

Remarks

## Texas Water Development Board (TWDB) Groundwater Database (GWDB) Well Information Report for State Well Number 41-61-401



#### **GWDB** Reports and Downloads

#### **Well Basic Details**

#### **Scanned Documents**

State Well Number  County  San Saba  River Basin  Colorado  Groundwater Management Area  Regional Water Planning Area  K - Lower Colorado  Groundwater Conservation District  Latitude (decimal degrees)  Latitude (degrees minutes seconds)  Longitude (decimal degrees)  Longitude (degrees minutes seconds)  Longitude (degrees minutes seconds)  Coordinate Source  Aquifer  4161401  Altitude  Golorado  K - Lower Colorado  GCD Does Not Exist  31.0522222  31.0522222  Latitude (degrees minutes seconds)  31° 03' 08" N  Longitude (degrees minutes seconds)  O98° 29' 09" W  Coordinate Source  Global Positioning System - GPS  Aquifer Code  367GRMN - Gorman Formation  Ellenburger-San Saba
River Basin  Groundwater Management Area  Regional Water Planning Area  K - Lower Colorado  Groundwater Conservation District  Latitude (decimal degrees)  Latitude (degrees minutes seconds)  Longitude (decimal degrees)  Longitude (degrees minutes seconds)  Longitude (degrees minutes seconds)  Coordinate Source  Aquifer Code  Colorado  Colorado
Groundwater Management Area 7  Regional Water Planning Area K - Lower Colorado  Groundwater Conservation GCD Does Not Exist District  Latitude (decimal degrees) 31.0522222  Latitude (degrees minutes seconds) 31° 03′ 08″ N  Longitude (decimal degrees) -98.4858333  Longitude (degrees minutes seconds) 098° 29′ 09″ W  Coordinate Source Global Positioning System - GPS Aquifer Code 367GRMN - Gorman Formation
Regional Water Planning Area K - Lower Colorado  Groundwater Conservation District  Latitude (decimal degrees)  Latitude (degrees minutes seconds)  Longitude (decimal degrees)  Longitude (degrees minutes seconds)  Longitude (degrees minutes seconds)  O98° 29' 09" W  Coordinate Source  Global Positioning System - GPS  Aquifer Code
Groundwater Conservation District  Latitude (decimal degrees)  Latitude (degrees minutes seconds)  Longitude (decimal degrees)  Longitude (degrees minutes seconds)  Coordinate Source  Aquifer Code  GCD Does Not Exist  31.0522222  31° 03' 08" N  -98.4858333  Longitude (degrees minutes seconds)  098° 29' 09" W  Coordinate Source  Global Positioning System - GPS
District  Latitude (decimal degrees)  31.0522222  Latitude (degrees minutes seconds)  Longitude (decimal degrees)  -98.4858333  Longitude (degrees minutes seconds)  098° 29' 09" W  Coordinate Source  Global Positioning System - GPS  Aquifer Code  367GRMN - Gorman Formation
Latitude (degrees minutes seconds)  Longitude (decimal degrees)  Longitude (degrees minutes seconds)  Coordinate Source  Aquifer Code  31° 03' 08" N  -98.4858333  098° 29' 09" W  Global Positioning System - GPS  367GRMN - Gorman Formation
Longitude (decimal degrees) -98.4858333  Longitude (degrees minutes seconds) 098° 29' 09" W  Coordinate Source Global Positioning System - GPS  Aquifer Code 367GRMN - Gorman Formation
Longitude (degrees minutes seconds)  O98° 29' 09" W  Coordinate Source  Global Positioning System - GPS  Aquifer Code  367GRMN - Gorman Formation
Coordinate Source Global Positioning System - GPS  Aquifer Code 367GRMN - Gorman Formation
Aquifer Code 367GRMN - Gorman Formation
Aquifer Ellenburger-San Saba
Aquifer Pick Method
Land Surface Elevation (feet above sea level)
Land Surface Elevation Method         Interpolated From Topo Map
Well Depth (feet below land surface)
Well Depth Source
Drilling Start Date
Drilling End Date
Drilling Method
Borehole Completion

Well Type	Spring
Well Use	Recreation
Water Level Observation	None
Water Quality Available	Yes
Pump	None
Pump Depth (feet below land surface)	
Power Type	
Annular Seal Method	
Surface Completion	
Owner	TPWD Gorman Spring
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	310309098291001
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	Gorman Springs
Other Well Number	
Previous State Well Number	
Reporting Agency	Texas Water Development Board
Created Date	5/25/2005
Last Update Date	3/22/2022

