## QUERÉTARO MUNICIPAL ECONOMIC YEARBOOK

GENERAL DEMOGRAPHIC INFORMATION AND Y PHYSICAL DESCRIPTION OF THE ENVIRONMENT









## GENERAL DEMOGRAPHIC INFORMATION





### General demographic information

### **BEHAVIOR OF THE POPULATION**

The National Institute of Statistics and Geography (INEGI) provided information on the volume and composition of the population at the national, state and municipal levels of Querétaro based on projections from the National Population Council (CONAPO).

Knowing the population data provides essential elements for an adequate forecast of the needs and demands in terms of health, education, employment, housing, social security, and transportation, to name a few.

During 2021, the INEGI reported that based on the 2016-2050 Projections of the Population of Mexico and the Federative Entities issued by CONAPO, the total population at the national level was 128,912,439 people; of which 49.0% are women and 51.0% are men.

### TOTAL POPULATION AT THE NATIONAL LEVEL, 2021.



Source: CONAPO. Projections of the Population of Mexico and the Federal Entities 2016-2050. Projections published in January 2022.

According to the results of the 2021 Population an Housing Census, the INEGI reported that Mexic ranks 11th in population worldwide, and the averag age in our country is 29 years. From 2010 to 2020 the population grew by 14.0 million people, with a annual growth rate in the last decade of 1.2%.

Querétaro has a population of 2,319,537 inhabitant represented as follows by municipality:





MUNICIPAL POPULAT OF QUERÉTA	
MUNICIPALITY	2021
Amealco de Bonfil	69,262
Arroyo Seco	15,014
Cadereyta de Montes	78,055
Colón	70,110
Corregidora	213,526
El Marqués	183,234
Ezequiel Montes	46,601
Huimilpan	42,916
Jalpan de Serra	30,075
_anda de Matamoros	20,500
Pedro Escobedo	77,600
Peñamiller	22,337
Pinal de Amoles	28,450
Querétaro	992,423
San Joaquín	10,475
San Juan del Río	306,881
Tequisquiapan	80,132
Tolimán	31,946
TOTAL	2,319,537

Source: CONAPO. Projections of the Population of Mexico and the Federal Entities 2016-2050. Published January 2022.



### **Demographic characteristics**

For the municipality of Querétaro, the total population during the year 2021 was projected by CONAPO with 992,423 people; with respect to the information from the 2020 Population and Housing Census, the growth rate was -5.5%.

"Т	"TOTAL POPULATION MUNICIPALITY OF QUERÉTARO, 2010-2021.				
YEAR	MUNICIPALITY	ABSOLUTE GROWTH BETWEEN PERIODS	TCMA*		
2011	820,368	18,428	2.3		
2012	830,608	10,240	1.2		
2013	841,282	10,674	1.3		
2014	852,257	10,975	1.3		
2015	878,931	26,674	1.9*		
2016	874,637	-4,294	-0.50		
2017	885,870	11,233	1.3		
2018	897,039	11,169	1.3		
2019	908,084	11,045	1.2		
2020	1,049,777	141,693	2.8*		
2021	992,423	-57,354	-5.5		

Source: INEGI, Population and Housing Censuses 2010 and 2020, from 2011 to 2014 is based on CONAPO estimates, the year 2015 corresponds to the results of the INEGI Intersensal Survey; from 2016 to 2019 are based on CONAPO population projections (2010-2030, database) published in January 2021. CONAPO data. Projections of the Population of Mexico and the Federative Entities, 2016-2050. Published January 2022.

\*The Average Annual Growth Rate is based on the population of the immediately preceding period (except the 2020 rate which is a ten-year base and the 2015 rate which is a five-year basis).

Comparing the years 2011 and 2021, we can see that there was an increase of 172,055 people, that is, 20.9% more inhabitants than in 2011.

### TOTAL POPULATION MUNICIPALITY OF QUERÉTARO, 2010-2021.



Source: INEGI, Population and Housing Censuses 2010 and 2020, from 2011 to 2014 is based on CONAPO estimates, the year 2015 corresponds to the results of the INEGI Intersensal Survey; from 2016 to 2019 are based on CONAPO population projections (2010-2030, database) published in January 2021. CONAPO data. Projections of the Population of Mexico and the Federative Entities, 2016-2050. Published January 2022

### **POPULATION BY AGE AND SEX**

The structure of the municipal population is made up of 50.3% women and 49.7% men.

