

# Texas Department of Transportation Year 4 Annual Report



## Municipal Separate Storm Sewer System (MS4) Permit Number WQ0005011000

Texas Department of Transportation  
Environmental Affairs Division  
125 East 11th Street  
Austin, Texas 78701

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February 2021



Texas Commission on Environmental Quality  
Stormwater & Pretreatment Team Leader (MC-148)  
P.O. Box 13087  
Austin, Texas 78711-3087

Re: MS4 Annual Report Transmittal for the Texas Department of Transportation  
TPDES Permit Authorization: WQ0005011000

Dear Team Leader:

This letter serves to transmit the Year 4 Annual Report for the Texas Pollutant Discharge Elimination System Municipal Separate Storm Sewer System Permit, Authorization Number WQ0005011000 for the Texas Department of Transportation.

A separate Notice of Change has not been submitted based on the fact that changes have not been proposed for the next permit year.

As required by the permit, a paper copy of this submittal has also been mailed to TCEQ's Stormwater & Pretreatment Team (MC-148) in Austin, Texas. Electronic copies have been delivered via TCEQ's ftp page to each Water Section Manager of each TCEQ region serving the regulated area of the permit (see following list of recipients).

Sincerely,

DocuSigned by:  
  
80BF418601C140C...

Carlos Swonke  
Director of Environmental Affairs Division

# Lists of Recipients of Annual Report

Sent via TCEQ ftp site at: <https://ftps.tceq.texas.gov/index.php?#>

<b>TCEQ Region</b>	<b>Water Section Manager</b>	<b>Email</b>
1	Guy Wilkins	<a href="mailto:guy.wilkins@tceq.texas.gov">guy.wilkins@tceq.texas.gov</a>
2	Jay Keith	<a href="mailto:jay.keith@tceq.texas.gov">jay.keith@tceq.texas.gov</a>
3	Michael Taylor	<a href="mailto:michael.taylor@tceq.texas.gov">michael.taylor@tceq.texas.gov</a>
4	Brent Candler	<a href="mailto:brent.candler@tceq.texas.gov">brent.candler@tceq.texas.gov</a>
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## **Additional Recipients**

### Regional

Liaison Zachary King	<a href="mailto:Zachary.King@Tceq.Texas.Gov">Zachary.King@Tceq.Texas.Gov</a>
NA Hanne Nielsen	<a href="mailto:hanne.nielsen@tceq.texas.gov">hanne.nielsen@tceq.texas.gov</a>
11 Mindy McDonough	<a href="mailto:mindy.mcdonough@tceq.texas.gov">mindy.mcdonough@tceq.texas.gov</a>



# TxDOT Statewide MS4 Annual Report

TPDES Individual Permit No. WQ0005011000

## General Information

Authorization Number: WQ0005011000 Annual Report Year: 4 (9/1/19-8/31/2020)

Name of MS4 / Permittee Texas Department of Transportation

Contact Name: Adrienne Boer Phone Number: 512-416-2605

Mailing Address: 125 E. 11th Street, Austin, Texas 78701-2483

E-mail Address: [adrienne.boer@txdot.gov](mailto:adrienne.boer@txdot.gov)

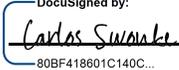
TxDOT Statewide MS4 Annual Report

TPDES Individual Permit No. WQ0005011000

## Certification

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Name (printed): Carlos Swonke Title: Director of Environmental Affairs Division

Signature:  Carlos Swonke Date 2/22/2021

**Note:** If this is a system-wide annual report including information for all permittees, each permittee shall sign and certify the annual report in accordance with 30 TAC §305.128 (relating to Signatories to Reports).

**Narrative Provisions**

1. Provide information on the status of complying with permit conditions:

	Yes or No	Explain
TxDOT is currently in compliance with the SWMP as submitted to and approved by the TCEQ. <i>(Part III)</i>	Yes	NA
TxDOT is currently in compliance with recordkeeping and reporting requirements. <i>(Part IV Section B. and C.)</i>	Yes	NA
TxDOT meets the eligibility requirements of the permit (e.g., TMDL requirements Edwards Aquifer limitations, compliance history, etc.) <i>(Part II Section D.)</i>	Yes	NA

2. Provide a general assessment of the appropriateness of the selected BMPs. Use table below or attach a summary, as appropriate:

See following page.

2. Provide a general assessment of the appropriateness of the selected BMPs. Use table below or attach a summary, as appropriate:

### **Assessment of Appropriateness of BMPs:**

The BMPs chosen to meet permit requirements are appropriate and adequate to meet the goals of the permit to reduce the discharge of pollutants to the maximum extent practicable.

TxDOT revised the SWMP in the first year of the permit. No further revisions have been made.

### **Evaluation of the Success of the Implementation of Measurable Goals:**

TxDOT successfully implemented the required BMPs per measurable goal, and exceeded goals in some cases. Each BMP listed on the following pages of this report indicates the success of each measurable goal (see column "Met Goal?").

FY2020 was a particularly challenging year due to Covid. With the lockdown due to the pandemic, we had to find other ways to complete our on-site activities such as facility surveys, outfall mapping, and trash clean-up events. We implemented virtual site visits for facility surveys, which allowed us to interact with the minimal on-site staff at our maintenance yards, without need for travel. Staff walked the site with live video on their phone so that we could see the conditions of the site. Staff also uploaded their data to Dropbox so we could review their records. Due to Covid, we were not able to host the annual Texas Trash Off. This event involves volunteers gathering trash from the right-of-way, but this interaction was deemed too risky during the pandemic. In regards to our outfall mapping, our contractors were able to maintain social distancing and safety protocol while visiting outfalls along the right-of-way.

Also during this fiscal year, TCEQ headquarters inquired regarding responsibility for trash pick-up under TxDOT overpasses. Often in larger cities TxDOT has a Municipal Maintenance Agreement (MMA) for litter pick-up such that the city manages trash pick-up within the city limits. The following cities have an MMA in place:

- Austin
- Beaumont
- Corpus Christi
- Dallas
- Killeen
- Laredo
- Paris
- Tyler
- Yoakum

For clarification of these roles, TxDOT will update the SWMP to indicate these agreements where we have them.

Further, as noted in email correspondence with TCEQ, we are acknowledging that the City of Horizon in the El Paso District is included in our MS4 area and included in our program activities. When TCEQ was renewing the El Paso MS4 permit an oversight in zip codes was found, where the zip code for Horizon, 79928, was inadvertently left out of the TxDOT MS4 permit; however, the City of Horizon was included in the TxDOT permit. TxDOT has included the City of Horizon and the area of zip code 79928 in all

permit activities since issuance of the statewide permit, so the oversight in the zip code did not affect the permitted area we are managing. During permit renewal TCEQ plans to include the zip code in our permit, and TxDOT will be sure to include this zip code in our application for the permit.

### **Accomplishments and Additional Activities Completed:**

TxDOT completed both the year 4 and year 5 activities for TMDL requirements, and reports them in this year's annual report.

### **Summary of Stormwater Activities Planned During the Next Reporting Year:**

TxDOT will continue to implement the program as described in the SWMP. We will continue completing outfall mapping and structural controls mapping at the remaining districts. We will also implement our annual activities as described in our SWMP. We are also planning for the Texas Trash Off; however, with the continuing Covid pandemic it may be delayed or canceled. We will report back in our annual report for next year.

### **Additional Requirements as Listed in Permit, Section IV.C.2.:**

**(a) The status of the compliance with permit conditions, an assessment of the appropriateness of the identified BMPs, progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, the measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals;**

Responses to (a) have been detailed throughout the sections in this report.

**(b) A summary of the results of information collected and analyzed, during the reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP;**

Data were collected at illicit discharges found while completing outfall mapping and dry weather screening in the Houston District. A summary of findings are included in Attachment G of this report. Follow-up visits were completed and the City of Houston was contacted, as needed.

**(c) Where applicable, a summary of any activities taken to address the discharge to impaired waterbodies, including any sampling results and a summary of the permittee's BMPs used to address the pollutant of concern;**

This activity is reported beginning at Attachment Q.

**(d) Progress toward reducing the discharge of the POCs to impaired waterbodies and all reporting requirements listed in Part II.D.3;**

This activity is reported beginning at Attachment Q.

**(e) A summary of the stormwater activities the permittee plans to undertake during the next reporting year;**

The next reporting year will be year 5 of this permit. We will complete all remaining activities as detailed in the SWMP. This includes finishing the remaining outfall mapping, and all yearly activities in the SWMP.

**(f) Proposed changes to the statewide SWMP, including changes to any BMPs or any identified measurable goals that apply to the program elements;**

Responses to (f) have been detailed previously in this report. Also see Attachment C (as applicable). No changes are planned for the SWMP.

**(g) Description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementations plans;**

This activity is reported beginning at Attachment Q.

**(h) Notice that the permittee is relying on another government entity(ies) to satisfy some of its permit obligations (if applicable);**

Not applicable.

**(i) The number of construction activities that occurred within the regulated area of the permittee;**

TxDOT let 209 construction projects within the regulated area during this permit year.

**(j) The number on inspections conducted at construction sites;**

TxDOT districts choose the weekly inspection interval instead of every 2 weeks and after a 0.5 inch rainfall interval. Compliance with inspection requirements of the Construction General Permit are verified by District Environmental Quality Coordinators (DEQC) through DEQC inspections. See BMP 3.3.6.

**(k) A summary describing the number and nature of enforcement actions and inspections where applicable**

In regards to the TxDOT MS4 permit, in Year 4 TxDOT had five TCEQ Investigations, both focused and comprehensive, with no violations. The following districts were inspected:

- Waco
- Abilene
- Ft. Worth
- El Paso
- Corpus Christi

**(l) Annual expenditures for the reporting year, with a breakdown for the major elements of the SWMP, and the budget for the year (reporting year) following each annual report.**

See Attachment CC.

3. The following lists measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals:

MCM	Measurable Goal	Success		Met Goal?
1.3.1 - DMWT Program	Record the number of TV and radio ads, social media views, outdoor events, and billboards. Include costs.	Number of TV Ads:	15,213	Met Goal
		TV Ad Cost:	\$ 183,056	Met Goal
		Number of Radio Ads:	13,755	Met Goal
		Radio Ads Cost:	\$ 257,708	Met Goal
		Social Media Views:	20,584,481	Met Goal
		Social Media Cost:	\$ 17,402	Met Goal
		Outdoor Activities Hosted:	13	Met Goal
		Outdoor Activities Cost:	\$ 4,000	Met Goal
		Billboards:	112,505,275	Met Goal
		Billboard Cost:	\$ 267,938	Met Goal
1.3.2 - "Adopt-a-Highway" Program	Report the number of volunteers, how many miles were adopted, and volume of materials removed.	<i>Refer to District-Specific Data Sheet. Also refer to Attachment F, Compass Code 525.</i>		Met Goal
1.3.3 - "Texas Trash-Off" Program	Report the number of volunteers, events, roadway miles cleared, and the pounds of trash collected. Provide copy of Trash-off Planner.	Number of Events:	0	Did Not Meet Goal
		Number of Volunteers:	-	Did Not Meet Goal
		Number of Roadway Miles Cleared:	-	Did Not Meet Goal
		Pounds of Trash:	-	Did Not Meet Goal
		<i>Refer to Attachment A</i>		
1.3.4-"Texas Highways Magazine"	The number of printed copies and the number of E-mails of electronic copies distributed.	Number of Printed Copies and Electronic Copies distributed:	2,246,284	Met Goal
1.3.5 - TxDOT's Webpages	Number of views from these web pages.	TxDOT Webpage Views:	1,996,003	Met Goal
		DMWT Webpage Views:	264,821	Met Goal
		ENV Webpage Views:	13,583	Met Goal
		Stormwater Webpage Views:	1,216	Met Goal

MCM	Measurable Goal	Success		Met Goal?
1.3.6 - Education of Construction Site Personnel	Record number of participants as well as document number of posters when provided.	<i>Refer to Attachment B</i>		Met Goal
1.3.7-Education of Herbicide Application Personnel	Record number of participants.	<i>Refer to Attachment B</i>		Met Goal
2.3.1 - Update SWMP and MCM Implementation	Provide updated SWMP.	<i>Refer to Attachment C</i>		Met Goal
2.3.2 - Update List of Allowable Non-Stormwater Discharges	Provide updated List in SWMP.	<i>Refer to Attachment D</i>		Met Goal
2.3.3-MS4 Areas Mapping	Update MS4 maps to include 20 percent of new mapped outfalls, relocated outfalls, and deleted outfalls.	<i>Refer to Attachment E. An interactive map of the data can be found on-line at <a href="http://www.txdot.gov/inside-txdot/division/environmental/aots.html">http://www.txdot.gov/inside-txdot/division/environmental/aots.html</a></i>		Met Goal
2.3.4-Education and Training	Record the number of participants for each training class.	<i>Refer to Attachment B</i>		Met Goal
2.3.5 - Public Reporting of Illicit Discharges and Spills	Report the number calls and complaint forms received from the DMWTW reporting system and the TxDOT Stormwater Webpage complaint page.	Report the number calls and complaint forms received:	0	Met Goal
2.3.6-Spill Prevention and Response	Report the number spills responded to. Compass Function Codes 520, 830.	<i>Refer to Attachment F</i>		Met Goal

MCM	Measurable Goal	Success		Met Goal?
2.3.7-Source Investigation and Elimination	Provide a list of illicit discharges/illicit connections detected. Summarize and report all follow-up actions resulting from screening to include identified RP and cost.	<i>Refer to Attachment G</i>		Met Goal
2.3.8-Inspections	Report the number inspections performed and provide a summary, if available, of the RP, cost, and enforcement.	<i>Refer to Attachment G</i>		Met Goal
2.3.9.a - Overflows and Infiltration	Report the number utility permits issued.	<i>Refer to District-Specific Data Sheet</i>		Met Goal
2.3.9.b - List of Dischargers	Update list of dischargers, as necessary.	<i>Refer to Attachment H</i>		Met Goal
2.3.9.c - Hazardous Waste and Used Motor Vehicle Fluids	Report the number of promotions, the type of promotion and the intended audience in the annual report.	<i>Refer to District-Specific Data Sheet and Attachment I</i>		Met Goal
2.3.9.d -Identification of Priority Areas	Update list of priority areas, as necessary.	<i>Refer to Attachment J</i>		Met Goal
2.3.9.e. - Dry Weather Inspections	2.3.9.e. Screen 20 percent of the previously permitted Phase I areas and report the number of dry weather inspections performed.	Number of Dry Weather Inspections:	669	Met Goal
2.3.9.f - Wet Weather Program	Include the Wet Weather Analysis in the fourth reporting year annual report.	<i>To be reported in Year 4. Refer to Attachment K</i>		In Progress

MCM	Measurable Goal	Success	Met Goal?
2.3.10.a-Spill Prevention and Response	Continue to implement and improve, as necessary, programs that prevent, contain, and respond to spills that may discharge into the MS4. Compass Function Codes 520, 830.	<i>Refer to Attachment F</i>	Met Goal
2.3.10.b-Agency coordination	Report any agency coordination conducted during the reporting year in the annual report.	<i>Refer to Attachment L</i>	Met Goal
3.3.1-Program Development	All new elements and elements in newly regulated Phase II areas completed will be included in the annual report.	All elements are being implemented in each of the applicable BMPs.	Met Goal
3.3.2-SWMP Update	Review and update as necessary, the SWMP and MCM implementation procedures.	<i>Refer to Attachment C</i>	Met Goal
3.3.3-Erosion and Sediment Control	Report the number of Forms 2448 for all other sites, obtained during the permit year.	<i>Refer to District-Specific Data Sheet</i>	Met Goal
3.3.4 - Prohibited Discharges	If changes are made to the list, those changes will be included in the current reporting year annual report.	<i>Refer to Attachment M</i>	N/A
3.3.5-Construction Plan Review Procedures	Report the number of pre-construction meetings completed during the permit year.	<i>Refer to District-Specific Data Sheet</i>	Met Goal
3.3.6-Construction Site Inspections and Enforcement	Report the number of Forms 2448 obtained during the permit year.	<i>Refer to District-Specific Data Sheet</i>	Met Goal

MCM	Measurable Goal	Success	Met Goal?
3.3.7-Information submitted by the Public	Report the number construction calls and complaint forms received during the reporting year.	<i>Refer to District-Specific Data Sheet</i>	Met Goal
3.3.8-MS4 Staff Training	Report the number of TxDOT staff and contractors that participated in Special Provision 506-003, Section 506.3.3 for the CRPE, CRPE Alternate, Contractor Superintendent, etc, and EMS training modules during the reporting year.	<i>Refer to Attachment B</i>	Met Goal
3.3.9.a - List of Sites	Maintain a current list of Non-TxDOT construction sites active during the permit year, including the name, location, and permit number of the discharges that have been authorized under an NPDES or TPDES stormwater discharge permit.	<i>Refer to District-Specific Data Sheet and Attachment N</i>	Met Goal
3.3.9.b - Education and Training	Education and training of construction site operators.	<i>Refer to Attachment B</i>	Met Goal
4.3.1-Program Development	Implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term.	All elements are being implemented in each of the applicable BMPs.	Met Goal
4.3.2 -Ordinances and Other Regulatory Mechanisms	Report any changes to current regulatory mechanisms, if made.	<i>Refer to Attachment O</i>	N/A
4.3.3 - SWMP Update	Review and update as necessary, the SWMP and MCM implementation procedures	<i>Refer to Attachment C</i>	Met Goal

MCM	Measurable Goal	Success		Met Goal?
4.3.4 -Documentation and Records	Retain all associated records for at least three years after coverage under this permit terminates.	Records Are Available.		Met Goal
4.3.5-Long-term Operation and Maintenance	Amount of maintenance activities performed on post construction controls.	<i>Refer to District-Specific Data Sheet</i>		Met Goal
5.3.1-Program Development	Implement all applicable new elements and all applicable elements in newly regulated Phase II MS4 areas by the end of the current permit term.	All elements are being implemented in each of the applicable BMPs.		Met Goal
5.3.2.a - TxDOT- Owned Facilities and Control Inventory	Log the number of inspections completed during the permit year in the annual report.	Number of Inspections:	25	Met Goal
5.3.2.b - TxDOT- Owned Facilities and Control Inventory	Include the number of inspections completed during the permit year in the annual report.	Number of Inspections:	25	Met Goal
5.3.2.c.-TxDOT- Owned Facilities and Control Inventory	Map/locate permanent structural controls. Perform mapping of 5 districts per year. Include updated map in the annual report.	<i>Refer to Attachment P.            An interactive map of the data can be found on-line at  <a href="http://www.txdot.gov/inside-txdot/division/environmental/aots.html">http://www.txdot.gov/inside-txdot/division/environmental/aots.html</a></i>		Met Goal
5.3.2.d.-TxDOT- Owned Facilities and Control Inventory	Report the number of facility inspections in the annual report. Volume of spoil, sediment, and trash in Compass Codes 520, 521, 522, 523, 524, 527, 561, 562, 563, 570, and 620.	Number of Inspections:	25	Met Goal
		<i>Refer to Attachment F</i>		Met Goal

MCM	Measurable Goal	Success	Met Goal?
5.3.3-Training and Education	Record the number of TxDOT staff and contractor participants for each training class.	<i>Refer to Attachment B</i>	Met Goal
5.3.4-Disposal of Waste Material	Report the cost and volumes from Compass Data. Compass Function Codes: 511, 513, 830, 831.	<i>Refer to Attachment F</i>	Met Goal
5.3.5-Contractor Requirements and Oversight	Report the number of utility permit requests received from contractors during the permit year in the annual report. Any issues relayed to contractor operations will also be included, as necessary, in the annual report.	<i>Refer to District-Specific Data Sheet</i>	Met Goal
5.3.6.a-Roadway Operation and Maintenance Activities	Report the costs, number of acres mowed and chemical controls used during the permit year and include in the annual report. Compass Function Codes 511, 513, 541 and 545.	<i>Refer to Attachment F</i>	Met Goal
5.3.6.b-Roadway Operation and Maintenance Activities	Report the costs and cubic yards of ditches cleaned during the permit year and include in the annual report. Compass Function Codes 561.	<i>Refer to Attachment F</i>	Met Goal
5.3.6.c-Roadway Operation and Maintenance Activities	Report the pesticide herbicide cost from Compass Function Codes 548, 551, 552 and 540.	<i>Refer to Attachment F</i>	Met Goal

MCM	Measurable Goal	Success		Met Goal?
5.3.6.d-Roadway Operation and Maintenance Activities	Report the number of inspections performed	Number of Inspections:	25	Met Goal
5.3.6.e-Roadway Operation and Maintenance Activities	Report the number of inspections performed	Number of Inspections:	25	Met Goal
5.3.7.a- Structural Control Maintenance	The number of inspections completed, and the cost of trash and debris removed, if available, from permanent structural controls during the permit year, in Compass Codes 520, 521, 522, 523, 524, 572, 561, 562, 563, 570, and 620.	Number of Inspections:	25	Met Goal
		<i>See Attachment F</i>		Met Goal
5.3.7.b- Structural Control Maintenance	Map/locate permanent structural controls, such as detention/irrigation ponds, hazardous waste traps, sand filter traps, infiltration ponds, or catch basins	<i>Refer to Attachment P.            An interactive map of the data can be found on-line at  <a href="http://www.txdot.gov/inside-txdot/division/environmental/aots.html">http://www.txdot.gov/inside-txdot/division/environmental/aots.html</a></i>		Met Goal
5.3.7.c- Structural Control Maintenance	The volume, quantity and cost of spoil, sediment and trash removed, in Compass Codes 520, 521, 522, 523, 524, 527, 561, 562, 563, 570, and 620.	<i>Refer to Attachment F</i>		Met Goal

MCM	Measurable Goal	Success	Met Goal?
5.3.7.d- Structural Control Maintenance	The number of miles mowed during the permit year.	Reported in Section 5.3.6.a	Met Goal
5.3.7.e- Structural Control Maintenance	The miles of ditches cleaned during the permit year.	Reported in Section 5.3.6.b	Met Goal
5.3.8a- Pesticide, Herbicide, and Fertilizer Application and Management	Landscape maintenance. Report the number of miles mowed during the permit year.	Reported in Section 5.3.6.a	Met Goal
5.3.8b- Pesticide, Herbicide, and Fertilizer Application and Management	Report employees trained.	Reported in Section 5.3.3	Met Goal
5.3.8c- Pesticide, Herbicide, and Fertilizer Application and Management	Report implementation of controls to reduce the discharge of pollutants related to the storage and application of pesticides, herbicides, and fertilizers.	Reported in Section 5.3.6.c	Met Goal

