

Appendix A

Colorado River Basin Regional Groundwater Basin
Evaluation Summary Table

Colorado River Basin Regional Groundwater Basin Evaluation Data Summary Table

DWR Basin	Salt and Nutrient Concentration Trends	Contribution of Imported / Recycled Water	Reliance on Groundwater	Population 2010	Area mi ²	Persons per mi ²	Persons per acre	Number / Density OWTS	Other Salt and Nutrient Sources	Hydrologic Factors	Factor Total	GAMA Ranking	CASGEM Ranking	Total Negative Factors	Identified Risks to Water Quality
7-01 Lanfair Valley	Slight Increase	0%	100%	19	245	0.08	0.0001	Based on Population	None Noted	DTW = 300 - 500					Low to None
	negative factor -1	positive factor 1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	positive factor 1	3	low 0	very low 0		
7-02 Fenner Valley	Slight Increase	0%	100%	31	709	0.04	0.0001	Based on Population	None Noted	Unknown DTW					Low to None
	negative factor -1	positive factor 1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	neutral factor 0	2	low 0	very low 0		
7-03 Ward Valley	Stable	0%	100%	22	1,500	0.01	0.0000	Based on Population	None Noted	DTW = 0 - 700					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	neutral factor 0	3	low 0	very low 0		
7-04 Rice Valley	Unknown	0%	100%	23	295	0.08	0.0001	Based on Population	None Noted	DTW = 150 - 285					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	low 0	very low 0		
7-05 Chuckwalla Valley	TDS: Primarily >SMCL. Max 4,000 mg/L. Decreasing and Stable N: Primarily <1/2 MCL, Stable	20% Import Colorado River at Eagle Mtn. Ripley & Lake Tamarisk WTPs	80%	7,853	940	8.35	0.0131	Desert Center Pop. 6.7/acre Lake Tamarisk WTP [Golf]	Race Track. Hydro-Electric. Solar. Mining. Landfill. Correctional Facilities. Minor Ag.	Natural Springs. Dry Lakes					Moderate
	positive factor 1	negative factor -1	negative factor -1	positive factor 1			neutral factor 0	neutral factor 0	neutral factor 0	negative factor -1	-1	low 0	very low 0	-1	
7-06 Pinto Valley	Good Quality Unknown	0%	0%	7	286	0.02	0.0000	Based on Population	Cottonwood Campground	Unknown DTW					Low to None
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	neutral factor 0	5	low 0	very low 0		
7-07 Cadiz Valley	Unknown	0%	100%	10	423	0.02	0.0000	Based on Population	Limited Ag. Recreation	Dry Lake [shallow]					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	low 0	very low 0		
7-08 Bristol Valley	TDS: Good-Fair Quality. Poor Quality at Dry Lakes.	0%	100%	27	778	0.03	0.0001	Based on Population	Evaporate Mining	Dry Lake [shallow] DTW = 0 to 200'					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	low 0	very low 0		
7-13.01 Deadman Valley Deadman Lake	TDS: Fair Quality Stable	Recycled Water	100%	22	139	0.16	0.0002	Based on Population	Small Airport	DTW >200'					Low to None
	neutral factor 0	negative factor -1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	positive factor 1	2	low 0	very low 0		
7-13.02 Deadman Valley Surprise Spring	Good Quality Stable	0%	100%	179	46	3.89	0.0061	Based on Population	None Noted	DTW ~160. spring					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	low 0	very low 0		
7-14 Lavic Valley	1917 Data Point Unknown	0%	0%	0	159	0.00	0.0000	0	None Noted	DTW ~400'					Low to None
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1			positive factor 1	positive factor 1	positive factor 1	positive factor 1	6	low 0	very low 0		
7-20 Morongo Valley	Good Quality Stable	0%	100%	2,983	11	263.98	0.4125	Based on Population	Septic use WDRs and Landfill	DTW 200-300'					Moderate
	neutral factor 0	positive factor 1	negative factor -1	negative factor -1			negative factor -1	negative factor -1	neutral factor 0	neutral factor 0	-2	medium -1	very low 0	-3	
7-21.04 Coachella Valley San Gorgonio Pass	Good Quality Stable	700 afy [10%] Import SWP for Recharge. Recycled Water	~ 90% GW	29,540	60	492.33	0.7693	Cities Sewered, but not all areas connected	Airport Septic Morongo Reservation Correctional Facility	Hydrologic Vulnerable Area					High
	neutral factor 0	neutral factor 0	negative factor -1	negative factor -1			neutral factor 0	neutral factor 0	neutral factor 0	negative factor -1	-3	high -2	medium -1	-6	

