Parameter	iter
PRIMARY STANDARDS-Mandatory Health-Related Standards	
Cabrille	
Effluent Turbidity NTU 9.1 NA 95 (a) NA NA NA Average 0.013 NO WS 0.1 Soil runoff MICROBIOLOGICAL Total Coliform 8 5.0 (b) NA Average ND NA Average ND NA NAUrally present in the environment Total Coliform Bacteria in Distribution System 9 5.0 (b) NA Average ND NA Average ND NAUrally present in the environment E. coil Bacteria in Treatment Plant effluent 9 5.0 (b) NA Average ND NA Average ND NAURALLY present in the environment E. coil Bacteria in Treatment Plant effluent (c) (c) NA Average ND Human and animal fecal waste ORGANIC CHEMICALS Pesticides/PCBs ND Runoff from herbicide used on row crops Alachlor ppb 2 4 1 Average ND Runoff from herbicide used on row crops Alrazine ppb 1 1 0.15 0.5 Average ND Runoff from herbicide used on row crops Alrazine pbb 1 8 200 2 Average ND Runoff from herbicide used on rice, alfalfa, and grapes Bentazon pbb 18 200 2 Average ND Runoff from herbicide used on rice, alfalfa, and grapes Carbofuran pbb 18 0.7 5 Average ND and grapes ND Average ND	
Microbiological Microbiolo	
Total Coliform Bacteria in Distribution System	
Total Coliform Bacteria in Treatment Plant effluent Solution Solution Bacteria in Treatment Plant effluent Solution Solution Solution Bacteria in Treatment Plant effluent Solution So	
Bacteria in Treatment Plant effluent	
Bacteria in Treatment Plant effluent (c) (c) 0 NA Average ND Human and animal fecal waste ORGANIC CHEMICALS Pesticides/PCBS Alachlor ppb 2 4 1 Average ND Runoff from herbicide used on row crops Range ND Runoff from herbicide used on row crops Attrazine ppb 1 0.15 0.5 Average ND and along highways Bentazon ppb 18 200 2 Average ND alfalfa, and grapes Carbofuran ppb 18 0.7 5 Average ND and grapes Carbofuran ppb 18 0.7 5 Average ND and grapes Carbofuran ppb 10 0.30 100 Average ND Runoff from herbicide used on rice, alfalfa, and grapes Carbofuran ppb 70 20 10 Average ND Residue of banned insecticide Range ND Residue of banned insecticide Range ND Range ND Runoff from herbicide used on rice, alfalfa, and grapes Range ND Residue of banned insecticide Range ND Range ND Runoff from herbicide used on row crops, and alguatic weeds Range ND Range ND Runoff from herbicide used on row crops, and alguatic weeds Range ND Range ND Runoff from herbicide used on rights-of-way, crops, and landscapes Dalapon ppb 200 790 10 Average ND Range ND R	
Pesticides/PCBs Alachlor ppb 2 4 1 Average ND Runoff from herbicide used on row crops Range ND Runoff from herbicide used on row crops Atrazine ppb 1 0.15 0.5 Average ND Runoff from herbicide used on row crops Bentazon ppb 18 200 2 Average ND Runoff/leaching from herbicide used on rice, Bentazon ppb 18 200 2 Average ND alaflafa, and grapes Carbofuran ppb 18 0.7 5 Average ND Leaching of soil furnigant used on rice, alfalfa, Carbofuran ppb 18 0.7 5 Average ND Runoff from herbicide used on row crops, Carbofuran ppb 100 30 100 Average ND Runoff from herbicide used on row crops, Range ND Runoff from herbicide used on row crops, Range ND Runoff from herbicide used on row crops, Range ND Runoff from herbicide used on rights-of-way, Range ND Runoff from herbicide used on rice, Range ND Runoff from herbicide used on rice, Range ND Runoff fro	
Alachlor ppb 2 4 1 Average ND Runoff from herbicide used on row crops Range ND Runoff from herbicide used on row crops Atrazine ppb 1 0.15 0.5 Average ND and along highways Bentazon ppb 18 200 2 Average ND Runoff/leaching from herbicide used on rice, Range ND Runoff/leaching from herbicide used on rice, Range ND Alfalfa, and grapes Carbofuran ppb 18 0.7 5 Average ND Leaching of soil fumigant used on rice, alfalfa, Range ND Leaching of soil fumigant used on rice, alfalfa, Range ND Residue of banned insecticide Range ND Runoff from herbicide used on row crops, Range ND Residue of banned insecticide Range ND Runoff from herbicide used on row crops, Range ND Runoff from herbicide used on rice, alfalfa, Range ND Residue of banned insecticide Range ND Runoff from herbicide used on rice, alfalfa, and range along alfalfa, and range a	
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Bentazon ppb 18 200 2 Average ND alfalfa, and grapes Carbofuran ppb 18 0.7 5 Average ND Leaching of soil fumigant used on rice, alfalfa, and grapes Carbofuran ppb 18 0.7 5 Average ND and grapes Chlordane ppt 100 30 100 Average ND Residue of banned insecticide Range ND Residue of banned insecticide Range ND Residue of banned insecticide Range ND Runoff from herbicide used on row crops, range land, lawns and aquatic weeds Range ND Runoff from herbicide used on rights-of-way, ppb 200 790 10 Average ND Runoff from herbicide used on rights-of-way, crops, and landscapes Dibromochloropropane Range ND Banned nematocide that may still be present (DBCP)	
Bentazon ppb 18 200 2 Average ND alfalfa, and grapes Carbofuran ppb 18 0.7 5 Average ND and grapes Carbofuran ppb 18 0.7 5 Average ND and grapes Chlordane ppt 100 30 100 Average ND Residue of banned insecticide Range ND Runoff from herbicide used on row crops, Range ND Runoff from herbicide used on row crops, Range ND Runoff from herbicide used on rights-of-way, Chlordane ppt 70 20 10 Average ND Runoff from herbicide used on rights-of-way, Dalapon ppb 200 790 10 Average ND Runoff from herbicide used on rights-of-way, Crops, and landscapes Range ND Banned nematocide that may still be present CDBCP) ppt 200 1.7 10 Average ND in soils	
