

APPENDIX P

*WATER RIGHTS SELF
ASSESSMENTS*

Table 1

WATER SYSTEM PLAN

WATER RIGHTS SELF ASSESSMENT – EXISTING STATUS (POTABLE SYSTEM)

PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		EXISTING CONSUMPTION		CURRENT WATER RIGHT STATUS (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. SWC 9005-A	City of Richland	1/30/1962	WTP – S01 and Horn Rapids Intake	Yes	24,350 gpm (54.25 cfs)	31,528 afy [A] 1,600 afy [NA]	23,170 gpm	16,511 afy	1,180 gpm	15,017 afy [A]
2. G4-25960C	City of Richland	8/21/1978	Willowbrook Well – S10	Yes	1,000 gpm	1,606 afy [NA]	1,000 gpm	102 afy	0 gpm	1,504 afy [NA]
3. S4-26404C	City of Richland	9/20/1979	WTP – S01 and Columbia Point Intake	Yes	7,630 gpm (17 cfs)	12,257 afy [NA]	7,260 gpm	6,419 afy	370 gpm	5,838 afy [NA]
4. S4-27121C	City of Richland	6/24/1980	WTP – S01	Yes	2,693 gpm (6 cfs)	4,336 afy [NA]	2,562 gpm	2,271 afy	131 gpm	2,065 afy [NA]
5. G4-28515C	City of Richland	8/8/1984	Duke Wellfield – S03, Horn Rapids Athletic Complex, and SMART Park Properties	Yes	1,400 gpm	1,228 afy [NA]	246 gpm	126 afy	1,154 gpm	1,102 afy [NA]
6. G4-28516C	City of Richland	8/8/1984	Wellsian Way Wellfield – S02	Yes	2,125 gpm	3,422 afy [NA]	2,100 gpm	1,051 afy	25 gpm	2,371 afy [NA]
7. G4-28517C	City of Richland	8/8/1984	Columbia Well – S05	Yes	556 gpm	890 afy [NA]	730 gpm	5 afy	(174 gpm)	885 afy [NA]
8. G4-28554C (potable portion)	City of Richland	10/26/1984	ORV Park Well No. 1 – S09 (inactive)	No	310 gpm	11.4 afy	0 gpm	0 afy	310 gpm	11.4 afy
9. G4-29214P (potable portion)	City of Richland	2/26/1987	Columbia Point Marina Well	No	100 gpm	1.8 afy	0 gpm	0 afy	100 gpm	1.8 afy

10. S4-30976P (Phase 1)	Cities of Richland, Kennewick, Pasco, and West Richland	6/24/1980	* See Footnote	No	1,122 gpm (2.5 cfs)	1,806.75 afy	0 gpm	0 afy	1,122 gpm	1,806.75 afy
11. G4-35244P	City of Richland	6/1/2009	Harrison Well and City Shops Well (undrilled)	Yes	1,500 gpm	2,418 afy [NA]	0 gpm	0 afy	1,500 gpm	2,418 afy [NA]
Claims 1. G4-063205CL	City of Richland	11/1943	North Richland Wellfield – S04	No	1,000 gpm	1,600 afy	0 gpm	0 afy	1,000 gpm	1,600 afy
TOTAL	*****	*****	*****	*****	43,786 gpm	34,947.95 afy	37,068 gpm	26,484 afy	6,718 gpm	8,463.95 afy
INTERTIE NAME/ IDENTIFIER	NAME OF PURVEYOR PROVIDING WATER	EXISTING LIMITS ON INTERTIE USE		EXISTING CONSUMPTION THROUGH INTERTIE		CURRENT INTERTIE SUPPLY STATUS (Excess/Deficiency)				
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)			
1. None for supply	-	-	-	-	-	-	-			
TOTAL	*****	-	-	-	-	-	-			
PENDING WATER RIGHT APPLICATION (New/Change)	NAME ON APPLICATION	DATE SUBMITTED	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	PENDING WATER RIGHTS						
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa) Requested					
1. S4-33044(B)A	Cities of Richland, Kennewick, Pasco, and West Richland	11/28/2011	No	158.1 cfs Jointly-owned	81,983 afy Jointly-owned					

Footnotes:

Water rights S4-27121C, G4-28515C, G4-28516C, and G4-28517C all contain a provision that provided a cumulative cap on all water rights that were being utilized by the City for municipal supply of 33,128 afy. SWC 9005-A originally issued for 32,430 afy, but the subsequent water rights have capped the total authorized annual volume to 33,128 afy, which is shown as the maximum annual volume under SWC 9005-A for planning purposes.