Colorado River Basin Regional Groundwater Basin Evaluation Data Summary Table

DWR Basin	Salt and Nutrient Concentration Trends	Contribution of Imported / Recycled Water	Reliance on Groundwater	Population 2010	Area mi ²	Persons per mi ²	Persons per acre	Number / Density OWTS	Other Salt and Nutrient Sources	Hydrologic Factors	Factor Total	GAMA Ranking	CASGEM Ranking	Total Negative Factors	Identified Risks to Water Quality
7-22 West Salton Sea	Poor Quality TDS Good Quality Nitrate Stable	Recycled Water WWTP	100%	5,352	166	32.24	0.0504	Sewer System	WDRs Landfill Geothermal	DTW = 10 - 50 Adjacent to Salton Sea. Hydrologic Vulnerable Area					
	neutral factor 0	negative factor -1	negative factor -1	neutral factor 0			positive factor 1	1	positive factor 1	negative factor -1	-1	low 0	very low 0	-1	Moderate
7-24.01 Borrego Valley Borrego Springs	TDS: Good to Poor Quality Primarily Stable Slight Increases N: Good Quality Stable	0%	100%	3,853	120	32.11	0.0502	Urban Centers No Sewer Systems	~20% Land Use: Ag. Golf. Recreation. Trailer Parks WDRs Landfill	DTW = 18 - 305 Multiple Aquifers. Hydrologic Vulnerable Area					
	neutral factor 0	positive factor 1	negative factor -1	neutral factor 0			negative factor -1	-1	negative factor -1	negative factor -1	-3	medium -1	high -2	-6	High
7-24.02 Borrego Valley Ocotillo Wells	Good Quality. TDS: Increasing N: Stable	0%	100%	500	120	4.17	0.0065	Based on Population	Recreation. Trailer Parks	DTW = 100 130 Hydrologic Vulnerable Area					
	negative factor -1	positive factor 1	negative factor -1	positive factor 1			positive factor 1	1	positive factor 1	negative factor -1	1	medium -1	very low 0	0	Low to None
7-25 Ocotillo-Clark Valley	TDS: Poor Quality. Stable	Unknown	20%	27	348	0.08	0.0001	Based on Population	Border Patrol. Vehicle Recreation Solar Farm. Ag	DTW <200'. Hydrologic Vulnerable Area					
	neutral factor 0	neutral factor 0	positive factor 1	positive factor 1			positive factor 1	1	neutral factor 0	negative factor -1	2	low 0	very low 0		Low to None
7-26 Terwilliger Valley	TDS: Good Quality. Slight Increase.	Unknown	20%	1,085	13	83.46	0.1304	Based on Population	Septic	DTW = 300					
	negative factor -1	neutral factor 0	positive factor 1	neutral factor 0			negative factor -1	-1	positive factor 1	positive factor 1	1	very low 0	very low 0		Low to None
7-27 San Felipe Valley	Increasing Concentrations	0%	20%	188	4	47.00	0.0734	Based on Population	Campground. Wilderness Area	DTW = 22 - 88					
	negative factor -1	positive factor 1	positive factor 1	neutral factor 0			neutral factor 0	0	positive factor 1	negative factor -1	1	very low 0	very low 0		Low to None
7-28 Vallecito-Carrizo Valley	Increasing Concentrations	0%	100%	77	191	0.40	0.0006	Based on Population	None Noted	DTW = 40 - 78 Springs					
	negative factor -1	positive factor 1	negative factor -1	positive factor 1			positive factor 1	1	positive factor 1	negative factor -1	1	low 0	very low 0		Low to None
7-29 Coyote Wells Valley	Good Quality Stable	0%	100%	374	100	3.74	0.0058	Based on Population	Recreation Vehicle Park. Mining.	DTW: 100-300'. Hydrologic Vulnerable 1/4 Area					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1			positive factor 1	1	positive factor 1	negative factor -1	2	low 0	very low 0		Low to None
7-30 Imperial Valley	Variable Localized Concentrations [increasing, decreasing and stable]	Use 100% Imported Colorado River. Recycled Water	0%	164,037	1,870	87.72	0.1371	Cities Sewered.	~40% Ag. Naval Air Facility El Centro.	Adjacent to SaltonSea. Colorado/ New/Alamo Rivers, Canals. Aquitard. Hydrologic Vulnerable E/W Sides					
	neutral factor 0	negative factor -1	positive factor 1	neutral factor 0			positive factor 1	1	negative factor -1	neutral factor 0	0	low 0	very low 0		Low to None
7-31 Orocopia Valley	TDS: Good to Fair Quality Unknown Trend	0%	100%	2,243	150	14.95	0.0234	0	None Noted	DTW = 480 - 800					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1			positive factor 1	1	positive factor 1	positive factor 1	4	very low 0	very low 0		Low to None
7-32 Chocolate Valley	TDS: Poor Quality Increasing	0%	0%	658	203	3.24	0.0051	0	Nature Preserve Recreation. Hiking	DTW = 10 - 99					
	negative factor -1	positive factor 1	positive factor 1	positive factor 1			positive factor 1	1	positive factor 1	negative factor -1	3	very low 0	very low 0		Low to None