Carbofuran ppb 18 0.7 5 Average ND and grapes Chlordane ppt 100 30 100 Average ND Residue of banned insecticide Range ND Runoff from herbicide used on row crops, Range ND range land, lawns and aquatic weeds Range ND Runoff from herbicide used on rights-of-way, range land, lawns and aquatic weeds Range ND Runoff from herbicide used on rights-of-way, range land, lawns and landscapes Range ND Runoff from herbicide used on rights-of-way, rops, and landscapes Dibromochloropropane Range ND Banned nematocide that may still be present (DBCP) ppt 200 1.7 10 Average ND in soils	
Chlordane ppt 100 30 100 Average ND Residue of banned insecticide Range ND Runoff from herbicide used on row crops, Runoff from herbicide used on row crops, Runoff from herbicide used on row crops, Runoff from herbicide used on rights-of-way, Runoff from herbicide used on row crops, Runoff from herbicide used on row crops, Runoff from herbicide used on rights-of-way, Runoff from herbicide used on row crops, Runoff from herbicide used on rights-of-way, Runoff from herbicide used on row crops, Runoff from herbicide used on rights-of-way, Runoff from herbicide used on rights-of-way, Runoff from herbicide used on rights-of-way, Runoff from herbicide used on row crops, Runoff from herbicid	
Range ND Runoff from herbicide used on row crops, 2,4-D ppb 70 20 10 Average ND range land, lawns and aquatic weeds Range ND Runoff from herbicide used on row crops, range land, lawns and aquatic weeds Range ND Runoff from herbicide used on rights-of-way, roups, and landscapes Dibromochloropropane Range ND Banned nematocide that may still be present (DBCP) ppt 200 1.7 10 Average ND in soils	
Range ND Runoff from herbicide used on rights-of-way, Dalapon ppb 200 790 10 Average ND crops, and landscapes Dibromochloropropane Range ND Banned nematocide that may still be present (DBCP) ppt 200 1.7 10 Average ND in soils	i
Dibromochloropropane Range ND Banned nematocide that may still be present (DBCP) ppt 200 1.7 10 Average ND in soils	
(DBCP) ppt 200 1.7 10 Average ND in soils	
THE PROPERTY OF THE PROPERTY O	
Dinoseb ppb 7 14 2 Average ND vegetables, and fruits	
Range ND Runoff from herbicide used for terrestrial Diquat ppb 20 6 4 Average ND and aquatic weeds	
Range ND Runoff from herbicide used for terrestrial	
Range ND	
Endrin ppb 2 0.3 0.1 Average ND Residue of banned insecticide and rodenticide Ethylene Dibromide Range ND Petroleum refinery discharges; underground	
(EDB) ppt 50 10 20 Average ND gas tank leaks	
Glyphosate ppb 700 900 25 Average ND Runoff from herbicide use	
Heptachlor ppt 10 8 10 Average ND Residue of banned insecticide	
Range ND Heptachlor Epoxide ppt 10 6 10 Average ND Breakdown product of heptachlor	
Range ND Runoff/leaching from insecticide used on cattle,	
Lindane ppt 200 32 200 Average ND lumber, and gardens Range ND	
Methoxychlor ppb 30 0.09 10 Average ND Runoff/leaching from insecticide uses	
Molinate (Ordram) ppb 20 1 2 Average ND Runoff/leaching from herbicide used on rice	
Oxamyl (Vydate) ppb 50 26 20 Average ND Runoff/leaching from insecticide uses	
Range ND Discharge from wood preserving factories Pentachlorophenol ppb 1 0.3 0.2 Average ND other insecticidal and herbicidal uses	
Range ND Picloram ppb 500 166 1 Average ND Herbicide runoff	
Polychlorinated Range ND	
Biphenyls (PCBs) ppt 500 90 500 Average ND Runoff from landfills; discharge of waste chemicals Range ND	
Simazine ppb 4 4 1 Average ND Herbicide runoff Range ND	
Thiobencarb (d) ppb 70 42 1 Average ND Runoff leaching from rice herbicide	
(Silvex) ppb 50 3 1 Average ND Residue of banned herbicide	
Range ND Runoff/leaching from insecticide used on cotton and cattle	
Semi-Volatile Organic Compounds	
Acrylamide NA TT (0) NA Average ND Water treatment chemical impurities	
Range ND Leaching from water storage tank linings Benzo(a)pyrene ppt 200 7 100 Average ND and distribution lines	
Range ND	
Range ND Chemical factory discharge; inert ingredient	
Di(2-ethylhexyl)phthalate ppb 4 12 3 Average ND in pesticides Range ND	
Epichlorohydrin NA TT (0) NA Average ND Water treatment chemical impurities Range ND Discharge from metal refineries & agrichemicals	
Hexachlorobenzene ppb 1 0.03 0.5 Average ND factories; wastewater chlorination reaction by-product	
Hexachlorocyclopentadiene ppb 50 2 1 Average ND Discharge from chemical factories	
2,3,7,8-TCDD Range ND Waste incineration emissions; chemical factory (Dioxin) ppg 30 0.05 5 Average ND discharge	
Volatile Organic Compounds	
Range ND Plastics factory discharge; gas tanks Benzene ppb 1 0.15 0.5 Average ND and landfill leaching	
Range ND Discharge from chemical plants and other industrial plants and other industrial waste	
Range ND	
1,2-Dichlorobenzene ppb 600 600 0.5 Average ND Discharge from industrial chemical factories Range ND	
1,4-Dichlorobenzene ppb 5 6 0.5 Average ND Discharge from industrial chemical factories Range ND	
1,1-Dichloroethane ppb 5 3 0.5 Average ND Extraction and degreasing solvent; fumigant	
1,2-Dichloroethane ppt 500 400 500 Average ND Discharge from industrial chemical factories	
1,1-Dichloroethylene ppb 6 10 0.5 Average ND Discharge from industrial chemical factories	
Range ND Industrial chemical factory discharge;	
cis -1,2-Dichloroethylene ppb 6 13 0.5 Average ND by-product of TCE and PCE biodegradation Range ND Industrial chemical factory discharge;	
trans-1,2-Dichloroethylene ppb 10 50 0.5 Average ND by-product of TCE and PCE biodegradation Dichloromethane Range ND Discharge from pharmaceutical	
(Methylene Chloride) ppb 5 4 0.5 Average ND and chemical factories	
Range ND Industrial chemical factory discharge; 1,2-Dichloropropane ppb 5 0.5 0.5 Average ND primary component of some fumigants	

