



Water-Data Report 2010

**09415000 Virgin River At Littlefield, AZ**

Lower Colorado-Lake Mead Basin  
Lower Virgin Subbasin

LOCATION.--Lat 36°53'30", long 113°55'25" referenced to North American Datum of 1927, in SW ¼ SW ¼ sec.4, T.40 N., R.15 W., Mohave County, AZ, Hydrologic Unit 15010010, on right bank, 0.5 mi downstream of Beaver Dam Wash, 0.4 mi upstream from the town of Littlefield, AZ, and approximately 36 mi upstream from Lake Mead.

DRAINAGE AREA.--5,090 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Oct. 1929 to current year.

REVISED RECORDS.--WSP 959: 1932. WSP 979: 1930-31, 1933-37. WSP 1313: 1940 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,763.68 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to May 28, 1933, nonrecording gage at site 300 ft upstream, and May 28, 1933, to Nov. 7, 1939, at same site, both at datum 2.53 ft higher. Nov. 8, 1939, to Mar. 31, 1942, nonrecording gage at same site at datum 2.00 ft higher. Apr. 1, 1942, to Sep. 30, 1970, water-stage recorder at same site at same datum. Oct. 1, 1970, to Aug. 7, 1979, at site 300 ft upstream at same datum. Apr. 17, 2007 to current day 200 ft upstream at datum 3.69 ft higher.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,000 ft<sup>3</sup>/s, Jan. 1, 1989, gage height, 22.37 ft, due to failure of Quail Creek Dam; maximum discharge excluding 1989: 36,500 ft<sup>3</sup>/s, Jan. 10, 2005, gage height, 15.93 ft, on basis of slope-area measurement of peak flow; minimum daily, 40 ft<sup>3</sup>/s, Aug. 6, 1966.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr 22	0145	*3,410	*10.24
No other peaks greater than base discharge.			

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**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**  
**DAILY MEAN VALUES**  
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	80	e136	158	162	171	160	309	531	344	85	97	104
2	75	e140	146	159	e172	156	258	470	316	81	94	97
3	81	142	143	161	e158	150	212	434	e291	79	99	93
4	95	137	143	163	143	154	184	396	286	74	94	91
5	87	131	145	146	144	173	184	539	246	76	83	96
6	88	134	151	133	157	155	205	733	212	80	174	98
7	92	136	164	135	493	184	219	666	202	79	145	98
8	e102	144	255	132	435	235	180	560	175	72	146	90
9	e109	147	196	137	277	396	172	578	154	74	192	102
10	e112	152	162	135	255	564	194	607	136	68	234	99
11	e110	154	187	135	227	361	234	567	119	67	152	96
12	108	155	217	131	213	301	293	511	111	67	124	103
13	105	152	198	131	209	319	335	395	201	66	e105	107
14	105	152	315	136	189	311	279	361	e226	66	e98	106
15	99	146	207	136	200	265	227	373	e180	64	e83	99
16	93	138	197	137	190	284	262	403	e120	64	e80	93
17	94	129	168	138	195	430	329	484	e98	64	79	99
18	e95	121	161	142	e165	501	371	544	100	65	83	95
19	e95	125	148	157	e162	518	411	558	e115	67	100	105
20	e90	120	146	e230	166	390	455	534	112	68	187	106
21	e92	118	148	e220	297	312	674	588	94	66	143	100
22	e94	122	144	418	400	305	1,840	666	90	65	120	110
23	e97	121	150	283	202	389	805	697	91	69	107	107
24	e105	120	158	217	173	320	595	569	88	67	89	115
25	e110	122	151	161	e184	283	521	481	83	68	93	105
26	e113	124	147	141	157	262	618	427	80	75	92	105
27	e110	130	156	167	157	246	793	437	85	73	89	100
28	e113	141	156	230	160	226	759	414	86	69	83	100
29	125	149	160	179	---	221	816	450	80	74	162	94
30	127	156	166	162	---	226	748	415	80	76	116	93
31	e138	---	163	157	---	272	---	400	---	95	109	---
<b>Total</b>	3,139	4,094	5,306	5,271	6,051	9,069	13,482	15,788	4,601	2,223	3,652	3,006
<b>Mean</b>	101	136	171	170	216	293	449	509	153	71.7	118	100
<b>Max</b>	138	156	315	418	493	564	1,840	733	344	95	234	115
<b>Min</b>	75	118	143	131	143	150	172	361	80	64	79	90
<b>Ac-ft</b>	6,230	8,120	10,520	10,460	12,000	17,990	26,740	31,320	9,130	4,410	7,240	5,960