Casing - No Data		
Well Tests - No Data		
Lithology - No Data		
Annular Seal Range - No Data		
Borehole - No Data	Plugged E	Back - No Data
Filter Pack - No Data		Packers - No Data

Estimated flow 3411 GPM in 1989. The following flows estimated at south concrete crossing of Gorman Creek: 3960 GPM on June





Water Level Measurements	
No Data Available	





#### **Water Quality Analysis**

Sample Date: 10/29/1938 Sample Time: 0000 Sample Number: 1 Collection Entity: Other Federal Agencies

Sampled Aquifer: Gorman Formation

Analyzed Lab: University of Texas Reliability: From a report; unknown sample collection & preservation

Collection Remarks: from M-243

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		366	mg/L	
00940	CHLORIDE, TOTAL (MG/L AS CL)		9	mg/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)	<	20	mg/L as NO3	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		5.99		
00945	SULFATE, TOTAL (MG/L AS SO4)		7	mg/L as SO4	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		327	mg/L	





#### **Water Quality Analysis**

Sample Date: 7/12/1989 Sample Time: 1200 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: Texas Department of Health Reliability: Sampled using TWDB protocols

Collection Remarks: spring pool.

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		336	mg/L as CACO 3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		386	mg/L as CACO 3	
01503	ALPHA, DISSOLVED (PC/L)	<	2	PC/L	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	20	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	10	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		60	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		471.05	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		60	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		114	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		9	mg/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)	<	0.1	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		391	mg/L as CACO 3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	20	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		26	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	20	ug/L	
00618	NITRATE NITROGEN, DISSOLVED (MG/L AS N)		1.16	mg/L as N	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		5.14	mg/L as NO3	
00400	PH (STANDARD UNITS), FIELD		6.44	SU	
00671	PHOSPHORUS, DISSOLVED ORTHOPHOSPHATE (MG/L AS P)		0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.9	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
00955	SILICA, DISSOLVED (MG/L AS SI02)		13	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.14		
00932	SODIUM, CALCULATED, PERCENT		3	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		6.2	mg/L	





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Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		730	MICR	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		7	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		22	С	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		413	mg/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		20	ug/L	





#### **Water Quality Analysis**

Sample Date: 10/16/1996 Sample Time: 1530 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: LCRA - Lower Colorado River Authority Reliability: Sampled using TWDB protocols

Collection Remarks: balanced using field alk.

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		382	mg/L as CACO 3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		382	mg/L as CACO 3	
01503	ALPHA, DISSOLVED (PC/L)		4	PC/L	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	15	ug/L	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	5	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		66	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
03503	BETA, DISSOLVED (PC/L)	<	3	PC/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		466.17	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)	<	50	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.06	mg/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		120	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		8.6	mg/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	2	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.09	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		418	mg/L as CACO 3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	16.5	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)	<	3.5	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		28.9	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	1	ug/L	
01065	NICKEL, DISSOLVED (UG/L AS NI)		26	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		4.76	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		1.074	mg/L as N	





Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00608	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)	<	0.1	mg/L as N	
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)		0.1	mg/L as N	
00090	OXIDATION REDUCTION POTENTIAL (ORP), MILLIVOLTS		61.5	MV	
00400	PH (STANDARD UNITS), FIELD		6.71	SU	
00935	POTASSIUM, DISSOLVED (MG/L AS K)	<	1.5	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	5	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		15.6	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.11		
00932	SODIUM, CALCULATED, PERCENT		2	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		5.2	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		718	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		92	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		6.4	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		22	С	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		420	mg/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		2.7	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		150	ug/L	





### **Water Quality Analysis**

Sample Date: 5/25/2005 Sample Time: 1145 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: LCRA - Lower Colorado River Authority Reliability: Sampled using TWDB protocols

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		366	mg/L as CACO 3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		383	mg/L as CACO 3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	4.08	ug/L	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1.02	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	2.04	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		61.2	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1.02	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		467.39	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)	<	51	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.059	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1.02	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		113	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		7.28	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)		4.53	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1.02	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)		4.58	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.11	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		389	mg/L as CACO 3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	51	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1.02	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)	<	2.04	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		25.8	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1.02	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	1.02	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		4.67	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		1.055	mg/L as N	
00400	PH (STANDARD UNITS), FIELD		6.82	SU	





Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.13	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	4.08	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		15	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.1		
00932	SODIUM, CALCULATED, PERCENT		3	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		4.64	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		743	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		95.3	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		6.6	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		22.1	С	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1.02	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		408	mg/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		3.55	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		28.3	ug/L	