S4-30976P was issued to the cities of Richland, Kennewick, Pasco, and West Richland for a total of 178 cfs and 96,619 afy. However, access to the water for municipal supply is contingent on obtaining sufficient mitigation. For this reason, only the first phase of development (combined 10 cfs and 7,227 afy) has been mitigated and authorized. Subsequent phases will need to be mitigated before they can be available to the Cities. Only Richland's quarter of the first phase is identified in this table. The authorized points of diversion from the Columbia River for this permit are Energy NW, Battelle, Horn Rapids Intake, WSU, 3000 (SSFF), WTP (S01), Columbia Point, and Badger Mountain Irrigation District.

G4-063205CL pulls public water from the North Richland Wellfield. It is shown as not being used because the City has been infiltrating more than they have been withdrawing. The water pulled from this source is Columbia River water that has been diverted under water rights SWC 9004-A, SWC 9005-A, S4-26404C, and S4-27121C being filtered by the aquifer, referred to as the 3000 slow sand filter facility (SSFF).

The instantaneous diversion rate of water pumped from the river that is routed to either the WTP or 3000 SSFF was estimated by using the peak month (May 2014) combined with a peaking factor of 1.30. The monthly diversion rate was 25,609 gpm, which when multiplied by the peaking factor equals 33,292 gpm. With 300 gpm attributed to SWC 9004-A, that leaves 32,992 gpm accounted for in this table. The instantaneous rate was allocated to the Columbia River diversion water rights proportionately.

In 2015, approximately 25,685 afy was routed from the Columbia River to either the WTP or the 3000 SSFF. 485 afy is attributed to SWC 9004-A, which is not listed in this table, since it is non-potable, which leaves 25,200 afy accounted for in this table.

The use shown in this table (26,484 afy) is much greater than the demand shown in **Table 4-6** (19,031 afy). This is because some of the sources have been converted to non-potable uses (G4-25960C and G4-28515C), but primarily it is because water provided to the 3000 SSFF that is not able to be recaptured and used to satisfy municipal demand. Historically, the City has been diverting approximately 2 to 3 times as much water from the Columbia River into the 3000 SSFF as it has been able to recover from the facility through the North Richland Wellfield and served to customers. Instantaneous rate for each source based on installed pumping capacity and not demand.

[NA] = Non-additive

Existing use based on 2015 use.

If you need this publication in an alternate format, call (800) 525-0127. For TTY/TDD call (800) 833-6388.

DOH Form 331-371 (Updated 08/10)

Please return completed form to the Office of Drinking Water regional office checked below.

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Fax: (253) 395-6760

Southwest Drinking Water
Department of Health
PO Box 47823
Olympia, WA 98504-7823
Phone: (360) 236-3030
Fax: (360) 664-8058

Eastern Drinking Water
Department of Health
16201 E Indiana Ave, Suite 1500
Spokane Valley, WA 99216
Phone: (509) 329-2100
Fax: (509) 329-2104

Table 1

WATER SYSTEM PLAN

WATER RIGHTS SELF ASSESSMENT – 6-YEAR FORECAST (POTABLE SYSTEM)

PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		FORCASTED WATER USE FROM SOURCES (6-year Demand)		FORCASTED WATER RIGHT STATUS (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. SWC 9005-A	City of Richland	1/30/1962	WTP – S01 and Horn Rapids Intake	Yes	24,350 gpm (54.25 cfs)	31,528 afy [A] 1,600 afy [NA]	23,170 gpm	17,544 afy	1,180 gpm	13,984 afy [A]
2. G4-25960C	City of Richland	8/21/1978	Willowbrook Well – S10	Yes	1,000 gpm	1,606 afy [NA]	1,000 gpm	102 afy	0 gpm	1,504 afy [NA]
3. S4-26404C	City of Richland	9/20/1979	WTP – S01 and Columbia Point Intake	Yes	7,630 gpm (17 cfs)	12,257 afy [NA]	7,260 gpm	6,820 afy	370 gpm	5,437 afy [NA]
4. S4-27121C	City of Richland	6/24/1980	WTP – S01	Yes	2,693 gpm (6 cfs)	4,336 afy [NA]	2,562 gpm	2,413 afy	131 gpm	1,923 afy [NA]
5. G4-28515C	City of Richland	8/8/1984	Duke Wellfield – S03, Horn Rapids Athletic Complex, and SMART Park Properties	Yes	1,400 gpm	1,228 afy [NA]	246 gpm	126 afy	1,154 gpm	1,102 afy [NA]
6. G4-28516C	City of Richland	8/8/1984	Wellsian Way Wellfield – S02	Yes	2,125 gpm	3,422 afy [NA]	2,100 gpm	1,345 afy	25 gpm	2,077 afy [NA]
7. G4-28517C	City of Richland	8/8/1984	Columbia Well – S05	Yes	556 gpm	890 afy [NA]	730 gpm	224 afy	(174 gpm)	666 afy [NA]
8. G4-28554C (potable portion)	City of Richland	10/26/1984	ORV Park Well No. 1 – S09 (inactive)	No	310 gpm	11.4 afy	0 gpm	0 afy	310 gpm	11.4 afy
9. G4-29214P (potable portion)	City of Richland	2/26/1987	Columbia Point Marina Well	No	100 gpm	1.8 afy	0 gpm	0 afy	100 gpm	1.8 afy

