

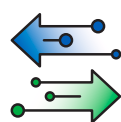


# TEMPORARY CHANGE IN DISINFECTANT

## Protecting Water Quality Fact Sheet

REGIONAL SERVICE THROUGH UNITY...MEETING OUR REGION'S NEEDS TODAY AND TOMORROW

## FREQUENTLY ASKED QUESTIONS



### What is the temporary change in water disinfection?

NTMWD first disinfects water using ozone and chlorine as part of the treatment process to eliminate bacteria and viruses. Then, for most of the year, NTMWD also adds chloramine (chlorine + ammonia) as a secondary disinfectant to keep drinking water clean as it travels from the treatment plants through miles of pipes to homes and businesses. Each spring for one month, NTMWD temporarily suspends the use of ammonia and uses free chlorine as the secondary disinfectant to maintain water quality year-round.



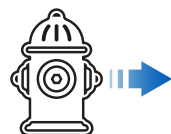
### Is the chlorine level tested during this period?

Yes, chlorine is tested, and many other compounds in water are monitored continuously. NTMWD conducts a quarter million tests each year in a state-certified laboratory to monitor, regulate and report water quality. During the disinfectant change in 2018, the Texas Commission on Environmental Quality (TCEQ) also collected 117 samples from 31 public water systems that deliver NTMWD water to confirm compliance. In some cases, NTMWD is voluntarily increasing the frequency of testing above what is required.



### What can I do if I don't like the chlorine taste or smell?

The closer you live to the water treatment plant, the more noticeable the chlorine odor or taste may be. Some tips include refrigerating water in an open pitcher, adding a slice of citrus/cucumber several hours before using or using a National Science Foundation (NSF/ANSI) approved water filter. Check out more tips at [www.nsf.gov](http://www.nsf.gov).



### Why are fire hydrants flushed during this process?

Local water providers (cities or utility districts) who receive NTMWD water may help move the chlorine-disinfected water through the system faster by flushing water out of fire hydrants. Frequent flushing helps maintain the system, ensure high water quality and reduce the chlorine odor and taste. Performing system flushing in the spring also helps save valuable water during the summer months.



### Why is this change necessary?

This change is a common water system maintenance practice among water providers in states with warmer climates. NTMWD uses it to maintain the system and ensure high water quality.



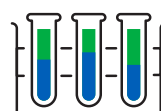
### What did the 2018 test results show?

NTMWD and TCEQ tests in 2018 confirmed NTMWD's chlorine levels during its disinfectant change were within the chlorine residual levels required by TCEQ and EPA.



### When does the change occur?

The temporary change usually occurs for about a month each year from the end of February through early April. It is done before the summer hotter temperatures which can increase the potential for bacterial growth in pipes.



### How do test results during the disinfectant change compare to other months?

Test results in 2018 indicate chlorine levels were consistent with the rest of year and within the annual average amounts required by TCEQ and EPA.



NTMWD.COM

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#### FAST FACTS:

80  
COMMUNITIES  
SERVED

SERVICE AREA:  
2,220  
SQUARE MILES IN  
10 COUNTIES

1.7  
MILLION  
POPULATION  
SERVED

WATER

WASTEWATER

SOLID WASTE

## NEED FOR DISINFECTION

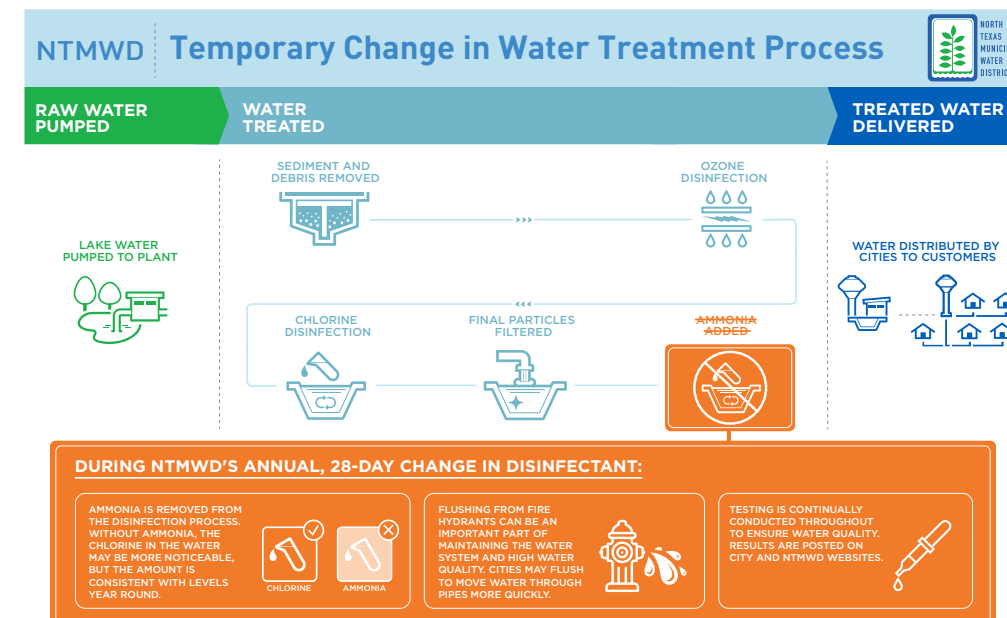
Disinfection is a critical part of water treatment to keep water safe. It involves a two-step process that treats the water, then adds disinfectant to maintain water quality as it travels long distances through pipes to homes and businesses. Both steps are needed to eliminate and keep tap water free of harmful microorganisms, such as parasites and viruses.

### NTMWD's Two-Step Water Disinfection Process:

1. Step One: Ozone and free chlorine disinfects water at the treatment plant.
2. Step Two: Chloramine, which is chlorine + ammonia, is added to the water before it leaves the plant to keep it disinfected. (Only chlorine-based disinfectants are approved by the EPA for this second step.)

## TEMPORARY CHANGE IN DISINFECTANT

For one month each spring, ammonia is temporarily suspended and free chlorine is used to ensure water remains disinfected as it travels to the cities we serve and on to their customers. This temporary change in disinfectant helps maintain the system and high water quality year-round. NTMWD has been doing this for over 10 years, and good water quality that meets health standards has always been maintained.







# HYDRANT FLUSHING TO HELP THE PROCESS

During the annual change, the cities we serve may help move the chlorine-disinfected water through the system faster by flushing water from fire hydrants.

## Hydrant flushing:

- Helps maintain local systems and water quality year-round.
- Decreases odor/taste of chlorine during the temporary change in disinfectant.
- Is standard practice for many water providers who use chloramine to maintain systems.



# HIGH WATER QUALITY MAINTAINED

## Testing

During this brief temporary change in disinfectant, NTMWD continues to deliver safe water to our cities.

## Ongoing water sampling is performed during the process by:

- NTMWD—results are reported to the [Texas Commission on Environmental Quality](#) (TCEQ) and made available to the public.
- TCEQ—conducts routine water sampling in NTMWD and city systems through an independent laboratory.

- Cities served by NTMWD—samples are analyzed in NTMWD’s state-certified laboratory and reported to TCEQ.

NTMWD tests for the concentration of chlorine at our treatment plant and at certain points in the transmission system every 15 minutes. NTMWD also conducts weekly testing at the delivery points where the cities, in turn, distribute to their customers. NTMWD’s water meets all safety standards required by the TCEQ, the EPA and the [Safe Drinking Water Act](#). Test results are available for the public to review online.