### **Water Quality Analysis**

Sample Date: 4/13/2006 Sample Time: 0000 Sample Number: 1 Collection Entity: Other or Identity Unknown

Sampled Aquifer: Gorman Formation

Analyzed Lab: Energy Labs Inc. Reliability: Reliability unknown or not available

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)		1370	Y-BP	40
82172	CARBON-14 FRACTION MODERN		0.8428		0.0042
82081	DELTA CARBON 13 C13/C12 PER MIL		-8.5	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-26	0/00	1
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-4.6	0/00	0.3
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		96.6	ug/L	
48297	STRONTIUM, ISOTOPE OF MASS 86 AND 87 RATIO		0.709851	N/A	
07012	TRITIUM IN WATER (TRITIUM UNITS)		1.92	TU	0.09





### **Water Quality Analysis**

Sample Date: 10/20/2008 Sample Time: 1605 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: LCRA - Lower Colorado River Authority Reliability: Sampled using TWDB protocols

Collection Remarks: pool at spring head

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		372	mg/L as CACO 3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)	<	0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		378	mg/L as CACO 3	
01503	ALPHA, DISSOLVED (PC/L)		3.8	PC/L	2.2
01106	ALUMINUM, DISSOLVED (UG/L AS AL)		11	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		1.55	PCT	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1.02	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	2.04	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		59.1	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1.02	ug/L	
03503	BETA, DISSOLVED (PC/L)		4	PC/L	1.3
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		461.29	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)	<	51	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.03	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1.02	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		113	mg/L	
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)		19410	Y-BP	100
82172	CARBON-14 FRACTION MODERN		0.0892		0.0011
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		7.4	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)		5.54	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1.02	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1.02	ug/L	
82081	DELTA CARBON 13 C13/C12 PER MIL		-6.7	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-28.6	0/00	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.12	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		396	mg/L as CACO 3	
71865	IODIDE (MG/L AS I)	<	0.2	mg/L	
01046	IRON, DISSOLVED (UG/L AS FE)		1190	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1.02	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		2.14	ug/L	





Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		27.7	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)		2.42	ug/L	
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	1.02	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		3.35	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.757	mg/L as N	
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-4.76	0/00	
00400	PH (STANDARD UNITS), FIELD		6.92	SU	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.11	mg/L	
09511	RADIUM 226, DISSOLVED, RADON METHOD, PC/L		0.6	PC/L	0.1
81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	0.1	PC/L	0.1
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	4.08	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		13.7	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1.02	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.1		
00932	SODIUM, CALCULATED, PERCENT		3	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		4.95	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		765	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		97	ug/L	
48297	STRONTIUM, ISOTOPE OF MASS 86 AND 87 RATIO		0.709959	N/A	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		6.5	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		22	С	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1.02	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		405	mg/L	
07012	TRITIUM IN WATER (TRITIUM UNITS)		1.77	TU	0.09
22610	URANIUM 234, DISSSOLVED, PC/L		0.4	PC/L	0.4
22620	URANIUM 235, DISSOLVED, PC/L		0.06	PC/L	0.2
22603	URANIUM 238, DISSOLVED, PC/L		0.3	PC/L	0.3
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)	<	1.02	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		4.1	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)		9.06	ug/L	





### **Water Quality Analysis**

Sample Date: 6/30/2020 Sample Time: 1415 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: LCRA - Lower Colorado River Authority Reliability: Sampled using TWDB protocols

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00425	ALKALINITY, BICARBONATE DISSOLVED (MG/L), LAB		385	mg/L	
00430	ALKALINITY, CARBONATE DISSOLVED (MG/L), LAB		0	mg/L	
00420	ALKALINITY, HYDROXIDE DISSOLVED (MG/L), LAB		0	mg/L	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		385	mg/L as CACO 3	
01503	ALPHA, DISSOLVED (PC/L)		3.47	PC/L	2.35
01106	ALUMINUM, DISSOLVED (UG/L AS AL)		6.38	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		1.43	PCT	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	1	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		59.8	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		469.833	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)	<	50	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.049	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		118	mg/L	
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)		990	Y-BP	
82172	CARBON-14 FRACTION MODERN		0.8844		0.0032
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		8.03	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	1	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1	ug/L	
82081	DELTA CARBON 13 C13/C12 PER MIL		-12	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-27.59	0/00	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.0594	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		408.078	mg/L as CACO 3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	50	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)	<	2	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		27.5	mg/L	





Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	1	ug/L	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		4.405	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		0.995	mg/L as N	
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-4.8	0/00	
00400	PH (STANDARD UNITS), FIELD		6.96	SU	
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.14	mg/L	
09503	RADIUM 226, DISSOLVED, PC/L	<	1	PC/L	0.12
81366	RADIUM 228, DISSOLVED (PC/L AS RA-228)	<	1	PC/L	0.49
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	5	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		13.1	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.109		
00932	SODIUM, CALCULATED, PERCENT		2.629	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		5.06	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		540	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		97.8	ug/L	
48297	STRONTIUM, ISOTOPE OF MASS 86 AND 87 RATIO		0.7099484	N/A	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		7.99	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		21.8	С	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		416.399	mg/L	
07012	TRITIUM IN WATER (TRITIUM UNITS)		1.07	TU	0.09
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)	<	1	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		3.77	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	5	ug/L	





#### **Water Quality Analysis**

Sample Date: 4/13/2021 Sample Time: 1221 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: LCRA - Lower Colorado River Authority Reliability: Sampled using TWDB protocols

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00425	ALKALINITY, BICARBONATE DISSOLVED (MG/L), LAB		383	mg/L	
00430	ALKALINITY, CARBONATE DISSOLVED (MG/L), LAB		0	mg/L	
00420	ALKALINITY, HYDROXIDE DISSOLVED (MG/L), LAB		0	mg/L	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		383	mg/L as CACO 3	
01503	ALPHA, DISSOLVED (PC/L)	<	3	PC/L	1.47
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	5	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		1.41	PCT	
01095	ANTIMONY, DISSOLVED (UG/L AS SB)	<	1	ug/L	
01000	ARSENIC, DISSOLVED (UG/L AS AS)	<	1	ug/L	
01005	BARIUM, DISSOLVED (UG/L AS BA)		65.2	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		467.393	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)	<	50	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.0454	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		115	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		6.95	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)		7.81	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.079	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		404.289	mg/L as CACO 3	
01046	IRON, DISSOLVED (UG/L AS FE)	<	50	ug/L	
01049	LEAD, DISSOLVED (UG/L AS PB)	<	1	ug/L	
01130	LITHIUM, DISSOLVED (UG/L AS LI)		2.1	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		28.4	mg/L	
01056	MANGANESE, DISSOLVED (UG/L AS MN)	<	1	ug/L	
71890	MERCURY, DISSOLVED (UG/L AS HG)	<	0.2	ug/L	
01060	MOLYBDENUM, DISSOLVED (UG/L AS MO)	<	1	ug/L	





Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		4.471	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		1.01	mg/L as N	
00400	PH (STANDARD UNITS), FIELD		6.79	SU	
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.05	mg/L	
71860	RESIDUAL SODIUM CARBONATE, CALCULATED		0		
01145	SELENIUM, DISSOLVED (UG/L AS SE)	<	5	ug/L	
00955	SILICA, DISSOLVED (MG/L AS SI02)		12	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.107		
00932	SODIUM, CALCULATED, PERCENT		2.582	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		4.92	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		685	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		95.1	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		7.45	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		22.1	С	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		410.232	mg/L	
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)	<	1	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		3.93	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	5	ug/L	





#### **Water Quality Analysis**

Sample Date: 4/8/2022 Sample Time: 1430 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: TWDB Field Analysis Reliability: Sampled using TWDB protocols

**Collection Remarks:** Baseline water quality parameters and atrazine only. Sampled from spring orifice.

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00400	PH (STANDARD UNITS), FIELD		7.07	SU	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		746	MICR	
00010	TEMPERATURE, WATER (CELSIUS)		22	С	





#### **Water Quality Analysis**

Sample Date: 4/12/2023 Sample Time: 1239 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: TWDB Field Analysis Reliability: Sampled using TWDB protocols

**Collection Remarks:** Baseline water quality parameters and atrazine only. Sampled from spring orifice.

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00400	PH (STANDARD UNITS), FIELD		6.9	SU	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		756	MICR	
00010	TEMPERATURE, WATER (CELSIUS)		22	С	





#### **Water Quality Analysis**

Sample Date: 3/27/2024 Sample Time: 1055 Sample Number: 1 Collection Entity: Texas Water Development Board

Sampled Aquifer: Gorman Formation

Analyzed Lab: LCRA - Lower Colorado River Authority Reliability: Sampled using TWDB protocols

Collection Remarks: Sampled from spring orifice using a peristaltic pump

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00400	PH (STANDARD UNITS), FIELD		6.85	SU	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		737	MICR	
00010	TEMPERATURE, WATER (CELSIUS)		22	С	

<sup>\*</sup> Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..

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