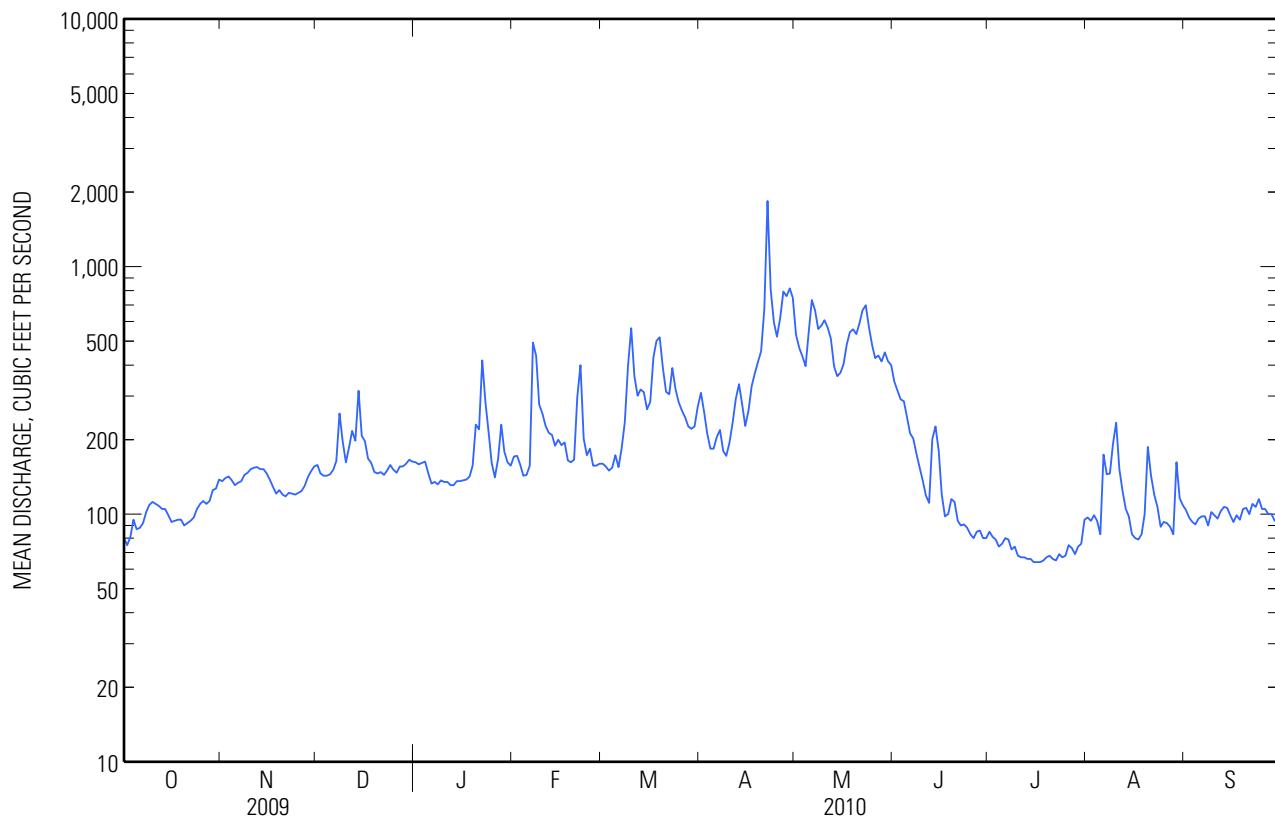
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2010, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	154	190	221	256	314	353	397	418	144	107	171	148
<b>Max</b>	624	552	1,247	2,327	2,330	1,805	1,385	2,162	1,119	381	976	737
(WY)	(2005)	(1947)	(1967)	(2005)	(1980)	(1995)	(1969)	(2005)	(1983)	(1932)	(1932)	(1939)
<b>Min</b>	53.4	101	111	108	108	85.4	61.6	49.9	46.8	51.6	49.8	53.3
(WY)	(1965)	(1991)	(1964)	(1964)	(2002)	(1977)	(1934)	(1990)	(1964)	(1965)	(2002)	(1964)