Colorado River Basin Regional Groundwater Basin Evaluation Data Summary Table

DWR Basin	Salt and Nutrient Concentration Trends	Contribution of Imported / Recycled Water	Reliance on Groundwater	Population 2010	Area mi ²	Persons per mi ²	Persons per acre	Number / Density OWTS	Other Salt and Nutrient Sources	Hydrologic Factors	Factor Total	GAMA Ranking	CASGEM Ranking	Total Negative Factors	Identified Risks to Water Quality
7-33 East Salton Sea	TDS: Good to Poor Quality Unknown Trend	0%	0%	1,083	306	3.54	0.0055	Based on Population	~15% Ag.	DTW = 20-48. Adjacent to Salton Sea. Hydrologic Vulnerable Area					Low to None
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	negative factor -1	3	low 0	very low 0			
7-34 Amos Valley	Stable	0%	0%	9	203	0.04	0.0001	Based on Population	Mine. Landfill	DTW = NW 126-228 SE 465-480. Hydrologic Vulnerable Area					Low to None
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	4	low 0	very low 0			
7-35 Ogilby Valley	Slight Increases	0%	20%	36	209	0.17	0.0003	Based on Population	Ag. Recreational Vehicle Park. Mining.	DTW = 150'. Hydrologic Vulnerable Area					Low to None
	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	3	low 0	very low 0			
7-36 Yuma Valley	TDS: Fair to Poor Quality Increasing to Stable N: Good Quality Stable	Use 100% Imported Colorado River	0%	3,146	6	524.33	0.8193	Sparse spaced Population	Ag ~30%. Tribal Land. Military. Camping. Trailer Parks. 2-Landfills	DTW = 5-240 Adjacent to Colorado River. Hydrologic Vulnerable 1/3 Area					Moderate
	positive factor 1	negative factor -1	positive factor 1	negative factor -1	neutral factor 0	negative factor -1	neutral factor 0	negative factor -1	negative factor -1	-2	medium -1	very low 0	-3		
7-37 Arroyo Seco Valley	Good Quality Stable to Decreasing	0%	100%	6	403	0.01	0.0000	Based on Population	None Noted	DTW = 30-98					Low to None
	positive factor 1	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	3	low 0	very low 0			
7-38 Palo Verde Valley	TDS: Poor Quality N: Good Quality Stable	Recycled Water Blythe WWTP	20%	7,459	200	37.30	0.0583	Blythe, Palo Verde have Sewer Systems	Ag ~100% Solar Plants Landfills Recreation Septic	DTW = 100 and 200-400. adjacent to Colorado River. Hydrologic Vulnerable Area					Moderate
	neutral factor 0	negative factor -1	positive factor 1	neutral factor 0	positive factor 1	negative factor -1	negative factor -1	negative factor -1	negative factor -1	-1	medium -1	very low 0	-2		
7-39 Palo Verde Mesa	TDS: Fair Quality Fluctuating N: Good Quality Stable	Imported Colorado River. Recycled Water Blythe WWTP	20%	9,231	353	26.15	0.0409	Blythe, Palo Verde have sewer	Ag ~30%. Golf. Solar	DTW = 135 -230 Adjacent to River. 1/3 Hydrologic Vulnerable Area					Moderate
	neutral factor 0	negative factor -1	positive factor 1	neutral factor 0	positive factor 1	negative factor -1	negative factor -1	negative factor -1	negative factor -1	-1	medium -1	very low 0	-2		
7-40 Quien Sabe Point Valley	TDS: Poor Quality N: Good Quality 1970 Data Point	Unknown Source	20%	112	40	2.80	0.0044	Based on Population	Ag small %. Resorts.	Adjacent to Colorado River					Low to None
	neutral factor 0	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	4	very low 0	very low 0			
7-41 Calzona Valley	TDS: Fair Quality Unknown	0%	100%	1,608	127	12.66	0.0198	Big River Not Sewered	Ag small %	DTW = ~200' Adjacent to Colorado River					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	3	very low 0	very low 0			
7-42 Vidal Valley	Unknown	0%	100%	10	216	0.05	0.0001	Based on Population	None Noted	Unknown DTW					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	3	very low 0	very low 0			
7-43 Chemehuevi Valley	Good Quality Stable	0%	100%	395	427	0.93	0.0014	Based on Population	None Noted	DTW = Shallow					Low to None
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	very low 0	very low 0			

