

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; $\delta^{15}\text{N}$, nitrogen isotope ratio; $\delta^{18}\text{O}$, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO_3 , calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Site number	Field identifier	Site name	Sample date (month/day/year)	Nitrite, filtered (mg/L as N)	Nitrite plus nitrate, filtered (mg/L as N)	Ammonia, filtered (mg/L as N)	Ammonia plus organic nitrogen, filtered (mg/L as N)	Orthophosphate, filtered (mg/L as P)
1	324148102541801	SAL–201	KD–27–17–612	02–28–03	E0.005	3.74	<0.04	E0.06	<0.02
2	324723102504901	SAL–202	KD–27–10–716	02–28–03	E.007	3.92	<.04	.10	E.01
3	325034102325101	SAL–203	KD–27–12–21	02–28–03	.116	10.5	<.04	.13	<.02
				07–29–03	.008	11.5	<.04	.17	<.02
4	330635103011201	SAL–104	ZT–25–64–303	03–01–03	<.008	2.35	<.04	E.09	<.02
		SAL–104	ZT–25–64–303	07–29–03	<.008	2.67	<.04	.22	<.02
5	333830102491701	SAL–105	DP–24–18–804	02–23–03	<.008	2.52	<.04	.14	.02
				07–30–03	<.008	3.65	<.04	.23	<.02
6	334043102365501	SAL–106	DP–24–20–404	02–21–03	<.008	3.78	<.04	<.10	.03
				07–30–03	<.008	3.84	<.04	.17	E.01
7	340012102273501	SAL–107	RU–10–61–703	02–27–03	<.008	4.12	<.04	<.10	<.02
				08–01–03	E.005	4.02	<.21	E.06	<.02
8	334905102545001	SAL–108	DP–24–09–605	02–22–03	<.008	4.64	<.04	E.07	<.02
9	334309102380201	SAL–209	DP–24–19–304	02–23–03	<.008	6.17	<.04	E.06	.02
10	333922102392701	SAL–110	DP–24–19–903	02–22–03	<.008	1.34	<.04	<.10	.02
11	333014102261401	SAL–111	LX–24–29–801	02–18–03	<.008	.65	<.04	<.20	E.01
12	331609102181501	SAL–212	XY–24–46–803	03–01–03	<.008	5.69	<.04	E.05	E.01
13	333458102184801	SAL–213	LX–24–30–503	02–18–03	E.004	6.03	<.04	<.50	<.02
14	334517102181201	SAL–114	LX–24–14–803	02–19–03	<.008	14.7	<.04	.17	E.01
				07–30–03	E.006	16.5	<.21	.26	<.02
15	340430102150001	SAL–215	RU–10–63–407	02–15–03	.100	4.53	E.04	.13	<.02
16	341350102213101	SAL–116	RU–10–54–101	02–27–03	<.008	1.95	<.04	<.10	.02
17	344030102184701	SAL–117	DD–10–22–503	02–26–03	<.008	4.03	<.04	.12	.03
18	340324102141501	SAL–118	RU–10–63–406	02–15–03	<.008	4.90	<.04	E.09	<.02
				07–31–03	<.008	5.62	<.21	.11	<.02
19	340040102163401	SAL–219	RU–10–62–903	02–14–03	.013	3.96	<.04	.13	.03
				07–31–03	.107	2.90	<.21	.31	<.02
20	335655102191801	SAL–120	RU–24–06–513	02–14–03	<.008	3.43	<.04	E.08	<.02

