions, Proposed Project, and the No Project 1 and No Project 2 alternatives. Diversions made by public water systems not accounted for in the municipal and industrial water demand calculations (East Sanel Irrigation District, Rains Creek Water District, Palomino Lakes Mutual Water Company) were accounted for in the estimation of water balance

losses. Diversions made by other water right permit holders with minimum bypass flow terms in their permits were accounted for in the water balance loss calculations. The Proposed Project and No Project 1 and No Project 2 alternatives assume the same water demands for municipal and industrial water uses, agricultural diversions, and other water balance losses as for Baseline Conditions. Under the Proposed Project and No Project 1 and No Project 2 alternatives, the Water Agency would meet minimum instream flow requirements for these water demands, including for those demands by holders of water right permits with minimum bypass flow terms. The Water Agency makes releases from Lake Mendocino and Lake Sonoma to: (1) meet the downstream demands of the hundreds of agricultural, commercial and residential water users, the Water Agency, and several public water systems along the Russian River and Dry Creek; and (2) maintain minimum instream flow requirements in the Russian River and Dry Creek. Under the Proposed Project and No Project 1 and No Project 2 alternatives, the Water Agency would operate in this manner, just as under Baseline Conditions.

Nevertheless, because of the terms in some water right permits, the changes in minimum instream flow requirements under the Proposed Project and No Project 2 Alternative could result in lower instream flows that would adversely affect when holders of these permits could divert water from the Russian River. Water right permits are issued by the SWRCB and terms, including minimum bypass flow terms like those discussed above, are enforced by the SWRCB. The Water Agency has no legal authority to amend the terms of water right permits that have such minimum bypass flow terms, and CEQA Guidelines Section 15126.4(a)(5) therefore is applicable. It provides that, under such circumstances, mitigation "need not be proposed or analyzed." This impact is significant and unavoidable and cannot be mitigated by the Water Agency.

Impact 4.10.2. Changes in instream flows could result in violations of wastewater discharge requirements. (No Impact)

There are four wastewater treatment plants (WWTP) that discharge treated effluent into the Russian River: the City of Ukiah Waste Water Treatment Plant, City of Cloverdale Sewer Treatment Plant, City of Healdsburg Water Treatment Plant, and Russian River County Sanitation District Waste Water Treatment Plant. There are no wastewater treatment facilities on Dry Creek. The quantity and period of discharges are authorized by the SWRCB and NCRWQCB under the NPDES and the Basin Plan (NCRWQCB, 2011). The Basin Plan established a policy and implementation schedule for controlling wastewater discharges into the Russian River. The Basin Plan cites the following waste discharge rules, which are intended to help implement water quality objectives and protect beneficial uses in the Russian River watershed:

- Discharges of wastewater into the Russian River and its tributaries are prohibited during the period of May 15 through September 30.
- Discharges during all other periods when the waste discharge flow is less than one percent of the receiving stream's flow as set forth in the individual NPDES permits.
- The discharge of municipal waste during October 1 through May 14 must be of advanced treated wastewater in accordance with effluent limitations contained in NPDES permits for each affected discharger, and must meet a median coliform level of 2.2 most probable number (mpn)/100 milliliter (ml).[1]

The allowable discharge season is from October 1 to May 14, a period when much of the flow in the Russian River is unimpaired from rainfall and runoff. Unimpaired drainage and stream flow (as opposed to releases from Lakes Sonoma and Mendocino) contribute the majority of the Russian River flows downstream of Coyote Valley Dam and Warm Springs Dam during the rainy season (November through April) and the discharge season. The discharge season generally avoids the dry season when minimum instream flows are maintained by the Water Agency.

Wastewater treatment plants along the Russian River can only discharge into the river from October 1 to May 14 and are limited to no more than 1 percent of the daily measured flow at a corresponding USGS gage as defined in the WWTPs' NPDES permits. Other limitations to discharge, including total treatment and discharge capacities, are included in the permits as well. To assess if the Proposed Project and No Project 1 and No Project 2 alternatives could potentially impact each WWTP's ability to discharge into the river and still remain in compliance with their permit, an analysis was performed on the Russian River ResSim model results. The analysis evaluated modeled daily flows for the Proposed Project and the No Project 1 and No Project 2 alternatives and the Baseline Condition at model nodes Hopland, Cloverdale, Healdsburg, Dry Creek Mouth (confluence of Dry Creek and the Russian River), and Hacienda for water years 1910 to 2013. Each node represents a USGS gage location that the WWTP discharge is evaluated against. These flows entail the time period of October 1 to May 14 to account for the period in which any WWTP can discharge into the Russian River. The flows at evaluation nodes were multiplied by 1 percent to determine the maximum allowable discharge for each WWTP at each day. The allowable discharges under the 1 percent daily measured flow limit were summed for each water year and the average of the summations were calculated to obtain an average total water year maximum allowable discharge volume in acre-feet. These daily discharges and yearly volumes were calculated for the Proposed Project and No Project 1 and No Project 2 alternatives.