Women



Total population 992,423

Source: INEGI, Population and Housing Census 2020. With information from the National Population Council (CONAPO), Projections of the Population of Mexico and the Federal Entities 2016-2050. Published January 2022.

The population distribution by age range goes from:

- 0 to 14 years at 23.0%
- · 15 to 29 years at 26.7%
- · 30 to 44 years represent 23.2%
- · 45 to 64 years at 20.8%
- 6.3% for people aged 65 and over

TOTAL POPULATION BY AGE FOR THE MUNICIPALITY OF QUERÉTARO, 2021.		
AGE	POPULATION	
0 to 14 years	228,446	
15 to 29 years	264,681	
30 to 44 years	230,455	
45 a 64 años	206,254	
65 years and older	62,587	
Unspecified	NA	
TOTAL	992,423	

Source: INEGI. Population and Housing Census 2020. With information from the National Population Council (CONAPO). Projections of the Population of Mexico and the Federal Entities 2016-2050. Published January 2022.



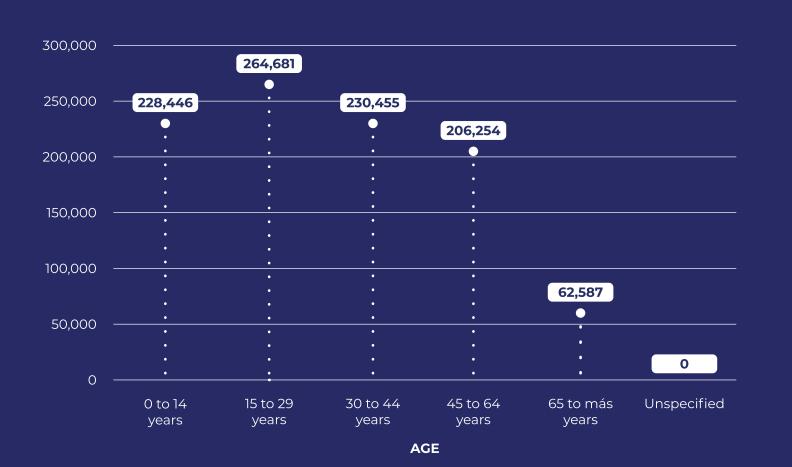






According to information from CONAPO, the municipal dependency index was 41.4%, representing the labor force.

### TOTAL POPULATION BY AGE FOR THE MUNICIPALITY OF QUERÉTARO, 2021.



## Total population: 992,423

**Source:** INEGI. Population and Housing Census 2020. With information from the National Population Council (CONAPO). Projections of the Population of Mexico and the Federal Entities 2016-2050. Published January 2022.

MUNICIPAL DEPENDENCY INDEX, 2010-2021.			
YEAR	PERCENTAGE (%)		
2011	47.5		
2012	47.2		
2013	46.9		
2014	46.8		
2015	44.8		
2016	46.7		
2017	46.7		
2018	46.9		
2019	47.0		
2020	41.0		
2021	41.4		

Source: INEGI, Population and Housing Censuses 2010 and 2020. Data from 2011 to 2021 are based on CONAPO population projections, with the exception of 2015 which presents data from the 2015 Intercensal Survey. Data 2021, CONAPO. Projections of the Population of Mexico and the Federative Entities, 2016-2050. Published January 2022.



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### **BIRTH, MORBIDITY AND MORTALITY**

Population phenomena refers to all those relevant events such as demographic growth, migration, birth rates, mortality and morbidity that affect a society and that in turn intervene in its socioeconomic development.

The Ministry of Health registered in the municipality of Querétaro during the year 2021 a birth rate of 9.6 births per thousand inhabitants, while the mortality rate for the same period was 7.0 deaths per thousand inhabitants.

It also reported that during the same year the morbidity rate (proportion of sick people in relation to the total population) was 128.7, the most frequent diseases being the following:

#### PATHOLOGIES REGISTERED IN THE MINISTRY OF HEALTH, 2020

PATHOLOGY	CASES
COVID-19	11,958
Acute respiratory infections	10,567
Other diagnoses	2,144
Influenza	1,026
Intestinal infections by other organisms and ill-defined ones	895
Urinary tract infection	624
Ulcers, gastritis and duodenitis	346
Conjunctivitis	283
Motor Vehicle Transportation Accidents	177
Acute otitis media	104
Obesity	88
TOTAL	28,212

### **OFFICE OF VITAL RECORDS**

The Municipal Directorate of the Office of Vital Records has the function of documenting the data and facts that concern the civil status of citizens. Registry acts are carried out, certified copies, foreign certified copies, exhumation, construction, cremation of remains, proof of the non-existence of birth and marriage, notations, guardianship, stillbirth, and searches.