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**SUMMARY STATISTICS**

	<b>Calendar Year 2009</b>	<b>Water Year 2010</b>		<b>Water Years 1930 - 2010</b>	
<b>Annual total</b>	44,715	75,682			
<b>Annual mean</b>	123	207		239	
<b>Highest annual mean</b>				825	2005
<b>Lowest annual mean</b>				100	1991
<b>Highest daily mean</b>	387	Jan 25	1,840	Apr 22	25,000 Jan 11, 2005
<b>Lowest daily mean</b>	52	Jul 18	64	Jul 15	40 Aug 6, 1966
<b>Annual seven-day minimum</b>	57	Jul 15	65	Jul 12	41 Aug 3, 1966
<b>Maximum peak flow</b>			3,410	Apr 22	61,000 Jan 1, 1989
<b>Maximum peak stage</b>			10.24	Apr 22	22.37 Jan 1, 1989
<b>Instantaneous low flow</b>			61	Jul 16	
<b>Annual runoff (ac-ft)</b>	88,690	150,100		173,100	
<b>10 percent exceeds</b>	181	436		417	
<b>50 percent exceeds</b>	117	148		146	
<b>90 percent exceeds</b>	66	81		62	



**09415000 Virgin River At Littlefield, AZ—Continued****WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Oct. 1948 to current year.

PERIOD OF DAILY RECORD.--

CHEMICAL ANALYSES: Jul. 1949 to Sep. 1969.

SPECIFIC CONDUCTANCE: Oct. 1947 to Mar. 1988.

WATER TEMPERATURE: Oct. 1947 to Mar. 1988.

SEDIMENT DATA: Oct. 1947 to Sep. 1968, Oct. 1992 to Sep. 1995.

REMARKS.--Data were collected in cooperation with the Southern Nevada Water Authority to characterize the hydraulics and water quality of the Virgin River Basin and to establish information on chemical loading into Lake Mead. Streamflow is not completely homogenous chemically from bank to bank. Flow adjacent to north (right) bank is generally more dilute than average, particularly at times of low streamflow; monthly data collected during Jun. 1975-Sep. 1976 indicate that specific conductance off north bank was 93 to 100 percent of streamwide average (range of discharge, 60-230 ft<sup>3</sup>/s). Water temperature characteristically shows little or no variation from bank to bank. Detailed sampling information for period since Jun. 1975 is available from U.S. Geological Survey, Carson City, NV. Surrogate constituent values (parameters 90640, 99958, 99959, 99994, and 99995) are recovery percentages for the indicated compounds. These compounds are added to the sample to determine the relative recovery of other organic compounds that are detected using the same analytical method.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 4,650 microsiemens/cm, Aug. 21, 1966; minimum, 615 microsiemens/cm, May 27, 28, 30, 31, 1983.

WATER TEMPERATURE: Maximum, 33.5°C, Jul. 7, 1953; minimum, 2.0°C Jan. 4, 1949, Jan. 4, 1950, Jan. 4, 5, 1971.

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 1 of 20

[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Tempera-ture, air, °C (00020)	filtered, units (50624)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units (61726)	Discharge, instant-aneous, ft <sup>3</sup> /s (00061)	Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units	Dissolved oxygen, water, unfiltered, mg/L (00300)
11-09-2009	1200	Surface water	Regular	--	--	--	--	145	--	
11-09-2009	1245	Surface water	Regular	--	22.3	.079	.072	145	145	10.2
12-21-2009	1707	Surface water	Regular	--	--	--	--	E 145	145	--
02-08-2010	1321	Surface water	Regular	--	15.6	--	--	349	349	--
02-25-2010	1420	Surface water	Regular	--	--	.049	.038	168	168	9.7
06-23-2010	1330	Surface water	Regular	--	34.6	.030	.023	97	97	10.0
08-23-2010	1345	Surface water	Regular	--	27.6	--	--	E 97	97	--
09-01-2010	1345	Surface water	Regular	724	28.1	.055	.042	110	110	7.9
09-30-2010	1500	Surface water	Regular	--	--	--	--	E 80	80	--