10. S4-30976P (Phase 1)	Cities of Richland, Kennewick, Pasco, and West Richland	6/24/1980	* See Footnote	No	1,122 gpm (2.5 cfs)	1,806.75 afy	0 gpm	0 afy	1,122 gpm	1,806.75 afy
11. G4-35244P	City of Richland	6/1/2009	Harrison Well and City Shops Well (undrilled)	Yes	1,500 gpm	2,418 afy [NA]	0 gpm	0 afy	1,500 gpm	2,418 afy [NA]
Claims 1. G4-063205CL	City of Richland	11/1943	North Richland Wellfield – S04	No	1,000 gpm	1,600 afy	0 gpm	0 afy	1,000 gpm	1,600 afy
TOTAL	*****	*****	*****	*****	43,786 gpm	34,947.95 afy	37,068 gpm	28,574 afy	6,718 gpm	6,374 afy
INTERTIE NAME/ IDENTIFIER	NAME OF PURVEYOR PROVIDING WATER	EXISTING LIMITS ON INTERTIE USE		FORECASTED CONSUMPTION THROUGH INTERTIE		FORECASTED INTERTIE SUPPLY STATUS (Excess/Deficiency)				
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1. None for supply	-	-	-	-	-	-	-			
TOTAL	*****	-	-	-	-	-	-			
PENDING WATER RIGHT APPLICATION (New/Change)	NAME ON APPLICATION	DATE SUBMITTED	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	PENDING WATER RIGHTS						
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1. S4-33044(B)A	Cities of Richland, Kennewick, Pasco, and West Richland	11/28/2011	No	158.1 cfs Jointly-owned	81,983 afy Jointly-owned					

Footnotes:

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Of the water routed from the Columbia River to either the WTP or the 3000 SSFF, 485 afy is attributed to SWC 9004-A, which is not listed in this table, since it is non-potable.

For this scenario, the Wellsian Way source was assumed to meet 6 percent of the total demand, the Columbia Well was assumed to meet 1 percent of the total demand, surface water is still pumped to and from the North Richland Wellfield to meet 22 percent of the demand, and direct service from the WTP is used to provide the remainder.

[NA] = Non-additive

Existing use based on forecasted 2021 demand without water use efficiency.

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Table 1

WATER SYSTEM PLAN

WATER RIGHTS SELF ASSESSMENT – 10-YEAR FORECAST (POTABLE SYSTEM)

PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		FORCASTED WATER USE FROM SOURCES (10-year Demand)		FORCASTED WATER RIGHT STATUS (Excess/Deficiency)	
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2. G4-25960C	City of Richland	8/21/1978	Willowbrook Well – S10	Yes	1,000 gpm	1,606 afy [NA]	1,000 gpm	102 afy	0 gpm	1,504 afy [NA]
3. S4-26404C	City of Richland	9/20/1979	WTP – S01 and Columbia Point Intake	Yes	7,630 gpm (17 cfs)	12,257 afy [NA]	7,260 gpm	7,285 afy	370 gpm	4,972 afy [NA]
4. S4-27121C	City of Richland	6/24/1980	WTP – S01	Yes	2,693 gpm (6 cfs)	4,336 afy [NA]	2,562 gpm	2,577 afy	131 gpm	1,759 afy [NA]
5. G4-28515C	City of Richland	8/8/1984	Duke Wellfield – S03, Horn Rapids Athletic Complex, and SMART Park Properties	Yes	1,400 gpm	1,228 afy [NA]	246 gpm	126 afy	1,154 gpm	1,102 afy [NA]
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7. G4-28517C	City of Richland	8/8/1984	Columbia Well – S05	Yes	560 gpm	890 afy [NA]	730 gpm	239 afy	(170 gpm)	651 afy [NA]
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9. G4-29214P (potable portion)	City of Richland	2/26/1987	Columbia Point Marina Well	No	100 gpm	1.8 afy	0 gpm	0 afy	100 gpm	1.8 afy