MCM	Measurable Goal	Success			Met Goal?
5.3.8d- Pesticide, Herbicide, and Fertilizer Application and Management	Report collection and disposal of unused pesticides, herbicides, and fertilizers.	Reported in Section 5.3.6.c			Met Goal
6.3.1-Dry Weather Screening	Report on screening of the Phase I areas to detect the presence of illicit connections and improper discharges from adjacent MS4s and illegal third parties discharges to the MS4.	Reported in Section 2.3.9			Met Goal
6.3.2-Evaluation of Water Quality	In Year 4, evaluate the listed watersheds using existing stormwater characterization data collected by reliable sources such as TCEQ, local river authorities, partnerships, and/or other local efforts as appropriate.	Reported in Section 2.3.9			Met Goal
6.3.3-Floatables	Report implementation of statewide programs including the "Don't Mess with Texas" campaign, the "Adopt-a-Highway" program, and street sweeping to reduce the discharge of floatables into the statewide MS4.	Reported in Sections 1.3.1, 1.3.2, 1.3.3, 5.3.4, 5.3.6, and 5.3.7			Met Goal
7.3.1 -Discharges to Water Quality Impaired Water Bodies with an Approved TMDL	If the assessment indicates that TxDOT's operations may potentially contribute as a source of an adopted TMDL POC, TxDOT will implement appropriate BMPs and include in the annual report those impaired water bodies and POCs identified.	Refer to Attachment Q	Contributes:	No	Met Goal

MCM	Measurable Goal	Success			Met Goal?
7.3.1.1 -Targeted Controls	TxDOT will identify areas of focused effort or identify additional BMPs that will be implemented to reduce the POCs in the impaired waters.	Refer to Attachment R	Devel oped:	N/A	Met Goal
7.3.1.2 - Measurable Goals	For each targeted control, TxDOT will include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term.		Devel oped:	N/A	Met Goal
7.3.1.3 - Identification of Benchmarks	TxDOT will identify a benchmark goal (see Table 7.2) for the identified POC based on the watershed and TxDOT's district locations with one of the options provided in Section 7.3.1.3a), b), c), or d) options.	Refer to Attachment U	Select ion and Imple menta tion is Repor ted:	N/A	Met Goal
7.3.1.4 - Statewide Annual Report	Conduct an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark goal. Include analysis in annual report.		Condu cted:	N/A	Met Goal
7.3.1.5- Impairment for Bacteria	TxDOT has addressed the potential sources and will provide a summary of its findings in the annual report.	Refer to Attachment V	Includ ed:	N/A	Met Goal
			Evalu ated:	N/A	Met Goal

MCM	Measurable Goal	Success			Met Goal?
7.3.1.6- Monitoring or Assessment of Progress	Include documentation of this monitoring or assessment in the annual reports.	<i>Refer to Attachment W</i>	<i>Included:</i>	<i>N/A</i>	Met Goal
7.3.1.7- Observing no Progress Toward the Benchmark Goal	These revised BMPs will be included in the SWMP and subsequent annual reports.	<i>Refer to Attachment X</i>	<i>Included:</i>	<i>N/A</i>	Met Goal
7.3.2-Discharges Directly to Water Quality Impaired Water Bodies Without an Approved TMDL	If TxDOT discharges directly into an impaired water body without an approved TMDL, TxDOT will perform the following activities for the areas of the MS4. Update Table 7.3.	<i>Discharges into Water Bodies:</i>			Met Goal
		<i>Refer to Attachment Q</i>			
7.3.2.1- Discharging a Pollutant of Concern	Determining if discharges from the MS4 would be likely to contain the POCs at levels of concern.	<i>Refer to Attachment Y</i>			Met Goal
	Ensure that the SWMP includes focused BMPs, along with corresponding measurable goals, that TxDOT will implement.	<i>To be Reported in Year 3.</i> <i>Refer to Attachment Y</i>			Met Goal
	Submit notification of any additional BMPs to address the POCs to TCEQ.	<i>To be Reported in Year 4.</i> <i>Refer to Attachment Y</i>			Met Goal

MCM	Measurable Goal	Success	Met Goal?
7.3.2.2- Impairment of Bacteria	TxDOT has addressed the potential sources and will provide a summary of its findings in the annual report.	<p><i>Reported in Year 4.</i></p> <p><i>Refer to Attachment Z</i></p>	Met Goal
7.3.2.3-Annual Report	Submit notification of any additional BMPs to address the POCs to TCEQ.	<p><i>Refer to Attachment AA</i></p>	Met Goal
8.3.1 - TxDOT Agency Approved WPAPs	Submit a list of agency-approved WPAPs in the annual report for the respective permit year.	<p><i>Refer to Attachment BB</i></p>	Met Goal
9.1 -Expenditures	Develop the cost of expenditures representative of the funding spent on the stormwater management program. Include the expenditures in the annual report.	<p><i>Refer to Attachment CC</i></p>	Met Goal
10.1 - Point of Discharge Mapping	Map points of discharge from the MS4 area that were not submitted with the TxDOT MS4 permit application received by TCEQ on March 18, 2013. Completion of 20 percent per year. Submit updated maps with the annual report.	<p><i>Refer to Attachment DD.</i></p> <p><i>An interactive map of the data can be found on-line at</i></p> <p><i><a href="http://www.txdot.gov/inside-txdot/division/environmental/aots.html">http://www.txdot.gov/inside-txdot/division/environmental/aots.html</a></i></p>	Met Goal
10.2 - Major Structural Control Mapping	Map the location of major structural controls for stormwater discharge, including detention/retention ponds, major infiltration devices, etc. Completion of 20 percent per year. Submit updated maps with the annual report.	<p><i>Refer to Attachment EE.</i></p> <p><i>An interactive map of the data can be found on-line at</i></p> <p><i><a href="http://www.txdot.gov/inside-txdot/division/environmental/aots.html">http://www.txdot.gov/inside-txdot/division/environmental/aots.html</a></i></p>	Met Goal

# **District-Specific Data**

BMP	Measurable Goal	Abilene	Amarillo	Allanta	Austin	Beaumont	Bryan	Corpus Christi	Dallas	El Paso	Fort Worth	Houston	Laredo	Lubbock	Odessa	Paris	Pharr	San Angelo	San Antonio	Tyler	Waco	Wichita Falls	Yoakum	Totals
1.3.2-"Adopt-a-Highway" Program	Number of Volunteers	426	34	872	203	33	777	148	24	1523	2013	599	11	213	19	0	732	487	2614	347	474	252	1002	12,803
	Number of Miles Adopted	513	60	1408	1328	36	802	142	60	1515	1956	537	165	131	167	215	502	705	3763	582	1063	373	1389	17,412
	Volume Materials Removed (lbs)	10260	1200	28160	26560	720	16040	2840	1200	30300	39120	10740	3300	2620	5010	4300	10040	14100	75260	11640	21260	7460	27780	349,910
2.3.3-MS4 Areas Mapping	Provide updated map displaying surface waters receiving discharges.	Refer to Attachment E																						
2.3.6-Spill Prevention and Response	Report the number spills responded to. Compass Function Codes 520, 830.	Refer to Attachment F																						
2.3.7-Source Investigation and Elimination	Provide a list of illicit discharges/illicit connections detected. Summarize and report all follow-up actions resulting from screening to include identified RP and cost.	Refer to Attachment G																						
2.3.8-IDDE Inspections	Report the number inspections performed and provide a summary, if available, of the RP, cost, and enforcement.	Refer to Attachment G																						
	Illicit Flow Upstream Number of Inspections.	0	N/A	0	N/A	0	0	0	0	0	1	49	0	0	0	3	N/A	4	1	6	0	0	0	64
2.3.9.a-Overflows and Infiltration	Report the number of utility permits issued.	38	5		564	75		213	750	335	8,725	2,138	92	233					674		49			13,891
2.3.9.b-List of Dischargers	Changes will be included in the current reporting year annual report.	Refer to Attachment H																						
2.3.9.c-Hazardous Waste and Used Motor Vehicle Fluids	Number of Promotions	0	0		N/A	0		0	0	0	N/A	0	0	0					0		2			2
	Report the type of promotion and the intended audience.	Refer to Attachment I																						

BMP	Measurable Goal	Abilene	Amarillo	Allanta	Austin	Beaumont	Bryan	Corpus Christi	Dallas	El Paso	Fort Worth	Houston	Laredo	Lubbock	Odessa	Paris	Pharr	San Angelo	San Antonio	Tyler	Waco	Wichita Falls	Yoakum	Totals
2.3.9.d-Identification of Priority Areas	Update list, report if changes are made.	<i>Refer to Attachment J</i>																						
2.3.10.a-Spill Prevention and Response	Continue to implement and improve, as necessary, programs that prevent, contain, and respond to spills that may discharge into the MS4. Compass Function Codes 520, 830.	<i>Refer to Attachment F</i>																						
2.3.10.b-Agency coordination	Report any agency coordination conducted during the reporting year in the annual report.	<i>Refer to Attachment L</i>																						
3.3.3-Erosion and Sediment Control	Report the number of Form 2448 for all sites, obtained during the permit year.	0	9	0	37	3	1	0	33	28	12	8	0	0	2	7	9	3	21	2	14	2	0	191
3.3.5-Construction Plan Review Procedures	Report the number of pre-construction meetings obtained during the permit year.	0	4	1	37	2	5	1	12	24	8	27	0	5	12	3	18	4	28	7	3	7	1	209
3.3.6-Construction Site Inspections and Enforcement	Report the number of forms 2448 obtained during the permit year.	0	9	0	37	3	1	0	33	28	12	8	0	0	2	7	9	3	21	2	14	2	0	191
3.3.7-Information submitted by the Public	Report the number construction calls and complaint forms received during the reporting year.	31	8	0	46	0	0	0	0	12	0	6	0	1	0	0	14	0	2	0	0	0	0	120

BMP	Measurable Goal	Abilene	Amarillo	Allanta	Austin	Beaumont	Bryan	Corpus Christi	Dallas	El Paso	Fort Worth	Houston	Laredo	Lubbock	Odessa	Paris	Pharr	San Angelo	San Antonio	Tyler	Waco	Wichita Falls	Yoakum	Totals
3.3.8-MS4 Staff Training	Report the number of contractors that participated in Special Provision 506-003, Section 506.3.3 for the CRPE, CRPE Alternate, Contractor Superintendent, etc, and EMS training modules during the reporting year.	<i>Refer to Attachment B</i>																						
3.3.9.a- List of Sites	Report current list of non-TxDOT construction sites active during the permit year, including the name, location, and permit number of the discharges that have been authorized under an NPDES or TPDES stormwater discharge permit.	<i>Districts affirm immediately below if they have received non-TxDOT NOIs during the permit year. For NOIs and/or lists of projects, refer to Attachment N</i>																						
	Received non-TxDOT NOIs?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes					Yes		Yes		
4.3.4-Documentation and Records	Make records available for review by the TCEQ.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4.3.5-Long-term Operation and Maintenance	Amount of maintenance activities performed on post construction controls.	\$ 33,926	\$ 36,427	\$ -	\$ 167,000	\$ -	\$ -	\$ -	\$ -	\$ 341,208	\$ 9,123,803	\$ 9,483,772	\$ -	\$ 118,773	\$ -	\$ -	\$ 89,960	\$ 554,181	\$ 302,023	\$ -	\$ -	\$ -	\$ 332,680	\$ 20,583,754
5.3.2.d.-TxDOT-Owned Facilities and Control Inventory	Report the number of facility inspections in the annual report. Volume of spoil, sediment, and trash in Compass Codes 520, 521, 523, 524, 561, 570.	<i>Refer to Narrative Provisions and Attachment F</i>																						
5.3.4-Disposal of Waste Material	Report the cost and volumes from Compass Data. Compass Function Codes: 511, 513, 830, 831.	<i>Refer to Attachment F</i>																						

BMP	Measurable Goal	Abilene	Amarillo	Allanta	Austin	Beaumont	Bryan	Corpus Christi	Dallas	El Paso	Fort Worth	Houston	Laredo	Lubbock	Odessa	Paris	Pharr	San Angelo	San Antonio	Tyler	Waco	Wichita Falls	Yoakum	Totals
5.3.5-Contractor Requirements and Oversight	Report the number of utility permit requests received from contractors during the permit year.	48	117	79	1714	146	120	239	3200	465	9023	4530	93	233	331	140	2641	29	775	53	181	63	40	24,260
5.3.6.a-Roadway Operation and Maintenance Activities	Report the costs, number of acres mowed and chemical controls used during the permit year and include in the annual report. Compass Function Codes 511, 513, 541 and 545.	<i>Refer to Attachment F</i>																						
5.3.6.b-Roadway Operation and Maintenance Activities	Report the costs and cubic yards of ditches cleaned during the permit year and include in the annual report. Compass Function Codes 561.	<i>Refer to Attachment F</i>																						
5.3.6.c-Roadway Operation and Maintenance Activities	Report the pesticide herbicide cost from Compass Function Codes 548 and 540.	<i>Refer to Attachment F</i>																						
5.3.7.a- Structural Control Maintenance	The number of inspections completed, and the cost of trash and debris removed, if available, from permanent structural controls during the permit year, in Compass Codes 520, 521, 523, 524, 561, 570.	<i>Refer to Narrative Provisions and Attachment F</i>																						
5.3.7.c- Structural Control Maintenance	The volume, quantity and cost of spoil, sediment and trash removed, in Compass Codes 520, 521, 523, 524, 561, 570.	<i>Refer to Attachment F</i>																						
8.3.1-TxDOT Agency Approved WPAPs	Submit a list of agency-approved WPAPs for the respective permit year.	<i>Refer to Attachment CC</i>																						

### List of Attachments

A	Provide Copy of Trash-Off Planner (appendix to BMP 1.3.3)
B	Human Resources/Training Data - BMP 1.3.6, 1.3.7, 2.3.4, 3.3.8, 3.3.9.b, and 5.3.3.
C	Provide Updated SWMP Summary - BMP 2.3.1, 3.3.2, and 4.3.3
D	Provide Updated List of Allowable Non-Stormwater Discharges - BMP 2.3.2
E	Provide Updated Maps - BMP 2.3.3
F	District and Statewide Maintenance and Compass Data - BMPs 2.3.10, 5.3.4, and 5.3.6
G	Provide a List of ID/IC Detected, Number of Inspections, and a Summary of Follow-up Activities - BMP 2.3.7 & 2.3.8
H	Provide Updated List of Dischargers, as Necessary - BMP 2.3.9.b
I	Report the Number and Type of Promotions for Collection of Haz-Waste and Used Motor Oil - BMP 2.3.9.c
J	Update List of Priority Areas, as Necessary - BMP 2.3.9.d
K	4th-Year Reporting...Include the Wet Weather Analysis Reporting - BMP 2.3.9.f
L	Report Any USFWS Coordination Conducted During the Reporting Year - BMP 2.3.10.b
M	Include Changes to Prohibited Discharges - BMP 3.3.4
N	Include List of Active NPDES/TPDES Permitted Construction Sites - BMP 3.3.9
O	Report Any Changes to Current Regulatory Mechanisms - BMP 4.3.2
P	Map of Permanent Structural Controls - BMP 5.3.2.c
Q	Report Impaired Waterbodies and POCs Identified - BMP 7.3.1
R	Identify Areas of Focused Effort or Additional BMPs to Reduce POCs - BMP 7.3.1.1
S	Include Measurable Goal and Implementation Schedule for Targeted Controls - BMP 7.3.1.2
T	Provide Benchmark Goals and Report the Options Selected - 7.3.1.3
U	Provide Analysis of How BMPs Will be Effective in Contributing to the Benchmark Goal - BMP 7.3.1.4
V	Provide a Summary of Findings Addressing Potential Bacteria Sources - BMP 7.3.1.5
W	Provide Documentation of Monitoring or Assessment of Bacteria - BMP 7.3.1.6
X	Include Revised BMPs in SWMP and Annual Report - BMP 7.3.1.7
Y	Discharges to Impaired Waterbodies Require: Determining if Discharges Contain POCs at Levels of Concern; Include Focused BMPs, Along With Measureable Goals; and, Submit Notification of Additional BMPs to TCEQ - BMP 7.3.2.1
Z	Address Potential Bacteria Sources and Provide Summary of Findings - BMP 7.3.2.2
AA	Provide Notification of Additional BMPs to Address POCs to TCEQ - BMP 7.3.2.3
BB	Provide a List of Agency Approved WPAPs for Respective Permit Year - BMP 8.3.2
CC	Provide Annual Cost Spent on the TxDOT Stormwater Program - BMP 9.1
DD	Provide Maps of Points of Discharge Not Submitted with the Permit Application - BMP 10.1
EE	Provide Map of Major Structural Controls - BMP 10.2

# **Attachment A**

**Provide Copy of Trash-Off Planner (Appendix to BMP 1.3.3)**

# **Attachment B**

**Human Resources/Training Data - BMP 1.3.6, 1.3.7, 2.3.4, 3.3.8, 3.3.9.b, and  
5.3.3.**

## Attachment B

### Contractor Training Records

Course	Attendance
CON816: Construction Stage Gate Checklist	931
CON817: Completing SW Inspection Checklist	296
DES435: Using AP&D Stage Gate Checklist	29
DES907: Using PS&E Stage Gate Checklist	26
DES908: How to Create an EPIC Sheet	307
EL4030: Stormwater Erosion & Sediment (Day 1)	288
ENV103: Storm Water Pollution Prevention Plan*	45
ENV300: Stormwater Erosion & Sediment (Day 1)*	Retired
ENV301: Stormwater Erosion & Sediment Control (Day 2)*	2
ENV405: Field ENV Emergency Compliance	277
ENV414: Environmental Management System	320
ENV432: CGP Compliance/Enforcement	923
ENV433: Storm Water ENV Requirements Construction	345
ENV457: 404 Compliance During Construction	324
MNT415: Revegetation During Construction	932
<b>Total</b>	<b>5045</b>

\* Classroom Course

**Retired:** ENV300: Stormwater Erosion & Sediment (Day 1)\*

**No classroom** courses after April 2020 (ENV103 & ENV301)

## Attachment B - TxDOT Staff Training Records

	CON816: Construction Stage Gate Checklist	CON817: Completing SW Inspection Checklist	DES435: Using AP&D Stage Gate Checklist	DES907: Using PS&E Stage Gate	DES908: How to Create an EPIC Sheet	EL1430: Haz Materials Awareness	EL4030 Stormwater Erosion & Sediment Control	ENV103: Storm Water Pollu Prevent Plan	ENV206: UTS Facility Operator	ENV301: Stormwater Erosion & Sediment Control (Dav 2)	ENV405: Field ENV Emergency Compliance	ENV414: Environmental Mgt System	ENV432: CGP Compliance/ Enforcement	ENV433: Storm Water ENV Req Constructio	ENV457: 404 Compliance During Construction	ENV458 TxDOT SWAT Visit	MNT135: Adv. MNT Contract Insp.	MNT410: Herbicide Certification	MNT411: Herbicide Equipment Training
Abilene	7	6	8	8	11	32	9	3		2	8	13	12	12	12	1		51	
Amarillo	20	18	2	3	23	20	7		3	2	21	21	22	21	21	1		37	
Atlanta	23	30	4	3	27	25	10			2	26	31	26	35	28			44	
Austin	41	59	24	24	67	50	27	5	16	8	44	61	62	71	54	3		82	20
Beaumont	38	41	9	9	31	161	28	17		8	26	52	42	50	44	1	4	30	
Bryan	13	12	31	29	37	26	34	7	6	10	12	52	37	50	34	1	3	55	
Corpus Christi	12	13	3	2	13	5	4	6		7	13	13	13	12	15		1	36	1
Dallas	70	68	26	19	71	105	35			3	103	117	90	121	100	1		44	3
El Paso	9	19	5	2	16	4	8			2	16	14	17	16	16	1		36	
Fort Worth	49	51	10	15	56	81	35		1	1	45	51	51	53	55	2		46	25
Houston	45	38	14	11	53	61	27	9	5	22	39	43	42	46	46	1	6	33	30
Laredo	8	10	1	1	8	27	2		4		10	9	8	8	8		18	27	7
Lubbock	28	29	21	20	30	26	7	8	9	5	28	30	30	32	27	1		77	
Odessa	3	4	4	3	5	20	5	10	1	9	4	12	5	5	6			46	
Paris	21	19	8	9	23	20	17	1	1	2	19	26	21	27	21			50	
Pharr	4	5	1	1	6	39	1			3	7	6	5	7	7	2		33	8
SanAngelo	4	3	4	2	8	12	1	1		1	4	3	4	4	4	1		53	
SanAntonio	22	28	3	2	21	13	14	4		4	23	23	23	24	22	2	20	50	19
Tyler	9	10	16	16	22	23	22	2	1		10	24	23	24	26	2		32	13
Waco	36	40	14	11	43	25	30	11	3	14	37	48	44	47	45	1	10	28	15
Wichita Falls	14	13	7	8	11	20	10		1		12	12	13	14	12			35	1
Yoakum	16	15	11	11	19	3	31	18	7	12	12	80	20	61	20	1	1	32	20
Divisions	11	9	10	7	12	9	7	1	1	2	8	18	12	18	18	11	0	10	3
<b>Total Attendance</b>	<b>503</b>	<b>540</b>	<b>236</b>	<b>216</b>	<b>613</b>	<b>807</b>	<b>371</b>	<b>103</b>	<b>59</b>	<b>119</b>	<b>527</b>	<b>759</b>	<b>622</b>	<b>758</b>	<b>641</b>	<b>33</b>	<b>63</b>	<b>967</b>	<b>165</b>

	MNT415: Revegetation During Construction	SFH420: Hazardous Communication	SHF421: Hazardous Communicatio n Refresher
Abilene	7	67	47
Amarillo	20	76	87
Atlanta	25	50	64
Austin	35	95	69
Beaumont	41	60	35
Bryan	9	68	45
Corpus Christi	12	95	77
Dallas	52	185	126
El Paso	16	64	56
Fort Worth	38	105	88
Houston	32	179	190
Laredo	7	64	37
Lubbock	30	72	47
Odessa	3	56	124
Paris	17	44	58
Pharr	6	63	47
SanAngelo	3	32	19
SanAntonio	23	97	121
Tyler	10	39	52
Waco	38	56	49
Wichita Falls	13	46	25
Yoakum	13	57	39
Divisions	10	381	407
<b>Total Attendance</b>	<b>460</b>	<b>2051</b>	<b>1909</b>

ENV300: Stormwater Eros & Sedimn - Retired  
ENV458: TxDOT SWAT Visit - New Hands on Learning

# **Attachment C**

**Provide Updated SWMP Summary - BMP 2.3.1, 3.3.2, and 4.3.3**

No updates have been made to the SWMP this Permit Year.