2020 Water Quality Report to SDCWA member agencies -- San Diego County Water Authority

		State or				Treatment Plant Effluent	Major Sources in Drinking Water
Parameter	Units	Federal MCL [MRDL]	PHG (MCLG) [MRDLG]		Range Average	Twin Oaks Valley Water Treatment Plant	
					Range	ND	Runoff/leaching from nematocide used on
1,3-Dichloropropene	ppt	500	200	500	Average	ND	croplands
					Range	ND	Petroleum refinery discharge; industrial
Ethylbenzene	ppb	300	300	0.5	Average	ND	chemical factories
Methyl tert-butyl ether					Range	ND	
MTBE) (d,e)	ppb	13	13	3	Average	ND	Gasoline discharge from watercraft engines
					Range	ND	Discharge from industrial, agricultural, and chemical
Monochlorobenzene	ppb	70	70	0.5	Average	ND	factories, and dry cleaners
					Range	ND	Rubber and plastics factories discharge;
Styrene	ppb	100	0.5	0.5	Average	ND	landfill leaching
,					Range	ND	Discharge from industrial, agricultural, and chemical
.1.2.2-Tetrachloroethane	ppb	1	0.1	0.5	Average	ND	factories; solvent uses
etrachloroethylene					Range	ND	Discharge from factories, dry cleaners,
PCE)	ppb	5	0.06	0.5	Average	ND	and auto shops
					Range	ND	
oluene	ppb	150	150	0.5	Average	ND	Discharge from petroleum and chemical refineries
					Range	ND	
I.2.4-Trichlorobenzene	ppb	5	5	0.5	Average	ND	Discharge from textile-finishing factories
					Range	ND	Metal degreasing site discharge; manufacture
,1,1-Trichloroethane	ppb	200	1000	0.5	Average	ND	of food wrappings
					Range	ND	
,1,2-Trichloroethane	ppb	5	0.3	0.5	Average	ND	Discharge from industrial chemical factories
					Range	ND	Cleaning and degreasing solvent,
,2,3-Trichloropropane	ppt	5	0.7	5	Average	ND	also associated with pesticide products
Frichloroethylene					Range	ND	Discharge from metal degreasing sites and
TCE)	ppb	5	1.7	0.5	Average	ND	other factories
richlorofluoromethane					Range	ND	Industrial factory discharge; degreasing solvent;
Freon-11)	ppb	150	1300	5	Average	ND	propellant
,1,2-Trichloro-1,2,2-					Range	ND	Discharge from metal degreasing sites and other
rifluoroethane (Freon-113)	ppm	1.2	4	0.01	Average	ND	factories; dry cleaning solvent; refrigerant
					Range	ND	Leaching from PVC piping; plastic factory
Vinyl Chloride	ppt	500	50	500	Average	ND	discharge; by-product of TCE and PCE biodegradation
					Range	ND	Discharge from petroleum and chemical refineries;
Xvlenes	mag	1.750	1.8	0.0005	Average	ND	fuel solvent

