

CHEMICAL ANALYSES OF DAVIS WATER
MARCH 2012



General Mineral, General Physical, and Inorganic Chemical Analyses

Constituent	Common Name	Units	MCL or SMCL	PHG or Notification Level	West Area					North Area		Central Area						East Area		South Area					
					Well Number	30	25	20	28	31	27	19	23	1	33	11	7	14	24	15	22	26	32	EM3	21
Hardness	CaCO ₃	mg/L			110	390	400	160	130	320	380	610	410	70	550	510	380	370	370	350	450	74	480	700	
Calcium	Ca	mg/L			18	37	40	24	18	31	35	52	41	16	44	51	34	39	34	34	45	16	52	72	
Magnesium	Mg	mg/L			16	71	73	24	21	59	71	120	74	7.0	110	94	71	65	70	64	83	8	86	130	
Sodium	Na	mg/L			90	68	59	49	85	85	90	100	76	93	110	100	71	66	97	93	70	93	77	120	
Potassium	K	mg/L			2.7	<2.0	<2.0	<2.0	2.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	2.2	<2.0	2.3	
Alkalinity	CaCO ₃	mg/L			220	380	380	200	210	330	390	560	400	200	490	470	350	350	370	340	390	200	370	340	
Hydroxide	OH	mg/L			<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<3.0	<3.0	
Carbonate	CO ₃	mg/L			12	<3.0	<3.0	8.3	11	7.2	<3.0	<3.0	<3.0	15	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	9	<3.0	<3.0		
Bicarbonate	HCO ₃	mg/L			200	380	380	190	200	330	390	560	400	180	490	470	350	350	370	340	390	190	370	340	
Sulfate	SO ₄	mg/L	500		36	41	33	21	41	47	60	120	54	31	92	84	52	52	63	64	71	38	79	270	
Chloride	Cl	mg/L	500		21	29	25	12	24	35	41	78	38	18	74	69	51	32	63	56	57	24	68	150	
Nitrate	NO ₃	mg/L	45	45	<2.0	17 ⁸	32 ⁸	3.7	<2.0	16 ⁷	15	27 ⁷	16	<2.0	19	17	13	12	7.8	5.5	22	<2.0	30 ⁸	12	
Fluoride	F	mg/L	2	1	0.11	0.22	0.24	0.10	0.12	0.19	0.26	0.26	0.25	<0.10	0.28	0.22	0.26	0.19	0.21	0.19	0.3	<0.1	0.19	0.18	
pH			6.5-8.5		8.4	8.2	8.2	8.4	8.4	8.3	8.2	8.2	8.2	8.5	8.2	8.2	8.2	8.2	8.2	8.3	8.3	8	8	8.2	8.2
Specific Conductance	E.C.	µmhos/cm	1600		590	950	920	490	590	880	1000	1400	1000	530	1300	1300	950	910	1000	990	1000	540	1100	720 ¹⁰	
Total Filterable Residue	TDS	mg/L	1000		350	530	500	270	330	490	570	820	570	310	770	720	530	520	580	540	620	330	630	400 ¹⁰	
Color		units	15		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Odor	TON		3		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Turbidity	NTU		5		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
MBAS (foaming agents)		mg/L	0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Radioactivity: Gross Alpha ¹		pCi/L	15		1.4	1.9	1.3	1.1	0.7	2.1	3.8	3.6	2.6	0.2	4.4	2.8	1.7	3.6	3.0	2.7	3.7	0.3	5.5	4.6	
Radium-228 ¹		pCi/L	50		0.229	1.090	0.506	0.231	0.515	0.074	0.028	0.512	0.545	0.181	0.517	0.760	0.522	0.910	0.445	0.284	2.020	0.235	-1.02	1.260	
Radon ²		pCi/L			366	210	315	418	368	192	483	393	318		376	226	496	419	488	252	276		187	299	
Aluminum	Al	µg/L	1000	600	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Arsenic	As	µg/L	10	0.004	2.8	<2.0	<2.0	3.3	<2.0	3.5	2.8	2.4	2.3	4.7	2.0	2.2	<2.0	2.6	4.2	3.3	3.0	7	2.7	2.1	
Antimony	Sb	µg/L	6	20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Barium	Ba	µg/L	1000	2000	<50	160	180	130	<50	88	110	180	180	<50	130	240	140	150	120	120	180	<50	91	51	
Beryllium	Be	µg/L	4	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Cadmium	Cd	µg/L	5	0.04	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Total Chromium	Cr	µg/L	50		10	22 ⁶	35 ⁶	17	<10	19 ⁶	32 ⁶	33 ⁶	32 ⁶	<10	28 ⁶	26 ⁶	11	11	<10	<10	23	<10	17	<10	
Hexavalent Chromium ³	Cr V1	µg/L		0.02	6	32	40	15	8	18	30	30	27	<2	24	25	8	14	<2	6	16		16	6	
Copper	Cu	µg/L	1000	170-	<5.0	<5.0	<5.0	<5.0	24	<5.0	24	11	<5.0	<5.0	22	<5.0	<5.0	9.3	8.1	12	<5.0	<5.0	<5.0	<5.0	
Total Iron	Fe	µg/L	300		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	71	<50	<50	<50	
Lead	Pb	µg/L	15	2-	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Manganese	Mn	µg/L	50		32 ⁵	<10	<10	<10	<10	<10	<10	<10	<10	39 ⁵	<10	<10	<10	<10	33 ⁵	31 ⁵	<10	57 ⁵	<10	24	
Mercury	Hg	µg/L	2	1.2	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	
Nickel	Ni	µg/L	100	12	<10	<10	<10	<10	<10	<10	61	<10	<10	<10	<10	<10	<10	<10	<10	15	<10	<10	<10	<10	
Selenium	Se	µg/L	50		<2.0	3.5	2.2	<2.0	<2.0	4.1	19	27	9.4	<2.0	38 ⁴	32 ⁴	4.4	8.6	11	11	12	<2	19	10	
Silver	Ag	µg/L	100		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Thallium	Tl	µg/L	2	0.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Zinc	Zn	µg/L	5000		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	120	<50	<50	<50	<50	<50	<50	<50	<50	<50	
Boron	B	µg/L		1000	930	670	580	720	780	1000	960	950	720	960	950	930	730	720	1200	1100	680	820	670	880	
Nitrite	NO ₂	mg/L	1 (as N)	1 (as N)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Sample Dates:					Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	Aug-11	
Routine:					Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	Jul-07	
1 : Alpha/228					Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	Jun-05	
2 : Radon					Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	Oct-10	
3 : Hexavalent Cr																									
4 : Quarterly Se					Feb-12																				
5 : Quarterly Mn						Feb-12	Feb-12			Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	Feb-12	
6 : Quarterly Cr																									



