Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 56-54-403

GWDB Reports and Downloads

Well Basic Details

Scanned Documents

State Well Number	5654403
County	Kerr
River Basin	Guadalupe
Groundwater Management Area	9
Regional Water Planning Area	J - Plateau
Groundwater Conservation District	Headwaters GCD
Latitude (decimal degrees)	30.1669556
Latitude (degrees minutes seconds)	30° 10' 01.04" N
Longitude (decimal degrees)	-99.3426528
Longitude (degrees minutes seconds)	099° 20' 33.55" W
Coordinate Source	Global Positioning System - GPS
Aquifer Code	218EDRDA - Edwards and Associated Limestones
Aquifer	Edwards-Trinity Plateau
Aquifer Pick Method	
Land Surface Elevation (feet above sea level)	1902
Land Surface Elevation Method	Digital Elevation Model -DEM
Well Depth (feet below land surface)	
Well Depth Source	
Drilling Start Date	
Drilling End Date	
Drilling Method	
Borehole Completion	

Well Type	Spring
Well Use	Domestic
Water Level Observation	Miscellaneous Measurements
Water Quality Available	Yes
Pump	Submersible
Pump Depth (feet below land surface)	
Power Type	Electric Motor
Annular Seal Method	
Surface Completion	
Owner	Fessenden Springs
Driller	
Other Data Available	
Well Report Tracking Number	
Plugging Report Tracking Number	
U.S. Geological Survey Site Number	301002099203401
Texas Commission on Environmental Quality Source Id	
Groundwater Conservation District Well Number	
Owner Well Number	Fessenden Spring
Other Well Number	
Previous State Well Number	
Reporting Agency	U.S. Geological Survey
Created Date	3/31/1966
Last Update Date	4/4/2024

Remarks	Fessenden Spring. TPWD Heart of the Hills Fisheries Research Station derives all of its water from Fessenden Springs via a canal. A pump at the headwaters feeds a house on the property which is seldom inhabited by students and guest scientists. Estimated discharge 2500 GPM on 3/31/66. One of two springs known as Ellebracht Springs. Conductance 609 mmhos on 4/27/05.