**09415000 Virgin River At Littlefield, AZ—Continued**

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	alpha-HCH-d6, surrogate, Schedule 9060/2060, water, filtered, percent recovery (99958)		Barban, surrogate, Schedule 2003, water, filtered, percent recovery (99995)		Caffeine-13C, surrogate, Schedules 2060/9060, water, filtered, percent recovery (99959)	
						2,4,5-T, surrogate, Schedule 9060/2060, water, filtered, percent recovery (99958)	alpha-HCH-d6, surrogate, Schedule 2003, water, filtered, percent recovery (99995)	Barban, surrogate, Schedule 2060/9060, water, filtered, percent recovery (90640)	Caffeine-13C, surrogate, Schedules 2060/9060, water, filtered, percent recovery (99959)		
11-09-2009	1200	--	--	--	--	--	--	--	--	--	
11-09-2009	1245	7.9	2,610	16.3	28	70.8	86.2	84.4	59.5		
12-21-2009	1707	--	3,000	12.9	--	--	--	--	--	--	
02-08-2010	1321	--	1,630	12.7	--	--	--	--	--	--	
02-25-2010	1420	7.8	2,900	15.7	180	78.1	81.3	96.4	95.4		
06-23-2010	1330	7.8	3,210	26.4	E 2.5	97.3	97.5	117	92.2		
08-23-2010	1345	--	3,040	28.5	--	--	--	--	--	--	
09-01-2010	1345	7.9	3,100	25.1	220	82.7	96.3	86.9	64.4		
09-30-2010	1500	--	3,370	24.5	--	--	--	--	--		

**09415000 Virgin River At Littlefield, AZ—Continued**

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Diazinon-d10, surrogate, schedule 2003, dried at 180 °C, water, filtered, percent recovery (99994)		Dissolved solids (70300)		Magnesium, water, filtered, mg/L (00915)		Potassium, water, filtered, mg/L (00925)		Sodium, water, filtered, mg/L (00930)		Alkalinity, water, filtered, inflection-point, incremental titration method, field, mg/L as CaCO <sub>3</sub> (39086)
		Diazo-	n-	surrogate,	Dissolved	solids	water,	filtered,	water,	filtered,	water,	
11-09-2009	1200	--	--	--	--	--	--	--	--	--	--	--
11-09-2009	1245	101	2,000	234	73.4	22.0	256	22.0	256	22.0	256	--
12-21-2009	1707	--	--	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--	--	--
02-25-2010	1420	68.5	2,150	240	81.1	23.9	270	81.1	23.9	270	286	286
06-23-2010	1330	104	2,320	303	94.8	26.6	302	94.8	26.6	302	260	260
08-23-2010	1345	--	--	--	--	--	--	--	--	--	--	--
09-01-2010	1345	79.2	2,300	291	85.1	25.7	288	85.1	25.7	288	287	287
09-30-2010	1500	--	--	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Bicarbonate, water, filtered, inflection- point, incremental titration method, field	Carbon (inorganic plus organic), suspended sediment,	Carbon dioxide, water, unfiltered, unfiltered, mg/L (00405)	Carbon dioxide, water, unfiltered, mg/L (00452)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO <sub>2</sub> (00955)
11-09-2009	1200	--	--	--	--	--	--	--	--
11-09-2009	1245	--	1.18	6.4	--	342	.86	E .04	16.0
12-21-2009	1707	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--
02-25-2010	1420	348	4.00	8.3	--	373	.88	.45	19.8
06-23-2010	1330	311	.94	7.1	2.6	414	.96	E .08	10.3
08-23-2010	1345	--	--	--	--	--	--	--	--
09-01-2010	1345	346	7.84	6.6	2.2	387	.91	.24	18.7
09-30-2010	1500	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, unfiltered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)	Orthophos- phate, water, filtered, mg/L as P (00671)	Particulate nitrogen, suspended in water, mg/L (49570)	Phos- phorus, water, filtered, mg/L as P (00666)
11-09-2009	1200	--	--	--	--	--	--	--	--	--
11-09-2009	1245	752	.19	.26	<.020	1.06	.006	.114	E .03	.13
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	857	.24	.45	<.020	1.42	.006	.140	.27	.12
06-23-2010	1330	992	.18	.18	E .012	.12	.008	.012	.12	<.04
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	911	.22	.73	<.020	1.22	.004	.119	.47	.12
09-30-2010	1500	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Fecal									
		Esche-richia coli, modified	coliform, m-FC MF	(0.45 micron)	Fecal coliform, M-FC MF	(0.7 micron)	Iron, water, filtered	Lithium, water, filtered	Strontium, water, filtered	Vanadium, water, filtered	Arsenic, water, filtered
	Phosphorus, water, unfiltered, mg/L as P (00665)	m-TEC MF method, col/100 mL (90902)	water, unfiltered, mg/L as P (00665)	M-FC MF method, col/100 mL (31616)	water, unfiltered, mg/L as P (00665)	M-FC MF method, col/100 mL (31625)	water, filtered, µg/L (01046)	water, filtered, µg/L (01130)	water, filtered, µg/L (01080)	water, filtered, µg/L (01085)	water, filtered, µg/L (01000)
11-09-2009	1200	--	--	--	--	--	--	--	--	--	--
11-09-2009	1245	.17	85	130	--	< 12	254	2,940	3.4	11.4	
12-21-2009	1707	--	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--	--
02-25-2010	1420	.32	77	50	--	< 12	354	3,350	3.2	13.9	
06-23-2010	1330	E .02	24	--	18	< 12	379	3,890	3.5	9.3	
08-23-2010	1345	--	--	--	--	--	--	--	--	--	--
09-01-2010	1345	.38	310	380	--	< 18	367	3,460	3.2	10.9	
09-30-2010	1500	--	--	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	2,6-Diethyl-aniline, 2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (61618)									
		1-Naphthol, water, filtered (0.7 micron)	2,4-D methyl ester, water, glass fiber	2,4-D, water, filtered	2,4-DB, water, filtered	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (61618)	Boron, water, filtered, µg/L (01020)	Selenium, water, filtered, recoverable, µg/L (01145)	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (61618)	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (61618)	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (61618)
	Sample start time	Boron, water, filtered, µg/L (01020)	Selenium, water, filtered, recoverable, µg/L (49295)	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (50470)	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (39732)	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (38746)					
11-09-2009	1200	--	--	--	--	--	--	--	--	--	--
11-09-2009	1245	633	1.6	< .04	< .200	< .06	< .02	< .006	< .010	< .014	
12-21-2009	1707	--	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--	--
02-25-2010	1420	843	2.3	< .04	< .200	< .06	< .02	< .006	< .010	< .014	
06-23-2010	1330	879	1.8	< .04	< .200	E .02	< .02	< .006	< .010	< .014	
08-23-2010	1345	--	--	--	--	--	--	--	--	--	--
09-01-2010	1345	748	1.6	< .04	< .200	< .06	< .02	< .006	< .010	< .014	
09-30-2010	1500	--	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 8 of 20