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Map identifier (fig. 2)	Site number	Field identifier	Site name	Sample date (month/day/year)	Nitrite, filtered (mg/L as N)	Nitrite plus nitrate, filtered (mg/L as N)	Ammonia, filtered (mg/L as N)	Ammonia plus organic nitrogen, filtered (mg/L as N)	Orthophosphate, filtered (mg/L as P)
21	334122102062101	SAL-121	LX-24-24-407	02-19-03	<0.008	4.70	<0.04	E0.05	<0.02
22	332946102135701	SAL-122	LX-24-39-102	dry	--	--	--	--	--
23	332402101561801	SAL-123	SP-23-33-802	02-12-03	<.008	21.6	<.04	.21	E.01
24	333415102010301	SAL-224	SP-24-32-607	02-17-03	<.008	5.55	<.04	E.05	E.01
				07-31-03	<.008	5.35	<.04	.13	<.02
25	333525101414901	SAL-225	SP-23-27-212	02-17-03	.008	13.0	<.04	.12	E.01
				07-30-03	.015	13.7	<.04	.15	E.01
26	333755102032601	SAL-226	SP-24-24-803	02-16-03	<.008	8.40	<.04	E.07	<.02
27	335808102084401	SAL-227	RU-24-07-302	02-13-03	<.008	.85	<.04	<.10	E.01
28	335836102081001	SAL-228	RU-24-07-303	02-13-03	<.008	10.1	<.04	.11	E.01
				07-31-03	<.008	8.14	<.21	.29	<.02
29	340358101434101	SAL-229	KY-11-56-406	02-11-03	<.008	1.15	<.04	<.10	E.01
30	342402101384301	SAL-130	XT-11-35-913	02-26-03	<.008	1.35	<.04	E.07	E.02

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Map identifier (fig. 2)	$\delta^{15}\text{N}$ of nitrate, filtered (per mil)	$\delta^{18}\text{O}$ of nitrate, filtered (per mil)	2,6-Di-ethyl-aniline, filtered (µg/L)	3-trifluoro-methyl-aniline, filtered (µg/L)	3-trifluoro-methyl-phenyl-urea, filtered (µg/L)	Aceto-chlor, filtered (µg/L)	Aceto-chlor ESA, filtered (µg/L)	Aceto-chlor OA, filtered (µg/L)	Aceto-chlor SAA, filtered (µg/L)	Aceto-chlor/ meto-lachlor ESA SA, filtered (µg/L)	Alachlor, filtered (µg/L)
1	7.3	--	<0.006	<0.05	<0.05	<0.006	--	--	--	--	<0.004
2	5.9	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
3	4.9	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
4	4.7	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
5	5.4	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
6	5.3	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
7	6.5	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
8	5.9	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
9	7.8	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
10	7.7	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
11	10.3	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
12	6.1	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
13	6.1	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
14	4.5	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
15	4.9	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
16	7.4	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
17	9.1	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
18	5.1	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
19	5.8	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
20	7.9	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
21	4.3	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004

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Map identifier (fig. 2)	$\delta^{15}\text{N}$ of nitrate, filtered (per mil)	$\delta^{18}\text{O}$ of nitrate, filtered (per mil)	2,6-Diethyl-aniline, filtered (µg/L)	3-trifluoro-methyl-aniline, filtered (µg/L)	3-tri-fluoro-methylphe-nyl-urea, filtered (µg/L)	Aceto-chlor, filtered (µg/L)	Aceto-chlor ESA, filtered (µg/L)	Aceto-chlor OA, filtered (µg/L)	Aceto-chlor SAA, filtered (µg/L)	Ace-tochlor/ meto-lachlor ESA SA, filtered (µg/L)	Alachlor, filtered (µg/L)
22	--	--	--	--	--	--	--	--	--	--	--
23	6.3	--	<0.006	<0.05	<0.05	<0.006	--	--	--	--	<0.004
24	7.	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
25	5.6	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
26	7.1	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
27	5.6	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
28	5.3	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
	--	--	--	--	--	--	--	--	--	--	--
29	9.9	--	<.006	<.05	<.05	<.006	--	--	--	--	<.004
30	10.3	--	<.006	<.05	<.05	<.006	--	--	--	--	<.010

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Map identi- fier (fig. 2)	Alachlor ESA, filtered (µg/L)	Alachlor ESA SA, filtered (µg/L)	Alachlor OA, filtered (µg/L)	Alachlor SAA, filtered (µg/L)	alpha- HCH, filtered (µg/L)	Atrazine, filtered (µg/L)	Azinphos- methyl, filtered (µg/L)	Ben- fluralin, filtered (µg/L)	Butyl- ate, filtered (µg/L)	Car- baryl, filtered (µg/L)	Carbo- furan, filtered (µg/L)
1	--	--	--	--	<0.005	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020
2	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
3	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
4	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
5	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
6	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
7	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
8	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
9	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
10	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
11	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
12	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
13	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
14	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
15	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
16	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
17	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
18	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
19	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
20	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
21	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
22	--	--	--	--	--	--	--	--	--	--	--
23	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020

