

# CONSUMER CONFIDENCE REPORT TCEQ CERTIFICATE of DELIVERY

For Calendar year 2018

Public Water System (PWS) Name: CITY OF CROWELL

PWS ID Number: 0780001

I certify that the community water system named above has distributed the Consumer Confidence Report (CCR) for the calendar year of 2018 and that the information in the report is correct and consistent with the compliance monitoring data previously submitted to the TCEQ. Systems serving 100,000 or more people are required to post the CCR on a publicly available web site and provide the direct URL.

Date of Delivery: 6-10-19  
 Certified By: Name (print): Ronnie Allen  
 Title: Public Works Director  
 Phone Number: 940-684-1722

Signature: Ronnie Allen Date: 6-7-19

**You must use at least one direct delivery and at least one good faith delivery method:**  
 (indicate "☒" all that apply):

Systems serving 100,000 or more people are required to post the CCR on a publicly available web site and provide the direct URL here: http:// \_\_\_\_\_

### Direct Delivery Methods

- Mail a paper copy of the CCR
- Mail notification that CCR is available on-line at http://CityofCrowell.org  
 \*The Internet link (url) you insert above must take customers directly to the open CCR.
- Email direct web address of the CCR, available at http://
- Email CCR as an attachment to or an embedded image in an email.
- Other direct delivery (for example, door hangers or additional electronic delivery method).  
 Please specify: \_\_\_\_\_

### Good faith delivery methods - to reach people who do not receive bills (check all that apply):

- Posting the CCR on the Internet at http://CityofCrowell.org
- Mailing the CCR to people who receive mail, but who do not receive bills.
- Advertising the availability of the CCR in news media.
- Posting the CCR in public places.
- Delivering multiple copies to single billing addresses serving multiple persons.
- Delivering multiple copies of the CCR to community organizations.

All systems are required to mail by July 1 the Certificate of Delivery and complete Consumer Confidence Report to:

Sending by certified mail:	Sending by regular mail:
TCEQ DWSF, MC-155, Attn: CCR, 12100 Park 35 Circle Austin, TX 78753	TCEQ DWSF, MC-155, Attn: CCR, PO Box 13087 Austin, TX 78711-3087

## 2018 Consumer Confidence Report for Public Water System CITY OF CROWELL

This is your water quality report for January 1 to December 31, 2018

For more information regarding this report contact:

CITY OF CROWELL provides surface water from [insert source name of aquifer, reservoir, and/or river] located in [insert name of County or City].

Name CITY of Crowell

Phone 940-684-1722

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 940-684-1722

### Definitions and Abbreviations

#### Definitions and Abbreviations

##### Action Level:

##### Action Level Goal (ALG):

##### Avg:

##### Level 1 Assessment:

##### Level 2 Assessment:

##### Maximum Contaminant Level or MCL:

##### Maximum Contaminant Level Goal or MCLG:

##### Maximum residual disinfectant level or MRDL:

##### Maximum residual disinfectant level goal or MRDLG:

##### MFL:

##### mmem:

##### na:

##### NTU:

##### pCi/L:

The following tables contain scientific terms and measures, some of which may require explanation.

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Regulatory compliance with some MCLs are based on running annual average of monthly samples.

A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

million fibers per liter (a measure of asbestos)

millirems per year (a measure of radiation absorbed by the body)

not applicable.

nephelometric turbidity units (a measure of turbidity)

picocuries per liter (a measure of radioactivity)

## Definitions and Abbreviations

ppb:	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
ppm:	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water.
ppq	parts per quadrillion, or picograms per liter (pg/L)
ppt	parts per trillion, or nanograms per liter (ng/L)
Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.