[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	2-Hydroxy-				3-Hydroxy-				Acifluor-fen, water,			
		2-Chloro-6-ethyl-amino-4-amino-s-triazine, water, filtered, recoverable, µg/L (04038)	2-Ethyl-6-methyl-aniline, water, filtered, recoverable, µg/L (61620)	4-iso-propyl-amino-6-ethyl-amino-s-triazine, water, filtered, recoverable, µg/L (50355)	3,4-Dichloro-ethyl, recoverable, µg/L (61625)	carbo-furan, water, filtered (0.7 micron glass fiber), recoverable, µg/L (49308)	4-Chloro-2-methyl-phenol, water, filtered, recoverable, µg/L (61633)	Aceto-chlor, water, filtered, recoverable, µg/L (49260)	filtered (0.7 micron glass fiber), recoverable, µg/L (49315)	Alachlor, water, filtered, recoverable, µg/L (46342)			
11-09-2009	1200	--	--	--	--	--	--	--	--	--	--	--	--
11-09-2009	1245	<.06	<.010	<.060	<.004	<.040	<.003	<.010	<.040	<.040	<.008		
12-21-2009	1707	--	--	--	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--	--	--	--
02-25-2010	1420	<.06	<.010	<.060	<.004	<.040	<.003	<.010	<.040	<.040	<.008		
06-23-2010	1330	<.06	<.010	<.060	<.004	<.040	<.003	<.010	<.040	<.040	<.008		
08-23-2010	1345	--	--	--	--	--	--	--	--	--	--	--	--
09-01-2010	1345	<.06	<.010	<.060	E .005	<.040	<.003	<.010	<.040	<.040	<.008		
09-30-2010	1500	--	--	--	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Aldicarb sulfone, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49313)	Aldicarb sulfoxide, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49314)	Aldicarb, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49312)	Atrazine, water, filtered, recover- able, µg/L (39632)	Azinphos- methyl oxygen analog, water, filtered, recover- able, µg/L (61635)	Azinphos- methyl, water, filtered glass fiber filter), recover- able, µg/L (82686)	Bendio- carb, water, filtered, recover- able, µg/L (50299)	Benfluralin, water, filtered glass fiber filter), recover- able, µg/L (82673)	Benomyl, water, filtered, recover- able, µg/L (50300)
11-09-2009	1200	--	--	--	--	--	--	--	--	--
11-09-2009	1245	< .08	< .060	< .12	< .007	< .04	< .120	< .04	< .014	E .003
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	< .08	< .060	< .12	< .007	< .04	< .120	< .04	< .014	< .060
06-23-2010	1330	< .08	< .060	< .12	< .007	< .04	< .120	< .04	< .014	< .060
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	< .08	< .060	< .12	< .007	< .04	< .120	< .04	< .014	< .060
09-30-2010	1500	--	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Bentazon, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (61693)	Bromacil, water, filtered water, filtered (04029)	Bromoxynil, water, filtered water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49311)	Carbaryl, water, filtered water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49310)	Carbaryl, water, filtered water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82680)	Carbo- furan, water, filtered water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49309)	Chlor- amben, water, filtered, recover- able, µg/L (61188)	Chlori- muron- ethyl, water, filtered, recover- able, µg/L (50306)	
11-09-2009	1200	--	--	--	--	--	--	--	--	
11-09-2009	1245	< .06	< .06	< .06	< .12	< .04	< .060	< .040	< .10	< .080
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	< .06	< .06	< .06	< .12	< .04	< .060	< .040	< .10	< .080
06-23-2010	1330	< .06	< .06	< .06	< .12	< .04	< .060	< .040	< .10	< .080
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	< .06	< .06	< .06	< .12	< .04	< .060	< .040	< .10	< .080
09-30-2010	1500	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	cis-Permethrin, Clopyralid, Cycloate, Cyfluthrin, Cypermethrin, Dacthal monoacid, DCPA,						