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Map identi- fier (fig. 2)	Alachlor ESA, filtered (µg/L)	Alachlor ESA SA, filtered (µg/L)	Alachlor OA, filtered (µg/L)	Alachlor SAA, filtered (µg/L)	alpha- HCH, filtered (µg/L)	Atrazine, filtered (µg/L)	Azinphos- methyl, filtered (µg/L)	Ben- fluralin, filtered (µg/L)	Butyl- ate, filtered (µg/L)	Car- baryl, filtered (µg/L)	Carbo- furan, filtered (µg/L)
24	--	--	--	--	<0.005	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020
	--	--	--	--	--	--	--	--	--	--	--
25	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
26	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
28	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
	--	--	--	--	--	--	--	--	--	--	--
29	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020
30	--	--	--	--	<.005	<.007	<.050	<.010	<.002	<.041	<.020

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[illegible]

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Map identi- fier (fig. 2)	Chlor- pyrifos, filtered (µg/L)	<i>cis</i> -Per- methrin, filtered (µg/L)	Cyana- zine amide, filtered (µg/L)	Cyana- zine, filtered (µg/L)	DCPA, filtered (µg/L)	Deethyl- atrazine, filtered (µg/L)	Deiso- propyl- atrazine, filtered (µg/L)	Deiso- propyl pro- metryn, filtered (µg/L)	Demeth- ylfluor- meturon, filtered (µg/L)	Demethyl norflu- razon, filtered (µg/L)	Desulf- inyl fipronil, filtered (µg/L)
23	<0.005	<0.006	<0.05	<0.018	<0.003	<0.006	<0.05	<0.05	<0.05	<0.05	<0.004
24	<.005	<.006	<.05	<.018	<.003	<.006	<.05	<.05	<.05	<.05	<.004
	--	--	--	--	--	--	--	--	--	--	--
25	<.005	<.006	<.05	<.018	<.003	<.006	<.05	<.05	<.05	<.05	<.004
	--	--	--	--	--	--	--	--	--	--	--
26	<.005	<.006	<.05	<.018	<.003	E.066	<.05	<.05	<.05	<.05	<.004
27	<.005	<.006	<.05	<.018	<.003	<.006	<.05	<.05	<.05	<.05	<.004
28	<.005	<.006	<.05	<.018	<.003	E.013	<.05	<.05	<.05	<.05	<.004
	--	--	--	--	--	--	--	--	--	--	--
29	<.005	<.006	<.05	<.018	<.003	<.006	<.05	<.05	<.05	<.05	<.004
30	<.005	<.006	<.05	<.018	<.003	<.006	<.05	<.05	<.05	<.05	<.004

Appendix 2. Results of physical and chemical analyses of ground-water samples collected from southern High Plains agricultural land-use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; $\delta^{15}\text{N}$, nitrogen isotope ratio; $\delta^{18}\text{O}$, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinyl acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO_3 , calcium carbonate; pCi/L, picocuries per liter]

[illegible]

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfynil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identi- fier (fig. 2)	Diazi- non, filtered (µg/L)	Dieldrin, filtered (µg/L)	Dimeth- enamid, filtered (µg/L)	Dimeth- enamid ESA, filtered (µg/L)	Dimeth- enamid OA, filtered (µg/L)	Desulf- inyl- fipronil amide, filtered (µg/L)	Disul- foton, filtered (µg/L)	EPTC, filtered (µg/L)	Ethal- fluralin, filtered (µg/L)	Etho- prop, filtered (µg/L)	Fipronil, filtered (µg/L)
23	<0.005	<0.005	<0.05	--	--	<0.009	<0.02	<0.002	<0.009	<0.005	<0.007
24	<.005	<.005	<.05	--	--	<.009	<.02	<.002	<.009	<.005	<.007
	--	--	--	--	--	--	--	--	--	--	--
25	<.005	<.005	<.05	--	--	<.009	<.02	<.002	<.009	<.005	<.007
	--	--	--	--	--	--	--	--	--	--	--
26	<.005	<.005	<.05	--	--	<.009	<.02	<.002	<.009	<.005	<.007
27	<.005	<.005	<.05	--	--	<.009	<.02	<.002	<.009	<.005	<.007
28	<.005	<.005	<.05	--	--	<.009	<.02	<.002	<.009	<.005	<.007
	--	--	--	--	--	--	--	--	--	--	--
29	<.005	<.005	<.05	--	--	<.009	<.02	<.002	<.009	<.005	<.007
30	<.005	<.005	<.05	--	--	<.009	<.02	<.002	<.009	<.005	<.007