## Information about your Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPAs Safe Drinking Water Hotline at (800) 426-4791.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

**Information about Source Water**

CITY OF CROWELL purchases water from GREENBELT MIWA. GREENBELT MIWA provides purchase surface water from [insert source name of aquifer, reservoir, and/or river] located in [insert name of County or City].  
 "Insert a table containing any contaminant that was detected in the provider's water for this calendar year, unless that contaminant has been separately monitored in your water system (i.e. TTHM, HAA5, Lead and Copper, Coliforms):"

TCCEQ completed a Source Water Susceptibility for all drinking water systems that own their sources. This report describes the susceptibility and types of constituents that may come into contact with the drinking water source based on human activities and natural conditions. The system(s) from which we purchase our water received the assessment report. For more information on source water assessments and protection efforts at our system contact [insert water system contact] [insert phone number].

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	08/22/2017	1.3	1.3	0.24	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems
Lead	08/22/2017	0	15	9.4	2	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

**2018 Water Quality Test Results**

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
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<b>Halooacetic Acids (HAA5)</b>	2018	53	15 - 42.5	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
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\* The value in the Highest Level or Average Detected column is the highest average of all HAA5 sample results collected at a location over a year\*

<b>Total Trihalomethanes (TTHM)</b>	2018	119	26.3 - 102	No goal for the total	80	ppb	Y	By-product of drinking water disinfection.
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\* The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year\*

<b>Inorganic Contaminants</b>	<b>Collection Date</b>	<b>Highest Level Detected</b>	<b>Range of Individual Samples</b>	<b>MCLG</b>	<b>MCL</b>	<b>Units</b>	<b>Violation</b>	<b>Likely Source of Contamination</b>
Nitrate [measured as Nitrogen]	2018	1	1.23 - 1.23	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

### Disinfectant Residual

\* A blank disinfectant residual table has been added to the CCR template, you will need to add data to the fields. Your data can be taken off the Disinfectant Level Quarterly Operating Reports (DLQOR):

<b>Disinfectant Residual</b>	<b>Year</b>	<b>Average Level</b>	<b>Range of Levels Detected</b>	<b>MRDL</b>	<b>MRDLG</b>	<b>Unit of Measure</b>	<b>Violation (Y/N)</b>	<b>Source in Drinking Water</b>
	2018			4	4		ppm	Water additive used to control microbes.

### Violations

#### Total Trihalomethanes (TTHM)

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

<b>Violation Type</b>	<b>Violation Begin</b>	<b>Violation End</b>	<b>Violation Explanation</b>
MCL, LRAA	01/01/2018	03/31/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
MCL, LRAA	04/01/2018	06/30/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.

**Violations**

MCL, LRAA	07/01/2018	09/30/2018	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum contaminant level and abbreviated MCL) for the period indicated.
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# 2018 Consumer Confidence Report for Public Water System GREENBELT MIWA

This is your water quality report for January 1 to December 31, 2018

For more information regarding this report contact:

GREENBELT MIWA provides surface water and ground water from [insert source name of aquifer, reservoir, and/or river] located in [insert name of County or City].

Name Bobby Kidd  
Phone 806-874-3650

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 806-874-3650.

## Definitions and Abbreviations

### Definitions and Abbreviations

Action Level:

The following tables contain scientific terms and measures, some of which may require explanation.

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Action Level Goal (ALG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.

Avg:

Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Level 1 Assessment:

A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment:

A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level or MCL:

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG:

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum residual disinfectant level or MRDL:

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum residual disinfectant level goal or MRDLG:

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

MFL

million fibers per liter (a measure of asbestos)

mrem

millirems per year (a measure of radiation absorbed by the body)

na:

not applicable.

NTU

nephelometric turbidity units (a measure of turbidity)

pCi/L

picouries per liter (a measure of radioactivity)

## Definitions and Abbreviations

ppb.	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water.
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ppq	parts per quadrillion, or picograms per liter (pg/L)
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Treatment Technique or TT:	A required process intended to reduce the level of a contaminant in drinking water.

### Information about your Drinking Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer, persons who have undergone organ transplants, those who are undergoing treatment with steroids, and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).



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### Information about Source Water

TCEQ completed an assessment of your source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for your water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system contact [insert water system contact\insert phone number]

## 2018 Water Quality Test Results

Disinfection By-Products	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Halacetic Acids (HAAS)	2018	13	12.7 - 12.7	No goal for the total	60	ppb	N	By-product of drinking water disinfection.