	State or Treatment Plant Effluent							
Parameter	Units	Federal MCL	PHG (MCLG) [MRDLG]	State DLR	Range Average	Twin Oaks Valley Water Treatment Plant	Major Sources in Drinking Water	
NORGANIC CHEMICALS					Range	ND	Natural deposits erosion:	
Numinum (d)	ppm	1	0.6	0.05	Average	ND	Residue from water treatment process.	
Antimony	ppb	6	1	6	Single Sample	ND	Petroleum refinery discharges; fire retardants; solder; electronics	
Arsenic	ppb	10	0.004	2	Single Sample	ND	Natural deposits erosion, glass and electronics production wastes	
Asbestos	MFL	7	7	0.2	Single Sample	ND	Asbestos cement pipes internal corrosion; natural deposits erosion	
					Single		Natural deposits erosion;	
Barium	ppb	1000	2000	100	Sample Single	ND	Oil and metal refineries discharge. Discharge from metal refineries, aerospace,	
Beryllium	ppb	4	1	1	Sample Single	ND	and defense industries Internal corrosion of galvanized pipes;	
admium	ppb	5	0.04	1	Sample Single	ND	natural deposits erosion Discharge from steel and pulp mills;	
hromium	ppb	50	(100)	10	Sample	ND ND	natural deposits erosion Runoff/leaching from natural deposits;	
hromium VI (q)	ppb	NA	0.02	NA	Range Average	ND ND	discharge from industrial waste factories	
opper (d,f)	ppm	1.0	0.3	0.05	Single Sample	ND	Internal corrosion of household pipes; natural deposits erosion	
yanide	ppb	150	150	100	Single Sample	ND	Discharge from steel/metal, plastic, and fertilizer factories	
yaniue	рры	130	130		Control Range	0.6 - 1.2		
luoride (g)					l Fluoride Level Range	0.7 0.5- 0.8	Erosion of natural deposits; water additive that promotes strong teeth	
reatment-related	ppm	2.0	1	0.1	Average Single	0.6	House pipes internal corrosion;	
ead (g)	ppb	AL=15	0.2	5	Sample Single	ND	erosion of natural deposits Erosion of natural deposits; factory discharge;	
ercury	ppb	2	1.2	1	Sample	ND	landfill runoff	
ickel	ppb	100	12	10	Single Sample	ND ND	Erosion of natural deposits; discharge from metal factories	
itrate (as N) (h)	ppm	10	10	0.4	Range Average	ND - 0.4 ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion	
litrite (as N)		1	1	0.4	Range Average	ND ND	Runoff and leaching from fertilizer use; septic tank and sewage; natural deposits erosion	
	ppm	1			Single			
Perchlorate (i)	ppb	6	1	4	Sample Single	ND	Industrial waste discharge Refineries, mines, and chemical	
Selenium	ppb	50	30	5	Sample Single	ND	waste discharge; runoff from livestock lots Leaching from ore processing; electronics	
hallium	ppb	2	0.1	1	Sample	ND	factory discharge	
ADIOLOGICALS (j) ross Alpha					Range	ND		
article Activity ross Beta	pCi/L	15	(0)	3	Average Range	ND ND	Erosion of natural deposits	
article Activity (k)	pCi/L	50	(0)	4	Average Range	ND ND	Decay of natural and man-made deposits	
adium-226	pCi/L	NA	0.05	1	Average	ND ND	Erosion of natural deposits	
adium-228	pCi/L	NA	0.019	1	Range Average	ND	Erosion of natural deposits	
combined Ladium-226 + 228 (I)	pCi/L	5	(0)	NA	Range Average	ND ND	Erosion of natural deposits	
trontium-90	pCi/L	8	0.35	2	Range Average	ND ND	Decay of natural and man-made deposits	
					Range	ND ND		
ritium	pCi/L	20000	400	1000	Average Single		Decay of natural and man-made deposits	
Iranium DISINFECTION BY-PRODUCTS. [pCi/L	20 ANT RESI	0.43 DUALS. A	ND DIS	Sample INFECTION B	/-PRODUCTS PRECURSORS (m)	Erosion of natural deposits	
otal Trihalomethanes TTHM) (n)	ppb	80	NA		Range Highest TTHM	16-38 38	By-product of drinking water chlorination	
aloacetic Acids (five)					Range	ND -7.6		
HAA5) (o)	ppb	60	NA	1	Highest HAA5 Range	7.6 ND-7.4	By-product of drinking water chlorination	
romate (p)	ppb	10	0.1	1	Average Range	2.8 2.7-3.7	By-product of drinking water ozonation	
otal Chlorine Residual	ppm	[4.0]	[4.0]	NA	Average Range	3.3 2 - 2.5	Drinking watrer disinfectant added for treatment Various natural and man-made sources; TOC is a precursor for the formation	
s Total Organic Carbon (TOC)	ppm	TT	NA	0.30	Average	2.2	of disinfection byproducts	
SECONDARY STANDARDSA	Aesthetic S	Standard	S		Range	ND	Residue from water treatment process;	
PESSIDARI STANDARDS-P					Average	ND		
	ppb	200	NA	50			natural deposits erosion Runoff/leaching from natural deposits:	
luminum (d)	ppb		NA NA	50 NA	Range Average	7 <mark>3-81</mark> 77	Runoff/leaching from natural deposits; seawater influence	