During the year 2021, 238,221 users were addressed and a total of 157,516 procedures were carried out. Among the most requested records 70% were certified copies, 18% were registration acts,6.1% were foreign certified copies, and the remaining 5.5% corresponded to the rest of the descriptions.

CITIZENS ADDRESSED IN THE OFFICE OF VITAL RECORDS OF THE MUNICIPALITY, 2021.				
DESCRIPTION	NUMBER OF PROCEDURES	USERS		
Registry Acts	28,685	109,390		
Certified Copies <sup>1</sup>	110,637	110,637		
Foreign Certified Copies	9,564	9,564		
Exhumation	1,397	1,397		
Construction	691	691		
Cremation of Remains	1,175	1,175		
Proof of Non-Existence of Birth	3,474	3,474		
Proof of Non-Existence of Marriage	1,041	1,041		
Annotations	621	621		
Guardianship	6	6		
Stillbirth	218	218		
Searches	7	7		
TOTAL	157,516	238,221		

<sup>1</sup>Included at no cost for seniors and disabled adults.

Source: Government of the State of Querétaro. Ministry of Health, 2022.





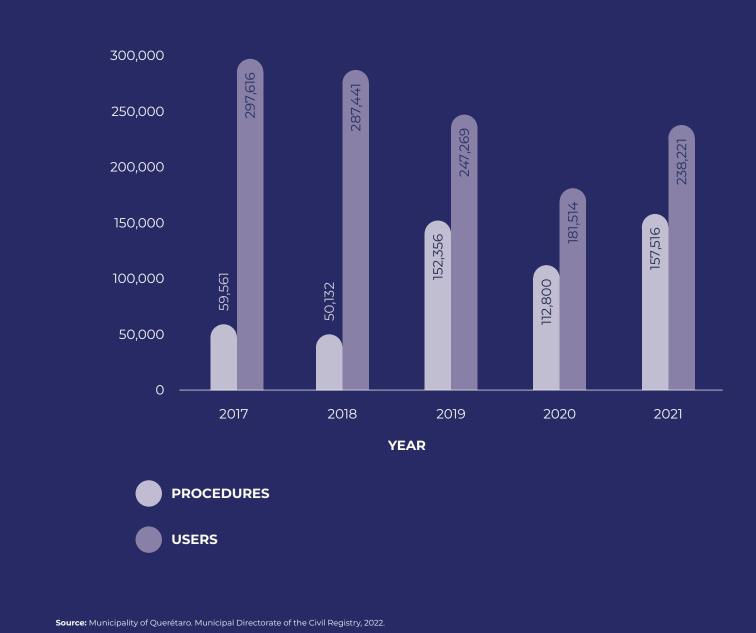
In 2021, the Municipal Directorate of the Office of Vital Records had 12 official offices, which were distributed as follows: 7 in the municipal districts, one at the Civic Center of Querétaro, one at the Hospital of Specialties for Children and Women, the Institute of Security and Social Services of State Workers (ISSSTE), the Mexican Institute of Social Security (IMSS) and at the San José de Querétaro Hospital.

REGISTRATION A	ACTS BY D	ISTRICT A	ND HOSP	ITALS IN TH	E MUNIC	IPALITY, 2	021.	
DISTRICTS	MARRIAGES	DIVORCES	DDEATHS	BIRTHS	ADOPTIONS	RECOGNITIONS	REGISTRATION OF FOREIGN RECORDS	ΤΟΤΑΙ
Centro Histórico	717	308	7,519	1,376	12	96	43	10,071
Epigmenio González Flores	556	169	92	2,081	2	56	14	2,970
Felipe Carrillo Puerto	574	190	100	1,634	2	43	11	2,554
Félix Osores Sotomayor	463	187	62	2,050	3	54	15	2,834
Josefa Vergara y Hernández	332	126	502	979	1	34	14	1,988
Santa Rosa Jáuregui	537	104	453	1,968	-	25	27	3,114
Villa Cayetano Rubio	176	120	262	387	-	14	16	975
			OTRAS					
Oficialía Centro Cívico	10	28	71	652	2	11	12	786
		нс	SPITALES	;				
Hospital de Especialidades del Niño y la Mujer	-	-	87	1,658	1	2	-	1,748
IMSS	-	-	5	733	-	1	-	739
ISSSTE	-	-	3	201	-	-	-	204
Hospital San José de Querétaro	-	-	4	698	-	-	-	702
TOTAL	3,365	1,232	9,160	14,417	23	336	152	28,685

Source: Municipality of Querétaro. Municipal Directorate of the Civil Registry, 2022.