Total Chlorine Residuals (mg/L) at NTMWD Treated Water Storage Reservoir Sites

Sampling Locations	01/01/18 - 02/25/18			During Maintenance Period 02/26/18 - 03/26/18			01/01/17 - 03/12/17			During Maintenance Period 03/13/17 - 04/10/17		
	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum
Custer Pump Station	3.81	4.14	3.60	3.68	3.97	3.32	3.81	4.07	3.53	3.48	3.92	3.23
Farmersville	3.61	3.86	3.38	3.08	3.50	2.62	3.45	3.91	2.99	2.37	3.14	1.98
Forney	3.51	3.84	2.86	1.67	2.60	0.21	2.93	3.11	2.55	2.11	3.26	1.13
Garland #2	3.86	4.13	3.64	3.64	3.82	3.40	3.78	4.10	3.60	3.12	3.79	2.58
Garland #4	3.86	3.99	3.76	3.66	3.78	3.54	3.74	3.90	3.60	3.26	3.90	2.87
McKinney	3.77	4.18	3.44	3.35	3.83	2.51	3.11	3.66	1.52	2.34	3.29	1.29
Plano #2	3.86	4.17	3.65	3.76	4.31	3.27	3.71	4.08	3.48	3.66	4.10	3.35
Princeton	3.56	3.83	3.32	3.22	3.68	2.93	3.34	3.62	2.97	2.21	3.27	1.65
Rockwall	3.45	3.78	3.01	3.34	3.84	2.77	3.55	3.79	3.36	2.07	3.04	1.70
Royse City	3.51	3.76	3.30	2.48	2.94	2.10	3.17	3.57	2.81	1.77	2.33	0.60
Shiloh	3.90	4.17	3.68	3.83	4.10	3.44	3.89	4.12	3.66	3.63	4.15	3.41
Sunnyvale	3.54	4.11	3.30	2.63	3.62	1.17	3.30	3.64	2.87	2.32	2.59	2.19

\*NOTE: EPA requires water treatment facilities to maintain a minimum chlorine level of 0.2 milligrams per liter (mg/l) or parts per million (ppm), a minimum of 0.5 mg/l or ppm during chloramine operations and a maximum running average of 4 mg/l or ppm. These levels are deemed safe for consumption.

1 mg/L = 1 ppm (parts per million)

## Home Testing

Homeowners who want more information about their water quality or are considering testing their water should consider these guidelines.

- 1) Review water quality information on your city or local water utility website and contact them with questions.
- 2) Use a state-certified laboratory to provide sampling instructions, containers, and ensure accurate results. You can find an accredited laboratory in Texas through [TCEQ](#).
- 3) Pool test kits are not a reliable method to test drinking water. You can learn more at [CDC.gov](#).

Beware of claims from companies advocating filtration for water safety. NTMWD’s water is safe to drink without filtration. Some filters can help dissipate chlorine odor, taste and skin sensitivities.

## Disinfection By-Products

**Disinfection By-Products** (DBPs) form when disinfectants, like chlorine, react with naturally occurring substances in the water. All commonly used disinfectants form DBPs.

## NTMWD’s water treatment process:

- Uses ozone and chloramine for most of the year, which actually reduces the DBPs in treated water.
- Keeps DBP levels well within the acceptable range EPA considers safe, including during its temporary, month-long change in disinfectant.
- Is regularly tested for the quality of water it produces. This year NTMWD has voluntarily increased the frequency of DBP testing from quarterly to monthly. Results will be posted on [NTMWD.com](#).

# ODOR/TASTE TIPS

Some people may notice a stronger smell or taste of chlorine during this time. While chlorine levels are consistent with the rest of the year, the temporary suspension of ammonia can make the smell or taste more noticeable. The water remains safe to drink and use.

For those who are sensitive to the taste, odor and skin contact, there are simple steps that can make it less noticeable.



### Tips to Reduce Chlorine Odor/Taste in Water

Individuals sensitive to chlorine may notice a stronger smell or taste for a few weeks in the spring during NTMWD’s temporary change in water disinfectant.

#### Your water is safe — it meets all quality standards.

Here are some simple steps to minimize chlorine odor, taste or skin sensitivity:

**Drinking water**

- Run the tap for a few minutes before using
- Refrigerate water in an open pitcher for several hours



- Add a slice of citrus/cucumber and let sit for several hours
- Consider installing filters on kitchen faucets

**Bath or shower water**

- Add a crushed 1000 mg Vitamin C tablet to bath water
- Consider installing filters on bathroom faucets or shower heads

#### What’s different?



For one month a year, ammonia is removed from the water treatment process, and chlorine only is used for disinfection to keep water safe as it travels through pipes to consumers.



This is a preventive measure to maintain the system and high water quality.



For more information and helpful tips, visit [NTMWD.com/safewater](#)



NORTH TEXAS MUNICIPAL WATER DISTRICT

## More Information

[NTMWD.com/safewater](#)  
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