luminum (d) hloride	ppb	200			Range	73-81	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials	
luminum (d) hloride olor	ppb ppm Color Units	200 500 15	NA NA	NA NA	Range Average Range Average Single	73-81 77 ND ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural	
luminum (d) hloride olor opper (d,f) oaming Agents	ppb ppm Color Units ppm	200 500 15 1.3	NA NA NA	NA NA 0.05	Range Average Range Average Single Sample Single	73-81 77 ND ND ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching	
luminum (d) hloride olor opper (d,f) oaming Agents MBAS)	ppb ppm Color Units ppm ppb	200 500 15 1.3 500	NA NA NA	NA NA 0.05 NA	Range Average Range Average Single Sample Single Sample Range	73-81 77 ND ND ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges	
luminum (d) hloride olor opper (d,f) oaming Agents MBAS)	ppb ppm Color Units ppm	200 500 15 1.3	NA NA NA	NA NA 0.05	Range Average Range Average Single Sample Single Sample Sample	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching	
hloride olor opper (d,f) oaming Agents //BAS)	ppb ppm Color Units ppm ppb	200 500 15 1.3 500	NA NA NA	NA NA 0.05 NA	Range Average Range Average Single Sample Single Sample Range Average Average Average Average	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges	
luminum (d) hloride olor opper (d,f) paming Agents //BAS) on anganese	ppb ppm Color Units ppm ppb ppb	200 500 15 1.3 500 300	NA NA NA NA	NA NA 0.05 NA 100	Range Average Range Average Single Sample Sample Range Average Average Range Average Range Average Range Average Range Average	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes	
uminum (d) hloride olor opper (d,f) caming Agents MBAS) on anganese TBE (d,e)	ppb ppm Color Units ppm ppb ppb	200 500 15 1.3 500 300 50	NA NA NA NA NA NA NA NL = 500	NA NA 0.05 NA 100 20	Range Average Range Average Single Sample Sample Range Average Average Range Average Range Average Range Average Range Single Sample	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits	
luminum (d) hloride olor opper (d,f) oaming Agents //BAS) on anganese TBE (d,e) dor Threshold	ppb ppm Color Units ppm ppb ppb ppb	200 500 15 1.3 500 300 50	NA NA NA NA NA NA NA NA NA NL = 500	NA NA 0.05 NA 100 20	Range Average Range Average Single Sample Sample Sample Range Average Range Average Average Single Sample Sample Sample Sample Sample Sample Average Average Single Sample Sample	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges	
luminum (d) hloride olor opper (d,f) paming Agents //BAS) on langanese TBE (d,e) dor Threshold	ppb ppm Color Units ppm ppb ppb ppb TON ppb	200 500 15 1.3 500 300 50 5 3	NA NA NA NA NA NL = 500 NA NA NA	NA NA 0.05 NA 100 20 3 1	Range Average Range Average Single Sample Sample Range Average Average Range Average Range Average Single Sample Sample Sample Single Sample	73-81	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water;	
luminum (d) hloride olor opper (d,f) oaming Agents MBAS) on langanese ITBE (d,e) dor Threshold ilver pecific Conductance	ppb ppm Color Units ppm ppb ppb ppb ppb ppb ppb ppb ppb ppb	200 500 15 1.3 500 300 50 5 3 100 1600	NA	NA NA 0.05 NA 100 20 3 1 10 NA	Range Average Range Average Single Sample Sample Range Average Average Average Range Average Single Sample Single Single Sample Sample Sample Sample Sample Sample Sample Sample Sample Range	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water; seawater influence Runoff/leaching from natural deposits;	
luminum (d) hloride olor opper (d,f) oaming Agents MBAS) on langanese ITBE (d,e) dor Threshold ilver pecific Conductance ulfate	ppb ppm Color Units ppm ppb ppb ppb ppb TON ppb µS/cm ppm	200 500 15 1.3 500 300 50 5 3 100 1600 500	NA N	NA NA 0.05 NA 100 20 3 1 10 NA 0.5	Range Average Single Sample Sample Range Average Single Sample Range Average Range Average Range Average Single Sample Range Average Range Average Range Average Range Average Range Range Range	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water; seawater influence Runoff/leaching from natural deposits; industrial wastes	