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfynil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Fipronil sulfide, filtered (µg/L)	Fipronil sulfone, filtered (µg/L)	Flufen-acet, filtered (µg/L)	Flufen-acet ESA, filtered (µg/L)	Flufen-acet OA, filtered (µg/L)	Fluo-meturon, filtered (µg/L)	Fonofos, filtered (µg/L)	Lindane, filtered (µg/L)	Linuron, filtered (µg/L)	Mala-thion, filtered (µg/L)	Methyl para-thion, filtered (µg/L)
1	<0.005	<0.005	<0.05	--	--	<0.05	<0.003	<0.004	<0.035	<0.027	<0.006
2	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
3	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
4	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
5	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
6	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
7	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
8	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
9	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
10	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
11	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
12	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
13	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
14	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
15	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
16	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
17	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
18	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
19	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
20	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
21	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
22	--	--	--	--	--	--	--	--	--	--	--
23	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006

Appendix 2. Results of physical and chemical analyses of ground-water samples collected from southern High Plains agricultural land-use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Fipronil sulfide, filtered (µg/L)	Fipronil sulfone, filtered (µg/L)	Flufen-acet, filtered (µg/L)	Flufen-acet ESA, filtered (µg/L)	Flufen-acet OA, filtered (µg/L)	Fluo-meturon, filtered (µg/L)	Fonofos, filtered (µg/L)	Lindane, filtered (µg/L)	Linuron, filtered (µg/L)	Malathion, filtered (µg/L)	Methyl parathion, filtered (µg/L)
24	<0.005	<0.005	<0.05	--	--	<0.05	<0.003	<0.004	<0.035	<0.027	<0.006
	--	--	--	--	--	--	--	--	--	--	--
25	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
26	<.005	<.005	<.05	--	--	.06	<.003	<.004	<.035	<.027	<.006
27	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
28	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006
	--	--	--	--	--	--	--	--	--	--	--
29	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	E.006n	<.006
30	<.005	<.005	<.05	--	--	<.05	<.003	<.004	<.035	<.027	<.006

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinyl acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Metolachlor, filtered (µg/L)	Metolachlor ESA, filtered (µg/L)	Metolachlor OA, filtered (µg/L)	Metribuzin, filtered (µg/L)	Molinate, filtered (µg/L)	Napropamide, filtered (µg/L)	Norflurazon, filtered (µg/L)	p,p'-DDE, filtered (µg/L)	Parathion, filtered (µg/L)	Pebulate, filtered (µg/L)	Pendimethalin, filtered (µg/L)
1	<0.013	--	--	<0.006	<0.002	<0.007	<0.05	<0.003	<0.010	<0.004	<0.022
2	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
3	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
4	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
5	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
6	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
7	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
8	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
9	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
10	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
11	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
12	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
13	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
14	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
15	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
16	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
17	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
18	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
19	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
20	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
21	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
22	--	--	--	--	--	--	--	--	--	--	--
23	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identi- fier (fig. 2)	Metola- chlor, filtered (µg/L)	Metola- chlor ESA, filtered (µg/L)	Metola- chlor OA, filtered (µg/L)	Metri- buzin, filtered (µg/L)	Moli- nate, filtered (µg/L)	Naprop- amide, filtered (µg/L)	Norflur- azon, filtered (µg/L)	p,p'-DDE, filtered (µg/L)	Para- thion, filtered (µg/L)	Peb- ulate, filtered (µg/L)	Pendi- meth- alin, filtered (µg/L)
24	<0.013	--	--	<0.006	<0.002	<0.007	<0.05	<0.003	<0.010	<0.004	<0.022
	--	--	--	--	--	--	--	--	--	--	--
25	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
26	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
27	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
28	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
	--	--	--	--	--	--	--	--	--	--	--
29	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022
30	<.013	--	--	<.006	<.002	<.007	<.05	<.003	<.010	<.004	<.022