		Chlorpyrifos oxygen analog, water, filtered, recoverable, µg/L (61636)	Chlorpyrifos, water, filtered, recoverable, µg/L (38933)	Permethyl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687)	Clopyralid, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49305)	Cycloate, water, filtered, recoverable, µg/L (04031)	Cyfluthrin, water, filtered, recoverable, µg/L (61585)	Dacthal, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49304)
11-09-2009	1200	--	--	--	--	--	--	--
11-09-2009	1245	<.05	E .005	<.014	<.06	<.04	<.016	<.020
12-21-2009	1707	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--
02-25-2010	1420	<.05	<.010	<.014	<.06	<.04	<.016	<.020
06-23-2010	1330	<.05	<.010	<.014	<.06	<.04	<.016	<.020
08-23-2010	1345	--	--	--	--	--	--	--
09-01-2010	1345	<.05	<.010	<.014	<.06	<.04	<.016	<.020
09-30-2010	1500	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Dichlor-						Dimetho- ate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82662)
		Desulfynil-fipronil amide, water, filtered, recoverable, µg/L (62169)	Desulfynil-fipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dicamba, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (38442)	prop, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49302)	Dichlorvos, water, filtered, recoverable, µg/L (49302)	
11-09-2009	1200	--	--	--	--	--	--	--
11-09-2009	1245	<.029	<.012	<.005	<.04	<.04	<.02	<.08
12-21-2009	1707	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--
02-25-2010	1420	<.029	<.012	<.005	<.04	<.04	<.02	<.08
06-23-2010	1330	<.029	<.012	<.005	<.04	<.04	<.02	<.08
08-23-2010	1345	--	--	--	--	--	--	--
09-01-2010	1345	<.029	<.012	<.005	<.04	<.04	<.02	<.08
09-30-2010	1500	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Dinoseb, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49301)	Di- phenamid, water, filtered, recover- able, µg/L (04033)	Diuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49300)	Ethion monoxon, water, filtered, recover- able, µg/L (61644)	Ethion, water, filtered, recover- able, µg/L (82346)	Fenami- phos sulfone, water, filtered, recover- able, µg/L (61645)	Fenami- phos sulfoxide, water, filtered, recover- able, µg/L (61646)	Fenami- phos water, filtered, recover- able, µg/L (61591)	Fenuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49297)
11-09-2009	1200	--	--	--	--	--	--	--	--	--
11-09-2009	1245	<.04	<.04	E .01	<.02	<.008	<.053	<.08	<.03	<.06
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	<.04	<.04	E .01	<.02	<.008	<.053	<.08	<.03	<.06
06-23-2010	1330	<.04	<.04	<.04	<.02	<.008	<.053	<.08	<.03	<.06
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	<.04	<.04	E .01	<.02	<.008	<.053	<.08	<.03	<.06
09-30-2010	1500	--	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Fipronil sulfide, water, filtered, recover- able, µg/L (62167)	Fipronil sulfone, water, filtered, recover- able, µg/L (62168)	Fipronil, water, filtered, recover- able, µg/L (62166)	Flumet- sulam, water, filtered, recover- able, µg/L (61694)	Fluome- turon, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38811)	Fonofos, water, filtered, recover- able, µg/L (04095)	Hexa- zinone, water, filtered, recover- able, µg/L (04025)	Imazaquin, water, filtered, recover- able, µg/L (50356)	Imaze- thapyr, water, filtered, recover- able, µg/L (50407)
11-09-2009	1200	--	--	--	--	--	--	--	--	--
11-09-2009	1245	<.013	<.024	<.018	<.06	<.04	<.004	<.008	<.06	<.06
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	<.013	<.024	<.018	<.06	<.04	<.004	<.008	<.06	<.06
06-23-2010	1330	<.013	<.024	<.018	<.06	<.04	<.004	<.008	<.06	<.06
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	<.013	<.024	<.018	<.06	<.04	<.004	<.008	<.06	<.06
09-30-2010	1500	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Imidacloprid, water, filtered, recoverable, µg/L (61695)	Iprodione, water, filtered, recoverable, µg/L (61593)	Isofenphos, water, filtered, recoverable, µg/L (61594)	(0.7 micron glass fiber filter), recoverable, µg/L (38478)	Malaoxon, water, filtered, recoverable, µg/L (61652)	Malathion, water, filtered, recoverable, µg/L (39532)	(0.7 micron glass fiber filter), recoverable, µg/L (38482)	MCPA, water, filtered, recoverable, µg/L (38487)	MCPB, water, filtered, recoverable, µg/L (38487)	Metalaxyll, water, filtered, recoverable, µg/L (50359)