The following table reflects that in 2021 a total of 238,221 citizens were addressed. Looking back, we can see that by 2021 there was an increase of 164.5% compared to 2017; with a total of 954,445 people in the same five-year period.

### ADDRESSED CITIZENS AND NUMBER OF PROCEDURES IN THE CIVIL REGISTRY, 2017-2021.





# PHYSICAL DESCRIPTION OF THE **ENVIRONMENT**







### Physical description of the environment

### LOCATION AND TERRITORIAL DIVISION

Mexico is made up of 32 states. One of them is the state of Querétaro, located in the center of the country in the Bajío Region, which has a territorial extension of 11,687.8 km<sup>2</sup>. The entity is divided into 18 municipalities and its capital is the municipality of Querétaro.

MUNICIPALITIES OF THE STATE OF QUERÉTARO, 2021.				
MUNICIPALITY	AREA (KM)2	PERCENTAGE (%)		
Amealco de Bonfil	711.4	6.1		
Arroyo Seco	731.2	6.3		
Cadereyta de Montes	1,338.5	11.4		
Colón	807.2	6.9		
Corregidora	236.0	2.0		
El Marqués	756.2	6.5		
Ezequiel Montes	298.3	2.6		
Huimilpan	388.4	3.3		
Jalpan de Serra	1,185.1	10.1		
Landa de Matamoros	696.8	6.0		
Pedro Escobedo	322.9	2.8		
Peñamiller	694.9	5.9		
Pinal de Amoles	705.4	6.0		
Querétaro	690.0	5.9		
San Joaquín	275.9	2.4		
San Juan del Río	796.7	6.8		
Tequisquiapan	371.9	3.2		
Tolimán	681.0	5.8		
TOTAL	11,687.8	100.0		

Source: National Institute of Statistics and Geography. INEGI, 2022.

Area (km²) State of Querétaro **11,687.8** 

Area (km²) Querétaro municipality

690.0



The municipality of Querétaro covers 5.9% of the total area of the entity and is made up of 7 districts:

DISTRICTS OF THE MUNICIPALITY OF QUERÉTARO, 2021.					
DISTRICT	AREA (KM²)	PERCENTAGE (%)			
Centro Histórico	19.6	2.8			
Epigmenio González Flores	66.5	9.6			
Felipe Carrillo Puerto	146.0	21.2			
Félix Osores Sotomayor	39.3	5.7			
Josefa Vergara y Hernández	33.5	4.9			
Santa Rosa Jáuregui	367.5	53.3			
Villa Cayetano Rubio	17.4	2.5			
TOTAL	690.0	100.0			

Source: Municipality of Querétaro. Ministry of Sustainable Development, 2022.



The municipality of Querétaro is located at the southwest of the state between parallels 20°30' and 20°55' north latitude and parallels 100°17' and 100°36' west longitude. Bordering with the Corregidora and Huimilpan municipalities to the south, with El Marqués to the east, and the state of Guanajuato shares its borders to the northwest of Querétaro.

### CLIMATE

The municipality of Querétaro has 3 types of climate

- Semihumid Temperate C(wo). Covering 38.8% of the territory and maintaining an average annual temperature of 17.8°C. Its most abundant rainfall is recorded in summer, particularly in the highest points to the north of the municipality.
- Semidry-semi warm BS<sub>1</sub>hw(w). It dominates the center of the city, the densest area of the urban sprawl. It presents rains in summer and registers an average annual temperature that ranges between 18.0°C and 22.0°C.
- Semi-dry Temperate BS1kw(w). Present at altitudes above 2,000 meters above sea level (masl), it covers 22.7% of the municipal territory. Its average annual temperature fluctuates between 16.0°C and 18.0°C and it rains in summer.