Appendix 2. Results of physical and chemical analyses of ground-water samples collected from southern High Plains agricultural land-use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfynil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

[illegible]

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; $\delta^{15}\text{N}$, nitrogen isotope ratio; $\delta^{18}\text{O}$, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO_3 , calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Phorate, filtered (µg/L)	Prometon, filtered (µg/L)	Prometryn, filtered (µg/L)	Propyzamide, filtered (µg/L)	Propachlor, filtered (µg/L)	Propachlor ESA, filtered (µg/L)	Propachlor OA, filtered (µg/L)	Propanil, filtered (µg/L)	Propargite, filtered (µg/L)	Propazine, filtered (µg/L)
25	<0.011	<0.01	<0.05	<0.004	<0.010	--	--	<0.011	<0.02	<0.05
	--	--	--	--	--	--	--	--	--	--
26	<.011	<.01	<.05	<.004	<.010	--	--	<.011	<.02	<.05
27	<.011	<.01	<.05	<.004	<.010	--	--	<.011	<.02	<.05
28	<.011	<.01	<.05	<.004	<.010	--	--	<.011	<.02	.06
	--	--	--	--	--	--	--	--	--	--
29	<.011	<.01	<.05	<.004	<.010	--	--	<.011	<.02	<.05
30	<.011	<.01	<.05	<.004	<.010	--	--	<.011	<.02	<.05

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfynil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identi- fier (fig. 2)	Sima- zine, filtered (µg/L)	Tebu- thiuron, filtered (µg/L)	Terbacil, filtered (µg/L)	Terbu- fos, filtered (µg/L)	Thio- bencarb, filtered (µg/L)	Triallate, filtered (µg/L)	Triflur- alin, filtered (µg/L)	Depth of well (feet below LSD)	Depth to water level (feet below LSD)	Specific conduct- ance, un- filtered (µS/cm)	pH, un- filtered (standard units)
1	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009	190	165.86	766	7.3
2	<.005	<.02	<.034	<.02	<.005	<.002	<.009	120.3	98.73	1,490	7.1
3	<.005	<.02	<.034	<.02	<.005	<.002	<.009	128	108.91	1,610	7.2
	--	--	--	--	--	--	--	128	110.15	1,640	7.3
4	<.005	.03	<.034	<.02	<.005	<.002	<.009	158	140.03	1,600	7.0
	--	--	--	--	--	--	--	158	142.54	--	--
5	<.005	<.02	<.034	<.02	<.005	<.002	<.009	215.8	190.25	1,980	7.2
	--	--	--	--	--	--	--	215.8	196.43	2,010	7.4
6	<.005	<.02	<.034	<.02	<.005	<.002	<.009	171.04	153.36	1,260	7.3
	--	--	--	--	--	--	--	171.04	<156.25	1,310	7.5
7	<.005	<.02	<.034	<.02	<.005	<.002	<.009	169.5	154.70	1,030	7.1
	--	--	--	--	--	--	--	169.5	155.33	1,070	7.0
8	<.005	<.02	<.034	<.02	<.005	<.002	<.009	159.15	139.86	2,040	7.0
9	<.005	<.02	<.034	<.02	<.005	<.002	<.009	195.8	173.63	2,220	7.1
10	<.005	<.02	<.034	<.02	<.005	<.002	<.009	166.3	145.73	1,160	7.3
11	<.005	<.02	<.034	<.02	<.005	<.002	<.009	179.1	154.59	1,030	7.2
12	<.005	<.02	<.034	<.02	<.005	<.002	<.009	154.1	132.13	1,350	7.3
13	<.005	<.02	<.034	<.02	<.005	<.002	<.009	154.9	135.45	1,490	7.1
14	<.005	<.02	<.034	<.02	<.005	<.002	<.009	114.7	90.24	2,800	7.0
	--	--	--	--	--	--	--	114.7	91.40	2,860	7.5
15	<.005	<.02	<.034	<.02	<.005	<.002	<.009	179.6	161.30	863	7.2
16	<.005	<.02	<.034	<.02	<.005	<.002	<.009	209.8	192.56	733	7.1
17	<.005	<.02	<.034	<.02	<.005	<.002	<.009	210.8	187.14	744	7.4
18	<.005	<.02	<.034	<.02	<.005	<.002	<.009	176.5	157.55	1,340	7.1
	--	--	--	--	--	--	--	176.5	158.85	1,450	7.4
19	<.005	<.02	<.034	<.02	<.005	<.002	<.009	148.9	128.57	4,630	7.0
	--	--	--	--	--	--	--	148.9	129.00	4,930	7.1
20	<.005	<.02	<.034	<.02	<.005	<.002	<.009	143.8	124.44	1,230	7.0
21	<.005	<.02	<.034	<.02	<.005	<.002	<.009	188.3	169.50	1,220	7.3
22	--	--	--	--	--	--	--	160.1	--	--	--