luminum (d) hloride olor opper (d,f) oaming Agents MBAS) on langanese ITBE (d,e) idor Threshold ilver pecific Conductance ulfate hiobencarb (d)	ppb ppm Color Units ppm ppb ppb ppb ppb ppb ppb ppb ppb ppb	200 500 15 1.3 500 300 50 5 3 100 1600	NA	NA NA 0.05 NA 100 20 3 1 10 NA	Range Average Single Sample Sample Sample Range Average Range Average Average Range Average Range Average Single Sample Range Average Range Average Range Average Range Average Single Sample Sample Sample Range Average Range Average Average	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water; seawater influence Runoff/leaching from natural deposits;	
Aluminum (d) Chloride Color Copper (d,f) Coaming Agents MBAS) Con Manganese ATBE (d,e) Codor Threshold Ciliver Copecific Conductance Culfate Chiobencarb (d) Cotal Dissolved Solids	ppb ppm Color Units ppm ppb ppb ppb ppb TON ppb µS/cm ppm	200 500 15 1.3 500 300 50 5 3 100 1600 500	NA N	NA NA 0.05 NA 100 20 3 1 10 NA 0.5	Range Average Range Average Single Sample Sample Range Average Range Average Range Average Range Average Single Sample Sample Range Average Range Average Range Average Single Sample Single Sample Single Sample Single Sample	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from rice herbicide	
Aluminum (d) Chloride Color Copper (d,f) Coaming Agents MBAS) Con Manganese MTBE (d,e) Codor Threshold Color Copper (d,f) Common Agents Manganese MTBE (d,e) Codor Threshold Color Copper (d,f) Common Agents Manganese MTBE (d,e) Codor Threshold Color Common Agents MTBE (d,e) Codor Threshold Color Common Agents MTBE (d,e) Codor Threshold Color	ppb ppm Color Units ppm ppb ppb ppb TON ppb µS/cm ppm ppb	200 500 15 1.3 500 300 50 5 3 100 1600 500	NA N	NA NA 0.05 NA 100 20 3 1 10 NA 0.5 1	Range Average Range Average Single Sample Sample Range Average Range Average Range Average Single Sample Range Average Range Average Single Sample Sample Single Sample Sample Single Sample Sample Sample Sample Range Average Single Sample Range Average Range Average Single Sample Range Average	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from rice herbicide Runoff/leaching from natural deposits; seawater influence Soil runoff	
luminum (d) chloride color copper (d,f) coaming Agents MBAS) con danganese MTBE (d,e) corrected to the conductance ulfate hiobencarb (d) cotal Dissolved Solids FDS) urbidity (a) inc	ppb ppm Color Units ppm ppb ppb ppb ppb ppb ppb ppb ppb ppb	200 500 15 1.3 500 300 50 5 3 100 1600 500 1	NA N	NA NA 0.05 NA 100 20 3 1 10 NA 0.5 1 NA	Range Average Range Average Single Sample Sample Range Average Range Average Range Average Range Average Single Sample Sample Sample Sample Sample Single Sample Sample Single Sample Single Sample Single Sample Sample Single Sample Range Average Range Range Range Range Range	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from rice herbicide Runoff/leaching from natural deposits; seawater influence	
chloride color copper (d,f) coaming Agents MBAS) con danganese MTBE (d,e) codor Threshold ciliver depecific Conductance coulfate chiobencarb (d) cotal Dissolved Solids TDS)	ppb ppm Color Units ppm ppb ppb ppb ppb TON ppb µS/cm ppm ppb ppm NTU	200 500 15 1.3 500 300 50 5 3 100 1600 500 1	NA N	NA NA 0.05 NA 100 20 3 1 10 NA 0.5 1 NA 0.1	Range Average Range Average Single Sample Sample Range Average Range Average Range Average Single Sample Range Average Range Average Range Average Single Sample Sample Single Sample Single Sample Single Sample Range Average Range Average Range Average Range Average Range Average Single Sample Range Average Single Sample Single Sample Range Average Single Sample Sample	73-81 77 ND	Runoff/leaching from natural deposits; seawater influence Naturally occurring organic materials Internal corrosion of household pipes; natural deposits erosion; wood preservatives leaching Municipal and industrial waste discharges Leaching from natural deposits; industrial wastes Leaching from natural deposits Gasoline discharge from watercraft engines Naturally-occurring organic materials Industrial discharges Substances that form ions in water; seawater influence Runoff/leaching from natural deposits; industrial wastes Runoff/leaching from rice herbicide Runoff/leaching from natural deposits; seawater influence Soil runoff Runoff/leaching from natural deposits;	