11-09-2009	1200	--	--	--	--	--	--	--	--	--	--
11-09-2009	1245	<.060	<.014	<.006	<.04	<.080	<.016	<.04	<.20	<.04	
12-21-2009	1707	--	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--	--
02-25-2010	1420	<.060	<.014	<.006	<.04	<.080	<.016	<.04	<.20	<.04	
06-23-2010	1330	<.060	<.014	<.006	<.04	<.080	<.016	<.04	<.20	<.04	
08-23-2010	1345	--	--	--	--	--	--	--	--	--	--
09-01-2010	1345	<.060	<.014	<.006	<.04	<.080	<.016	<.04	<.20	<.04	
09-30-2010	1500	--	--	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Metalaxyll, water, filtered, recoverable, µg/L (61596)	Methidathion, water, filtered, recoverable, µg/L (61598)	(0.7 micron glass fiber filter), recoverable, µg/L (38501)	Methiomyl, water, filtered, recoverable, µg/L (49296)	(0.7 micron glass fiber filter), recoverable, µg/L (49296)	Methyl paraoxon, water, filtered, recoverable, µg/L (61664)	(0.7 micron glass fiber filter), recoverable, µg/L (82667)	Methyl parathion, water, filtered, recoverable, µg/L (82667)	Metolachlor, water, filtered, recoverable, µg/L (39415)	Metribuzin, water, filtered, recoverable, µg/L (82630)	Metsulfuron-methyl, water, filtered, recoverable, µg/L (61697)
11-09-2009	1200	--	--	--	--	--	--	--	--	--	--	--
11-09-2009	1245	<.016	<.006	<.040	<.120	<.01	<.008	<.014	<.012	<.14		
12-21-2009	1707	--	--	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--	--	--
02-25-2010	1420	<.011	<.006	<.040	<.120	<.01	<.008	<.014	<.012	<.14		
06-23-2010	1330	<.007	<.006	<.040	<.120	<.01	<.008	<.014	<.012	<.14		
08-23-2010	1345	--	--	--	--	--	--	--	--	--	--	--
09-01-2010	1345	<.007	<.006	<.040	<.120	<.01	<.008	<.014	<.012	<.14		
09-30-2010	1500	--	--	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	N-(4-Chlorophenyl)-Myclobutanil, water, filtered, recoverable, µg/L (61599)	N'-methylurea, water, filtered, recoverable, µg/L (61692)	Neburon, water, filtered (0.7 micron glass fiber)	Nicosulfuron, water, filtered, recoverable, µg/L (50364)	Norflurazon, water, filtered (0.7 micron glass fiber)	Oryzalin, water, filtered (0.7 micron glass fiber)	Oxamyl, water, filtered (0.7 micron glass fiber)	Pendimethalin, water, filtered (0.7 micron glass fiber)	Phorate oxygen analog, water, filtered, recoverable, µg/L (61666)
11-09-2009	1200	--	--	--	--	--	--	--	--	--
11-09-2009	1245	<.010	<.06	<.02	<.10	<.04	<.04	<.12	<.012	<.03
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	<.010	<.06	<.02	<.10	<.04	<.04	<.12	E .009	<.03
06-23-2010	1330	<.010	<.06	<.02	<.10	<.04	<.04	<.12	<.012	<.03
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	<.010	<.06	<.02	<.10	<.04	<.04	<.12	<.012	<.03
09-30-2010	1500	--	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Phorate, water, filtered (0.7 micron glass fiber), recoverable, µg/L (82664)	Phosmet oxygen analog, water, filtered, recoverable, µg/L (61668)	Picloram, water, filtered (0.7 micron glass fiber), recoverable, µg/L (61601)	Prometon, water, filtered, recoverable, µg/L (49291)	Prometryn, water, filtered, recoverable, µg/L (04037)	Propham, water, filtered (0.7 micron glass fiber), recoverable, µg/L (04036)	Propiconazole, water, filtered, recoverable, µg/L (49236)	Propoxur, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (50471)	
11-09-2009	1200	--	--	--	--	--	--	--	--	
11-09-2009	1245	<.020	<.05	<.034	<.12	<.01	<.006	<.040	<.04	<.060
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	<.020	<.05	<.034	<.12	M	<.006	<.040	<.04	<.060
06-23-2010	1330	<.020	<.05	<.034	<.12	E .01	<.006	<.040	<.04	<.060
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	<.020	<.05	<.034	<.12	<.01	<.006	<.040	<.04	<.060
09-30-2010	1500	--	--	--	--	--	--	--	--	--