Casing - No Data

Well Tests - No Data

Lithology - No Data

Annular Seal Range - No Data

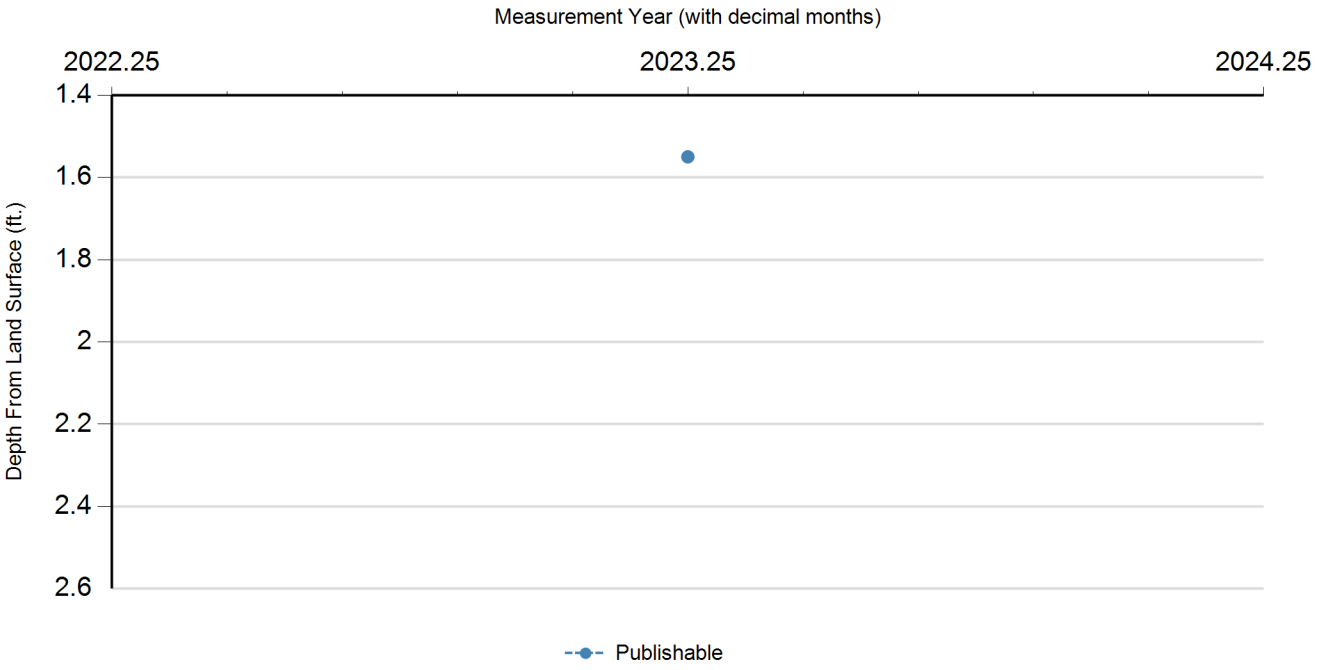
Borehole - No Data

Plugged Back - No Data

Filter Pack - No Data

Packers - No Data

Water Level Measurements



Status Code	Date	Time	Water Level (ft. below land surface)	Change value in ( ) indicates rise in level	Water Elevation (ft. above sea level)	Meas #	Measuring Agency	Method	Remark ID	Comments
P	3/30/2023	1435	1.55		1900.45	1	Texas Water Development Board	Steel Tape		Measured from top of cement block which the pump enters

Code Descriptions

Status Code	Status Description
P	Publishable

Water Quality Analysis

Sample Date: 4/27/2005 **Sample Time:** 1058 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Edwards and Associated Limestones

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

Collection Remarks: No Data

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		255	mg/L as CACO3	
00415	ALKALINITY, PHENOLPHTHALEIN (MG/L)		0	mg/L	
00410	ALKALINITY, TOTAL (MG/L AS CACO3)		249	mg/L as CACO3	
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)		77.3	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1.02	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		303.86	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		116	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.173	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1.02	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		84.8	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		27.5	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)	<	1.02	ug/L	
01035	COBALT, DISSOLVED (UG/L AS CO)	<	1.02	ug/L	
01040	COPPER, DISSOLVED (UG/L AS CU)	<	1.02	ug/L	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.25	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		274	mg/L as CACO3	
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)		4.2	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		15	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)		14.14	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		3.195	mg/L as N	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00400	PH (STANDARD UNITS), FIELD		7.31	SU	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.05	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)		17.9	mg/L as SIO2	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.48		
00932	SODIUM, CALCULATED, PERCENT		13	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		18.6	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		609	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		293	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		13	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		20.2	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1.02	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		342	mg/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		7.01	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	4.08	ug/L	

Water Quality Analysis

Sample Date: 7/7/2020 **Sample Time:** 1150 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Edwards and Associated Limestones

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

Collection Remarks: Sampled from largest spring discharge under large limestone outcrop (spring head)

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		239	mg/L as CACO3	
00425	ALKALINITY, BICARBONATE DISSOLVED (MG/L), LAB		240	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)		240	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)		7.1	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		1.7	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)		71.3	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		292.883	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		73.4	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.138	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		77.2	mg/L	
28004	CARBON-14 DISS APPARENT AGE (YEARS BP)		4300	Y-BP	
82172	CARBON-14 FRACTION MODERN		0.5855		0.0021
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		28.8	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		-7.9	0/00	
50791	DEUTERIUM, EXPRESSED AS PERMIL VSMOW		-27.89	0/00	
00950	FLUORIDE, DISSOLVED (MG/L AS F)		0.25	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		269.833	mg/L as CACO3	
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)		4.79	ug/L	

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		18.6	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	
71851	NITRATE NITROGEN, DISSOLVED, CALCULATED (MG/L AS NO3)		10.226	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		2.31	mg/L as N	
50790	OXYGEN-18, EXPRESSED AS PERMIL VSMOW		-4.67	0/00	
00400	PH (STANDARD UNITS), FIELD		7.36	SU	
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.19	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)		14.3	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.498		
00932	SODIUM, CALCULATED, PERCENT		13.189	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		18.8	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		451	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		368	ug/L	
48297	STRONTIUM, ISOTOPE OF MASS 86 AND 87 RATIO		0.7080148	N/A	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		11.6	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		20.4	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		325.345	mg/L	
07012	TRITIUM IN WATER (TRITIUM UNITS)		0.68	TU	0.09
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)		1.16	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		11.5	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	5	ug/L	

Water Quality Analysis

Sample Date: 4/7/2021 **Sample Time:** 1140 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Edwards and Associated Limestones

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

Collection Remarks: Sampled from largest spring discharge under large limestone outcrop (spring head)