Perflurooctanesufonic Acid

PFOS

2020 Water Quality Report to SDCWA member agencies -- San Diego County Water Authority Treatment Plant Effluent State or PHG Major Sources in Drinking Water Federal MCL (MCLG) State Range **Twin Oaks Valley** [MRDLG] DLR Water Treatment Plant Units [MRDL] Parameter Average Range ND Alachlor 2 4 Average ND Herbicide runoff ppb 1 Single 97 NA NΑ NΑ Alkalinity (t) ppm Sample Single Sample Runoff/leaching from natural deposits; 130 NL = 1000 NA 100 Boron ppb industrial wastes Range NA NΑ 33 NA Calcium ppm <u>Average</u> By-product of drinking water chlorination; Range Chlorate ppb NL = 800 NA 20 Average industrial processes Corrosivity (r) Single Elemental balance in water; affected 12 by temperature, other factors (as Aggressiveness Index) NA NA NA Sample Single Elemental balance in water; affected Sample Range 0.41 by temperature, other factors (as Saturation Index) NA NA NA ND Dimethoate ppb NA NA NA ND Average and residential uses Range NA Average Range Hardness (t) ppm NA NA NΑ Average Magnesium NA NΑ ppm Range ND Metolachlor ppb NA NΑ Average ND Herbicide runoff рΗ Range 7.4-8.2 NA Units NΑ NΑ Average Range NΑ NA NA Potassium ppm Average Single Sample ND pCi/L NA NA 100 Radon (j) Range NA NA NA 63 Sodium ppm Average NL = 50 NA Sample ND Naturally-occurring; industrial waste discharge Vanadium ppb N-Nitrosodiethylamine By-product of drinking water chloramination; Single ND industrial processes By-product of drinking water chloramination; (NDEA) ppb NA NA NA Sample N-Nitrosodimethylamine Single ND (NDMA) ppt NA NA Sample industrial processes Nitroso-di-n-butylamine By-product of drinking water chloramination; (NDBA) NA NA NA ND ppb Sample industrial processes N-Nitroso-di-n-propylamine By-product of drinking water chloramination; Single (NDPA) ND ppb NA NA NΑ Sample Single industrial processes N-Nitrosomethylethylamine By-product of drinking water chloramination; (NMEA) Sample Single industrial processes By-product of drinking water chloramination; ND NA NΑ NΑ ppb N-Nitrosopyrrolidine ND (NPYR) NA NΑ NA Sample industrial processes ppb Dichlorodifluoromethane Range ND 0.5 (Freon 12) ppb NL = 1000NΑ Average ND Industrial waste discharge Ethyl-*tert* -butylether Range ND 3 NΑ NA ND Used as gasoline additive (ETBE) ppb Average tert -Amyl-methylether (TAME) Range NA NA 3 ND ppb Used as gasoline additive Average tert -Butyl alcohol Single Sample MTBE breakdown product; used as gasoline (TBA) NL = 12 ND ppb NA additive OTHER PARAMETERS - VOLUNTARY SAMPLING NL=1400 Perfluoroctanoic Acid ppt NA NA Single