## 09415000 Virgin River At Littlefield, AZ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 19 of 20

[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Propyzamide, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82676)	Siduron, water, filtered, recover- able, µg/L (38548)	Simazine, water, filtered, recover- able, µg/L (04035)	Sulfo-meturon- methyl, water, filtered, recover- able, µg/L (50337)	Tebuthiuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82670)	Terbacil, water, filtered, recover- able, µg/L (04032)	Terbufos, oxygen analog sulfone, water, filtered, recover- able, µg/L (61674)	Terbufos, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82675)	Terbutyl- azine, water, filtered, recover- able, µg/L (04022)
11-09-2009	1200	--	--	--	--	--	--	--	--	--
11-09-2009	1245	< .004	< .04	< .006	< .060	< .03	< .040	< .04	< .02	< .01
12-21-2009	1707	--	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--	--
02-25-2010	1420	< .004	< .04	< .006	< .060	E .01	< .040	< .04	< .02	< .01
06-23-2010	1330	< .004	< .04	< .006	< .060	< .03	< .040	< .04	< .02	< .01
08-23-2010	1345	--	--	--	--	--	--	--	--	--
09-01-2010	1345	< .004	< .04	< .006	< .060	< .03	< .040	< .04	< .02	< .01
09-30-2010	1500	--	--	--	--	--	--	--	--	--

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 20 of 20

[CaCO<sub>3</sub>, calcium carbonate; L, milligrams per liter; MF, membrane filter; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO<sub>2</sub>, silicon dioxide; cm, centimeter; col/100 mL, colonies per 100 milliliters; ft<sup>3</sup>/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Triclopyr, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (61610)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49235)	Caffeine, water, filtered, recover- able, µg/L (82661)	Organic carbon, suspended sediment, total, mg/L (00689)	Organic carbon, water, filtered, mg/L (00681)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concentra- tion, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
11-09-2009	1200	--	--	--	--	--	23	356	139
11-09-2009	1245	< .018	< .08	< .018	< .080	1.14	1.3	--	--
12-21-2009	1707	--	--	--	--	--	--	--	--
02-08-2010	1321	--	--	--	--	--	--	--	--
02-25-2010	1420	< .018	< .08	< .018	< .080	3.54	1.8	--	--
06-23-2010	1330	< .018	< .08	< .018	< .080	.86	1.5	--	--
08-23-2010	1345	--	--	--	--	--	--	--	--
09-01-2010	1345	< .018	< .08	< .018	< .080	7.60	1.7	--	--
09-30-2010	1500	--	--	--	--	--	--	--	--