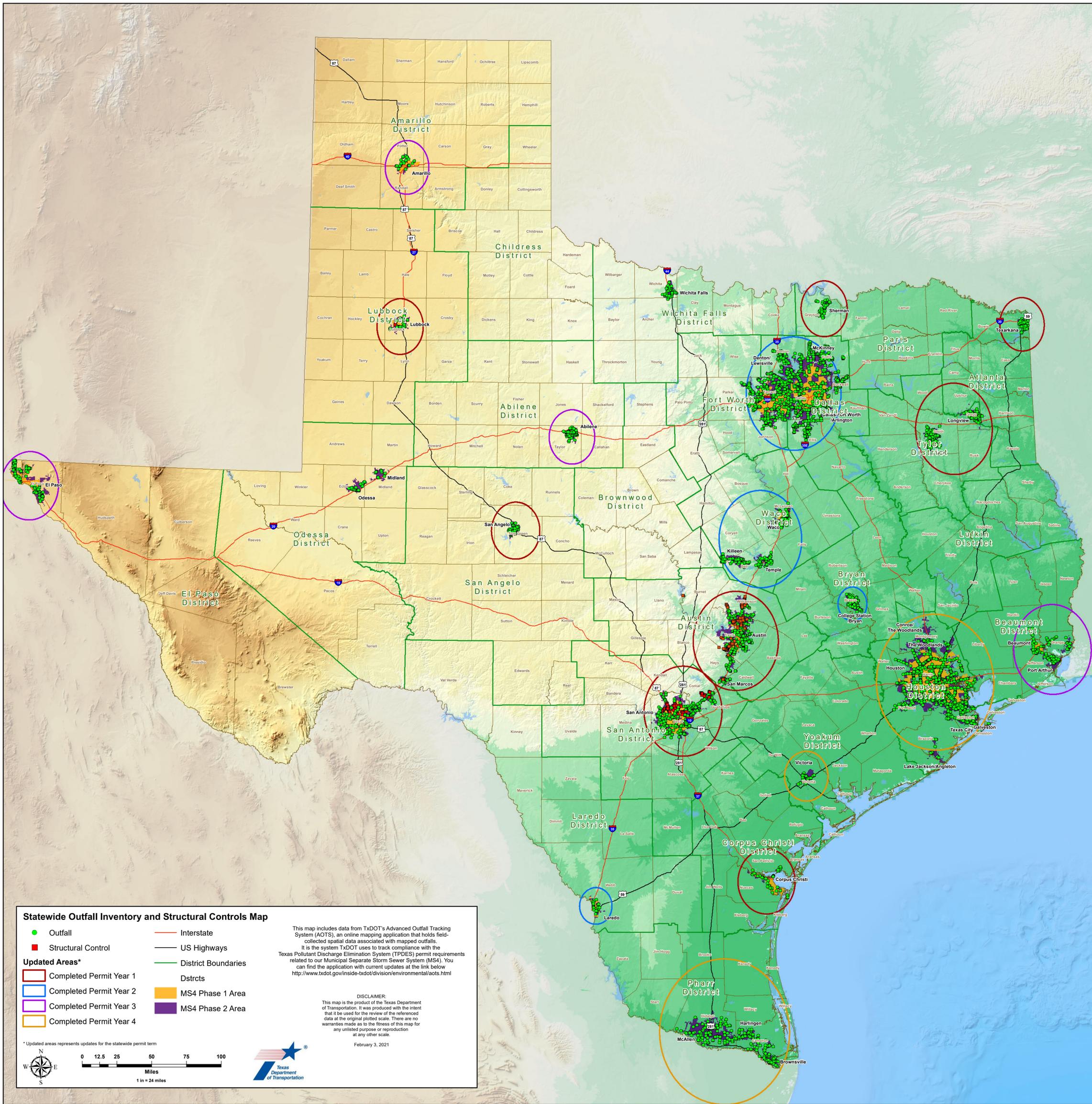
# **Attachment D**

**Provide Updated List of Allowable Non-Stormwater Discharges - BMP 2.3.2**

There are no updates to the List of Allowable Non-Stormwater Discharges. The list in the SWMP and Permit is complete and accurate.

# **Attachment E**

## **Provide Updated Maps - BMP 2.3.3**



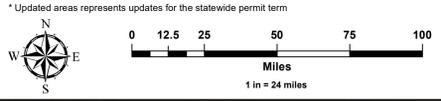
**Statewide Outfall Inventory and Structural Controls Map**

- Outfall
- Structural Control
- Updated Areas\***
- Completed Permit Year 1
- Completed Permit Year 2
- Completed Permit Year 3
- Completed Permit Year 4
- Interstate
- US Highways
- District Boundaries
- Dstrcts
- MS4 Phase 1 Area
- MS4 Phase 2 Area

This map includes data from TxDOT's Advanced Outfall Tracking System (AOTS), an online mapping application that holds field-collected spatial data associated with mapped outfalls. It is the system TxDOT uses to track compliance with the Texas Pollutant Discharge Elimination System (TPDES) permit requirements related to our Municipal Separate Storm Sewer System (MS4). You can find the application with current updates at the link below <http://www.txdot.gov/inside-txdot/division/environmental/aots.html>

**DISCLAIMER:**  
This map is the product of the Texas Department of Transportation. It was produced with the intent that it be used for the review of the referenced data at the original plotted scale. There are no warranties made as to the fitness of this map for any unlisted purpose or reproduction at any other scale.

February 3, 2021



# **Attachment F**

**District and Statewide Maintenance and Compass Data - BMPs 2.3.6, 2.3.10.a,  
5.3.2.d, 5.3.4, 5.3.6, 5.3.7.a, and 5.3.7.c**

## Attachment F

### MMS/Compass Data for MS4 Regulated Area per District

BMP #	5.3.4, 5.3.6.a		5.3.4, 5.3.6.a		2.3.6, 2.3.10.a, 5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.2.d, 5.3.7.a, 5.3.7.c		1.3.2		5.3.2.d, 5.3.7.a, 5.3.7.c	
	511 - ROW Mowing		513 - Spot Mowing		520 - Illegal Dumping Clean up		521 - Litter Removal		522 - Mechanical Sweeping		523 - Debris Removal		524 - Spot Litter		525 - Adopt-a-Highway		527 - Hand Sweeping	
	Acres	Cost	Hours	Cost	Cubic Yards	Cost	Acres	Cost	Miles	Cost	Miles	Cost	Acres	Cost	Hours	Cost	Square Yards	Cost
Abilene	2,050	\$ 67,732	755	\$ 57,419	0	\$ -	4,322	\$ 58,963	43	\$ 28,721	1	\$ 33	38	\$ 3,562	39	\$ 669	0	\$ -
Amarillo	2,313	\$ 127,292	10	\$ 2,813	25	\$ 2,765	12,768	\$ 87,003	1,217	\$ 229,833	21,376	\$ 140,523	0	\$ 174	0	\$ 5	5,391	\$ 2,612
Atlanta	2,987	\$ 117,168	163	\$ 19,037	0	\$ -	3,012	\$ 36,463	308	\$ 96,904	941	\$ 35,326	7	\$ 1,182	2	\$ 90	0	0
Austin	5,639	\$ 309,261	143	\$ 10,164	150	\$ 8,517	15,852	\$ 586,599	1,523	\$ 225,634	40,819	\$ 226,655	241	\$ 14,812	72	\$ 6,699	0	0
Beaumont	7,036	\$ 292,419	32	\$ 8,623	10	\$ 1,424	6,869	\$ 174,904	4,508	\$ 977,187	9,272	\$ 447,413	352	\$ 17,913	4	\$ 228	7,923	\$ 3,490
Bryan	4,422	\$ 107,877	54	\$ 5,605	30	\$ 2,100	11,915	\$ 159,146	184	\$ 38,021	19,355	\$ 58,290	1,547	\$ 28,820	6	\$ 324	5	\$ 88
Corpus Christi	5,641	\$ 220,824	12	\$ 3,639	20	\$ 307	27,071	\$ 478,604	3,417	\$ 470,507	17,869	\$ 559,276	569	\$ 4,257	1	\$ 40	2,263	\$ 4,113
Dallas	21,552	\$ 1,118,902	84	\$ 6,342	179	\$ 6,510	38,767	\$ 552,943	17,467	\$ 2,265,591	160,571	\$ 2,266,456	145	\$ 4,204	23	\$ 1,949	5,157	\$ 5,050
El Paso	237	\$ 32,056	289	\$ 35,159	2149	\$ 50,029	8,126	\$ 508,879	5,088	\$ 995,786	20,702	\$ 540,185	443	\$ 58,569	320	\$ 21,538	84,152	\$ 91,728
Fort Worth	30,119	\$ 1,376,487	11	\$ 3,840	13	\$ 370	133,337	\$ 1,917,264	10,018	\$ 1,070,099	25,921	\$ 966,636	1,501	\$ 28,984	159	\$ 11,569	11,298	\$ 16,141
Houston	99,111	\$ 1,356,322	13	\$ 6,107	357	\$ 13,114	213,834	\$ 3,157,447	44,154	\$ 5,618,497	103,133	\$ 2,502,661	2,682	\$ 193,970	36	\$ 4,421	569,807	\$ 293,114
Laredo	1,432	\$ 102,540	30	\$ 4,561	4	\$ 33	1,002	\$ 127,845	830	\$ 311,972	6,307	\$ 40,575	369	\$ 22,779	31	\$ 1,140	2	\$ 97
Lubbock	3,091	\$ 140,327	1,559	\$ 26,690	17	412.3539402	5,409	\$ 298,907	1,007	\$ 409,958	10,237	\$ 184,730	65	\$ 1,340	1	\$ 195	111	\$ 591
Odessa	3,294	\$ 123,063	30	\$ 4,561	3	\$ 147	6,766	\$ 160,663	565	\$ 212,908	1,136	\$ 50,879	611	\$ 7,078	20	\$ 2,551	11	\$ 1,264
Paris	2,113	\$ 80,934	0	\$ -	3	\$ 969	1,591	\$ 18,656	412	\$ 110,724	5,438	\$ 128,639	4	\$ 383	0	\$ 24	1,218	\$ 1,218
Pharr	9,954	\$ 491,505	1,559	\$ 26,690	1	\$ 47	15,163	\$ 308,775	3,760	\$ 889,051	3,373	\$ 217,480	26	\$ 4,791	201	\$ 10,656	1	\$ 55
San Angelo	2,429	\$ 87,846	120	\$ 14,429	0	\$ -	539	\$ 87,009	13,099	\$ 89,707	910	\$ 13,415	294	\$ 4,756	85	\$ 4,307	0	\$ 149
San Antonio	24,625	\$ 1,021,591	91	\$ 15,032	1042	\$ 31,013	159,032	\$ 1,768,801	13,894	\$ 2,742,035	54,371	\$ 1,183,425	762	\$ 180,373	134	\$ 7,338	1	\$ 3
Tyler	3,792	\$ 143,645	1	\$ 1,468	1	\$ 121	8,738	\$ 129,410	343	\$ 72,862	733	\$ 45,011	172	\$ 7,682	38	\$ 1,427	33	\$ 136
Waco	6,312	\$ 215,520	152	\$ 6,820	0	\$ -	3,330	\$ 71,871	667	\$ 79,308	1,180	\$ 18,710	269	\$ 12,583	32	\$ 4,161	9,988	\$ 1,585
Wichita Falls	2,654	\$ 109,994	1	\$ 236	104	\$ 2,110	3,775	\$ 46,622	693	\$ 188,149	4,155	\$ 87,651	10	\$ 141	190	\$ 2,623	0	\$ -
Yoakum	801	\$ 20,016	75	\$ 1	9	\$ 745	605	\$ 15,635	145	\$ 36,738	8,442	\$ 31,612	69	\$ 2,354	14	\$ 1,324	0	\$ -
<b>Total</b>	<b>241,605</b>	<b>\$ 7,663,322</b>	<b>5,183</b>	<b>\$ 259,235</b>	<b>4120</b>	<b>\$ 120,736</b>	<b>681,823</b>	<b>\$ 10,752,410</b>	<b>123,340</b>	<b>\$ 17,160,191</b>	<b>516,241</b>	<b>\$ 9,745,580</b>	<b>10,175</b>	<b>\$ 600,709</b>	<b>1407</b>	<b>\$ 83,279</b>	<b>697,362</b>	<b>\$ 421,435</b>

BMP #	5.3.6.c		5.3.6.a		5.3.6.c		5.3.6.c		5.3.6.c		5.3.6.c		5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.2.d, 5.3.7.a, 5.3.7.c	
	540 - Hand Vegetation Control		541 - Chemical Vegetation Control, Edges		545 - Chemical Vegetation Control, Basal Application		548 - Seeding		551 - Landscape Maintenance		552 - Tree and Brush Control		561 - Cleaning Ditches		562 - Ditch Reshaping		563 - Slope Repair/Stabilization	
	Hours	Cost	Acres	Cost	Hours	Cost	Square Yards	Cost	Acres	Cost	Miles	Cost	Cubic Yards	Cost	Linear Feet	Cost	Square Yards	Cost
Abilene	0	\$ -	51	\$ 16,771	10	\$ 11,525	0	\$ -	0	\$ -	84	\$ 57,509	202	\$ 25,289	484	\$ 1,021	570	\$ 1,360
Amarillo	128	\$ 24,382	225	\$ 8,166	3	\$ 852	0	\$ -		\$ -	289	\$ 60,992	769	\$ 233,860	2,354	\$ 7,792	6,658	\$ 26,519
Atlanta	40	\$ 10,670	226	\$ 42,026	3	\$ 374	181,526	\$ 1,743	153	\$ 44,411	559	\$ 448,507	972	\$ 61,150	1,342	\$ 3,103	280	\$ 10,235
Austin	378	\$ 39,086	603	\$ 128,986	0	\$ -	52,623	\$ 185	5	\$ 4,714	94	\$ 21,672	2,073	\$ 76,966	4,421	\$ 16,015	0	\$ -
Beaumont	322	\$ 42,530	315	\$ 51,541	0	\$ -	13	\$ 159	3	\$ 3,767	192	\$ 36,768	1,647	\$ 39,590	223,599	\$ 372,388	18,837	\$ 212,095
Bryan	12	\$ 1,748	138	\$ 39,168	0	\$ -	0	\$ -	0	\$ -	221	\$ 64,988	732	\$ 16,164	3,383	\$ 22,270	0	\$ -
Corpus Christi	137	\$ 39,444	708	\$ 107,944	0	\$ -	0	\$ -	50	\$ 13,019	338	\$ 211,947	475	\$ 7,919	1,355	\$ 11,856	11,073	\$ 21,341
Dallas	287	\$ 31,230	1,562	\$ 251,918	12	\$ 6,423	110	\$ 1,197	41	\$ 7,921	29	\$ 6,052	6,934	\$ 191,093	24,741	\$ 142,389	42,910	\$ 52,364
El Paso	1,673	\$ 109,262	3,866	\$ 428,741	0	\$ -	0	\$ -	29,231	\$ 845,056	184	\$ 52,897	1,377	\$ 50,843	898	\$ 2,981	3,065	\$ 24,145
Fort Worth	34	\$ 8,030	1,627	\$ 393,015	0	\$ -	0	\$ -	908	\$ 32,874	788	\$ 972,535	2,768	\$ 29,580	64,997	\$ 104,232	31,603	\$ 301,275
Houston	384	\$ 58,635	8,859	\$ 440,118	0	\$ -	171	\$ 6,758	24,370	\$ 862,919	30	\$ 6,512	20,667	\$ 121,394	509,306	\$ 802,752	88,911	\$ 2,340,338
Laredo	6	\$ 1,130	85	\$ 9,915	33	\$ 1,910	0	\$ -	1,297	\$ 33,109	7	\$ 10,947	865	\$ 2,369	427	\$ 867	7,939	\$ 6,766
Lubbock	34	\$ 690	695	\$ 123,479	0	\$ -	0	\$ -	16	\$ 10,875	65	\$ 10,615	1,468	\$ 96,677	3,230	\$ 3,107	0	\$ -
Odessa		\$ -	128	\$ 18,985	0	\$ -	0	\$ -	9,944	\$ 312,183	66	\$ 10,297	10,854	\$ 14,099	0	\$ -	0	\$ -
Paris	10	\$ 4,449	30	\$ 5,204	0	\$ -	117,914	\$ 356	534	\$ 9,808	1,102	\$ 167,549	47	\$ 3,920	0	\$ -	0	\$ -
Pharr	517	\$ 35,206	1,451	\$ 140,875	342	\$ 26,759	10	\$ 3,849	595	\$ 17,046	5	\$ 3,520	4,225	\$ 38,849	13,785	\$ 12,694	847	\$ 2,383
San Angelo	10	\$ 1,160	110	\$ 23,635	7	\$ 1,472	0	\$ -	21	\$ 5,627	195	\$ 1,169,249	391	\$ 638	9,253	\$ 874	17	\$ 3,805
San Antonio	199	\$ 11,200	1,646	\$ 246,006	264	\$ 16,398	2,382	\$ 4,755	0	\$ -	297	\$ 329,430	2,414	\$ 36,717	1,215	\$ 15,729	184	\$ 357,935
Tyler	3	\$ 1,340	340	\$ 27,254	0	\$ -	59,469	\$ 574	0	\$ 138	100	\$ 66,850	3,484	\$ 119,986	2,735	\$ 17,480	2,692	\$ 39,555
Waco	135	\$ 11,518	296	\$ 43,253	1	\$ 104	52	\$ 2,184	0	\$ -	46	\$ 25,216	742	\$ 15,587	671	\$ 7,237	75	\$ 178
Wichita Falls	82	\$ 6,480	174	\$ 19,378	0	\$ -	0	\$ -	0	\$ -	6	\$ 3,589	218	\$ 6,559	300	\$ 391	23	\$ 3,341
Yoakum		\$ -	132	\$ 23,086	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	58	\$ 502	0	\$ -
<b>Total</b>	<b>4,393</b>	<b>\$ 438,192</b>	<b>23,268</b>	<b>\$ 2,589,463</b>	<b>676</b>	<b>\$ 65,817</b>	<b>414,270</b>	<b>\$ 21,759</b>	<b>67,168</b>	<b>\$ 2,203,467</b>	<b>4,696</b>	<b>\$ 3,737,642</b>	<b>63,322</b>	<b>\$ 1,189,250</b>	<b>868,551</b>	<b>\$ 1,545,684</b>	<b>215,685</b>	<b>\$ 3,403,633</b>

BMP #	5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.2.d, 5.3.7.a, 5.3.7.c		5.3.4		5.3.4		Total
	570 - Culvert and Storm Drain Maintenance		620 - Bridge Channel Maintenance		830 - Hazard Material Clean Up, Spills or Leaking Storage Tanks		831 - Hazardous Material Clean up, Abandoned Materials		
	Each	Cost	Cubic Yards	Cost	Hours	Cost	Hours	Cost	Cost
Abilene	1	\$ 1,349	0	\$ -	0	\$ -	0	\$ -	\$ 331,923
Amarillo	75	\$ 12,701	0	\$ -	0	\$ -	1	\$ 25	\$ 968,308
Atlanta	65	\$ 102,043	599	\$ 10,201	0	\$ -	1	\$ 30	\$ 1,040,662
Austin	7,896	\$ 364,384	794	\$ 15,378	0	\$ -	0	\$ 65	\$ 2,055,794
Beaumont	1,989	\$ 128,529	79	\$ 1,110	1	\$ 221	0	\$ -	\$ 2,812,300
Bryan	23	\$ 5,331	3899	\$ 66,215	16	\$ 308	0	\$ -	\$ 616,464
Corpus Christi	252	\$ 19,493	841	\$ 83,848	28	\$ 1,147	0	\$ -	\$ 2,259,526
Dallas	1,534	\$ 372,304	1460	\$ 1,333	6	\$ 18,355	6	\$ 166	\$ 7,310,692
El Paso	512	\$ 353,652	389332	\$ 436,796	59	\$ 5,554	0	\$ -	\$ 4,643,857
Fort Worth	545	\$ 52,800	345	\$ 67,068	39	\$ 1,680	1	\$ 46	\$ 7,354,526
Houston	7,803	\$ 1,369,414	115	\$ 39	475	\$ 26,670	167	\$ 6,469	\$ 19,187,671
Laredo	37	\$ 3,439	0	\$ -	37	\$ 2,445	0	\$ -	\$ 684,440
Lubbock	18	\$ 22,062	0	\$ -	0	\$ -	0	\$ -	\$ 1,330,656
Odessa	22	\$ 25,322	0	\$ -	3	\$ 252	45	\$ 3,903	\$ 948,153
Paris	1,941	\$ 309,577	554	\$ 1,441	0	\$ -	0	\$ -	\$ 843,853
Pharr	1,252	\$ 119,127	202	\$ 45,552	0	\$ -	0	\$ -	\$ 2,394,912
San Angelo	0	\$ 16	0	\$ -	17	\$ 767	0	\$ -	\$ 1,508,861
San Antonio	6,509	\$ 1,204,324	49	\$ 26,430	28	\$ 1,802	1	\$ 58	\$ 9,200,394
Tyler	12	\$ 43,874	3	\$ 6,446	0	\$ -	0	\$ -	\$ 725,259
Waco	28	\$ 12,413	143	\$ 11,880	0	\$ -	10	\$ 464	\$ 540,591
Wichita Falls	367	\$ 13,255	0	\$ -	0	\$ -	0	\$ -	\$ 490,520
Yoakum	0	\$ -	24	\$ 219	0	\$ -	3	\$ 257	\$ 132,489
<b>Total</b>	<b>30,882</b>	<b>\$ 4,535,408</b>	<b>398,439</b>	<b>\$ 773,957</b>	<b>709</b>	<b>\$ 59,200</b>	<b>234</b>	<b>\$ 11,485</b>	<b>\$ 67,381,851</b>

# **Attachment G**

**Provide a List of ID/IC Detected, Number of Inspections, and a Summary of  
Follow-up Activities - BMP 2.3.7 and 2.3.8**

<b>ENV Statewide</b>	
<b>Number of inspections: 669</b>	
<b>Detections</b>	<b>Summarizations</b>
Houston District Outfall mapping project	5 illicit discharges were found during outfall mapping, description is following. Follow-up is ongoing. 669 outfalls were dry weather screened.
Houston District Outfall mapping project	HOU_FB_01176: Third party outfall discharging. White flow and staining observed at outfall. Field tests and lab samples taken.
Houston District Outfall mapping project	HOU_HR_00493: Moderate flow of approximately 5 percent of the outfall diameter observed. Field tests and lab samples taken.
Houston District Outfall mapping project	HOU_HR_00723: Milky white liquid flowing out of outfall. Field tests and lab samples taken.
Houston District Outfall mapping project	HOU_MO_00973: Slow trickle coming from outfall with slight foam build up. Possible Third party as the outfall is adjacent to a City of Conroe Storm Sewer manhole. Returned during dry weather period of >72 hours for field
Houston District Outfall mapping project	HOU_HR_01499: Third party outfall originating from the City of Houston sewer system discharging into a branch of Greens Bayou. Considered an obvious illicit discharge based on physical parameters identified, field test
NA	NA

<b>District - Abilene</b>	
Number of inspections: 0	
Detections	Summarizations
N/A	N/A

<b>District - Amarillo</b>	
Number of inspections: N/A	
Detections	Summarizations
N/A	N/A

N/A	N/A
N/A	N/A

## District - Atlanta

Number of inspections: 0

Detections	Summarizations
N/A	N/A

## District - Austin

Number of inspections: N/A

Detections	Summarizations
N/A	N/A
N/A	N/A
N/A	N/A

N/A	N/A
N/A	N/A
N/A	N/A

District - Beaumont	
Number of inspections: 0	
Detections	Summarizations
N/A	N/A

District - Bryan	
Number of inspections: 0	
Detections	Summarizations
N/A	N/A
N/A	N/A