Colorado River Basin Regional Groundwater Basin Evaluation Data Summary Table

DWR Basin	Salt and Nutrient Concentration Trends	Contribution of Imported / Recycled Water	Reliance on Groundwater	Population 2010	Area mi ²	Persons per mi ²	Persons per acre	Number / Density OWTS	Other Salt and Nutrient Sources	Hydrologic Factors	Factor Total	GAMA Ranking	CASGEM Ranking	Total Negative Factors	Identified Risks to Water Quality
7-44 Needles Valley	TDS: Good Quality N: Good Quality Stable	Recycled Water	20%	4,902	138	35.52	0.0555	City of Needles has Sewer and LAMP	River Recreation Recreational Vehicle Parks. Wildlife Refuge. Tribal Land. Airport. Ag.	DTW: 9 - 12 Adjacent to Colorado River. Hydrologic Vulnerable Area Along River					
	neutral factor 0	negative factor -1	positive factor 1	neutral factor 0	positive factor 1	positive factor 1	neutral factor 0	positive factor 1	neutral factor 0	negative factor -1	0	medium -1	very low 0	-1	Moderate
7-45 Piute Valley	Good Quality Stable	0%	100%	2	275	0.01	0.0000	Based on Population	None Noted	Spring					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	very low 0	very low 0		Low to None
7-46 Canebrake Valley	Unknown	0%	100%	2	9	0.22	0.0003	Based on Population	None Noted	Unknown DTW					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	3	very low 0	very low 0		Low to None
7-47 Jacumba Valley	N: Poor Quality Increasing	0%	100%	517	10	51.70	0.0808	Based on Population	None Noted	Unknown DTW					
	negative factor -1	positive factor 1	negative factor -1	neutral factor 0	neutral factor 0	neutral factor 0	neutral factor 0	positive factor 1	neutral factor 0	0		very low 0	very low 0		Low to None
7-48 Helendale Fault Valley	Good Quality Slight Increase	0%	100%	9	4	2.25	0.0035	Based on Population	Vehicle Recreation	Streams					
	negative factor -1	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	2	very low 0	very low 0		Low to None
7-49 Pipes Canyon Fault Valley	Unknown	0%	100%	5	5	1.00	0.0016	Based on Population	Wilderness Area	Unknown DTW					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	3	very low 0	very low 0		Low to None
7-50 Iron Ridge Area	Unknown	0%	0%	0	8	0.00	0.0000	Based on Population	Wilderness Area	Unknown DTW					
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	5	very low 0	very low 0		Low to None
7-51 Lost Horse Valley	Good Quality Unknown	0%	0%	0	27	0.00	0.0000	Based on Population	Wilderness Area Trails. Camping	Unknown DTW					
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	5	very low 0	very low 0		Low to None
7-52 Pleasant Valley	N: Poor Quality Stable	0%	0%	0	15	0.00	0.0000	Based on Population	None Noted	Unknown DTW					
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	5	very low 0	very low 0		Low to None
7-53 Hexie Mountain	Unknown	0%	0%	0	18	0.00	0.0000	Based on Population	None Noted	Unknown DTW					