ND

ND

Sample

Single

Sample

NA

NL=1300

ppt

NA

		State or			1	Treatment Plant Efflue	ent	
		Federal MCL	PHG (MCLG)	State	Range	Twin Oaks Valley		Major Sources in Drinking Water
Parameter	Units	[MRDL]	[MRDLG]		Average	Water Treatment Plan	nt	
ABBREVIATIONS AND F	OOTNOTES							
Albertariations								
Abbreviations Al	Aggressive	ness Index					N	Nitrogen
AL	Action Leve						NA	Not Applicable
CFE	Combined F	Filter Effluer	nt				NL	Notification Level
CFU	Colony-Forr						ND	None Detect
LRAA	Locational F						NTU	Nephelometric Turbidity Units
	LRAA is the						pCi/L	picoCuries per Liter
	Annual Ave				II		PHG	Public Health Goal
	samples co			nth period			ppb	parts per billion or micrograms per liter (μg/L)
DBP	Disinfection	-					ppm	parts per million or milligrams per liter (mg/L)
DLR	Detection Li			eporting			ppq	parts per quadrillion or picograms per liter (pg/L)
HPC	Heterotroph						ppt	parts per trillion or nanograms per liter (ng/L)
MBAS	Methylene E	Blue Active	Substances	3			SI	Saturation Index (Langelier)
MCL	Maximum C	Contaminant	Level				RAA	Running Annual Average
MCLG	Maximum C	Contaminant	Level Goa	I			TOC	Total Organic Carbon
MFL	Million Fibe	rs per Liter					TON	Threshold Odor Number
MRDL	Maximum F	Residual Dis	infectant Le	evel			TT	Treatment Technique
MRDLG	Maximum F	Residual Dis	infectant Le	evel Goal		Ц	ıS/cm	microSiemen per centimeter; or
						·		micromho per centimeter (µmho/cm)
Factoritae								
Footnotes (a)							(m)	TOVWTP met all provisions of the Stage 2 Disinfectants/Disinfection By-Products
						shall not exceed 1.0 NTU		(D/DBP) Rule. Compliance was based on the LRAA.
				e of the clo	oudiness of the v	ater and is an indicator		Average and range for the treatment plant effluent were taken from daily and
(1.)	of treatment				41		()	monthly samples for TTHM and HAA5.
(b)					the monthly san		(n)	DLR = 1.0 ppb for each TTHM (bromoform, chloroform, dibromochloromethane,
	negative for					ind all samples were	(0)	bromodichloromethane). DLR = 1.0 ppb for each HAA5 analyte (dichloroacetic acid, trichloroacetic acid,
(c)					secutive total co	iform-positive	(o)	monobromoacetic acid, and dibromoacetic acid) except for monochloroacetic
(6)					stitutes an acute			acid which has a DLR = 2.0 ppb.
	The MCL w			2011, 00110	atoc an doute		(p)	Running annual average was calculated from quarterly results of monthly and daily
(d)				obencarb	have both prima	y and secondary	\F-/	samples. Bromate reporting level is 3 ppb.
,	standards.	,	•		•	-	(p)	Chromium VI reporting level is 0.03 ppb.
(e)	MTBE repor						(r)	Al is a calculated value that measures the aggressiveness of water transported
(f)						der the Lead and		through pipes. Water with AI <10.0 is highly aggressive and would be very
						ie consumers' tap.		corrosive to almost all materials found in a typical water system. Al > 12.0 indicates
	The action l	evels, which	n trigger wa	iter systen	ns into taking tre	atment steps		non-aggressive water. Al between 10.0 and 11.9 indicates moderately aggressive
			in 10% of th	ne tap wat	er samples, are	1.3 ppm for copper	(-)	water.
(~)	and 15 ppb		lianaa wit-	all pravisi	one of the Ctat-I	Elucridation	(s)	SI measures the tendency for a water to precipitate or dissolve calcium carbonate
(g)	System Red		nance with	ali proviši	ons of the State's	Fiuoridation		(a natural mineral in water). Positive indices indicate the tendency to precipitate and/or deposit scale on pipes and are assumed to be non-corrosive. Negative
(h)			s nitrata w	hich eaus	ıls 10 mg/L as N.			indices indicate the tendency to dissolve calcium carbonate and are assumed to
(h) (i)						w the state DLR of 4 ppb.		be corrosive.
(i) (j)						ing in 2019 - 2020.	(t)	Alkalinity and hardness was based on CaCO ₃
u/						ed during the period of 2022-2024		
(k)		•			•	dose equivalent		
('')					screenina level is			