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PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		FORCASTED WATER USE FROM SOURCES (12-year Demand)		FORCASTED WATER RIGHT STATUS (Excess/Deficiency)	
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11. G4-35244P	City of Richland	6/1/2009	Harrison Well and City Shops Well (undrilled)	Yes	1,500 gpm	2,418 afy [NA]	0 gpm	0 afy	1,500 gpm	2,418 afy [NA]
Claims 1. G4-063205CL	City of Richland	11/1943	North Richland Wellfield – S04	No	1,000 gpm	1,600 afy	0 gpm	0 afy	1,000 gpm	1,600 afy
TOTAL	*****	*****	*****	*****	43,786 gpm	34,947.95 afy	37,068 gpm	31,263 afy	6,718 gpm	3,684 afy
INTERTIE NAME/ IDENTIFIER	NAME OF PURVEYOR PROVIDING WATER	EXISTING LIMITS ON INTERTIE USE		FORECASTED CONSUMPTION THROUGH INTERTIE		FORECASTED INTERTIE SUPPLY STATUS (Excess/Deficiency)				
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)			
1. None for supply	-	-	-	-	-	-	-			
TOTAL	*****	-	-	-	-	-	-			
PENDING WATER RIGHT APPLICATION (New/Change)	NAME ON APPLICATION	DATE SUBMITTED	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	PENDING WATER RIGHTS						
				Maximum Instantaneous Flow Rate (Qi) Requested	Maximum Annual Volume (Qa) Requested					
1. S4-33044(B)A	Cities of Richland, Kennewick, Pasco, and West Richland	11/28/2011	No	158.1 cfs Jointly-owned	81,983 afy Jointly-owned					

Footnotes:

Water rights S4-27121C, G4-28515C, G4-28516C, and G4-28517C all contain a provision that provided a cumulative cap on all water rights that were being utilized by the City for municipal supply of 33,128 afy. SWC 9005-A originally issued for 32,430 afy, but the subsequent water rights have capped the total authorized annual volume to 33,128 afy, which is shown as the maximum annual volume under SWC 9005-A for planning purposes.

S4-30976P was issued to the cities of Richland, Kennewick, Pasco, and West Richland for a total of 178 cfs and 96,619 afy. However, access to the water for municipal supply is contingent on obtaining sufficient mitigation. For this reason, only the first phase of development (combined 10 cfs and 7,227 afy) has been mitigated and authorized. Subsequent phases will need to be mitigated before they can be available to the Cities. Only Richland’s quarter of the first phase is identified in this table. The authorized points of diversion from the Columbia River for this permit are Energy NW, Battelle, Horn Rapids Intake, WSU, 3000 (SSFF), WTP (S01), Columbia Point, and Badger Mountain Irrigation District.

G4-063205CL pulls public water from the North Richland Wellfield. It is shown as not being used because the City has been infiltrating more than they have been withdrawing. The water pulled from this source is Columbia River water that has been diverted under water rights SWC 9004-A, SWC 9005-A, S4-26404C, and S4-27121C being filtered by the aquifer, referred to as the 3000 slow sand filter facility (SSFF).

The instantaneous diversion rate of water pumped from the river that is routed to either the WTP or 3000 SSFF was estimated by using the peak month (May 2014) combined with a peaking factor of 1.30. The monthly diversion rate was 25,609 gpm, which when multiplied by the peaking factor equals 33,292 gpm. With 300 gpm attributed to SWC 9004-A, that leaves 32,992 gpm accounted for in this table. The instantaneous rate was allocated to the Columbia River diversion water rights proportionately.

Of the water routed from the Columbia River to either the WTP or the 3000 SSFF, 485 afy is attributed to SWC 9004-A, which is not listed in this table, since it is non-potable.

For this scenario, the Wellsian Way source was assumed to meet 6 percent of the total demand, the Columbia Well was assumed to meet 1 percent of the total demand, surface water is still pumped to and from the North Richland Wellfield to meet 22 percent of the demand, and direct service from the WTP is used to provide the remainder.

[NA] = Non-additive

Existing use based on forecasted 2025 demand without water use efficiency.