The following table shows the temperatures and precipitations each month of the year, as well as the averages during 2021:

CLIMATE INFORMATION OF THE MUNICIPALITY OF QUERÉTARO, 2021.					
ГН	ΜΑΧΙΜυΜ	MINIMUM	MEDIUM	- PRECIPITATION <sup>1</sup>	
	24.7	9.7	17.2	10.5	
	26.9	9.5	18.2	0.0	
	30.1	12.6	21.4	0.0	
	30.5	15.2	22.9	7.0	
	15.8	30.3	23.1	89.3	
	15.6	27.1	21.4	115.1	
	27.2	15.9	21.6	67.0	
	27.7	15.8	21.8	143.1	
	26.4	15.4	20.9	223.9	
	26.2	14.5	20.4	95.1	
	25.5	9.6	17.6	1.1	
	25.4	9.4	17.4	1.1	
GE	25.2	15.4	20.3	62.8	

MONTH	T	TEMPERATURE IN °C				
MONTH	ΜΑΧΙΜυΜ	MINIMUM	MEDIUM	- PRECIPITATION		
January	24.7	9.7	17.2	10.5		
February	26.9	9.5	18.2	0.0		
March	30.1	12.6	21.4	0.0		
April	30.5	15.2	22.9	7.0		
May	15.8	30.3	23.1	89.3		
June	15.6	27.1	21.4	115.1		
July	27.2	15.9	21.6	67.0		
August	27.7	15.8	21.8	143.1		
September	26.4	15.4	20.9	223.9		
October	26.2	14.5	20.4	95.1		
November	25.5	9.6	17.6	1.1		
December	25.4	9.4	17.4	1.1		
AVERAGE	25.2	15.4	20.3	62.8		

Source: National Water Commission (CONAGUA), 2022.

<sup>1</sup> Quantities expressed in millimetres.

Maximum temperature:



Annual average:





### **OROGRAPHY**

The municipality of Querétaro is made up of mountains, plains, and hilly regions, that appear as rounded hills with plains that extend from south to north, parallel to the Querétaro-San Luis Potosí highway. The altitude of the plains varies between 1,800 and 1,900 meters above sea level.

"PHYSIOGRAPHIC PROVINCES IN THE MUNICIPALITY OF QUERÉTARO, 2021.				
PROVINCE	SUB-PROVINCE	SYSTEM OF TOPOGRA- PHIC FORMS	MUNICIPAL SURFACE (%)	
Mesa del Centro	Mountains and plains of the northern state of Guanajuato	Mountains	5.5	
		Mountains with plains	53.0	
Mountains and plains Neovolcanic axis the states of Queréta and Hidalgo	Mountains and plains of	Plain	9.2	
		Mountains	8.9	
		Mountains with hills	23.4	

Source: Municipality of Querétaro. Ministry of Sustainable Development with information from the National Institute of Statistics and Geography (INEGI).

Note: Geographic data set of the Physiographic Chart 1:1,000,000.





The most important elevations are concentrated to the north of the municipal territory in the Santa Rosa Jáuregui and Felipe Carrillo Puerto districts. Santa Rosa Jáuregui houses the highest hills, including Cerro Grande with a height of 2,760 meters above sea level, and La Rochera and Pájaro Azul hills, both with 2,720 meters above sea level.

MAIN ELEVATIONS OF THE MUNIC		
ELEVATION	ALTITUE (MSNM	
Ridge in the area of San Pablo	1,860	
Cerro de las Campanas	1,835	
Cerro El Patol (Cerro Colorado)	2,460	
Cerro Prieto	2,270	
Cerro El Paisano	2,080	
Cerro El Puertecillo	2,055	
Cerro El Borrego	2,040	
Cerro La Gallina	1,950	
Plot 97 of Ejido Jurica	1,925	
Cerro El Cimatario	2,390	
Cerro El Tángano	2,170	
Cerro Grande	2,760	
Cerro La Rochera	2,720	
Cerro Pájaro Azul	2,720	
Cerro Támbula	2,700	
Cerro La Rochera (La Carbonera)	2,650	
Cerro Colorado	2,370	
Cerro Pie de Gallo	2,340	
Cerro La Media Luna	2,230	
Cerro El Buey	2,220	
Cerro El Nabo	2,020	
El Campanario Ridge	1,985	
Source: Municipality of Querétaro. Institute of Ecology ar	nd Climate Change, 2022	

<sup>1</sup>Meters above sea level.

<sup>2</sup>The hill reaches <sup>2,600</sup> meters in the state of Guanajuato. The altitude shown constitutes the maximum range of that hill within the municipality of Querétaro.

E	DELEGATION
	Centro Histórico
	Felipe Carrillo Puerto
	Félix Osores Sotomayor
	Josefa Vergara y Hernández
	Santa Rosa Jáuregui



### **EDAPHOLOGY**

The countryside is a resource base of great importance. Therefore, it is essential to study the soil and its physical and chemical attributes, as well as its limitations, composition, nature, and relationship with the environment.