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Sima-zine, filtered (µg/L)	Tebu-thiuron, filtered (µg/L)	Terbacil, filtered (µg/L)	Terbu-fos, filtered (µg/L)	Thio-bencarb, filtered (µg/L)	Triallate, filtered (µg/L)	Triflur-alin, filtered (µg/L)	Depth of well (feet below LSD)	Depth to water level (feet below LSD)	Specific conductance, un-filtered (µS/cm)	pH, un-filtered (standard units)
23	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009	99.6	78.85	2,070	7.1
24	<.005	<.02	<.034	<.02	<.005	<.002	<.009	174.3	153.16	915	7.4
	--	--	--	--	--	--	--	174.3	156.28	1,090	7.6
25	<.005	<.02	<.034	<.02	<.005	<.002	<.009	135.0	107.89	1,480	7.2
	--	--	--	--	--	--	--	135.0	108.91	1,530	7.3
26	<.005	<.02	<.034	<.02	<.005	<.002	<.009	137.9	121.15	1,040	7.2
27	<.005	<.02	<.034	<.02	<.005	<.002	<.009	176.0	157.99	1,010	7.3
28	<.005	<.02	<.034	<.02	<.005	<.002	<.009	174.7	154.76	1,520	7.1
	--	--	--	--	--	--	--	174.7	155.65	1,690	6.9
29	<.005	<.02	<.034	<.02	<.005	<.002	<.009	153.0	118.97	1,010	7.0
30	<.005	<.02	<.034	<.02	<.005	<.002	<.009	218.5	195.24	676	7.2

Appendix 2. Results of physical and chemical analyses of ground-water samples collected from southern High Plains agricultural land-use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; $\delta^{15}\text{N}$, nitrogen isotope ratio; $\delta^{18}\text{O}$, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinyl acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO_3 , calcium carbonate; pCi/L, picocuries per liter]

[illegible]

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Temperature, water (°C)	Turbidity, unfiltered (NTU)	Dissolved oxygen, (mg/L)	Dissolved solids, filtered (mg/L)	Hardness (mg/L as CaCO ₃)	Alkalinity, filtered (mg/L as CaCO ₃)	Calcium, filtered (mg/L)	Magnesium, filtered (mg/L)	Sodium, filtered (mg/L)	Sodium adsorption ratio
23	19.0	--	7.8	1,600	830	212	109	134	145	2
24	19.9	0.9	7.8	543	270	320	31.5	46.9	84.2	2
	19.6	--	9.8	--	--	--	--	--	--	--
25	20.3	.4	.8	936	580	248	71.3	96.1	67.3	1
	18.4	--	.9	--	--	--	--	--	--	--
26	18.5	.6	7.3	621	450	267	66.1	68.5	34.4	.7
27	19.6	4.5	7.9	606	360	234	54.7	54.4	56.0	1
28	--	5.9	6.5	953	640	218	96.3	95.2	59.0	1
	21.1	5.2	5.5	--	--	--	--	--	--	--
29	18.4	--	6.0	539	370	207	68.5	47.6	43.6	1
30	18.0	.7	4.8	445	270	301	36.5	43.0	45.4	1