The results of this analysis are summarized in Table 4.10-5. During the discharge season, the No Project 1 Alternative would have a slight decrease (0.4 to 1.0 percent) in change in daily allowable discharge under the 1 percent of the daily measured flow limit as compared to Baseline Conditions and, therefore, would have a negligible change in when WWTPs may

[1] For dischargers not in compliance with the waste discharge rate limitation or advanced wastewater treatment, time schedules set forth in NPDES permit updates for each discharger. In addition, each discharger not in compliance must report to the RWQCB on progress towards compliance on an annual basis.

discharge under their permits. The Proposed Project and No Project 2 Alternative would result in small increases (0.1 to 4.5 percent) in the ability to discharge daily under the 1 percent of the daily measured flow limit. The Proposed Project, No Project 1 Alternative, and No Project 2 Alternative would have a negligible effect on the ability of the WWTPs to discharge under their permits. As mentioned above, each WWTP's permits include other limitations to discharge, including total treatment and discharge capacities, which limit the volumes of wastewater that can be treated and discharged. The Proposed Project and No Project 1 and No Project 2 alternatives would not change these permit terms and would not allow for an increase in discharge to the river. Changes in instream flows would not result in violations of wastewater discharge requirements and there would be no impact.

Table 4.10-5. Modeled average annual change from Baseline Conditions of allowable discharge from wastewater treatment plants (WWTPs) based on modeled Russian River flows for water years 1910 - 2013. The discharge season is from October 1 to May 14. A negative (-) value indicates a decrease in allowable discharge under the 1 percent of the daily measured flow. A positive value indicates an increase in allowable discharge under the 1 percent of the daily measured flow. Total discharge is limited by the terms and conditions of each WWTP permit and values do not represent an increase in the amount of discharge allowed over current permit limits.

WWTP Name	USGS Gage Location	No Project 1 (acre-feet)	No Project 2 (acre-feet)	Proposed Project (acre-feet)
City of Ukiah	Hopland	0.0%	3.0%	4.5%
City of Healdsburg	Healdsburg and Dry Creek near Mouth	-0.4%	1.0%	1.5%
Town of Cloverdale	Cloverdale	0.0%	2.1%	3.2%
Russian River CSD	Guerneville	-1.0%	0.1%	0.5%

4.10.5 General Plans and Consistency

The project area is located within Mendocino County and the unincorporated areas of Sonoma County. The following section presents the relevant goals, policies, and objectives in the Mendocino County and Sonoma County General Plans related to public services, utilities, and service systems that may be affected by the Proposed Project.

Mendocino County

The Mendocino County General Plan (Mendocino County, 2009) sets forth the following goals, objectives, and policies related to water supplies and wastewater that are applicable to the Proposed Project.

Resource Management Element

Goal RM-1 (Water Supply): Protection, enhancement, and management of the water resources of Mendocino County

- Policy RM-3: Work cooperatively with property owners, agencies, and organizations to develop and support programs that maintain the integrity of stream systems for flood control, aquatic habitat, and water supply.

- Policy RM-6: Promote sustainable management and conservation of the county's water resources.
- Policy RM-10: Continue to seek and advocate for dependable water resources necessary to support all sectors of the economy and other beneficial uses.
- Policy RM-11: Work with local, state, and federal agencies and organizations to develop and protect water supplies in a manner that is consistent with adopted General Plan policies, recognizing sustainable yields and protections for the environment.
- Policy RM-12: Support the creation of a comprehensive plan for surface and groundwater resources in Mendocino County.
- Policy RM-15: Maximize the use of existing water supplies while proceeding with the development of new water supplies.

Development Element

Goal DE-16 (Water/Sewer): Efficient and adequate public water and sewer services.

- Policy DE-186: Coordinate community water and sewer services with General Plan land use densities and intensities.
- Policy DE-187: The County supports efficient and adequate public water and sewer services through combined service agencies, shared facilities, or other inter-agency agreements.
- Policy DE-188: Encourage water and sewer service providers to incorporate water conservation, reclamation, and reuse.
- Policy DE-190: Development of residential, commercial, or industrial uses shall be supported by water supply and wastewater treatment systems adequate to serve the long-term needs of the intended density, intensity, and use.
- Policy DE-191: Land use plans and development shall minimize impacts to the quality or quantity of drinking water supplies.

Water Supply and Sewer (Wastewater Treatment) Services

Goal DE-16 (Water/Sewer): Efficient and adequate public water and sewer services.

- Policy DE-186: Coordinate community water and sewer services with General Plan land use densities and intensities.
- Action Item DE-187.3: Work with communities and public water and sewer service entities to monitor, manage and/or maintain community-wide or decentralized water or sewer systems.
- Policy DE-188: Encourage water and sewer service providers to incorporate water conservation, reclamation, and reuse.

Consistency

The Proposed Project does not include construction of additional facilities or changes in operation of existing facilities and would improve water supply reliability in the Russian River. The Proposed Project is consistent with the goals, policies, and objectives of Mendocino County General Plan.

Sonoma County

The Sonoma County General Plan 2020 (PRMD, 2012) has the following goals related to public water supplies that may be affected by the Proposed Project and ends with a brief analysis discussing consistency with this plan.

Public Facilities and Services Element

- Goal PF-1: Assure that water and wastewater services are available where necessary to serve planned growth and development without promoting unplanned growth.
- Objective PF-1.1: Operate county water and wastewater facilities in accordance with planned growth and in compliance with applicable State and Federal standards.
- Goal PF-2: Assure that park and recreation, public education, fire suppression and emergency medical, and solid waste services, and public utility sites are available to meet future needs of Sonoma County residents.

Consistency

The Proposed Project does not include construction of additional facilities or changes in operation of existing facilities and would improve water supply reliability in the Russian River. The Proposed Project is consistent with the goals, policies, and objectives of Sonoma County General Plan.

4.10.6 References

Mendocino County. (2009). *Mendocino County General Plan 2009.* Ukiah, CA: Mendocino County Planning and Building Department.

Mendocino County. (2009). *Mendocino County General Plan 2009, Development Element.* Ukiah, CA: Mendocino County Planning and Building Department.

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