N/A	N/A

District - Corpus Christi	
Number of inspections: 0	
Detections	Summarizations
N/A	N/A

District - Dallas	
Number of inspections: 0	
Detections	Summarizations



District - Fort Worth	
Number of inspections: 1	
Detections	Summarizations
L.H. and R.J. Springfield Revocable Trust	<p>07/19/2019 - 2201 N. FM-2257 (AKA - Jay Bird Ln), Unincorporated Parker County, Springtown, TX - Property owner cust a drainage ditich beginning on the south side of the property and continued around to the east side of the property. The drainage ditch was then cut through the wall of the TxDOT ROW creating an outflow into the TxDOT drainage ditch. The flow was from south to north toward a creek which is along the north property line of the creek. With moderate to heavy rains, water runs across the pasture from North to South and then travels back to the North until it flows into the TxDOT drainage ditch overwhelming the driveway culvert causing water to flow onto FM-2257 (AKA - Jay Bird Ln. This investigation is ongoing and working with TCEQ to resolve the stormwater violation. No estimate on TxDOT dollars spent at this time.</p> <p>This investigation is still on-going and no cost has been charged against this investigation for FY-2020</p>
N/A	N/A
N/A	N/A

N/A	N/A
N/A	N/A
N/A	N/A

District - Houston	
Number of inspections: 49	
Detections	Summarizations
Unknown	Location: US 59 NB @ FM 2919 (Montgomery Co); Date: 9/4/2019 Cost: RP paid
HMI	Location: IH 69 @ Creekwood (Harris Co); Date: 9/18/2019 Cost: RP paid
Unknown	Location: IH 45 @ Spring Creek (Montgomery Co); Date: 9/25/2019 Cost: RP paid
Unknown	Location: IH 45 @ Pruitt Rd (Montgomery Co); Date: 10/6/2019 Cost: RP paid
Unknown	Location: IH 45 @ Airtex (Harris Co); Date: 10/14/2019 Cost: RP paid
HMI	Location: IH 610 EB before HTR (Harris Co); Date: 10/16/2019 Cost: RP paid

Additional from Houston District	
Detections	Summarizations
Masters	Location: US 59 NB @ Frostoria (Harris Co); Date: 10/22/2018 Cost: \$4,893.20
HMI	Location: FM 1485 @ Stephen Forest (Montgomery Co); Date: 11/11/2018 Cost: \$13,507.69
HMI	Location: SH 105 @ Walker Rd (Montgomery Co); Date: 11/20/2018 Cost: RP paid
Masters	Location: FM 3038 @ SH 75 (Montgomery Co); Date: 11/21/2018 Cost: RP paid

Masters	Location: Spur 10 @ Robinowitz Rd (Fort Bend Co); Date: 11/28/2018 Cost: RP paid
HMI	Location: US 290 @ Mueske (Waller Co); Date: 11/29/2018 Cost: RP paid
HMI	Location: BS 35E West Columbia @ SH 36 (Brazoria Co); Date: 12/10/2018 Cost: RP paid
Masters	Location: FM 3083 @ Jefferson Chemical (Waller Co); Date: 12/12/2018 Cost: RP paid

## Additional from Houston District

Detections	Summarizations
HMI	Location: US 90 SB @ Chiminey Rock (Harris Co); Date: 10/23/2019 Cost: \$3977.69
Unknown	Location: US 90 EB @ SL 8 (Harris Co); Date: 11/5/2019 Cost: RP paid
Unknown	Location: IH 10 WB in Baytown (Harris Co); Date: 11/6/2019 Cost: RP paid
Unknown	Location: BW 8 WB feeder @ Hollister (Harris Co); Date: 11/6/2019 Cost: RP paid
Unknown	Location: FM 362 @ FM 529 @ Wilson Rd (Harris Co);
Unknown	Location: Affluent WB @ US 59 (Harris Co); Date: 11/11/2019 Cost: RP paid
Unknown	Location: US 59 @ Green Rd (Harris Co); Date: 11/14/2019 Cost: RP paid
Unknown	Location: IH 45 @ Woodlands Pkwy (Montgomery Co);
Unknown	Location: IH 45 @ Shepard Hill Rd (Montgomery Co); Date: 11/15/2019 Cost: RP paid
Unknown	Location: IH 69 @ Green Rd (Harris Co); Date: 11/21/2019 Cost: RP paid
Unknown	Location: IH 10 @ Pederson Rd entrance ramp (Harris Co);
HMI	Location: SH 225 @ Goodyear (Harris Co); Date: 1/14/2020 Cost: \$11699.38
Unknown	Location: FM 2855 north of US 90 (Waller Co); Date: 1/16/2020 Cost: RP paid
Unknown	Location: FM 1462/ FM 521 at CR 48 (Galveston Co); Date: 1/17/2020 Cost: RP paid
Masters	Location: IH 10 @ Sjolander (Harris Co); Date: 1/17/2020 Cost: \$ 3336.51

Unknown	Location: US 59 @ University (Harris Co); Date: 1/20/2020 Cost: RP paid
Masters	Location: US 59 @ Brazos River (Waller Co); Date: 1/20/2020 Cost: \$ 3945.88
Unknown	Location: FM 3083 @ Loop 339 (Montgomery Co); Date: 1/20/2020 Cost: RP paid
HMI	Location: IH 69 @ FM 1960 (Harris Co); Date: 1/21/2020 Cost: \$ 15407.04
HMI	Location: SH 105 @ Waukegen (Montgomery Co); Date: 2/5/2020 Cost: \$27040.03
Masters	Location: US 90 @ Crosby (Harris Co); Date: 2/10/2020 Cost: \$ 3955.00
Unknown	Location: SH 6 @ Hempstead (Montgomery Co); Date: 2/11/2020 Cost: RP paid
Unknown	Location: SH 146 SB @ Banana School (Galveston Co);
Unknown	Location: IH 10 EB @ FM 359 (Waller Co); Date: 2/17/2020 Cost: RP paid
Unknown	Location: IH 45 @ Shepard Hill Rd (Montgomery Co); Date: 2/19/2020 Cost: RP paid
HMI	Location: FM 2854 Conroe (Montgomery Co); Date: 3/7/2020 Cost: \$4255.64
Unknown	Location: IH 10 EB @ FM 359 (Waller Co); Date: 3/16/2020 Cost: RP paid
Unknown	Location: IH 10 WB @ Woods Rd (Waller Co); Date: 3/19/2020 Cost: RP paid
HMI	Location: IH 10 @ FM 1489 Brookshire (Waller Co); Date: 3/25/2020 Cost: \$ 1811141.00
Unknown	Location: SH 99 NB @ Mueschkee / Cypress Hill (Harris Co); Date: 4/7/2020 Cost: RP paid
Unknown	Location: FM 1791 @ Taliaferro (Montgomery Co); Date: 4/8/2020 Cost: RP paid
Masters	Location: SH 75 @ Africian Hill (Montgomery Co); Date: 4/21/2020 Cost: \$ 11568.38

HMI	Location: US 90 @ Miller Rd (Harris Co); Date: 4/27/2020 Cost: \$ 9043.61
Masters	Location: US 59 @ Roman Forest (Montgomery Co); Date: 5/4/2020 Cost: \$ 2283.00
HMI	Location: US 90 @ McCarty (Harris Co); Date: 5/12/2020 Cost: \$ 23483.00
Masters	Location: SH 105 @ Old Dobbin Rd (Montgomery Co); Date: 5/12/2020 Cost: \$ 7295.78
Unknown	Location: IH 610 WB @ McCarty (Harris Co); Date: 5/21/2020 Cost: RP paid
Unknown	Location: US 59 SB @ FM 2919 (Fort Bend Co); Date: 5/22/2020 Cost: RP paid
Unknown	Location: IH 10 @ Thompson Rd (Harris Co); Date: 6/14/2020 Cost: RP paid
Unknown	Location: IH 45 SB @ Stokes Rd (Harris Co); Date: 6/24/2020 Cost: RP paid
Unknown	Location: FM 1774 (Montgomery Co); Date: 7/26/2020 Cost: RP paid
Unknown	Location: BW 8 @ JFK (Harris Co); Date: 7/29/2020 Cost: RP paid
HMI	Location: IH 45 @ Woodlands Pkwy (Montgomery Co); Date: 7/30/2020 Cost: RP paid

## District - Lubbock

Number of inspections: 0

Detections	Summarizations
N/A	N/A

## District - Odessa

Number of inspections: 0

Detections	Summarizations
N/A	N/A
N/A	N/A
N/A	N/A

N/A	N/A
N/A	N/A
N/A	N/A

District - Paris	
Number of inspections: 3	
Detections	Summarizations
Scott Shannon/Logan Arthur	No illicit discharges detected. No cost associated.
N/A	N/A

District - Pharr	
Number of inspections: N/A	
Detections	Summarizations
N/A	N/A
N/A	N/A

N/A	N/A

District - San Angelo	
Number of inspections: 4	
Detections	Summarizations
Unknown	10-8-2019 - 2750 FM 388, 76905 - Previous potential for illicit discharge. No illicit discharge or potential observed today.
Stripes @ Bell St & US67 (Houston Harte)	10-30-2019 - No illicit discharges and/or illicit connections were observed.
Unknown	8-21-2020 - No illicit discharges and/or illicit connections were observed.
Unknown	8-26-2020 - No illicit discharges and/or illicit connections were observed.
N/A	N/A
N/A	N/A

District - San Antonio	
Number of inspections: 1	
Detections	Summarizations
Austin Bridge and Road LP	Contractor had no S&E controls in place. Contractor cleaned dirt off car lot. Still no controls set in place by contractor. Austin B&R has not responded as of 10/14/2020

N/A	N/A

## District - Tyler

Number of inspections: 6

Detections	Summarizations
NA	NA

## District - Waco

Number of inspections: 0

Detections	Summarizations
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## District - Yoakum

Number of inspections: 0

Detections	Summarizations
n/a	n/a

# **Attachment H**

**Provide Updated List of Dischargers, as Necessary - BMP 2.3.9.b**

TxDOT developed a GIS map and database to identify TPDES and NPDES permitted dischargers to the State's Right-of-Way (ROW) in Phase I Areas of the District's MS4 regulated areas. Data were collected from MS4s throughout the state, counties, TCEQ and EPA, as listed in the following summary table. The database includes TCEQ's TPDES industrial stormwater permit database, the TPDES municipal wastewater database, and the TPDES industrial wastewater permit database. The database also includes EPA's NPDES industrial stormwater permit database, the NPDES municipal wastewater database, and the NPDES industrial wastewater permit database. The GIS database can be provided as requested.

TxDOT's TPDES MS4 Permit - Permitted MS4 Discharger ROW Analysis and Master Database Process Documentation  
MS4 Discharger Results/Database Summary

Agency/MS4 Name	Agency/MS4 type	Population <sup>2</sup>	Summary of Records Located within TxDOT MS4 Phase I Near and Adjacent Boundary <sup>1</sup>					Comments
			MS4 Records	TCEQ Wastewater Outfalls	TCEQ_Permit Registry	EPA NPDES Major Records**	EPA NPDES Records	
Abilene	City	117,063	NP	0	18	0	61	
Amarillo	City	190,695	60	0	21	0	77	City provided an access database record of 308 outfalls.
Arlington	City	365,438	248	0	55	0	253	City provided spreadsheet record of approximately 1300 verified outfalls (out of 3556).
Austin	City	790,390	1976	1	44	2	340	City of Austin provided a feature class of their entire stormwater infrastructure. MS4 records used for analysis included the feature classes 'F_Header' (field collected GPS records) and 'Header' (Desktop generated records not yet field verified) where the 'OUTFALL' field was set to true.
Beaumont	City	118,296	NP	0	18	1	77	
Corpus Christi	City	305,215	326	2	34	5	178	City provided spreadsheet record of approximately 2600 outfalls.
Dallas	City	1,197,816	NP	7	229	4	757	
El Paso	City	649,121	1	4	81	2	337	City provided spreadsheet record of 5 sample basin locations.
Fort Worth	City	741,206	2461	0	167	1	567	City provided shapefile of approximately 10,400 outfalls.
Garland	City	226,876	184	0	22	0	52	City provided shapefile of approximately 1600 outfalls.
Harris County (HCFCD)	County	4,092,459	177	78	421	26	4969	HCFCD obtained TxDOT's near and Adjacent Boundary and provided 177 records.
Houston	City	2,099,451	NP	See above	See above	See above	See above	City of Houston shares a regulatory area and permit with Harris County and HCFCD as the Joint Task Force.
Irving	City	216,290	NP	0	3	1	36	
Laredo	City	236,091	NP	0	14	1	48	
Lubbock	City	229,573	18	0	27	0	133	City provided shapefile record of 32 outfalls.
Mesquite	City	139,824	497	0	3	0	40	City provided shapefile record of approximately 1900 stormwater end treatment (i.e., headwalls) points.
NTTA	Transportation	Not applicable	46	0	29	0	99	NTTA provided a feature class of their entire stormwater infrastructure. MS4 records used for analysis included the outfall point feature class where "STA_CAT" field set to OUTFALL. An arbitrary ROW boundary was created to capture all NTTA records and used to perform intersection analysis.
Pasadena	City	149,043	7	0	0	0	12	City of Pasadena's city limit feature class from TNRIS was used to create boundary for MS4 records intersection analysis and to capture NPDES records not captured within TxDOT's Phase 1 regulated area .
Plano	City	259,841	251	0	1	0	27	City provided shapefile record of approximately 4800 outfalls.
San Antonio	City	1,327,407	3249	6	207	1	1234	City provided shapefile record of approximately 13,800 outfalls.
Waco	City	124,805	NP	0	5	0	54	
<b>TOTAL</b>			<b>9501</b>	<b>98</b>	<b>1399</b>	<b>44</b>	<b>9351</b>	<b>20,349</b>

1. Refer to Permitted Discharger Identification, Data Collection and Coordination, and ROW Analysis and Master Database Process Documentation Memo Dated 10/25/2019 under Contract 577XXSM002, WA2 for additional information.

2. 2010 US Census Data

NP - No data provided by Entity for analysis

\*\*EPA NPDES Major records are a subset of EPA NPDES Records

# **Attachment I**

**Report the Number and Type of Promotions for Collection of Haz-Waste and  
Used Motor Oil - BMP 2.3.9.c**

<b>Districts</b>	
<b>Abilene</b>	
Type of Promotion	Intended Audience
N/A	N/A
<b>Amarillo</b>	
Type of Promotion	Intended Audience
N/A	N/A
<b>Austin</b>	
Type of Promotion	Intended Audience
N/A	N/A
<b>Beaumont</b>	
Type of Promotion	Intended Audience
N/A	N/A
<b>Corpus Christi</b>	
Type of Promotion	Intended Audience

# Districts

n/a	n/a

## Dallas

Type of Promotion	Intended Audience
NA	NA

## El Paso

Type of Promotion	Intended Audience
N/A	N/A

## Fort Worth

Type of Promotion	Intended Audience
N/A	N/A

## Houston

Type of Promotion	Intended Audience
N/A	N/A

<b>Districts</b>	
<b>Laredo</b>	
Type of Promotion	Intended Audience
N/A	N/A

<b>Lubbock</b>	
Type of Promotion	Intended Audience
N/A	N/A

<b>San Antonio</b>	
Type of Promotion	Intended Audience
N/A	N/A

<b>Waco</b>	
Type of Promotion	Intended Audience
Recycle herbicide jugs	TxDOT Maintenance Staff
Recycle used motor oil and filters	TxDOT Area Office Staff
N/A	N/A
N/A	N/A
N/A	N/A

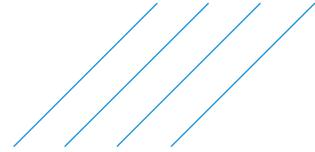
# **Attachment J**

**Update List of Priority Areas, as Necessary - BMP 2.3.9.d**

There are no updates to the list of priority areas.

# **Attachment K**

**4th-Year Reporting...Include the Wet Weather Analysis Reporting - BMP 2.3.9.f**



## Memo

**To:** Adrienne Boer, CFM, CPESC, PMP  
Program Manager, TxDOT Environmental Affairs Division

<b>From:</b> Chad Richards, PE, CPSWQ, CFM	<b>Email:</b> chad.richards@atkinsglobal.com
<b>Date:</b> 30 October, 2020	<b>Phone:</b> +1 281 529 4200
<b>Ref:</b> 579XXSM001, WA 03, Year 4 In Lieu Data Analysis	<b>cc:</b> Kofi Sam, PE, CFM, CPESC (Atkins)

**Subject** TxDOT Year 4 In Lieu Monitoring Data Analysis and Results

### Background

Pursuant to the Texas Pollutant Discharge Elimination System (TPDES) Permit WQ0005011000 Part IV.A.2 and Section 2.3.9 of the State Stormwater Management Program (SWMP), the State is required to evaluate water quality using existing stormwater characterization data for the Phase I areas where the State was previously responsible for outfall or watershed monitoring.

On May 12, 2020, the Texas Department of Transportation (TxDOT) Environmental Affairs Division (ENV) issued Work Authorization No. 57903SM001 under Scientific Services Contract No. 579XXSM001 to Atkins to perform data analysis of existing stormwater characterization data to meet the requirements of TxDOT's permit and SWMP.

In order to perform the data analysis, the following project tasks were developed for this work authorization:

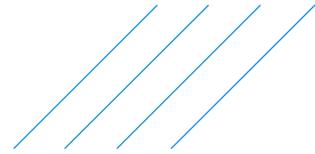
1. Coordination, Data Collection, and Data Assembly
2. Analyze Stormwater Characterization Data

This memorandum documents the analysis and results of these tasks.

### Coordination and Data Collection

Atkins contacted the following organizations for wet weather characterization data: the Texas Commission on Environmental Quality (TCEQ), the North Central Texas Council of Governments (NCTCOG), the San Antonio River Authority (SARA), the Lower Colorado River Authority (LCRA), the Houston-Galveston Area Council (HGAC), the Trinity River Authority (TRA), and each of the Municipal Separate Storm Sewer System (MS4) jurisdictions where TxDOT previously performed wet weather monitoring activities. Email correspondence are attached to this memo as Attachment C.

TxDOT previously performed monitoring activities in the following Phase I areas (previous permit #s in parenthesis): TxDOT Beaumont (WQ0004644000), City of San Antonio (WQ0004284), TxDOT Austin (WQ0004645000), City of Houston (WQ0004685000), TxDOT Houston District (Pasadena – WQ0004520000), City of Fort Worth (WQ0004350000), City of Arlington (WQ0004635000), and City of Dallas (WQ0004521000).



Atkins received wet weather characterization data for the Beaumont, San Antonio, Austin, Houston and Pasadena MS4s from the TCEQ and for the Dallas, Fort Worth, and Arlington MS4s from the NCTCOG. Atkins also received wet weather data from the City of Beaumont.

### **Data Assembly**

The wet weather characterization received from the TCEQ and NCTCOG included daily average and daily maximum reported values of pollutants/parameters monitored by each MS4 in accordance with their individual TPDES MS4 stormwater permits. Pollutants requiring TxDOT evaluation per Attachment 3 of permit No. WQ000550100 are presented in Table 1 below. The evaluation was performed on data from forty-seven (47) outfalls or sampling sites. The locations of the outfalls/sampling locations are shown in Table 2.

Atkins identified four types of datasets from the collected wet weather characterization data. They included outfalls/sampling locations with:

- a. Multi-frequency, multi-year sampling data;
- b. Multi-frequency, single year sampling data,
- c. One-time, multi-year sampling data, and;
- d. One-time, single year sampling data.

Atkins compiled the wet weather characterization data into a spreadsheet format that would facilitate trend and comparative analysis, and tabulated/calculated the maximum, minimum, mean and median values for all applicable series of reported values. The compiled data will be submitted to TxDOT as a separate electronic deliverable alongside this memo.

### **Data Analysis**

Atkins performed a spatial intersection analysis using the location descriptions of the 47 outfall/sampling locations and a shapefile of TxDOT's MS4 near and adjacent boundary. The analysis identified outfalls located within TxDOT's near and adjacent boundary (LWAB outfalls) and outfalls located outside TxDOT's near and adjacent boundary (LOAB outfalls). Eleven LWAB outfalls were identified and the remaining thirty-six were classified as LOAB outfalls. The locations of each outfall in each jurisdiction are shown in the exhibits attached as Attachment A.

Atkins performed a trend analysis on the overall mean of maximum reported values for each outfall for each applicable parameter within each MS4 jurisdiction for the period 2017 through 2019. The results are illustrated in Table 3. Atkins also performed a trend analysis on the maximum reported value for each LWAB outfall or sampling location. Results are shown in Table 4.

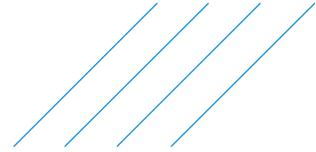
Atkins compared the highest daily maximum reported value observed at each outfall over the period of interest (2017-2019) to the mean of maximum reported values for each jurisdiction. The results of this analysis are presented in tables 5a through 5f.

The representative graphical illustrations of trends of reported maximum and average daily reported values for multi-year outfall/sampling locations are shown in Attachment B.

### **Results Summary**

#### Overall

One hundred and forty-eight sets of daily maximum values were reviewed across eight MS4 jurisdictions reported during the period 2017 through 2019. Of that total, thirty-eight percent of the annual mean value of the highest daily maximum reported values decreased continuously from the first year during the period of reported data, thirty-six percent increased continuously from the previous year, and the remaining twenty-six percent showed an undulating trend.



#### Multi-Year Trends

Four of the ten LWAB outfalls were classified as multi-frequency multi-year outfall/sampling locations: Two were in the Beaumont MS4 and one each in the San Antonio and Arlington MS4s.

In the Beaumont MS4, forty-two percent of the daily maximum reported values decreased continuously from the first year during the period of reported data, fourteen percent increased continuously from the previous year, and the remaining forty-four percent showed an undulating trend.

In the San Antonio MS4, twenty-six percent of the daily maximum reported values decreased continuously from the first year during the period of reported data, and the remaining seventy-four percent showed an undulating trend.

In the Arlington MS4, data was collected over the two-year period 2018-2019. Twenty-three percent of the daily maximum reported values stayed the same or decreased from the first year during the period of reported data, and the remaining seventy-seven percent showed an increase from the previous year.

Multi-year trend results are illustrated in Tables 3 and 4.

#### Peak Value Comparisons

Seven of the eleven LWAB outfalls were classified as multi-frequency/one-time single year outfall/sampling locations: Four of the outfalls were in the Dallas MS4 and three in the Fort Worth MS4. The highest reported daily maximum value recorded at each location was compared to the overall mean of the highest daily maximum values for each jurisdiction.

In the Dallas MS4, seventy-three percent of the highest daily maximum reported values (from Outfalls: TCTR-100, TCTR-200, HTC-100 and WRC-100) were below or equal to the overall mean of the daily maximum reported values for the entire MS4.