\* The value in the Highest Level or Average Detected column is the highest average of all HAAS sample results collected at a location over a year\*

Total Trihalomethanes (TTHM)	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
	2018	14	13.9 - 13.9	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

\* The value in the Highest Level or Average Detected column is the highest average of all TTHM sample results collected at a location over a year\*

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
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Arsenic	2018	4	3.8 - 3.8	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2018	0.24	0.24 - 0.24	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2018	0.7	0.69 - 0.69	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2018	3	2.8 - 2.8	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Radioactive Contaminants	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	02/19/2015	6.9	6.9 - 6.9	0	50	pCi/L*	N	Decay of natural and man-made deposits.

\*EPA considers 50 pCi/L to be the level of concern for beta particles.

Combined Radium 226/228	02/19/2015	1.5	1.5 - 1.5	0	5	pCi/L	N	Erosion of natural deposits.
Uranium	02/19/2015	3.1	3.1 - 3.1	0	30	ug/l	N	Erosion of natural deposits.

Synthetic organic contaminants including pesticides and herbicides	Collection Date	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Units	Violation	Likely Source of Contamination
Atrazine	2018	0.1	0.1 - 0.1	3	3	ppb	N	Runoff from herbicide used on row crops.

### Disinfectant Residual

A blank disinfectant residual table has been added to the CCR template, you will need to add data to the fields. Your data can be taken off the Disinfectant Level Quarterly Operating Reports (DLQOR).

Disinfectant Residual	Year	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Violation (Y/N)	Source in Drinking Water
	2018			4	4		ppm	Water additive used to control microbes.

**Turbidity**

	Level Detected	Limit (Treatment Technique)	Violation	Likely Source of Contamination
Highest single measurement	0.33 NTU	1 NTU	N	Soil runoff.
Lowest monthly % meeting limit	100%	0.3 NTU	N	Soil runoff.

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

**Total Organic Carbon**

The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

**Violations**

**Interim Enhanced SWTR**

The Interim Enhanced Surface Water Treatment Rule improves control of microbial contaminants, particularly Cryptosporidium, in systems using surface water, or ground water under the direct influence of surface water. The rule builds upon the treatment technique requirements of the Surface Water Treatment Rule.

Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE (IESWTR/LTI), MAJOR	03/01/2018	03/31/2018	We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.

**Public Notification Rule**

The Public Notification Rule helps to ensure that consumers will always know if there is a problem with their drinking water. These notices immediately alert consumers if there is a serious problem with their drinking water (e.g., a boil water emergency).

Violation Type	Violation Begin	Violation End	Violation Explanation
PUBLIC NOTICE RULE LINKED TO VIOLATION	08/06/2015	10/02/2018	We failed to adequately notify you, our drinking water consumers, about a violation of the drinking water regulations.

LEAD & COPPER RULE MONITORING AND REPORTING VIOLATION  
MANDATORY LANGUAGE – TIER III

**IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER**

City of Crowell has violated the monitoring and reporting requirements set by Texas Commission on Environmental Quality (TCEQ) in Chapter 30, Section 290, Subchapter F. Even though these were not emergencies, as our customers, you have the right to know what happened and what we are doing (or did) to correct these situations.

*We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During Quarter 3 and Quarter 4 of 2018 we did not complete all monitoring or testing for contaminant(s) and therefore cannot be sure of the quality of your drinking water during that time.*

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for these contaminants, how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which the follow-up samples were taken.

Contaminant	Required sampling frequency	Number of samples taken	When samples should have been taken	When samples were or will be taken
Water Quality Parameter	Quarterly	3 per Qtr.	Qtr. 3 & Qtr. 4 2018	All Qtrs. of 2019

We have contacted the people who are responsible for pulling these samples and they are aware of what needs to be done and they will be correcting the error. For more information, please contact City of Crowell at 940-684-1722.

*Please share this information with all other people who drink this water, especially those who may not have received this notice directly (i.e., people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.*

This notice is being sent to you by City of Crowell. Public Water System Number: TX0780001

Date Distributed: 6-10-19