In the municipality of Querétaro there are 5 types of soil with associations that belong to the physiological province of the Central Neovolcanic axis:

- **1. Kastanozem/calcium:** Posee una capa de más de 15 cm de espesor de color blanco en forma de polvo o caliche rico en cal. Sus suelos son de una subunidad de fertilidad moderada a alta. En esta misma clasificación se encuentran los chernozems.
- **2. Phaeozem and associations:** Son suelos porosos, oscuros y ricos en materia orgánica, utilizados intensivamente en la agricultura. Las sequías periódicas y la erosión eólica e hídrica son sus principales limitantes. Se utilizan para la producción de granos y hortalizas, se encuentran en climas templados y húmedos con vegetación natural.
- **3. Eutric Fluvisol:** Formados por sedimentos fluviales, se distinguen por sus materiales diferenciados por partículas mecánicas como arena, limo y arcilla o por presentar diferencias en el contenido orgánico en una profundidad menor a 25 cm desde la superficie.
- **4. Lithosol:** Son suelos muy delgados, de un espesor inferior a 25 cm. Antes de llegar a la capa pétrea pueden ser más profundos, con alto contenido de rocas o grava.
- **5. Vertisol: :** Dependiendo del material parental y del clima, puede oscilar del gris o rojizo al negro que es más familiar. Tiene un alto contenido de minerales de arcilla expansiva que producen profundas grietas en las estaciones secas.

"CO	L TYPES I	
30	LIPESH	

SOIL UNIT	AREA IN HECTARES	MUNICIPAL AREA (%)
Calcic kastanozem	1,947	2.8
Phaeozem and associations	6,354	9.2
Haplic phaeozem	141	0.2
Haplic phaeozem / Lithosol	3,238	4.7
Haplic Phaeozem / Pelic Vertisol	459	0.7
Luvic phaeozem	2,073	3.0
Feozem lúvico / litosol	233	0.3
Luvic phaeozem/lithosol	210	0.3
Eutric fluvisol	411	0.6
Lithosol and associations	12,908	18.7
Lithosol	1,013	1.4
Lithosol/vertic cambisol	254	0.4
Litosol / haplic phaeozem	8,395	12.2
Lithosol/eutric regosol	270	0.4
Lithosol/rendzine	615	0.9
Lithosol / pelic vertisol	2,361	3.4
Vertisol and associations	47,387	68.7
Pelic vertisol	41,782	60.6
Vertisol pelic / lithosol	5,605	8.1
TOTAL	69,007	100.0

Source: Municipality of Querétaro. Institute of Ecology and Climate Change, 2022.



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CONAGUA acknowledges 5 dams in the municipality of Querétaro, with a total infrastructure capable of storing 13.1 million cubic meters of water. The complete information is shown in the following table:

### MAIN STORAGE DAMS IN THE MUNIC DISTRICT DAM Los Ángeles de Mompaní Felipe Carrillo Puerto El Zapote Santa Catarina Santa Rosa Jáuregui La Tinaja de la Estancia El Cajón TOTAL

Source: National Water Commission (CONAGUA), 2022

<sup>1</sup>Millions of cubic meters.

The State Water Commission (CEA) has registered 11 waterfronts in municipal territory. Together they have a storage capacity of 3.01 million cubic meters. The breakdown of information is shown in the following table:

### DISTRICT WATER B El Refug Epigmenio González Flores Benito Ju Felipe Carrillo Puerto Los Jazmi Félix Osores Sotomayor El Nab Argentir Tángan Josefa Vergara Hernández Tángano Ciudad de las Art Bolaño Cuesta Ch Villa Cayetano Rubio Cuesta Ch TOTAL Source: State Water Commission (CEA), 2022. <sup>1</sup>Millions of cubic meters.

### **HYDROGRAPHY**

The hydrological region in the municipality is called "Lerma-Santiago" and is located within the Querétaro river basin, draining the waters of the southwest of the entity towards the Lerma river, to later pour its waters into the Pacific Ocean.

The "Pánuco" region drains the waters from the southwest and center towards the Moctezuma River and those from the north towards the Santa María River, finally reaching the Pánuco River and discharging its waters into the Gulf of Mexico.