In the Fort Worth MS4, sixty-nine percent of the highest daily maximum reported values from Outfalls FWSYC1, FWMRY1, and FWMAR1 were below or equal to the overall mean of the daily maximum reported values for the entire MS4.

Data from the four multi-frequency multi-year outfall/sampling locations were also subjected to a peak value comparative analysis.

In the Beaumont MS4, thirty-nine percent of the highest daily maximum reported values from Outfalls BEAU001 and BEAU005 were below or equal to the overall mean of the daily maximum reported values for the entire MS4.

In the San Antonio MS4, seventeen percent of the highest daily maximum reported values from Outfall SA004 were below or equal to the overall mean of the daily maximum reported values for the entire MS4.

In the Arlington MS4, eight percent of the highest daily maximum reported values from sampling location AR1801/1901A were below or equal to the overall mean of the daily maximum reported values for the entire MS4.

Table 1: Pollutants used for Water Quality Evaluations

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring							
	Beaumont	San Antonio	Austin	Houston	Pasadena	Fort Worth	Arlington	Dallas
	4644	4284	4645	4685	4520	4350	4635	4521
Biological Oxygen Demand (BOD)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chemical Oxygen Demand (COD)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oil and Grease	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Suspended Solids (TSS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Dissolved Solids (TDS)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Kjeldahl Nitrogen (TKN)	Yes	Yes	Yes	Yes	Yes	No	No	No
Total Nitrogen	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nitrite-N	Yes	No	No	No	No	No	No	No
Nitrate-N	Yes	Yes	No	No	No	No	No	No
Ammonia-N	Yes	Yes	No	No	No	No	No	No
Nitrate+Nitrite	No	Yes	Yes	No	No	No	No	No
Total Phosphorous	Yes	Yes	Yes	Yes	Yes	No	No	No
Dissolved Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Cadmium	Yes	Yes	Yes	Yes	Yes	No	No	No
Total Chromium	Yes	Yes	No	No	No	Yes	Yes	Yes
Total Copper	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Lead	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Zinc	Yes	Yes	Yes	Yes	Yes	No	No	No
Total Arsenic	No	No	No	No	No	Yes	Yes	Yes
Total Mercury	No	No	No	Yes	Yes	No	No	No
Total Nickel	No	Yes	No	Yes	Yes	No	No	No
Total Silver	No	No	Yes	Yes	Yes	No	No	No
E. Coli	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Coliform	No	No	No	No	No	Yes	Yes	Yes
Enterococci	No	No	Yes	Yes	Yes	No	No	No
pH	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hardness as CaCO3	Yes	Yes	Yes	Yes	Yes	No	No	No
Temp	Yes	Yes	Yes	Yes	Yes	No	No	No
Atrazine	Yes	No	Yes	No	No	No	No	No

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring							
	Beaumont	San Antonio	Austin	Houston	Pasadena	Fort Worth	Arlington	Dallas
	4644	4284	4645	4685	4520	4350	4635	4521
Cyanide Amenable	No	No	No	Yes	Yes	No	No	No
Total Cyanide	No	Yes	No	No	No	No	No	No
Diazinon	No	Yes	No	Yes	Yes	No	No	No
Carbaryl	No	No	No	No	No	Yes	Yes	Yes
Chlorides as Cl	No	No	Yes	No	No	No	No	No
Sulfates	No	No	Yes	No	No	No	No	No

Yes – Evaluation required per Attachment 3 of permit No. WQ000550100  
No - Evaluation not required per Attachment 3 of permit No. WQ000550100

Table 2: Evaluated Phase I Permittee outfalls/sampling locations

Permittee/MS4	Outfall ID and Location Description*	Latitude	Longitude
Beaumont**	Outfall 001, Located at 9146 Landis Drive (BEAU001)	30.0674	-94.199
	Outfall 002, Located at 5560 Folsom Drive (BEAU002)	30.1152	-94.1659
	Outfall 003, Located at Intersection of Cypress and Fannin Streets (BEAU003) - [City collects samples at Washington Boulevard]	30.0561	-94.1571
	Outfall 004, Located at 490 Tenth Street (BEAU004) - [City collects samples at S Tenth Street]	30.0735	-94.1284
	Outfall 005, Located at 5199 Fannett Road (BEAU005)	30.0358	-94.149
San Antonio	Outfall 001, Located at San Pedro and Olmos Creek (SA001)	29.4906	-98.499
	Outfall 002, Located at South Flores Street and Six Mile Creek (SA002)	29.3373	-98.4822
	Outfall 003, Located at Alderete Park and Zarzamora Creek (SA003)	29.441	-98.5722
	Outfall 004, Located at Bandera Road and Zarzamora Creek (SA004)	29.4815	-98.5971
	Outfall 005, Located at Bitters Road and Salado Creek tributary (SA005)	29.5277	-98.4398
	Outfall 006, Located at Business Park and Service Center Drive (SA006)	29.4753	-98.3934
Austin	Outfall 001, Located at Bear Creek and Farm-to-Market Road 1826 (AU001)	30.1596	-97.9552
	Outfall 002, Located at Fort Branch Creek near Webberville Road (AU002)	30.2806	-97.6789
	Outfall 003, Located at Waller Creek and 23 <sup>rd</sup> Street (AU003)	30.2858	-97.7338
	Outfall 004, Located at Blunn Creek near Little Stacey Park (AU004)	30.2483	-97.7428
JTF (City of Houston, Harris County, Harris County Flood Control District)	Outfall 001, Located at the former USGS substation on the eastside of West T.C. Jester across from Lazybrook Drive (City of Houston) [HOU001]	29.8044	-95.4344
	Outfall 002, Located at the manhole on Tanglewilde approximately 600 feet north of Ella Lee, near a 30-foot ditch draining to the east (City of Houston) [HOU002]	29.7435	-95.5346
	Outfall 003, Located at a manhole approximately 1100 feet north of west Greens Road, and 30 feet west of ditch P150-00-00, which is located southeast of Willowbrook Mall (City of Houston) [HOU003]	29.9582	-95.5348
	Outfall 005, Located at ditch number N-109-00-00 on the west side of Overbluff Drive (Harris County) [HOU005]	29.7847	-95.1540

Permittee/MS4	Outfall ID and Location Description *	Latitude	Longitude
	Outfall 006, Located 50 feet east of the intersection of Cypress Trace and Cypress Station (Harris County) [HOU006]	30.0310***	-95.4406***
	Outfall 007, Located at a manhole on Bridgedown Drive approximately 700 feet west of Jones Road in the Steeplechase Corners Shopping Center (Harris County) [HOU007]	29.9273	-95.5870
	Outfall 008, Located at a ditch on west side of Port Road approximately 1000 feet south of Choate Road (Harris County) [HOU008]	29.6171***	-95.0526***
	Outfall 0011, Located on the south bank of Cole Creek, at the end of Clara Street (City of Houston) [HOU0011]	29.8653	-95.5536
Pasadena	Outfall 001, Located at 1500 Wichita Street, 50 feet south of HCFCD Ditch I-101-04 (PAS001)	29.6894	-95.1777
	Outfall 002, Located at 1500 Jenkins Street, 100 feet east of Little Vince Bayou (PAS002)	29.6961	-95.1924
	Outfall 003, Located at 2550 Pasadena Boulevard, 20 feet east of Little Vince Bayou (PAS003)	29.682***	-95.1807***
	Outfall 004, Located at 200 Old North Richey Street, 100 feet south of the railroad tracks (PAS004)	29.7159***	-95.22***
Fort Worth	Sampling Site FWSYC1, I-35W northbound frontage road beneath SE Loop IH-820 eastbound	32.6677	-97.3178
	Sampling Site FWMRY1, 3900 Block Longvue (FM 2871)	32.7133	-97.4966
	Sampling Site FWMRY3, Winscott Road (Vickery Blvd.) in South Z Boaz Park	32.6954	-97.4477
	Sampling Site FWMAR1, 3500 Macie, bridge crossing in Buck Sansom Park	32.8079	-97.3703
	Sampling Site FWMAR3, Saunders Park south of Mule Alley and downstream of JV1A	32.7862	-97.3460
	Sampling Site FWOVR1, NW of Granbury Rd and Trail Lake Dr	32.682	-97.3738
Arlington	Sampling Site AR1801/AR1901A, Johnson Creek at Six Flags/East Sanford Street	32.7588 32.7428	-97.067 -97.0876
	Sampling Site AR1802/AR1902, Fish Creek at SH 360	32.6624	-97.0614
Dallas	Sampling Site TCTR-100, 3805 Pipestone Road at Mican Channel	32.7685	-96.8844
	Sampling Site TCTR-200, 3951 La Reunion Parkway at Mican Channel	32.7711	-96.8914
	Sampling Site TCTR-300, 4300 Singleton Boulevard at Mican Channel	32.7789	-96.8926
	Sampling Site HTC-100, 3505 Maple Avenue at Turtle Creek	32.7996	-96.813

Permittee/MS4	Outfall ID and Location Description *	Latitude	Longitude
	Sampling Site HTC-200, 1201 Turtle Creek Boulevard at Turtle Creek	32.7959	-96.8242
	Sampling Site HTC-300, 2240 Irving Boulevard at Turtle Creek	32.7969	-96.837
	Sampling Site WRC-100, 3800 Samuell Blvd. at White Rock Creek	32.792756	-96.728893
	Sampling Site WRC-200, 5219 Military Parkway at White Rock Creek	32.783709	-97.727515
	Sampling Site WRC-300, 5100 C. F. Hawn Frwy at White Rock Creek	32.745551	-96.73078
	Sampling Site FMC-100, 3200 Linfield Road at Honey Springs Branch	32.710769	-96.765777
	Sampling Site FMC-200, 4400 Vandervoort Drive at Honey Springs Branch	32.70968	-96.760929
	Sampling Site FMC-300, 8000 Carbondale St. at honey Springs Branch	32.7115	-96.747856

\*Location descriptions obtained from each MS4's TPDES MS4 stormwater permit or annual report. Geographic coordinates estimated using a combination of the location description and google earth desktop survey.

\*\* Geographic coordinates obtained from the City of Beaumont.

\*\*\* Geographic locations approximated to the nearest vicinity based on a review of location description and google earth desktop survey.

Table 3: Overall Multi-Year Pollutant Trends by Jurisdiction (Trends in annual jurisdiction means of highest reported daily maximum values)

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring							
	*Beaumont	*San Antonio	**Austin	*Houston	*Pasadena	**Fort Worth <sup>2</sup>	**Arlington	**Dallas <sup>1</sup>
	#4644	#4284	#4645	#4685	#4520	#4350	#4635	#4521
BOD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
COD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oil and Grease	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TDS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TKN	Yes	Yes	Yes	Yes	Yes	No	No	No
Total Nitrogen	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nitrite-N	Yes	No	No	No	No	No	No	No
Nitrate-N	Yes	Yes	No	No	No	No	No	No
Ammonia-N	Yes	Yes	No	No	No	No	No	No
Nitrate+Nitrite	No	Yes	Yes	No	No	No	No	No
Total Phosphorous	Yes	Yes	Yes	Yes	Yes	No	No	No
Dissolved Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Cadmium	Yes	Yes	Yes	Yes	Yes	No	No	No
Total Chromium	Yes	Yes	No	No	No	Yes	Yes	Yes
Total Copper	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Lead	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Zinc	Yes	Yes	Yes	Yes	Yes	No	No	No
Total Arsenic	No	No	No	No	No	Yes	Yes	Yes
Total Mercury	No	No	No	Yes	Yes	No	No	No
Total Nickel	No	Yes	No	Yes	Yes	No	No	No
Total Silver	No	No	Yes	Yes	Yes	No	No	No
E. Coli	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Coliform	No	No	No	No	No	Yes	Yes	Yes
Enterococci	No	No	Yes	Yes	Yes	No	No	No
pH <sup>3</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hardness as CaCO <sub>3</sub>	Yes	Yes	Yes	Yes	Yes	No	No	No
Temp	Yes	Yes	Yes	Yes	Yes	No	No	No
Atrazine	Yes	No	Yes	No	No	No	No	No

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring							
	*Beaumont	*San Antonio	**Austin	*Houston	*Pasadena	**Fort Worth <sup>2</sup>	**Arlington	**Dallas <sup>1</sup>
	#4644	#4284	#4645	#4685	#4520	#4350	#4635	#4521
Cyanide Amenable	No	No	No	Yes	Yes	No	No	No
Total Cyanide	No	Yes	No	No	No	No	No	No
Diazinon	No	Yes	No	Yes	Yes	No	No	No
Carbaryl	No	No	No	No	No	Yes	Yes	Yes
Chlorides as Cl	No	No	Yes	No	No	No	No	No
Sulfates	No	No	Yes	No	No	No	No	No

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)
  2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)
  3. Average pH values used for evaluation
- \* Data reported for the period 2017 – 2019  
\*\* Data reported for the period 2018 - 2019  
# Permit number reference ID
- Red shade – Increasing trend  
Yellow shade – Up-Down undulating trend  
Orange shade – Down-Up undulating trend  
Green – Decreasing trend OR average pH values between 6-9 SU OR results Below Reporting Limit over evaluated period  
Grey shade – No data reported for required evaluation  
No shade – Evaluation not required

Table 4: Multi-Year Pollutant Trends by Outfall/Sampling Location (Trends in highest reported daily maximum values at outfall/sampling locations located within TxDOT's near and adjacent boundary [LWAB])

Parameter	Outfalls with multi-frequency and multi-year sampling				
	*Beaumont #4644		*San Antonio #4284	**Arlington #4635	
	BEAU001	BEAU005	SA004	AR1801/1901A	
BOD	Yes	Yes	Yes	Yes	
COD	Yes	Yes	Yes	Yes	
Oil and Grease	Yes	Yes	Yes	Yes	
TSS	Yes	Yes	Yes	Yes	
TDS	Yes	Yes	Yes	Yes	
TKN	Yes	Yes	Yes	No	
Total Nitrogen	No	No	Yes	Yes	
Nitrite-N	Yes	Yes	No	No	
Nitrate-N	Yes	Yes	Yes	No	
Ammonia-N	Yes	Yes	Yes	No	
Nitrate+Nitrite	No	No	Yes	No	
Total Phosphorous	Yes	Yes	Yes	No	
Dissolved Phosphorous	Yes	Yes	Yes	Yes	
Total Cadmium	Yes	Yes	Yes	No	
Total Chromium	Yes	Yes	Yes	Yes	
Total Copper	Yes	Yes	Yes	Yes	
Total Lead	Yes	Yes	Yes	Yes	
Total Zinc	Yes	Yes	Yes	No	
Total Arsenic	No	No	No	Yes	
Total Mercury	No	No	No	No	
Total Nickel	No	No	Yes	No	
Total Silver	No	No	No	No	
E. Coli	Yes	Yes	Yes	Yes	
Total Coliform	No	No	No	Yes	
Enterococci	No	No	No	No	
pH <sup>3</sup>	Yes	Yes	Yes	Yes	

Parameter	Outfalls with multi-frequency and multi-year sampling					
	*Beaumont #4644			*San Antonio #4284		**Arlington #4635
	BEAU001	BEAU005		SA004		AR1801/1901A
Hardness as CaCO3	Yes	Yes		Yes		No
Temp	Yes	Yes		Yes		No
Atrazine	Yes	Yes		No		No
Cyanide Amenable	No	No		No		No
Total Cyanide	No	No		Yes		No
Diazinon	No	No		Yes		No
Carbaryl	No	No		No		Yes
Chlorides as Cl	No	No		No		No
Sulfates	No	No		No		No

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)
  2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)
  3. MAX/MIN pH values used for evaluation
- \* Data reported for the period 2017 – 2019  
\*\* Data reported for the period 2018 - 2019  
# Permit number reference ID
- Red shade – Increasing trend  
Yellow shade – Up-Down undulating trend  
Orange shade – Down-Up undulating trend  
Green – Decreasing trend OR pH values between 6-9 SU OR results Below Reporting Limit over evaluated period  
Grey shade – No data reported for required evaluation  
No shade – Evaluation not required

Table 5a: Pollutant Value Comparison (Comparison of highest reported daily maximum values at outfall/sampling locations located within TxDOT's near and adjacent boundary [LWAB] to the overall mean of the highest daily maximum values for each applicable jurisdiction)

Parameter	Outfalls with multi-frequency and multi-year sampling				
	*Beaumont 4644			*San Antonio 4284	**Arlington 4635
	BEAU001	BEAU005		SA004	AR1801/1901A
BOD	Yes	Yes		Yes	Yes
COD	Yes	Yes		Yes	Yes
Oil and Grease	Yes	Yes		Yes	Yes
TSS	Yes	Yes		Yes	Yes
TDS	Yes	Yes		Yes	Yes
TKN	Yes	Yes		Yes	No
Total Nitrogen	No	No		Yes	Yes
Nitrite-N	Yes	Yes		No	No
Nitrate-N	Yes	Yes		Yes	No
Ammonia-N	Yes	Yes		Yes	No
Nitrate+Nitrite	No	No		Yes	No
Total Phosphorous	Yes	Yes		Yes	No
Dissolved Phosphorous	Yes	Yes		Yes	Yes
Total Cadmium	Yes	Yes		Yes	No
Total Chromium	Yes	Yes		Yes	Yes
Total Copper	Yes	Yes		Yes	Yes
Total Lead	Yes	Yes		Yes	Yes
Total Zinc	Yes	Yes		Yes	No
Total Arsenic	No	No		No	Yes
Total Mercury	No	No		No	No
Total Nickel	No	No		Yes	No
Total Silver	No	No		No	No
E. Coli	Yes	Yes		Yes	Yes
Total Coliform	No	No		No	Yes
Enterococci	No	No		No	No
pH <sup>3</sup>	Yes	Yes		Yes	Yes

Parameter	Outfalls with multi-frequency and multi-year sampling					
	*Beaumont 4644			*San Antonio 4284		**Arlington 4635
	BEAU001	BEAU005		SA004		AR1801/1901A
Hardness as CaCO3	Yes	Yes		Yes		No
Temp	Yes	Yes		Yes		No
Atrazine	Yes	Yes		No		No
Cyanide Amenable	No	No		No		No
Total Cyanide	No	No		Yes		No
Diazinon	No	No		Yes		No
Carbaryl	No	No		No		Yes
Chlorides as Cl	No	No		No		No
Sulfates	No	No		No		No

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)

2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)

3. MAX/MIN pH values used for evaluation

\* Data reported for the period 2017 – 2019

\*\* Data reported for the period 2018 - 2019

# Permit number reference ID

Orange shade – Outfall/Sampling location peak value higher than jurisdiction mean of peak values OR pH values outside 6-9 SU

Green – Outfall/Sampling location peak value equal to or lower than jurisdiction mean of peak values OR pH values between 6-9 SU

Grey shade – No data reported for required evaluation

No shade – Evaluation not required

Table 5b: Pollutant Value Comparison (Comparison of highest reported daily maximum values at outfall/sampling locations located within TxDOT's near and adjacent boundary [LWAB] to the overall mean of the highest daily maximum values for each applicable jurisdiction)

Parameter	Outfalls with a single/multiple sampling events per year (single year sampling only)						
	**Dallas <sup>1</sup> #4521				**Fort Worth <sup>2</sup> #4350		
	DAL TCTR-100	DAL TCTR-200	DAL HTC-100	DAL WRC-100	FWSYC1	FWMRY1	FYMAR3
BOD	Yes	Yes	Yes	Yes	Yes	Yes	Yes
COD	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oil and Grease	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TDS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TKN	No	No	No	No	No	No	No
Total Nitrogen	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nitrite-N	No	No	No	No	No	No	No
Nitrate-N	No	No	No	No	No	No	No
Ammonia-N	No	No	No	No	No	No	No
Nitrate+Nitrite	No	No	No	No	No	No	No
Total Phosphorous	No	No	No	No	No	No	No
Dissolved Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Cadmium	No	No	No	No	No	No	No
Total Chromium	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Copper	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Lead	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Zinc	No	No	No	No	No	No	No
Total Arsenic	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Mercury	No	No	No	No	No	No	No
Total Nickel	No	No	No	No	No	No	No
Total Silver	No	No	No	No	No	No	No
E. Coli	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Coliform	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enterococci	No	No	No	No	No	No	No
pH <sup>3</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Parameter	Outfalls with a single/multiple sampling events per year (single year sampling only)						
	**Dallas <sup>1</sup> #4521				**Fort Worth <sup>2</sup> #4350		
	DAL TCTR-100	DAL TCTR-200	DAL HTC-100	DAL WRC-100	FWSYC1	FWMRY1	FYMAR3
Hardness as CaCO3	No	No	No	No	No	No	No
Temp	No	No	No	No	No	No	No
Atrazine	No	No	No	No	No	No	No
Cyanide Amenable	No	No	No	No	No	No	No
Total Cyanide	No	No	No	No	No	No	No
Diazinon	No	No	No	No	No	No	No
Carbaryl	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Chlorides as Cl	No	No	No	No	No	No	No
Sulfates	No	No	No	No	No	No	No

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)

2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)

3. MAX/MIN pH values used for evaluation

\* Data reported for the period 2017 – 2019

\*\* Data reported for the period 2018 - 2019

# Permit number reference ID

Orange shade – Outfall/Sampling location peak value higher than jurisdiction mean of peak values OR pH values outside 6-9 SU

Green – Outfall/Sampling location peak value equal to or lower than jurisdiction mean of peak values OR pH values between 6-9 SU

Grey shade – No data reported for required evaluation

No shade – Evaluation not required

Table 5c: Pollutant Value Comparison (Comparison of the highest reported daily maximum values at outfall/sampling locations located outside TxDOT's near and adjacent boundary [LOAB] to the overall mean of the highest daily maximum values for each applicable jurisdiction)

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)							
	*Beaumont (#4644)				**Austin (#4645)			
	BEAU002	BEAU003	BEAU004		AU001	AU002	AU003	AU004
BOD	Yes	Yes	Yes		Yes	Yes	Yes	Yes
COD	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Oil and Grease	Yes	Yes	Yes		Yes	Yes	Yes	Yes
TSS	Yes	Yes	Yes		Yes	Yes	Yes	Yes
TDS	Yes	Yes	Yes		Yes	Yes	Yes	Yes
TKN	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Total Nitrogen	No	No	No		Yes	Yes	Yes	Yes
Nitrite-N	Yes	Yes	Yes		No	No	No	No
Nitrate-N	Yes	Yes	Yes		No	No	No	No
Ammonia-N	Yes	Yes	Yes		No	No	No	No
Nitrate+Nitrite	No	No	No		Yes	Yes	Yes	Yes
Total Phosphorous	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Dissolved Phosphorous	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Total Cadmium	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Total Chromium	Yes	Yes	Yes		No	No	No	No
Total Copper	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Total Lead	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Total Zinc	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Total Arsenic	No	No	No		No	No	No	No
Total Mercury	No	No	No		No	No	No	No
Total Nickel	No	No	No		No	No	No	No
Total Silver	No	No	No		Yes	Yes	Yes	Yes
E. Coli	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Total Coliform	No	No	No		No	No	No	No
Enterococci	No	No	No		Yes	Yes	Yes	Yes
pH <sup>3</sup>	Yes	Yes	Yes		Yes	Yes	Yes	Yes