CHEMICAL ANALYSES OF DAVIS WATER
MARCH 2012

Synthetic Organic Chemicals (continued)

Constituent	EPA Method	Units	MCL	PHG or (MCLG)	West Area					North Area		Central Area						East Area		South Area				
					Well Number	30	25	20	28	31	27	19	23	1	33	11	7	14	24	15	22	26	32	EM3
Atrazine (AATREX)	525.2	µg/L	1	0.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)pyrene (PAH)	525.2	ppt	200	4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
bis(2-ethylhexyl) adipate	525.2	µg/L	400	200	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
bis(2-ethylhexyl) phthalate	525.2	µg/L	4	12	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Bromacil (HYVAR)	525.2	µg/L			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Butachlor	525.2	µg/L			<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	
Diazinon	525.2	µg/L			<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	
Dimethoate (CYGON)	525.2	µg/L			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Metolachlor	525.2	µg/L			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Metribuzin	525.2	µg/L			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Molinate (ORDRAM)	525.2	µg/L	20		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Propachlor	525.2	µg/L			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Simazine (PRINCEP)	525.2	µg/L	4	4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Thiobencarb (BOLERO)	525.2	µg/L	70	70	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
3-Hydroxycarbofuran	531.1	µg/L			<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Aldicarb (TEMIK)	531.1	µg/L			<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Aldicarb Sulfone	531.1	µg/L			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Aldicarb Sulfoxide	531.1	µg/L			<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	
Carbaryl (SEVIN)	531.1	µg/L			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Carbofuran (FURADAN)	531.1	µg/L	18	1.7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Methomyl	531.1	µg/L			<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
Oxamyl (VYDATE)	531.1	µg/L	50	50	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20	
Glyphosate	547	µg/L	700	1000	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	
Endothal	548.1	µg/L	100	580	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	<45	
Diquat	549.2	µg/L	20	15	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	
2,3,7,8-TCDD (DIOXIN)	1613B	ppq	30	0	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	<.000005	
Routine Sample Dates:					2010	2009	2009	2009	2010	2009	2009	2010	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009	2009

NOTES:

mg/L = milligrams per liter = parts per million (ppm)

µg/L = micrograms per liter = parts per billion (ppb)

ppt = parts per trillion

MCL = maximum contaminant level = maximum quantity allowable or desirable under Federal and State Drinking Water Regulations

PHG = Public Health Goals (Maximum Contaminant Level Goals) : Levels of contaminants in drinking water that are considered to pose an insignificant risk to public health.

(Primary, or health related limits are bold face; Secondary, or aesthetic limits are in italics; California Notification Levels are in bold italics; Blank indicates no established standard)



CHEMICAL ANALYSES OF DAVIS WATER
MARCH 2012

UPDATED : MARCH 2012

SYSTEM AND TESTING INFORMATION

Davis' water is 100% groundwater pumped from 20 wells located throughout the City.

This information is a summary of recent quality analyses performed on the City of Davis' wells and system. Since all of the City's water mains are interconnected and the number of wells operating at any given time depends on the system demand, you may or may not receive water from the well that is closest to your residence.

The water is untreated except for addition of @sodium hypochlorite (chlorine). Each well receives a full chemical analysis once every 16 months and the system is sampled for bacteria on a weekly basis. (Bacteriological results are not reported here.)

If you have further questions or require additional information, please phone Marie Graham at (530) 757-5686.

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HARDNESS CALCULATIONS BY AREA

Well #	mg/L	grains/gal	Well #	mg/L	grains/gal
WEST			CENTRAL		
30	110	6	1	410	24
20	400	23	7	510	30
25	390	23	11	550	32
28	160	9	14	380	22
31	130	8	23	610	36
	238	14		Average	492 29
NORTH			EAST		
19	380	22	33	70	4
27	320	19	15	370	22
	350	20	22	350	20
				Average	263 15
			SOUTH		
			24	370	22
			21	170	10
			26	450	26
			32*	74	4
			EM3	480	28
				Average	309 18

HARDNESS is a measure of the concentration of calcium and magnesium present in water. Hard water causes scaling on plumbing fixtures and utensils but is not a health concern. The optimum amount of hardness for household water is 75 to 100 mg/L. Hardness is commonly referred to in grains per gallon (GPG) for adjusting water softeners. GPG is obtained by dividing mg/L by 17.1

@ **CHLORINE ADVISORY** - Davis' water is chlorinated at a dosage of 0.5 ppm. take proper precautions when adding water to fish tanks, dialysis machines, etc.