The headwater of the Santa María River is in San Luis Potosí. It crosses through Guanajuato and Querétaro and returns to its native entity to take the name of Tampaón or Tamuín River. It further joins the Moctezuma River on the border with Veracruz, where it joins the Pánuco River.

The headwater of the The Moctezuma River is in the Zimapán dam where the waters of the San Juan River and the Tula River merge, coming from Querétaro and Hidalgo, respectively.

Zimapán, Constitución de 1917, San Idelfonso, Centenario, Santa Catarina, La Llave, Jalpan, Alfredo Vladimir Bonfil, El Capulín de Amealco, El Batán, and San Pedro Huimilpan water dams make up a good part of the Queretaro's hydraulic diagram.

The National Water Commission (CONAGUA) acknowledges 11 aquifers in the state, 2 of them located in the municipal capital:

- Querétaro Valley Aquifer. Located southwest of the state, occupying part of the municipalities of Querétaro, Corregidora, and El Marqués. It covers an area of 563 km<sup>2</sup>, has a concession volume of 129.41 mm<sup>3</sup>/year, a natural discharge of 4.0 mm<sup>3</sup>/year and a recharge of just 70.0 mm<sup>3</sup>/year. It presents a deficit of 63.72 mm<sup>3</sup>/year due to overexploitation.
- Buenavista Valley Aquifer. It occupies 319 km<sup>2</sup> to the west of the state, covering mainly the municipality of Querétaro. It borders to the north and west by the Guanajuato aquifers, to the south by the Valle de Querétaro, and to the east by the Amazcala aquifer. It has a natural discharge of 0.10 mm<sup>3</sup>/year, a recharge of 11.00 mm<sup>3</sup>/year and a volume of 22.61 mm<sup>3</sup>/year, which presents a deficit of 12.44 mm<sup>3</sup>/year.

AQUIFERS IN THE MUNICIPALITY OF QUERÉTARO, 2021. (MILLION CUBIC METERS PER YEAR).				
AQUIFER	RECHARGE	NATURAL DISCHARGE	EXTRACTION VOLUME	DEFICIT
Querétaro Valley	70.0	4.0	129.4	-63.7
Buenavista Valley	11.0	0.1	22.6	-12.4

Source: National Water Commission (CONAGUA) 2022

CIPALITY OF QUERÉTARO, 2021.				
TOTAL STORAGE CAPACITY <sup>1</sup>	USEFUL STORAGE CAPACITY <sup>1</sup>			
0.7	0.7			
2.0	1.9			
8.8	8.8			
0.6	0.6			
1.0	0.6			
13.1	12.6			

ANK	STORAGE CAPACITY <sup>1</sup>
gio	0.37
árez	0.78
ines	0.50
0	0.24
na	0.23
01	0.20
o	0.16
tes (Bordo 1)	0.15
DS	0.10
nina I	0.08
ina II	0.21
	3.01



### **VEGETATION**

The state of Querétaro has a vegetation area made up of 48.7% agricultural zones, 18.4% forests, 15.4% scrub, 7.7% jungles, 6.9% grasslands, and the remaining 2.9% by other types of vegetation, bodies of water, and urban areas.

The vegetation in the municipal territory is made up of oak forest, tropical dry forest, shrub lands, chrysanthemums scrub, subtropical scrub, induced grassland which is derived from excessive cattle feed, natural grassland, and aquatic and riparian vegetation.

Oak and coniferous forests predominate in the mountainous systems. The main usable species present are common pine (wood), Chinese pine (wood), pinyon pine (edible), dark oak (wood) and táscate (wood).

Shrub lands mainly occupy the semi-desert region, with a predominance of xeric scrub. The main usable species present are garambullo (edible), mesquite (forage), cactus (edible), chaparro prieto (forage) and izote (fibers).

The forests are found mainly in the Sierra Gorda region, with a predominance of the deciduous type. The main usable species present are ojite (fodder), chaca (medicinal) and tepehuaje (edible).