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)							
	*Beaumont (#4644)			**Austin (#4645)				
	BEAU002	BEAU003	BEAU004	AU001	AU002	AU003	AU004	
Hardness as CaCO3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Temp	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Atrazine	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Cyanide Amenable	No	No	No	No	No	No	No	
Total Cyanide	No	No	No	No	No	No	No	
Diazinon	No	No	No	No	No	No	No	
Carbaryl	No	No	No	No	No	No	No	
Chlorides as Cl	No	No	No	Yes	Yes	Yes	Yes	
Sulfates	No	No	No	Yes	Yes	Yes	Yes	

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)

2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)

3. MAX/MIN pH values used for evaluation

\* Data reported for the period 2017 – 2019

\*\* Data reported for the period 2018 - 2019

# Permit number reference ID

Orange shade – Outfall/Sampling location peak value higher than jurisdiction mean of peak values OR pH values outside 6-9 SU

Green – Outfall/Sampling location peak value equal to or lower than jurisdiction mean of peak values OR pH values between 6-9 SU

Grey shade – No data reported for required evaluation

No shade – Evaluation not required

Table 5d: Pollutant Value Comparison (Comparison of the highest reported daily maximum values at outfall/sampling locations located outside TxDOT's near and adjacent boundary [LOAB] to the overall mean of the highest daily maximum values for each applicable jurisdiction)

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)							
	*Houston (#4685)							
	HOU001	HOU002	HOU003	HOU005	HOU006	HOU007	HOU008	HOU0011
BOD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
COD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Oil and Grease	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TDS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TKN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Nitrogen	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nitrite-N	No	No	No	No	No	No	No	No
Nitrate-N	No	No	No	No	No	No	No	No
Ammonia-N	No	No	No	No	No	No	No	No
Nitrate+Nitrite	No	No	No	No	No	No	No	No
Total Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dissolved Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Cadmium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Chromium	No	No	No	No	No	No	No	No
Total Copper	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Lead	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Zinc	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Arsenic	No	No	No	No	No	No	No	No
Total Mercury	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Nickel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Silver	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
E. Coli	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Coliform	No	No	No	No	No	No	No	No
Enterococci	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
pH <sup>3</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hardness as CaCO <sub>3</sub>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temp	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Atrazine	No	No	No	No	No	No	No	No

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)							
	*Houston (#4685)							
	HOU001	HOU002	HOU003	HOU005	HOU006	HOU007	HOU008	HOU0011
Cyanide Amenable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Cyanide	No	No	No	No	No	No	No	No
Diazinon	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Carbaryl	No	No	No	No	No	No	No	No
Chlorides as Cl	No	No	No	No	No	No	No	No
Sulfates	No	No	No	No	No	No	No	No

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)

2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)

3. MAX/MIN pH values used for evaluation

\* Data reported for the period 2017 – 2019

\*\* Data reported for the period 2018 - 2019

# Permit number reference ID

Orange shade – Outfall/Sampling location peak value higher than jurisdiction mean of peak values OR pH values outside 6-9 SU

Green – Outfall/Sampling location peak value equal to or lower than jurisdiction mean of peak values OR pH values between 6-9 SU

Grey shade – No data reported for required evaluation

No shade – Evaluation not required

Table 5e: Pollutant Value Comparison (Comparison of the highest reported daily maximum values at outfall/sampling locations located outside TxDOT's near and adjacent boundary [LOAB] to the overall mean of the highest daily maximum values for each applicable jurisdiction)

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)									
	*San Antonio (#4284)					*Pasadena (#4520)				
	SA001	SA002	SA003	SA005	SA006	PAS001	PAS002	PAS003	PAS004	
BOD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
COD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Oil and Grease	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TDS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TKN	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Nitrogen	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Nitrite-N	No	No	No	No	No	No	No	No	No	
Nitrate-N	Yes	Yes	Yes	Yes	Yes	No	No	No	No	
Ammonia-N	Yes	Yes	Yes	Yes	Yes	No	No	No	No	
Nitrate+Nitrite	Yes	Yes	Yes	Yes	Yes	No	No	No	No	
Total Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Dissolved Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Cadmium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Chromium	Yes	Yes	Yes	Yes	Yes	No	No	No	No	
Total Copper	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Lead	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Zinc	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Arsenic	No	No	No	No	No	No	No	No	No	
Total Mercury	No	No	No	No	No	Yes	Yes	Yes	Yes	
Total Nickel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Silver	No	No	No	No	No	Yes	Yes	Yes	Yes	
E. Coli	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Coliform	No	No	No	No	No	No	No	No	No	
Enterococci	No	No	No	No	No	Yes	Yes	Yes	Yes	
pH <sup>3</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes <sup>+</sup>	Yes	Yes	
Hardness as CaCO <sub>3</sub>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Temp	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Atrazine	No	No	No	No	No	No	No	No	No	

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)									
	*San Antonio (#4284)					*Pasadena (#4520)				
	SA001	SA002	SA003	SA005	SA006	PAS001	PAS002	PAS003	PAS004	
Cyanide Amenable	No	No	No	No	No	Yes	Yes	Yes	Yes	
Total Cyanide	Yes	Yes	Yes	Yes	Yes	No	No	No	No	
Diazinon	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Carbaryl	No	No	No	No	No	No	No	No	No	
Chlorides as Cl	No	No	No	No	No	No	No	No	No	
Sulfates	No	No	No	No	No	No	No	No	No	

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)

2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)

3. MAX/MIN pH values used for evaluation

\* Data reported for the period 2017 – 2019

\*\* Data reported for the period 2018 - 2019

# Permit number reference ID

+ Pasadena reported a maximum value of 16.2

Orange shade – Outfall/Sampling location peak value higher than jurisdiction mean of peak values OR pH values outside 6-9 SU

Green – Outfall/Sampling location peak value equal to or lower than jurisdiction mean of peak values OR pH values between 6-9 SU

Grey shade – No data reported/analyzed for required evaluation

No shade – Evaluation not required

Table 5f: Pollutant Value Comparison (Comparison of the highest reported daily maximum values at outfall/sampling locations located outside TxDOT's near and adjacent boundary [LOAB] to the overall mean of the highest daily maximum values for each applicable jurisdiction)

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)											
	**Dallas <sup>1</sup> (#4635)								**Fort Worth <sup>2</sup> (#4521)			
	DAL TCTR 300	DAL HTC 200	DAL HTC 300	DAL WRC 200	DAL WRC 300	DAL FMC 100	DAL FMC 200	DAL FMC 300	FW MRY3	FW MAR1	FW OVR1	
BOD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
COD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Oil and Grease	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TDS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
TKN	No	No	No	No	No	No	No	No	No	No	No	
Total Nitrogen	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Nitrite-N	No	No	No	No	No	No	No	No	No	No	No	
Nitrate-N	No	No	No	No	No	No	No	No	No	No	No	
Ammonia-N	No	No	No	No	No	No	No	No	No	No	No	
Nitrate+ Nitrite	No	No	No	No	No	No	No	No	No	No	No	
Total Phosphorous	No	No	No	No	No	No	No	No	No	No	No	
Dissolved Phosphorous	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Cadmium	No	No	No	No	No	No	No	No	No	No	No	
Total Chromium	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Copper	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Lead	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Zinc	No	No	No	No	No	No	No	No	No	No	No	
Total Arsenic	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Mercury	No	No	No	No	No	No	No	No	No	No	No	
Total Nickel	No	No	No	No	No	No	No	No	No	No	No	
Total Silver	No	No	No	No	No	No	No	No	No	No	No	
E. Coli	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Total Coliform	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Enterococci	No	No	No	No	No	No	No	No	No	No	No	

Parameter	Phase I areas and permits where TxDOT was responsible for monitoring Outfalls/Sampling sites located outside TxDOT's near and adjacent boundary (LOAB)											
	**Dallas <sup>1</sup> (#4635)									**Fort Worth <sup>2</sup> (#4521)		
	DAL TCTR 300	DAL HTC 200	DAL HTC 300	DAL WRC 200	DAL WRC 300	DAL FMC 100	DAL FMC 200	DAL FMC 300		FW MRY3	FW MAR1	FW OVR1
pH <sup>3</sup>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Hardness as CaCO <sub>3</sub>	No	No	No	No	No	No	No	No		No	No	No
Temp	No	No	No	No	No	No	No	No		No	No	No
Atrazine	No	No	No	No	No	No	No	No		No	No	No
Cyanide Amenable	No	No	No	No	No	No	No	No		No	No	No
Total Cyanide	No	No	No	No	No	No	No	No		No	No	No
Diazinon	No	No	No	No	No	No	No	No		No	No	No
Carbaryl	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Chlorides as Cl	No	No	No	No	No	No	No	No		No	No	No
Sulfates	No	No	No	No	No	No	No	No		No	No	No

1. Data collected from 6 distinct sites in 2018 and 6 distinct sites in 2019 (Data collected 4 times in a year)

2. Data collected from 3 distinct sites in 2018 and 3 distinct sites in 2019 (Data collected once a year)

3. MAX/MIN pH values used for evaluation

\* Data reported for the period 2017 – 2019

\*\* Data reported for the period 2018 - 2019

# Permit number reference ID

Orange shade – Outfall/Sampling location peak value higher than jurisdiction mean of peak values OR pH values outside 6-9 SU

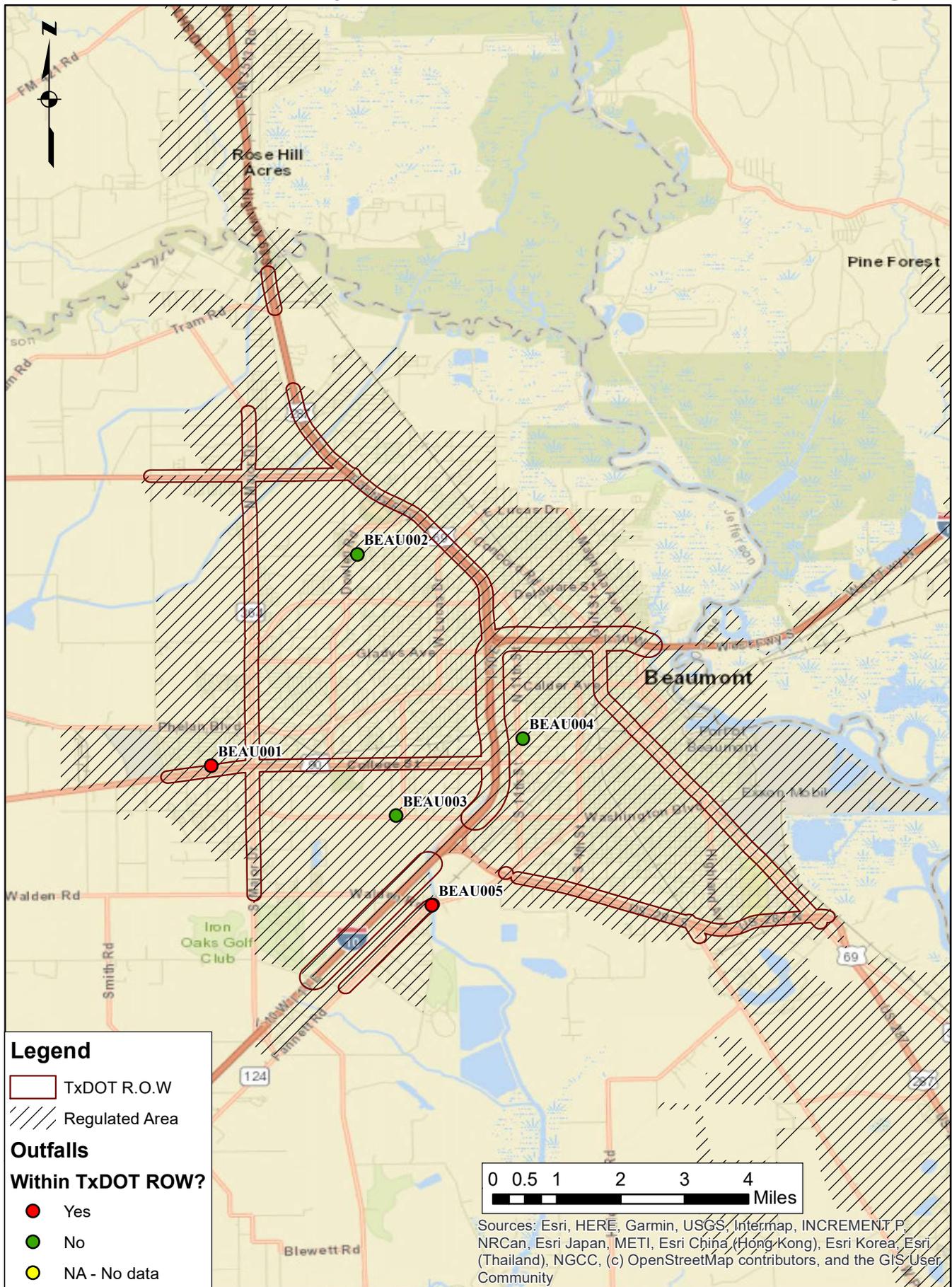
Green – Outfall/Sampling location peak value equal to or lower than jurisdiction mean of peak values OR pH values between 6-9 SU

Grey shade – No data reported for required evaluation

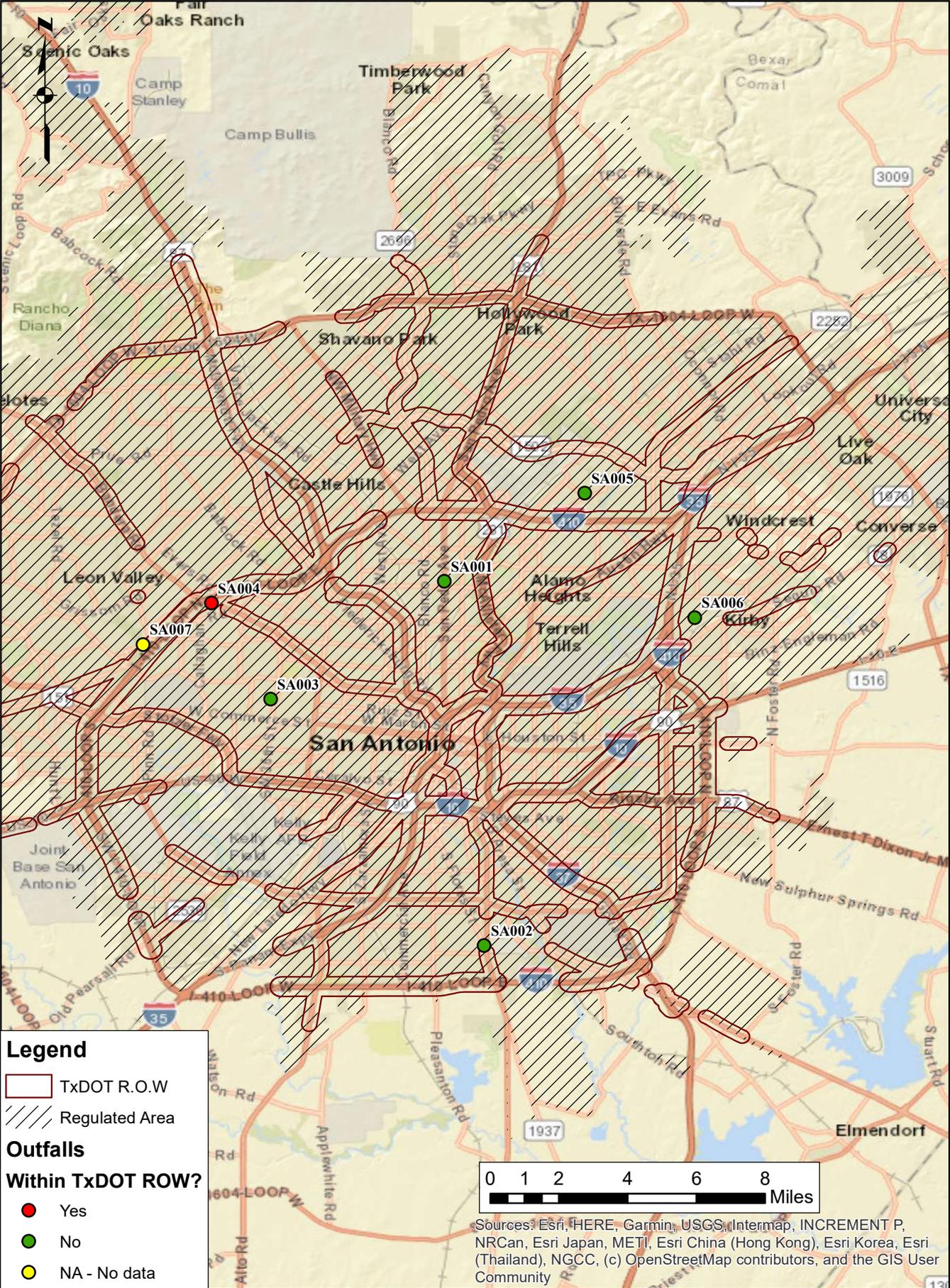
No shade – Evaluation not required

Attachment A  
Outfall/Sampling Locations

# TxDOT R.O.W and City of Beaumont Outfall Monitoring Sites



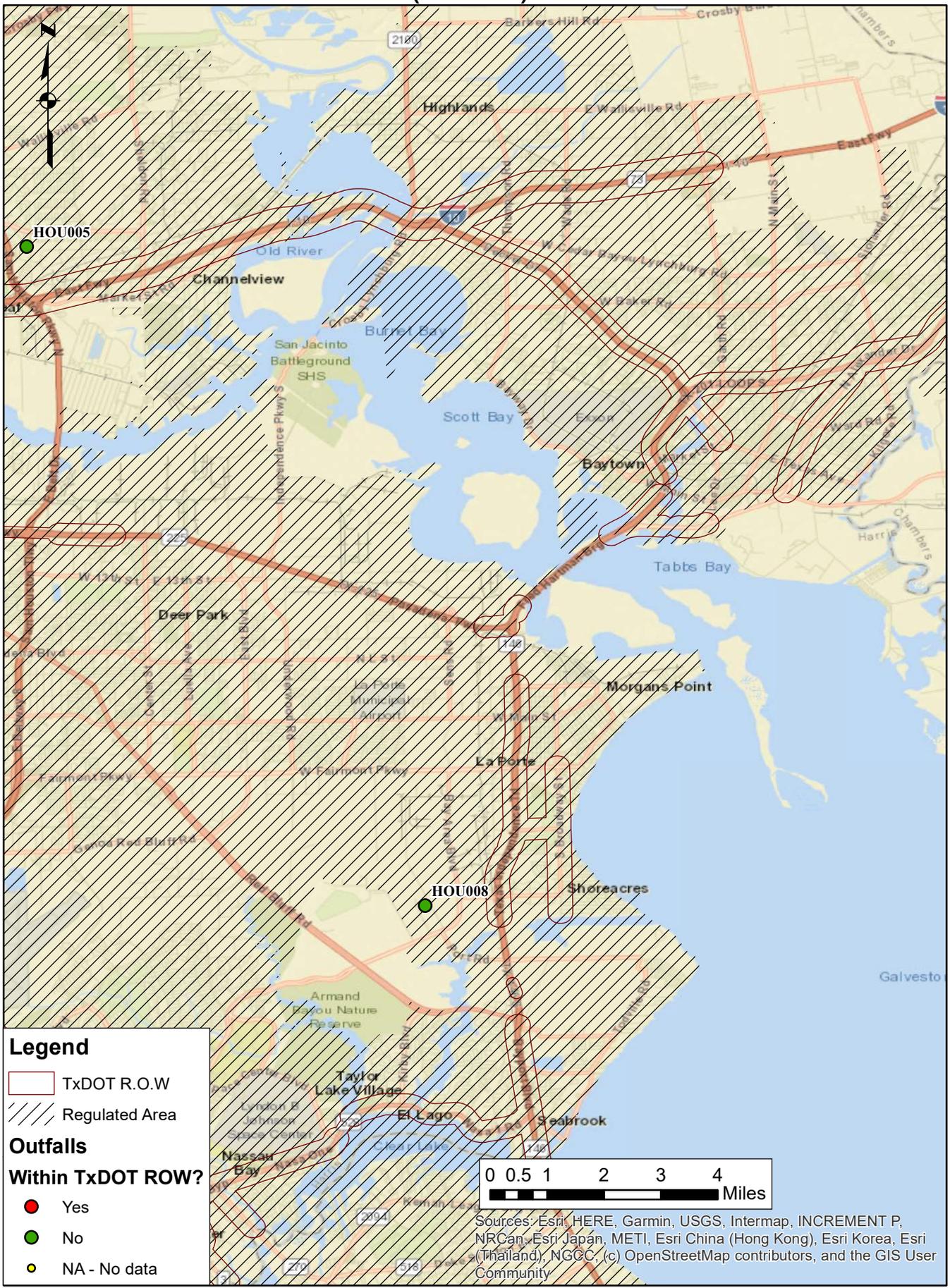
# TxDOT R.O.W and City of San Antonio Outfall Monitoring Sites