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identi- fier (fig. 2)	Sodium (percent)	Potas- sium, filtered (mg/L)	Sulfate, filtered (mg/L)	Chlor- ide, filtered (mg/L)	Fluoride, filtered (mg/L)	Bromide, filtered (mg/L)	Silica, filtered (mg/L)	Alum- inum filtered (µg/L)	Anti- mony, filtered (µg/L)	Arsenic, filtered (µg/L)	Barium, filtered (µg/L)
25	20	23.6	218	174	2.86d	0.99	59.2	M	<0.30	16.3	28
	--	--	--	--	--	--	--	--	--	--	--
26	14	10.4	77.3	117	2.96d	.90	51.1	E1	<.30	10.3	83
27	24	12.7	98.4	117	1.73	.76	49.2	<2	E.17	8.0	54
28	16	15.5	214	219	1.32	1.03	53.5	<2	<.30	6.9	56
	--	--	--	--	--	--	--	--	--	--	--
29	20	10.1	17.4	165	2.22	.90	45.3	M	<.30	2.6	196
30	26	8.17	29.3	13.6	3.86d	.12	81.7	M	<.30	7.5	110

Appendix 2. Results of physical and chemical analyses of ground-water samples collected from southern High Plains agricultural land-use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfynil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

[illegible]

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfinil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identi- fier (fig. 2)	Beryll- ium, filtered (µg/L)	Boron, filtered (µg/L)	Cad- mium, filtered (µg/L)	Chrom- ium, filtered (µg/L)	Cobalt, filtered (µg/L)	Copper, filtered (µg/L)	Iron, filtered (µg/L)	Lead, filtered (µg/L)	Lithium, filtered (µg/L)	Man- ganese, filtred (µg/L)	Molyb- denum, filtered (µg/L)
25	<0.06	336	E0.03	<0.8	0.601	1.7	<10	<0.08	126	621	5.3
	--	--	--	--	--	--	--	--	--	--	--
26	<.06	141	E.02	E.5	.209	.7	<10	<.08	132	.7	4.9
27	<.06	217	.06	.9	.198	1.7	<10	<.08	137	9.7	5.8
28	<.06	201	E.02	E.5	.339	1.5	<10	<.08	154	6.0	1.6
	--	--	--	--	--	--	--	--	--	--	--
29	<.06	207	E.03	E.8	.144	.6	<10	<.08	77.0	.6	4.0
30	<.06	257	E.03	<.8	.125	1.5	<10	<.08	110	4.2	6.4

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

[mg/L, milligrams per liter; --, no data; <, less than; d, diluted sample, method high range exceeded; µg/L, micrograms per liter; δ¹⁵N, nitrogen isotope ratio; δ¹⁸O, oxygen isotope ratio; ESA, ethanesulfonic acid; SA, second amide; OA, oxanilic acid; SAA, sulfynil acetic acid; E, estimated; t, below the long-term method detection level; n, below the laboratory reporting level and above the long-term method detection level; M, presence verified, not quantified; LSD, land surface datum referenced to North American Vertical Datum of 1988 (NAVD 88); µS/cm, microsiemens per centimeter at 25 degrees Celsius; °C, degrees Celsius; NTU, nephelometric turbidity units; >, greater than; CaCO₃, calcium carbonate; pCi/L, picocuries per liter]