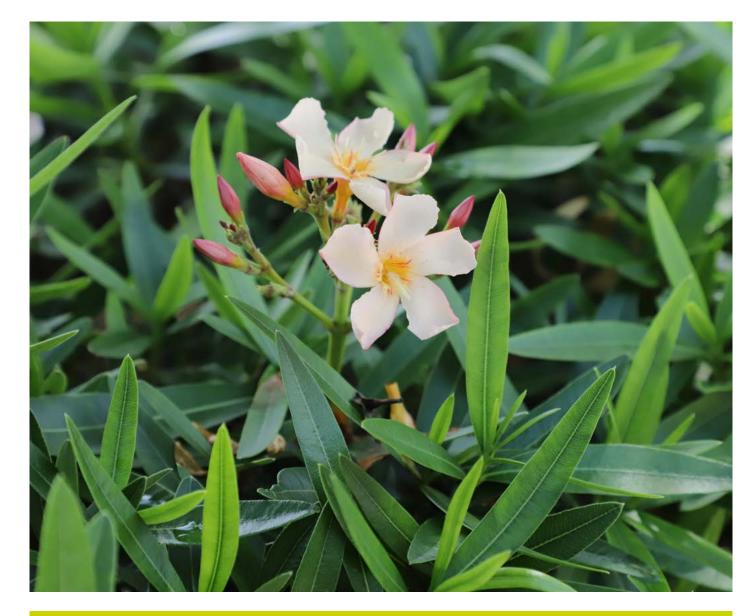
The grasslands are found throughout the state, predominating the induced type. The main species found, used as fodder, are the red grass, navajita velluda and navajita.

### **FLORA**

As a result of an inventory work in the metropolitan area of Querétaro, the National Commission for the Knowledge and Use of Biodiversity (CONABIO) registered around 400 representative species in 77 plant families' classification, including Acanthaceae, Agavaceae, Asteraceae, Cactaceae, Compositae, Gramineae, Fabaceae, Poaceae and Solanaceae.

The state of Querétaro has endemic species that require attention and conservation, such as the garambullo (Myrtillocactus geometrizans), pitayo (Stenocereus dumortieri), organ cactus (Pachycereus marginatus), mesquite (Prosopis laevigata), xixote stick (Bursera fagaroides), white stick (Celtis caudata), tepeguaje (Lysiloma microphylla), huizache (Acacia farnesiana) and cactus (Opuntia sp.).

The municipality has a deployment of crops consisting of different agricultural products. Among the main ones are corn (Zea mays), beans (Phaseolus vulgaris) and, to a lesser extent, sorghum (Sorghum vulgare), barley (Hordeum sativum) and alfalfa (Medicago sativa).



CATEGORY	COMMON NAME	SCIENTIFIC NAME	COMMUNITIES OR SITES WHERE IT CAN BE LOCATED	DISTRICT
	Colorín	Erythrina Coralloides	El Tángano	Josefa Vergara y Hernández
Threatened species	Palo Blanco	Hesperalbizia Occidentalis	El Nabo, Mompaní y Peña Colorada	Felipe Carrillo Puerto
	Biznaga de Huamiche	Ferocactus Histrix	La Joya, Peña Colorada	Santa Rosa Jáuregui y Epigmenio González Flores
Species with special protection	Biznaga de La Cañada	Mammillaria Microhelia	Jurica-Los Cajones	Santa Rosa Jáuregui y Félix Osores Sotomayor
	Walnut or Cedar	Cedrela Odorata	La Carbonera	Conto Doco Jáuro auti
Endangered species	Biznaguita	Mammillaria Mathildae	Jurica-Los Cajones	Santa Rosa Jáuregui
Source: Municipality of Querétaro	. Institute of Ecology and Climate (	Change, 2022.		

### SPECIES OF FLORA WITH SOME CATEGORY IN THE NOM-059-SEMARNAT-2010.



### FAUNA

The municipality of Querétaro has a great variety of wild macrofauna located in the La Joya volcano, the El Tángano and El Cimatario escarpments, the Mompaní, San Miguelito, Cerro Grande, Peña Colorada and Rancho Raspiño-Charape de Los Pelones ravines, where small animals live and take refuge.

The predominant animals of the macrofauna are the rattlesnake (*Crotalus sp.*), birds such as the cardinal (*Pyrocephalus rubinus*), the rufous-tailed hawk (*Buteo jamaicensis*) and mammals such as the gray fox (*Urocyon cinereoargenteus*), skunk (*Conepatus mesoleucus*), cacomixtle (*Bassariscus astutus*), coyote (*Canis latrans*) and bobcat (*Lynx rufus*).

CONABIO registers almost 200 different animal species in the municipality of Querétaro, the complete information is shown in the following table



FAUNA	FAMILY	GENDER	SPECIES
Amphibians	6	7	15
Poultry	37	86	104
Mammals	15	49	57
Fishes	4	6	6
Reptiles	9	10	17
TOTAL	71	158	199

Source: Municipality of Querétaro. Institute of Ecology and Climate Change, 2022.



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