



Austin Water Treatment Plants

Rick Coronado
Assistant Director - Operations

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PRODUCT QUALITY

- **Complies with regulatory and reliability requirements**
- **Consistent with customer; public health, and ecological needs**

Monthly Performance Dashboard

Product Quality

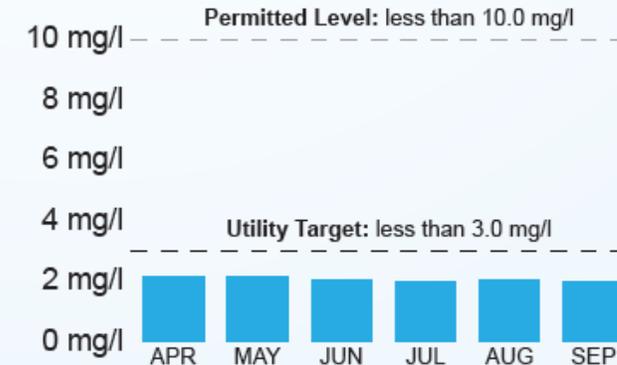
- Trained O&M Technicians to perform Threshold Odor Number (TON) Test at every facility
- Performed various taste and odor removal experiments using permanganate and activated carbon
- Evaluated isolating pipelines at Davis WTP as a non-chemical zebra mussel mitigation method
- Feeding Powdered Activated Carbon (PAC) at Ullrich and Davis WTPs for odor control seems to have a secondary benefit of controlling ZM proliferation

Drinking Water Quality Fiscal Year 2019: Cloudiness of water (turbidity)



Measured turbidity "cloudiness of water" is the indicator of the effectiveness of our filtration systems. Our target is to keep treated drinking water turbidity level at 0.10 Nephelometric Turbidity Unit (NTU) or less.

Wastewater Quality Fiscal Year 2019



Ensure stream water quality by keeping the Carbonaceous Biological Oxygen Demand (CBOD) concentration from our wastewater treatment plants discharges at 3.0 mg/L or less.



Consumer Confidence Report (CCR)

www.austinwater.org/waterquality

- Annual Report – received July 1
- Regulated/Unregulated Test
- October 2018 exceedance
 - Turbidity (clarity of water)

WATER QUALITY REPORT | AUSTIN
January - December 2018



Substance (Sampled for in 2018 unless noted differently)	Highest Level Allowed (EPA's MCL)	Regulated at the Treatment Plant			Ideal Goals (EPA's MCLG)	Possible Sources
		Low	High	Average		
Barium (ppm)	2	0.01	0.01	0.01	2	Natural geology
Copper (ppm)	AL=1.3	0.01	0.01	0.01	1.3	Household plumbing
Fluoride (ppm)	4	<0.002	.009	0.004	4	Natural geology, supplement
Nitrate (ppm)	10	0.69	0.84	0.78	10	Runoff from fertilizer use
Cyanide (ppb)	200	0.04	130	90	200	Discharge from manufacturing
Beta/photom emitters (pci/L) 2018	50	<70	4.8	4.8	0	Decay of natural and man-made deposits
Turbidity (ntu)-clarity	TT (95% of the samples must be at or below 0.3 ntu)	0.01	3.50	0.05		Austin Water measures turbidity (cloudiness of the water) as an indicator of the effectiveness of our filtration system.
<p><i>In October, Austin Water did not continuously meet the turbidity standards due to extreme flooding and historically high raw water turbidity levels, with 85% of the readings below 0.3 NTU but 3 readings above 1.0 NTU.**</i></p>						
<p>TOC Removal Ratio* Annual avg ≥1</p>						
<p>*The TOC removal ratio is the percent of TOC removed through the treatment process divided by the percent of TOC required by TCEQ to be removed. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAAs) which are reported below.</p>						
<p>Regulated in the Distribution System</p>						
Yearly Average 60	4.0 (MRDL)	0.36	3.50	2.30	≤4 (MRDLG)	Disinfectant used to control microbes
		8.8	16.7	12.5	not applicable	Byproduct of drinking water disinfection
		23.5	47.6	32.9	not applicable	Byproduct of drinking water disinfection
<p>Household plumbing</p>						



October 2018 Flooding After Action

Resiliency Strategies

- Polymer Feed Systems at all Water Treatment Plants
- Water Quality Event Response Procedures
- Laboratory Equipment (Zeta Potential Meter)



City of Austin
Process Treatment Recommendation Resulting
from October 2018 Flood Event

OCTOBER 16, 2018 FLOOD EVENT
REPORT AND RESULTING
RECOMMENDATIONS

FINAL | July 2019


TBPE No. F-882



February 2019 Taste and Odor Event

Zebra Mussel Mitigation

- Diving/Cleaning Contract
- Copper Sulfate Chemical Contract (Jan 2020)
- Sodium Permanganate Feeding System (Handcox WTP)
- Powdered Activated Carbon



Water Quality Monitoring

Water Quality Monitoring

- Algae Monitoring
- Cyanotoxin Testing
- Taste and Odor Monitoring

Lake Water

Sampling date: October 14, 2019			
Analyte	Davis WTP	Ullrich WTP	Handcox WTP
	(ug / L)	(ug / L)	(ug / L)
Anatoxin-a	ND	ND	ND
Cylindrospermopsin	ND	ND	ND
Total Microcystins	ND	ND	ND
ND - non-detect			



Wastewater Treatment Plant Effluent

Permit Parameters

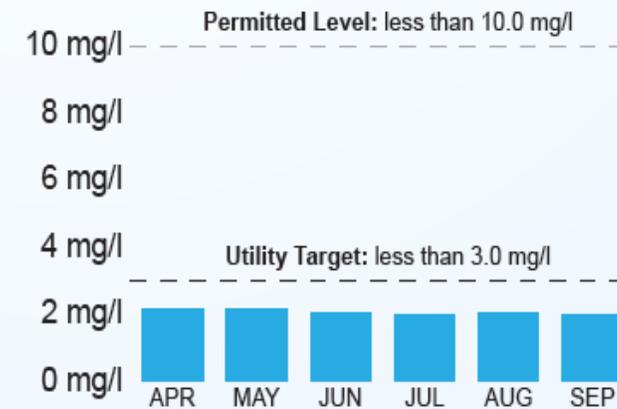
- Carbonaceous Biochemical Oxygen Demand (CBOD)
- Total Suspended Solids (TSS)
- Ammonia Nitrogen
- Disinfection Parameters

South Austin Regional & Walnut Creek WWTP

- 2018 Silver Peak Performance Awards

Current Permits are under renewal (SAR and Walnut)

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Questions?



