

NTMWD Disinfection Byproducts Information

June 11, 2008

Current (Stage 1) TCEQ Annual Average Limits for Disinfection Byproducts

- 80 ppb for total trihalomethanes (TTHMs)
- 60 ppb for haloacetic acids (HAA5s)
- Large cities have “four” sampling points:
 - Entry into the distribution system
 - Two points of average residence time
 - Point of maximum residence time
- All four sample point values are averaged together
- TAC 290.113

2012 (Stage 2) TCEQ Annual Average Limits for Disinfection Byproducts

- TTHM & HAA5 limits remain the same
- New TCEQ regulations require additional sampling points:

<u>Population Served</u>	<u>Sample Points</u>
○ 3,301-9,999	2
○ 10,000-49,999	4
○ 50,000-249,999	8
○ 250,000-999,999	12
- Individual sample point values reported as a running average, *not averaged together as in the current (Stage 1) TCEQ rules*
- Each individual sample point must not exceed the limits
- TAC 290.115

Effects of Recent Drought on Disinfection Byproducts

- HAA5s have not been a concern
- TTHMs were within limits during normal weather patterns using an enhanced coagulation treatment process
- Drought and lower lake levels caused higher TOC and increased TTHMs
 - Did not exceed limits under the current (Stage 1) TCEQ regulations
 - May have exceeded the limits under the 2012 (Stage 2) TCEQ regulations

Benefits of Adding Ozone Disinfection to the Treatment Process

- Significantly reduces TTHMs
- Is effective in mitigating taste and odor in treated water
- Provides substantially improved disinfection capability
- Provides an additional barrier:
 - Oxidizes endocrine disrupters & pesticides
 - Oxidizes many other microconstituents
 - Inactivates a wider range of pathogens