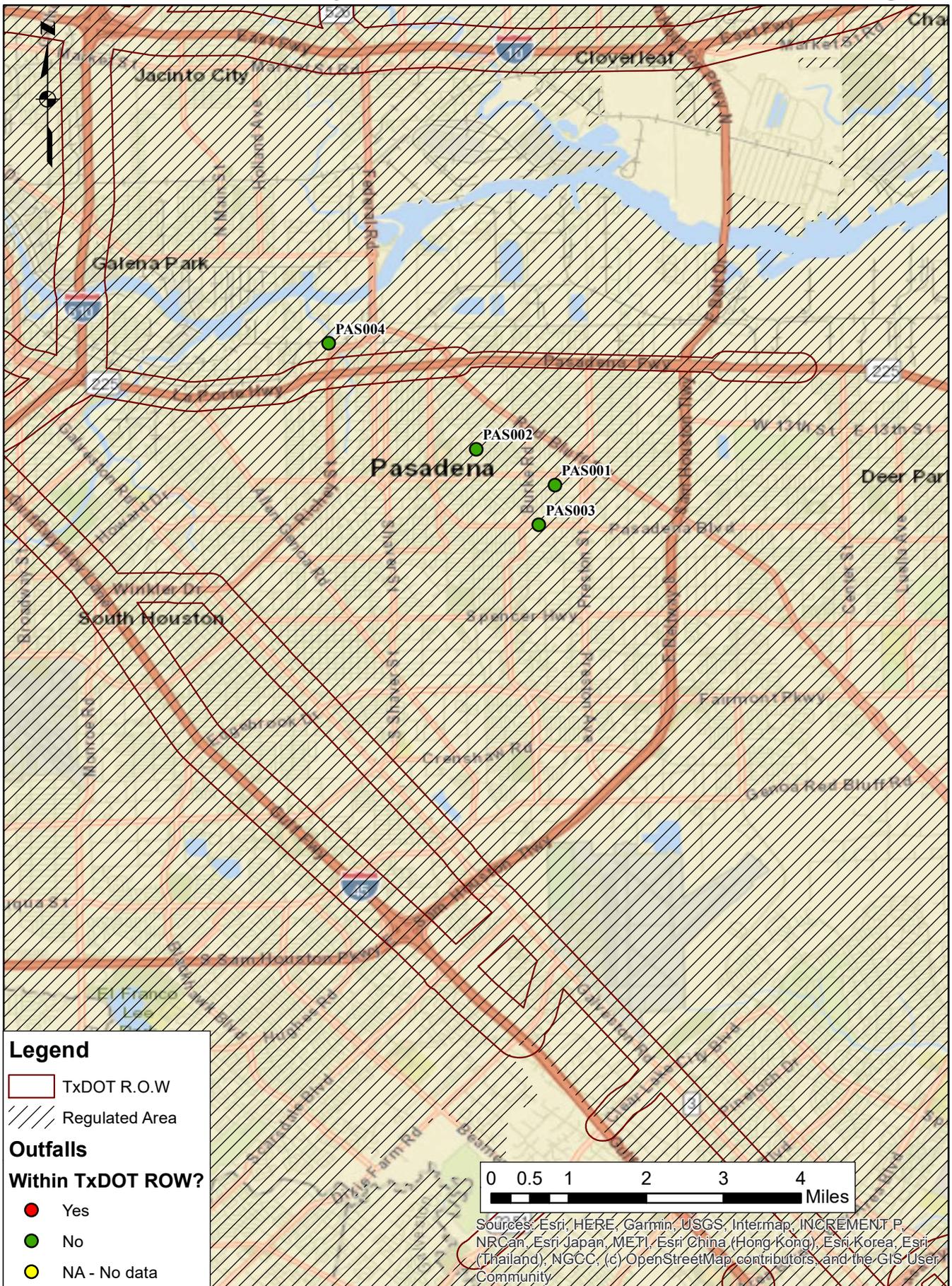




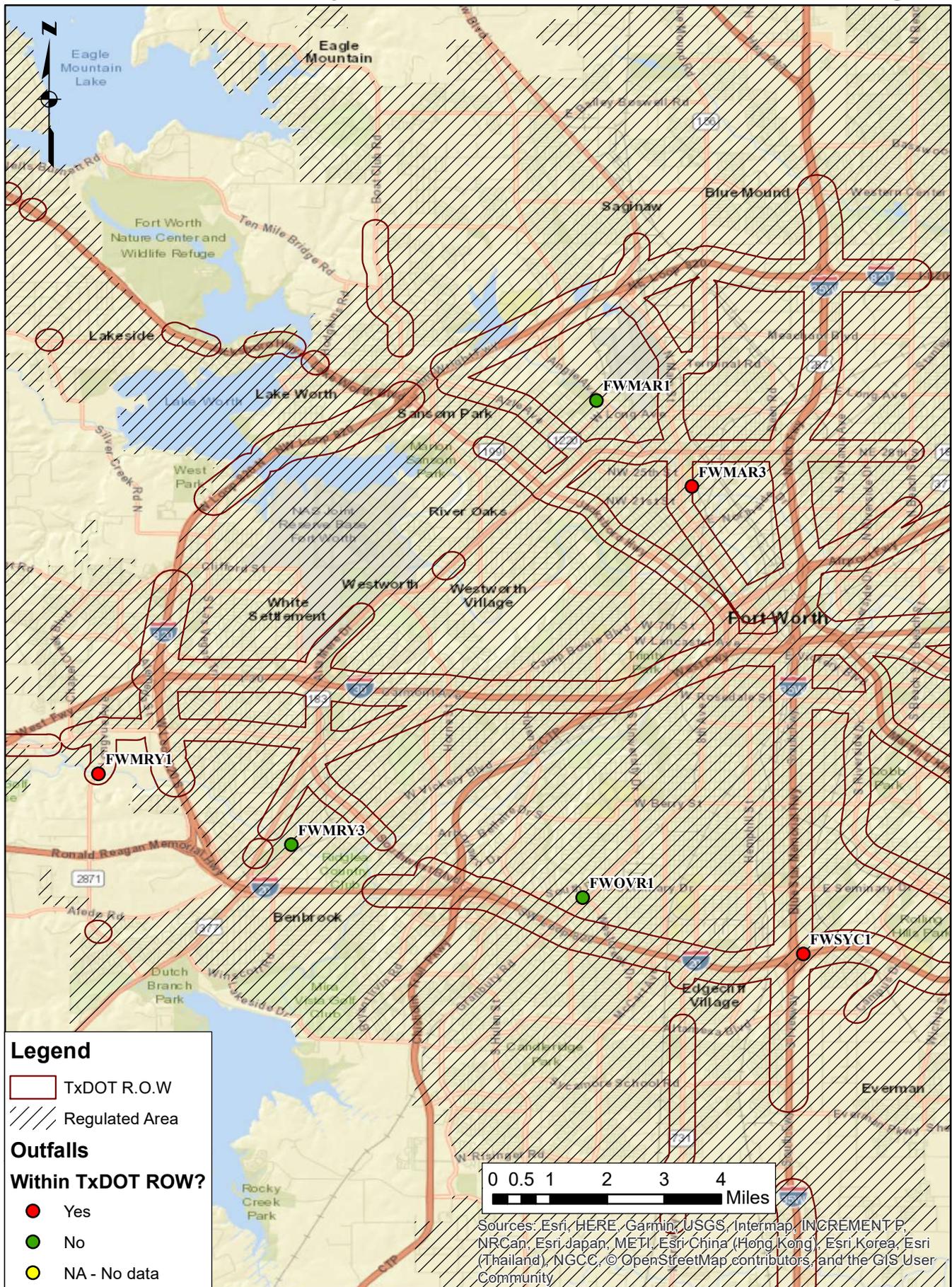
# TxDOT R.O.W and City of Houston JTF Outfall Monitoring Sites (2 of 2)



# TxDOT R.O.W and City of Pasadena Outfall Monitoring Sites



# TxDOT R.O.W and City of Fort Worth Outfall Monitoring Sites

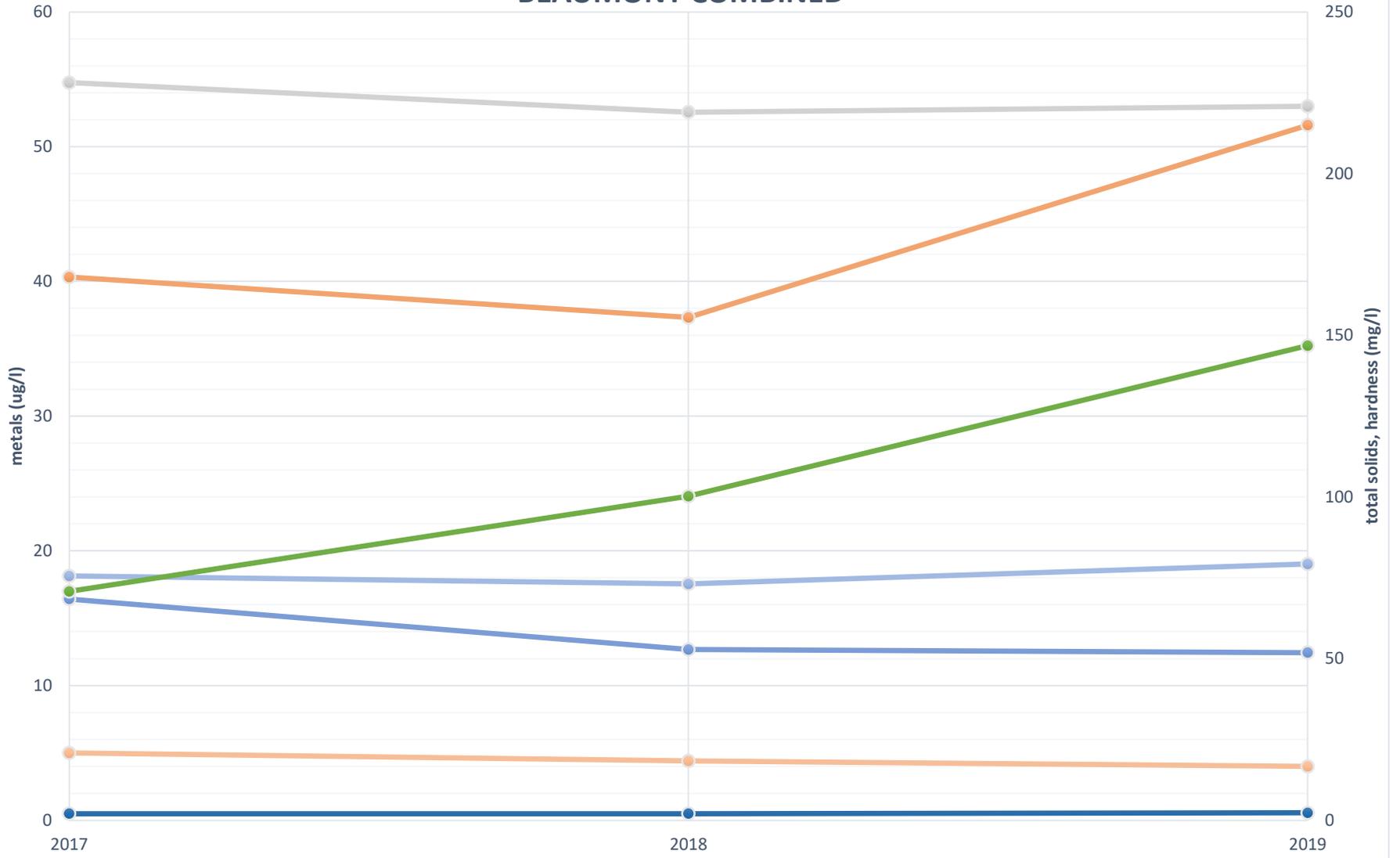






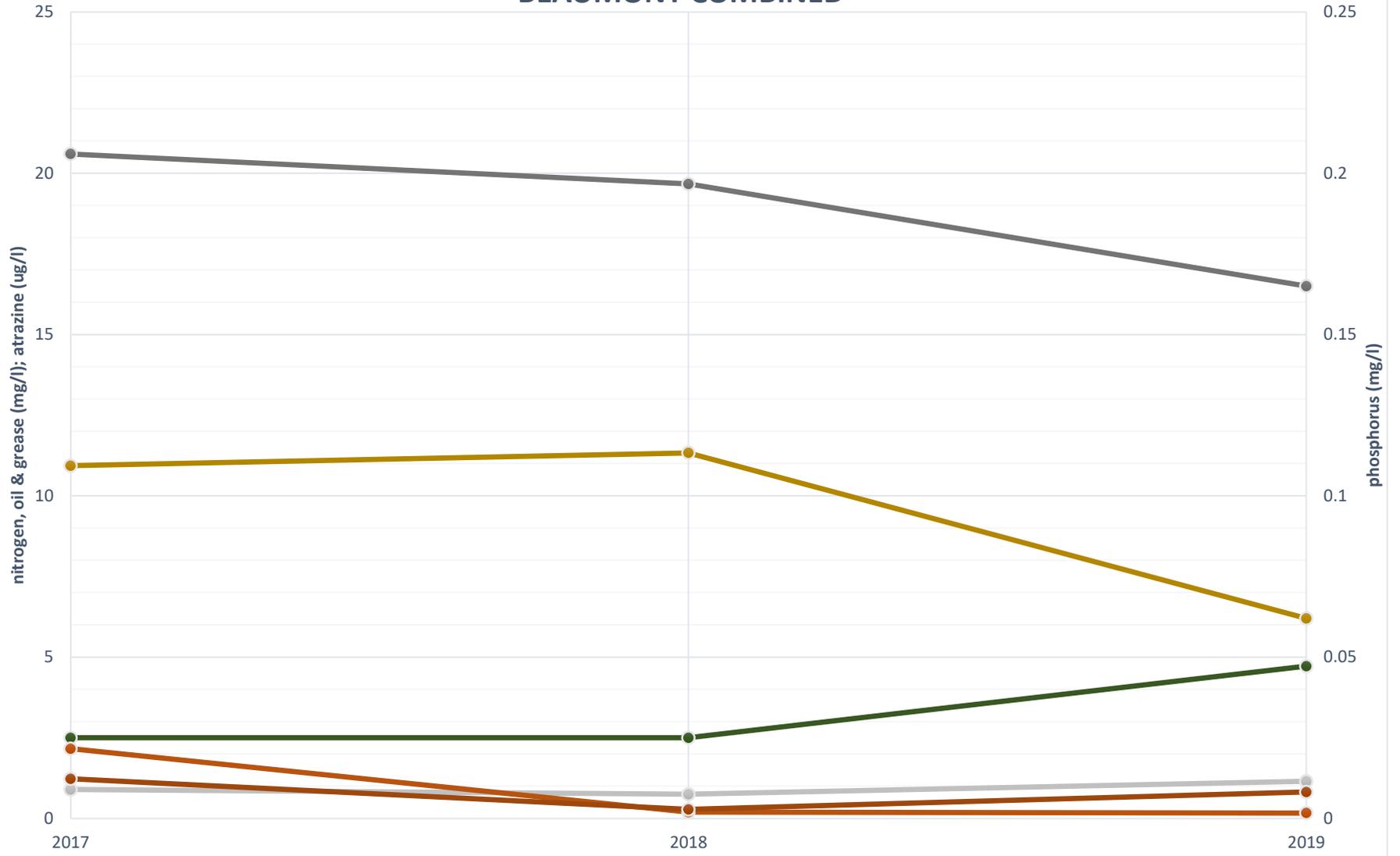
Attachment B  
Trend Graphs

# BEAUMONT COMBINED



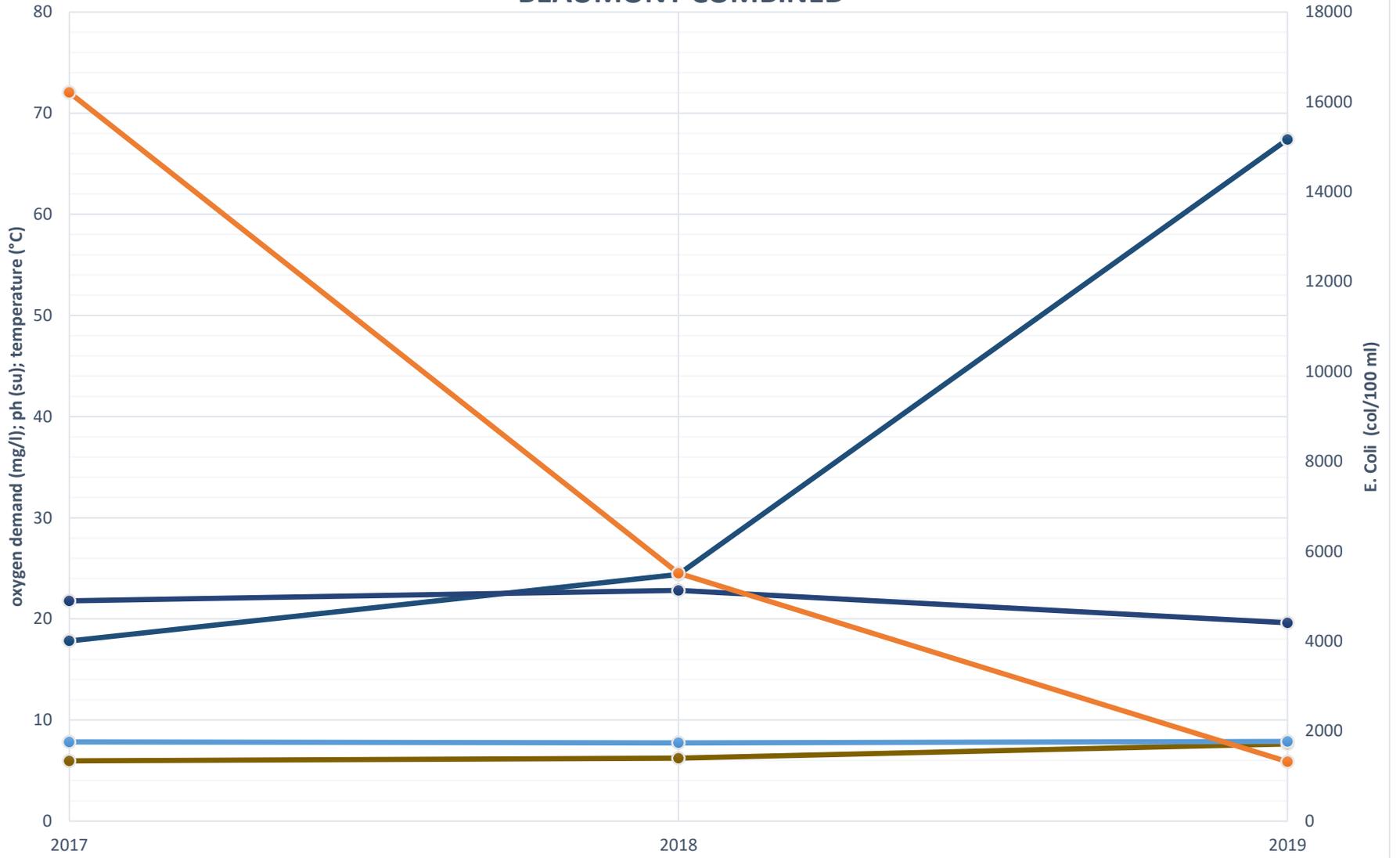
- Cadmium (AVG)
- Copper (AVG)
- Lead (AVG)
- Zinc (AVG)
- Total Suspended Solids (AVG)
- Total Dissolved Solids (AVG)
- Hardness (AVG)

# BEAUMONT COMBINED



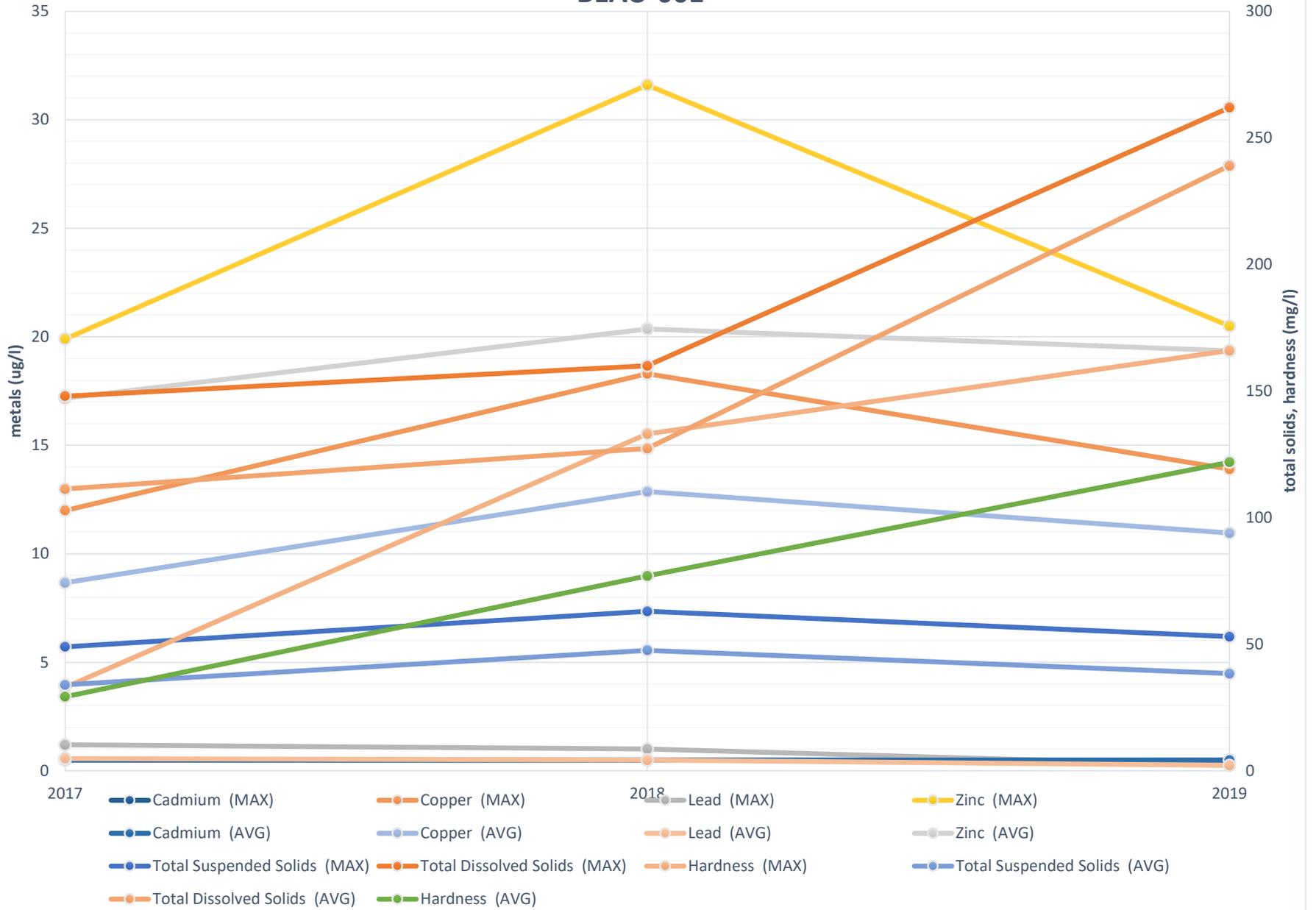
- Oil and Grease (AVG)
- Total Kjeldahl Nitrogen (AVG)
- Nitrate + Nitrite N (AVG)
- Atrazine (AVG)
- Total Phosphorus (AVG)
- Dissolved Phosphorus (AVG)