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	5	very low 0	very low 0		Low to None
7-54 Buck Ridge Fault Valley	Unknown	0%	0%	0	11	0.00	0.0000	Based on Population	Campground. Wilderness Area	Springs					
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	4	very low 0	very low 0		Low to None
7-55 Collins Valley	Unknown	0%	100%	11	11	1.00	0.0016	Based on Population	Campground. Hiking	Unknown DTW					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	3	very low 0	very low 0		Low to None
7-56 Yaqui Well Area	Slight Increases	0%	100%	4	23	0.17	0.0003	Based on Population	Campground	DTW = 50'					
	negative factor -1	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	1	very low 0	very low 0		Low to None
7-59 Mason Valley	Stable	0%	100%	23	9	2.56	0.0040	Based on Population	Trailer Park small %	DTW = 40 - 75					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	very low 0	very low 0		Low to None
7-61 Davies Valley	Unknown	0%	0%	0	6	0.00	0.0000	Based on Population	None Noted	Unknown DTW					
	neutral factor 0	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	neutral factor 0	5	very low 0	very low 0		Low to None
7-63 Vandeventer Flat	Good Quality Stable	0%	100%	50	11	4.55	0.0071	Based on Population	None Noted	DTW = 75-125					
	neutral factor 0	positive factor 1	negative factor -1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	positive factor 1	negative factor -1	2	very low 0	very low 0		Low to None

Colorado River Basin Regional Groundwater Basin Evaluation Data Summary Table

DWR Basin	Salt and Nutrient Concentration Trends	Contribution of Imported / Recycled Water	Reliance on Groundwater	Population 2010	Area mi²	Persons per mi²	Persons per acre	Number / Density OWTS	Other Salt and Nutrient Sources	Hydrologic Factors	Factor Total	GAMA Ranking	CASGEM Ranking	Total Negative Factors	Identified Risks to Water Quality
------------------	---	--	--------------------------------	------------------------	----------------------------	-----------------------------------	-------------------------	------------------------------	--	---------------------------	---------------------	---------------------	-----------------------	-------------------------------	--

DWR = Department of Water Resources
 S = Salt measured as Total Dissolved Solids (TDS)
 N = Nutrients measured as Nitrates
 mi² = square miles
 OWTS = Onsite Wastewater Treatment Systems (Septic Systems)
 GAMA = Groundwater Ambient Monitoring Assessment
 CASGEM = California State Groundwater Elevation Monitoring

DTW = Depth to Water Measured in Feet Below Ground
 WTP / WWTP = Water Treatment Plant / Waste Water Treatment Plant
 Ag = Agriculture
 WDR = Waste Discharge Requirement [Permit]
 afy = acre feet per year
 SWP = State Water Project
 LAMP = Local Area Management Plan