Map identifier (fig. 2)	Nickel, filtered (µg/L)	Selenium, filtered (µg/L)	Silver, filtered (µg/L)	Strontium, filtered (µg/L)	Thallium, filtered (µg/L)	Uranium natural, filtered (µg/L)	Vanadium, filtered (µg/L)	Zinc, filtered (µg/L)	Organic carbon, filtered (mg/L)	Tritium, unfiltered (pCi/L)
1	2.71	5.2	<0.2	1,050	E0.03	3.78	83.2	1.1	0.8	<1
2	5.27	14.9	<.2	2,160	.06	7.78	59.8	1.8	2.0	3
3	3.88	18.7	.2	3,460	.07	8.30	118	2.0	--	12
	--	--	--	--	--	--	--	--	1.8	--
4	9.03	17.7	<.2	2,190	.07	8.07	26.2	1.8	--	3
	--	--	--	--	--	--	--	--	2.9	--
5	4.83	21.2	1.2	4,100	<.04	5.63	33.7	5.8	--	<1
	--	--	--	--	--	--	--	--	7.8	--
6	2.66	49.9	.7	2,390	<.04	10.1	42.3	11.3	--	37
	--	--	--	--	--	--	--	--	7.1	--
7	4.34	8.6	<.2	1,760	.06	5.59	14.0	8.6	--	7
	--	--	--	--	--	--	--	--	.8	--
8	4.95	21.9	2.8	4,270	<.04	5.88	22.2	1.1	1.4	<1
9	3.42	28.1	<.2	4,940	.05	8.48	46.2	3.0	2.2	12
10	2.71	35.2	1.1	2,500	<.04	5.38	45.1	3.8	1.9	<1
11	3.22	1.1	<.2	2,220	<.04	9.14	27.9	1.7	3.0	<1
12	3.00	93.5	<.2	3,080	<.04	21.9	49.7	1.8	1.5	21
13	4.11	12.3	1.5	3,170	E.03	13.4	48.1	2.1	2.3	1
14	9.30	49.5	3.2	7,250	E.08n	17.1	29.6	5.8	--	10
	--	--	--	--	--	--	--	--	3.1	--
15	4.03	8.4	<.2	1,720	E.03	5.67	30.8	7.8	2.4	6
16	2.62	3.5	<.2	1,200	.04	10.7	8.7	6.3	.8	<1
17	2.29	3.4	<.2	1,450	<.04	18.3	18.5	3.0	3.9	15
18	5.23	19.9	E.1	2,280	.06	6.21	23.1	7.1	--	1
	--	--	--	--	--	--	--	--	10.8	--
19	7.32	3.8	E.2n	5,800	.10	30.8	13.5	6.1	--	3
	--	--	--	--	--	--	--	--	4.2	--
20	3.29	15.9	<.2	2,530	E.04	10.3	17.6	1.8	2.3	41
21	2.51	14.0	<.4	2,570	E.03	11.7	49.8	1.4	2.4	10
22	--	--	--	--	--	--	--	--	--	--
23	6.10	45.0	<.2	5,730	E.03	26.1	45.8	3.7	2.2	4
24	1.93	9.0	<.2	2,390	E.02	27.1	72.1	9.5	--	34

Appendix 2. Results of physical and chemical analyses of ground–water samples collected from southern High Plains agricultural land–use study area, Texas, 2003.—Continued

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Map identifier (fig. 2)	Nickel, filtered (µg/L)	Selenium, filtered (µg/L)	Silver, filtered (µg/L)	Strontium, filtered (µg/L)	Thallium, filtered (µg/L)	Uranium natural, filtered (µg/L)	Vanadium, filtered (µg/L)	Zinc, filtered (µg/L)	Organic carbon, filtered (mg/L)	Tritium, unfiltered (pCi/L)
24	--	--	--	--	--	--	--	--	1.3	--
25	3.10	17.9	<.2	3,130	0.08	1.95	31.0	2.3	--	3
	--	--	--	--	--	--	--	--	1.6	--
26	2.20	8.9	<.2	3,190	E.04	13.3	40.5	2.3	1.6	21
27	3.97	7.8	E.1	2,110	<.04	9.26	28.4	29.8	1.8	<1
28	5.87	14.4	E.2	3,650	E.02	9.25	29.2	1.8	--	<1
	--	--	--	--	--	--	--	--	4.3	--
29	4.21	1.5	E.1	1,790	E.04	8.79	12.7	3.0	.8	<1
30	2.63	6.7	<.2	1,280	<.04	9.97	33.0	4.3	2.4	<1