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
39086	ALKALINITY FIELD DISSOLVED AS CACO3		257	mg/L as CACO3	
00425	ALKALINITY, BICARBONATE DISSOLVED (MG/L), LAB		240	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)		240	mg/L as CACO3	
01106	ALUMINUM, DISSOLVED (UG/L AS AL)	<	5	ug/L	
50938	ANION/CATION CHG BAL, PERCENT		2.18	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)		75.4	ug/L	
01010	BERYLLIUM, DISSOLVED (UG/L AS BE)	<	1	ug/L	
00440	BICARBONATE ION, CALCULATED (MG/L AS HCO3)		292.883	mg/L	
01020	BORON, DISSOLVED (UG/L AS B)		78.8	ug/L	
71870	BROMIDE, DISSOLVED, (MG/L AS BR)		0.153	mg/L	
01025	CADMIUM, DISSOLVED (UG/L AS CD)	<	1	ug/L	
00915	CALCIUM, DISSOLVED (MG/L AS CA)		73.4	mg/L	
00445	CARBONATE ION, CALCULATED (MG/L AS CO3)		0	mg/L	
00941	CHLORIDE, DISSOLVED (MG/L AS CL)		30.2	mg/L	
01030	CHROMIUM, DISSOLVED (UG/L AS CR)		5.94	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)		0.274	mg/L	
00900	HARDNESS, TOTAL, CALCULATED (MG/L AS CACO3)		268.593	mg/L as CACO3	
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)		4.88	ug/L	
00925	MAGNESIUM, DISSOLVED (MG/L AS MG)		20.6	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)		6.552	mg/L as NO3	
00631	NITRITE PLUS NITRATE, DISSOLVED (MG/L AS N)		1.48	mg/L as N	
00400	PH (STANDARD UNITS), FIELD		7.2	SU	
00666	PHOSPHORUS, DISSOLVED (MG/L AS P)	<	0.02	mg/L as P	
00935	POTASSIUM, DISSOLVED (MG/L AS K)		1.16	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)		12.9	mg/L as SIO2	
01075	SILVER, DISSOLVED (UG/L AS AG)	<	1	ug/L	
00931	SODIUM ADSORPTION RATIO, CALCULATED (SAR)		0.529		
00932	SODIUM, CALCULATED, PERCENT		13.909	PCT	
00930	SODIUM, DISSOLVED (MG/L AS NA)		19.9	mg/L	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		559	MICR	
01080	STRONTIUM, DISSOLVED (UG/L AS SR)		380	ug/L	
00946	SULFATE, DISSOLVED (MG/L AS SO4)		11.1	mg/L as SO4	
00010	TEMPERATURE, WATER (CELSIUS)		20.4	C	
01057	THALLIUM, DISSOLVED (UG/L AS TL)	<	1	ug/L	
70301	TOTAL DISSOLVED SOLIDS , SUM OF CONSTITUENTS (MG/L)		320.476	mg/L	
22703	URANIUM, NATURAL, DISSOLVED (UG/L AS U)		1.18	ug/L	
01085	VANADIUM, DISSOLVED (UG/L AS V)		10.2	ug/L	
01090	ZINC, DISSOLVED (UG/L AS ZN)	<	5	ug/L	

Water Quality Analysis

Sample Date: 4/13/2022 **Sample Time:** 1100 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Edwards and Associated Limestones

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

Collection Remarks: Sampled from largest spring discharge under large limestone outcrop (spring head)

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00400	PH (STANDARD UNITS), FIELD		7.45	SU	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		576	MICR	
00010	TEMPERATURE, WATER (CELSIUS)		20.5	C	

Water Quality Analysis

Sample Date: 3/30/2023 **Sample Time:** 1320 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Edwards and Associated Limestones

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

Collection Remarks: Sampled from largest spring discharge under large limestone outcrop (spring head)

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00400	PH (STANDARD UNITS), FIELD		7.23	SU	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		576	MICR	
00010	TEMPERATURE, WATER (CELSIUS)		20.5	C	

Texas Water Development Board (TWDB)
Groundwater Database (GWDB)
Well Information Report for State Well Number 56-54-403

Water Quality Analysis

Sample Date: 4/2/2024 **Sample Time:** 1114 **Sample Number:** 1 **Collection Entity:** Texas Water Development Board

Sampled Aquifer: Edwards and Associated Limestones

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

Collection Remarks: Sampled from largest spring discharge under large limestone outcrop (spring head)

Parameter Code	Parameter Description	Flag	Value*	Units	Plus/Minus
00400	PH (STANDARD UNITS), FIELD		7.23	SU	
00094	SPECIFIC CONDUCTANCE, FIELD (UMHOS/CM AT 25C)		574	MICR	
00010	TEMPERATURE, WATER (CELSIUS)		20.6	C	

** Value may not display all significant digits for parameter in results, check Scanned Documents for laboratory paperwork..*