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DOH Form 331-372 (Updated 08/10)

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Southwest Drinking Water
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Table 1

WATER SYSTEM PLAN

WATER RIGHTS SELF ASSESSMENT – 21-YEAR FORECAST (POTABLE SYSTEM)

PERMIT CERTIFICATE OR CLAIM #	NAME ON DOCUMENT	PRIORITY DATE (List oldest first)	SOURCE NAME/ NUMBER	ANY PORTION SUPPLEMENTAL? (If yes, explain in footnote)	EXISTING WATER RIGHTS		FORCASTED WATER USE FROM SOURCES (21-year Demand)		FORCASTED WATER RIGHT STATUS (Excess/Deficiency)	
					Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)
Permits/ Certificates 1. SWC 9005-A	City of Richland	1/30/1962	WTP – S01 and Horn Rapids Intake	Yes	24,350 gpm (54.25 cfs)	31,528 afy [A] 1,600 afy [NA]	23,170 gpm	19,821 afy	1,180 gpm	11,707 afy [A]
2. G4-25960C	City of Richland	8/21/1978	Willowbrook Well – S10	Yes	1,000 gpm	1,606 afy [NA]	1,000 gpm	102 afy	0 gpm	1,504 afy [NA]
3. S4-26404C	City of Richland	9/20/1979	WTP – S01 and Columbia Point Intake	Yes	7,630 gpm (17 cfs)	12,257 afy [NA]	7,260 gpm	7,706 afy	370 gpm	4,551 afy [NA]
4. S4-27121C	City of Richland	6/24/1980	WTP – S01	Yes	2,693 gpm (6 cfs)	4,336 afy [NA]	2,562 gpm	2,726 afy	131 gpm	1,610 afy [NA]
5. G4-28515C	City of Richland	8/8/1984	Duke Wellfield – S03, Horn Rapids Athletic Complex, and SMART Park Properties	Yes	1,400 gpm	1,228 afy [NA]	246 gpm	126 afy	1,154 gpm	1,102 afy [NA]
6. G4-28516C	City of Richland	8/8/1984	Wellsian Way Wellfield – S02	Yes	2,125 gpm	3,422 afy [NA]	2,100 gpm	1,698 afy	25 gpm	1,724 afy [NA]
7. G4-28517C	City of Richland	8/8/1984	Columbia Well – S05	Yes	556 gpm	890 afy [NA]	730 gpm	283 afy	(174 gpm)	885 afy [NA]
8. G4-28554C (potable portion)	City of Richland	10/26/1984	ORV Park Well No. 1 – S09 (inactive)	No	310 gpm	11.4 afy	0 gpm	0 afy	310 gpm	11.4 afy
9. G4-29214P (potable portion)	City of Richland	2/26/1987	Columbia Point Marina Well	No	100 gpm	1.8 afy	0 gpm	0 afy	100 gpm	1.8 afy

10. S4-30976P (Phase 1)	Cities of Richland, Kennewick, Pasco, and West Richland	6/24/1980	* See Footnote	No	1,122 gpm (2.5 cfs)	1,806.75 afy	1,122 gpm	1,136 afy	0 gpm	671 afy
11. G4-35244P	City of Richland	6/1/2009	Harrison Well and City Shops Well (undrilled)	Yes	1,500 gpm	2,418 afy [NA]	0 gpm	0 afy	1,500 gpm	2,418 afy [NA]
Claims 1. G4-063205CL	City of Richland	11/1943	North Richland Wellfield – S04	No	1,000 gpm	1,600 afy	0 gpm	0 afy	1,000 gpm	1,600 afy
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INTERTIE NAME/ IDENTIFIER	NAME OF PURVEYOR PROVIDING WATER	EXISTING LIMITS ON INTERTIE USE		FORECASTED CONSUMPTION THROUGH INTERTIE		FORECASTED INTERTIE SUPPLY STATUS (Excess/Deficiency)				
		Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)	Maximum Instantaneous Flow Rate (Qi)	Maximum Annual Volume (Qa)			
1. None for supply	-	-	-	-	-	-	-			
TOTAL	*****	-	-	-	-	-	-			
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For this scenario, the Wellsian Way source was assumed to meet 6 percent of the total demand, the Columbia Well was assumed to meet 1 percent of the total demand, surface water is still pumped to and from the North Richland Wellfield to meet 21 percent of the demand, and direct service from the WTP is used to provide the remainder. This reduction in the percentage of water provided by the North Richland Wellfield is necessary to avoid exceeding the annual water right due to the inefficiency of that system.

[NA] = Non-additive

Existing use based on forecasted 2036 demand without water use efficiency.

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