# BEAUMONT COMBINED

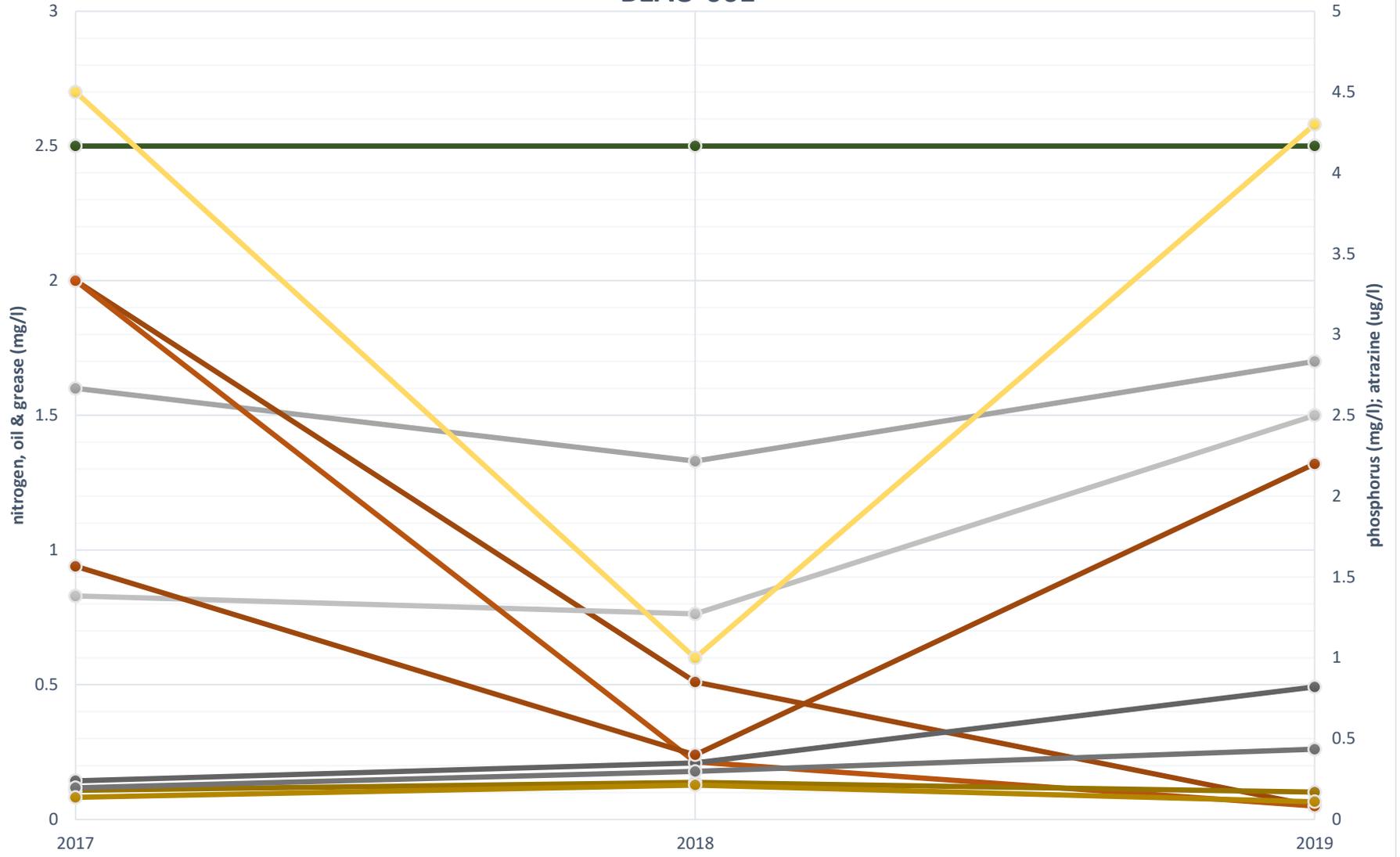


● Biological Oxygen Demand (AVG) ● Chemical Oxygen Demand (AVG) ● pH (AVG) ● Temperature (AVG) ● E. coli (AVG)

# BEAU-001

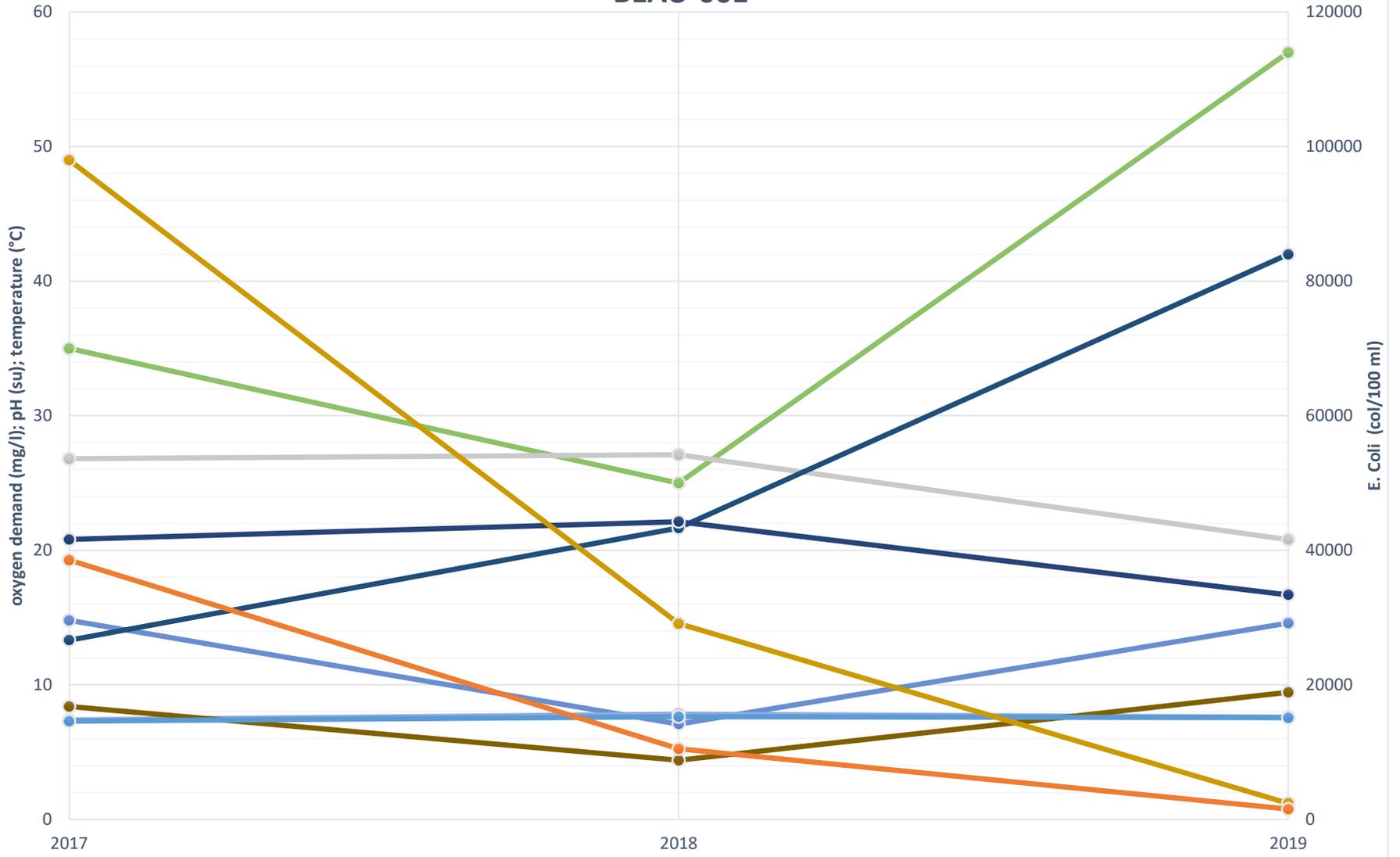


# BEAU-001



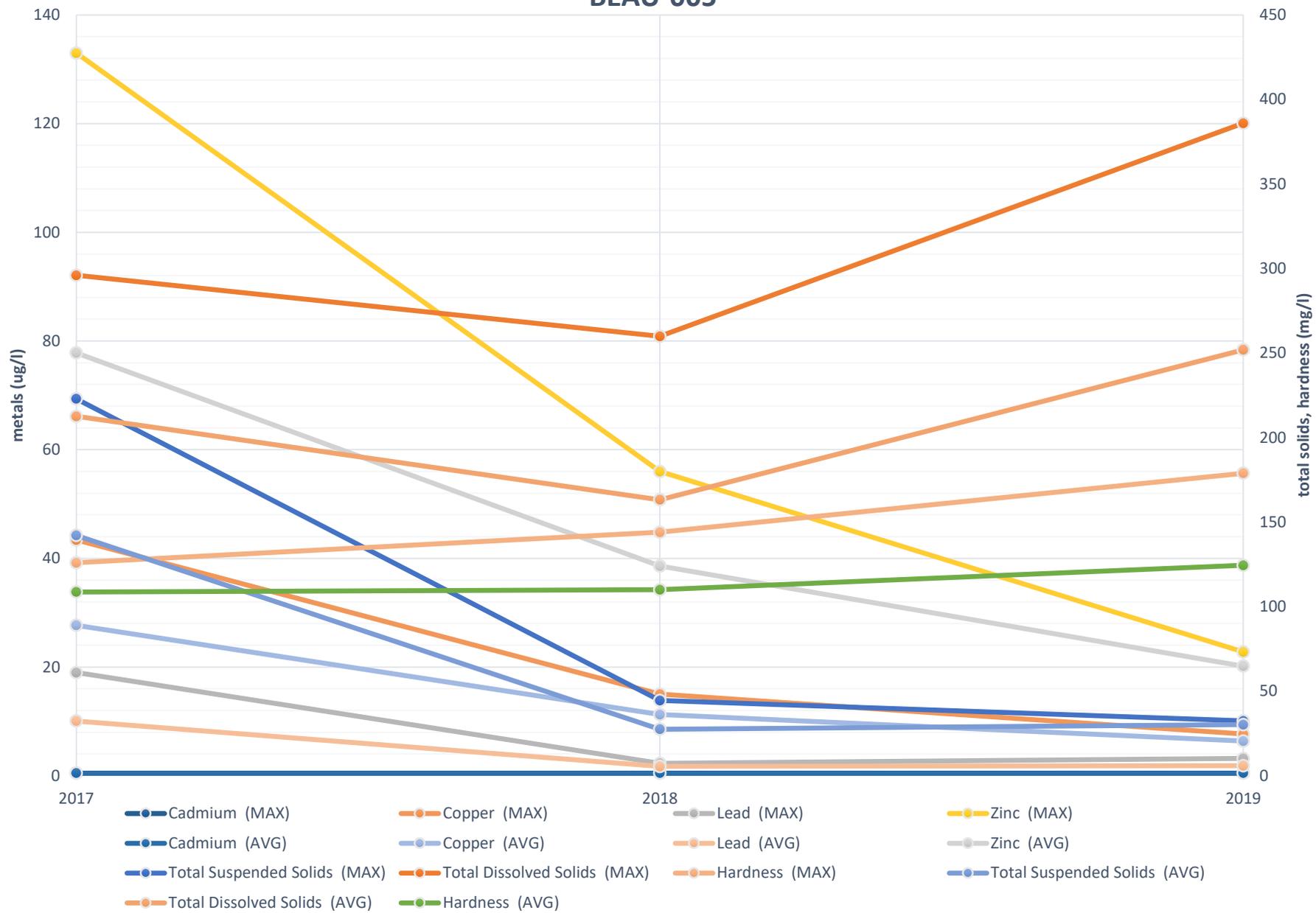
- Oil and Grease (MAX)
- Total Kjeldahl Nitrogen (MAX)
- Nitrate + Nitrite N (MAX)
- Oil and Grease (AVG)
- Total Kjeldahl Nitrogen (AVG)
- Nitrate + Nitrite N (AVG)
- Total Phosphorus (MAX)
- Dissolved Phosphorus (MAX)
- Atrazine (MAX)
- Total Phosphorus (AVG)
- Dissolved Phosphorus (AVG)
- Atrazine (AVG)

# BEAU-001

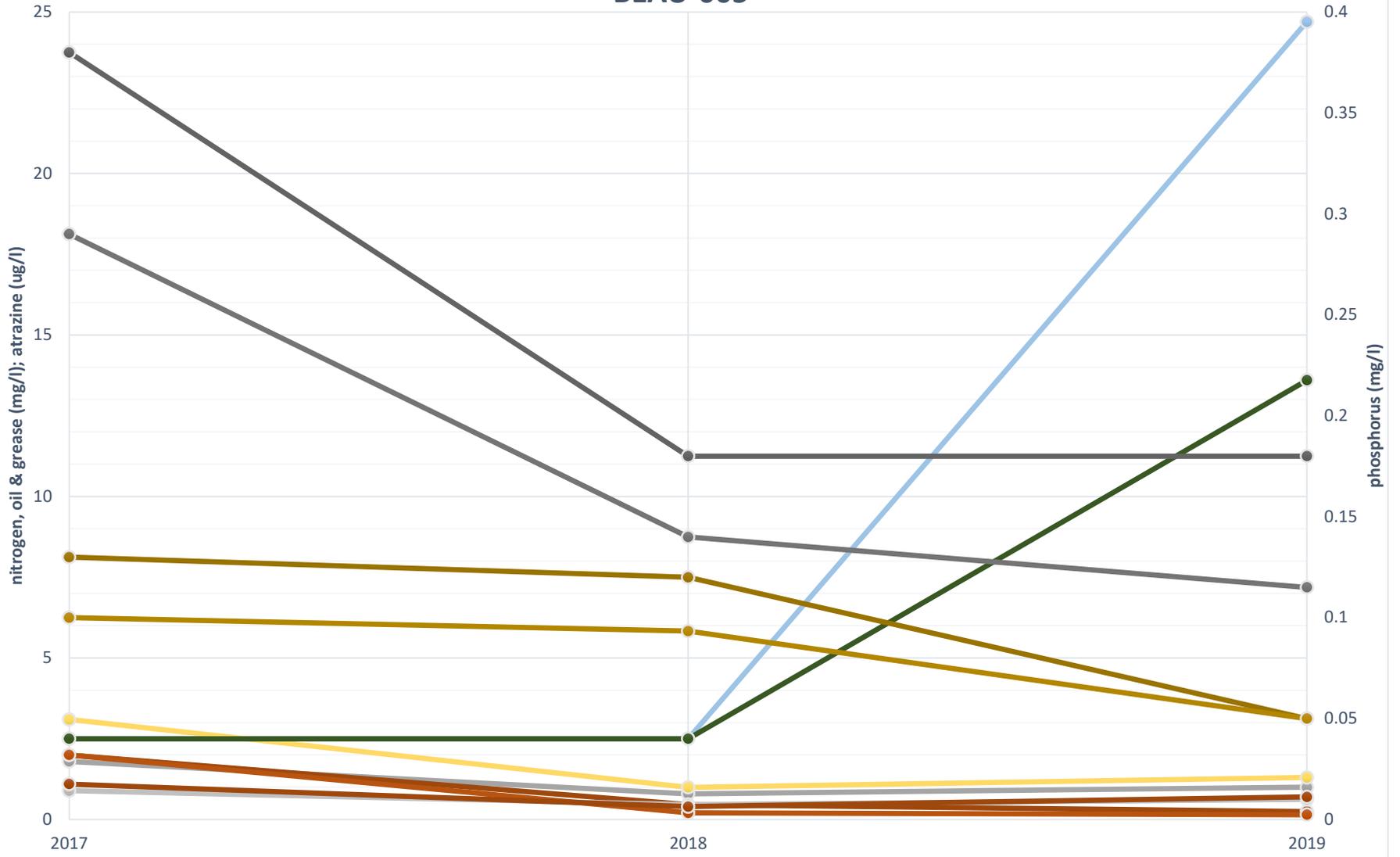


- Biological Oxygen Demand (MAX)
- Biological Oxygen Demand (AVG)
- E. coli (MAX)
- E. coli (AVG)
- Chemical Oxygen Demand (MAX)
- Chemical Oxygen Demand (AVG)
- pH (MAX)
- pH (AVG)
- Temperature (MAX)
- Temperature (AVG)

# BEAU-005

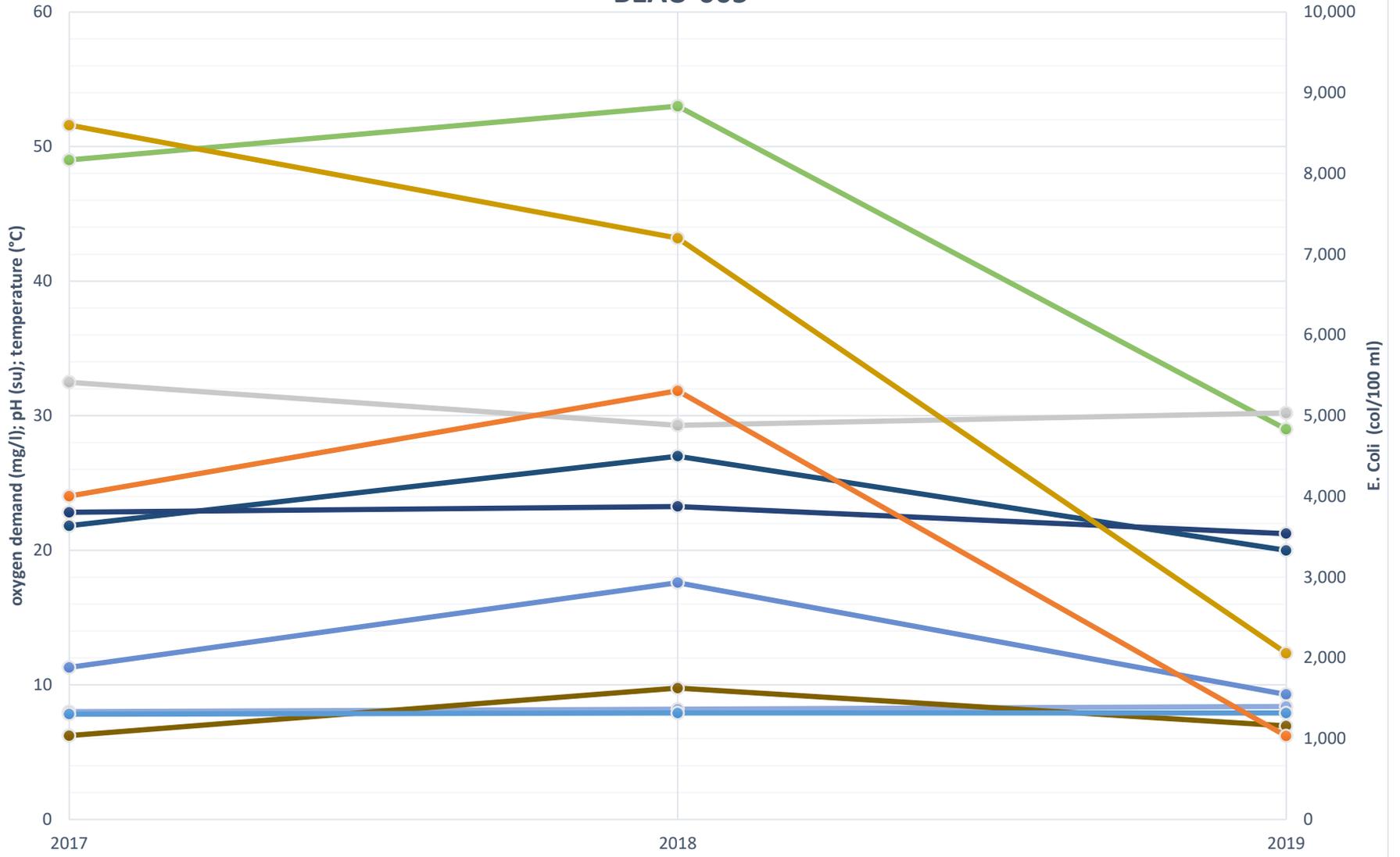


# BEAU-005



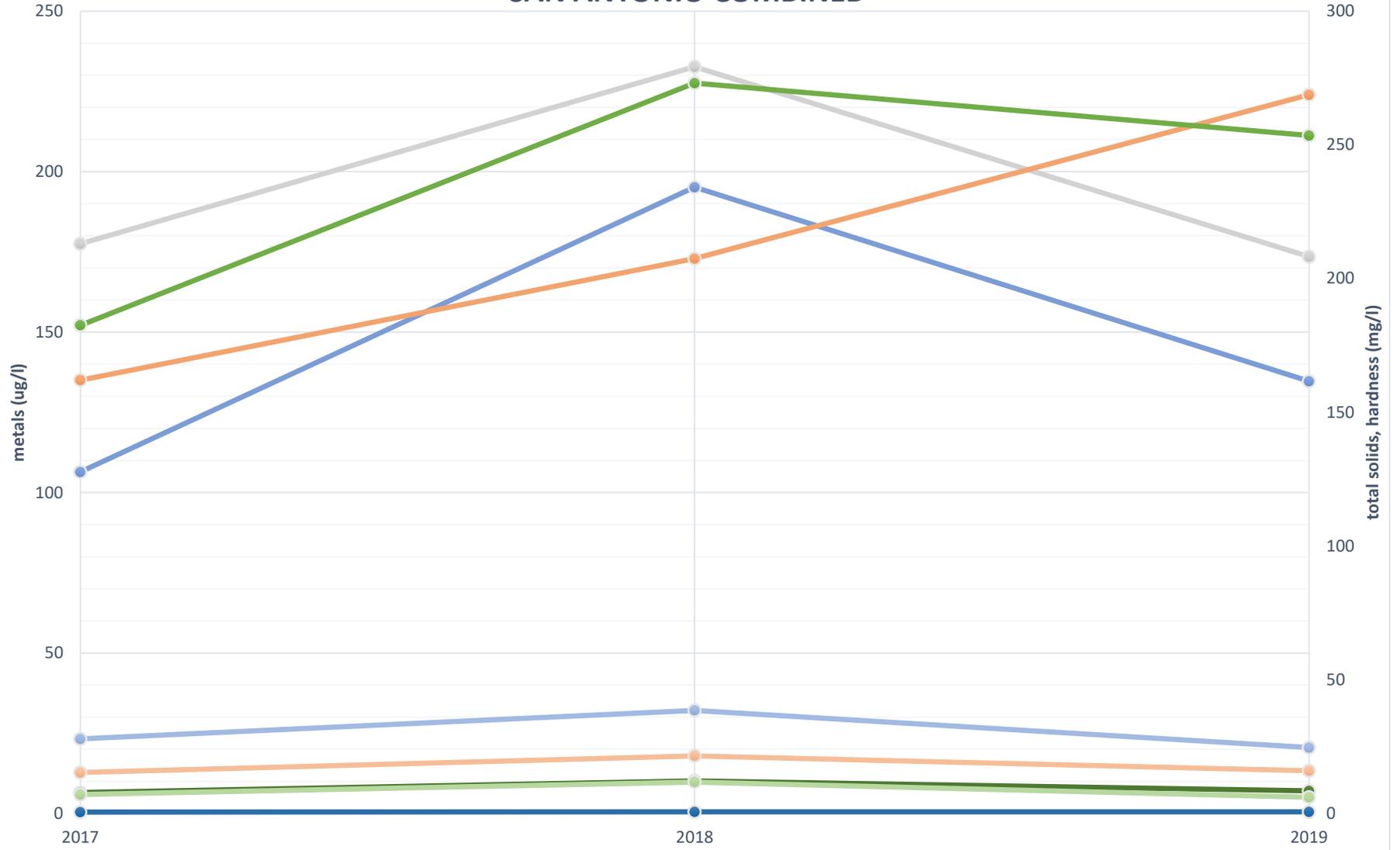
- Oil and Grease (MAX)
- Oil and Grease (AVG)
- Total Phosphorus (MAX)
- Dissolved Phosphorus (MAX)
- Total Kjeldahl Nitrogen (MAX)
- Total Kjeldahl Nitrogen (AVG)
- Nitrate + Nitrite N (MAX)
- Nitrate + Nitrite N (AVG)
- Atrazine (MAX)
- Atrazine (AVG)
- Dissolved Phosphorus (AVG)

# BEAU-005



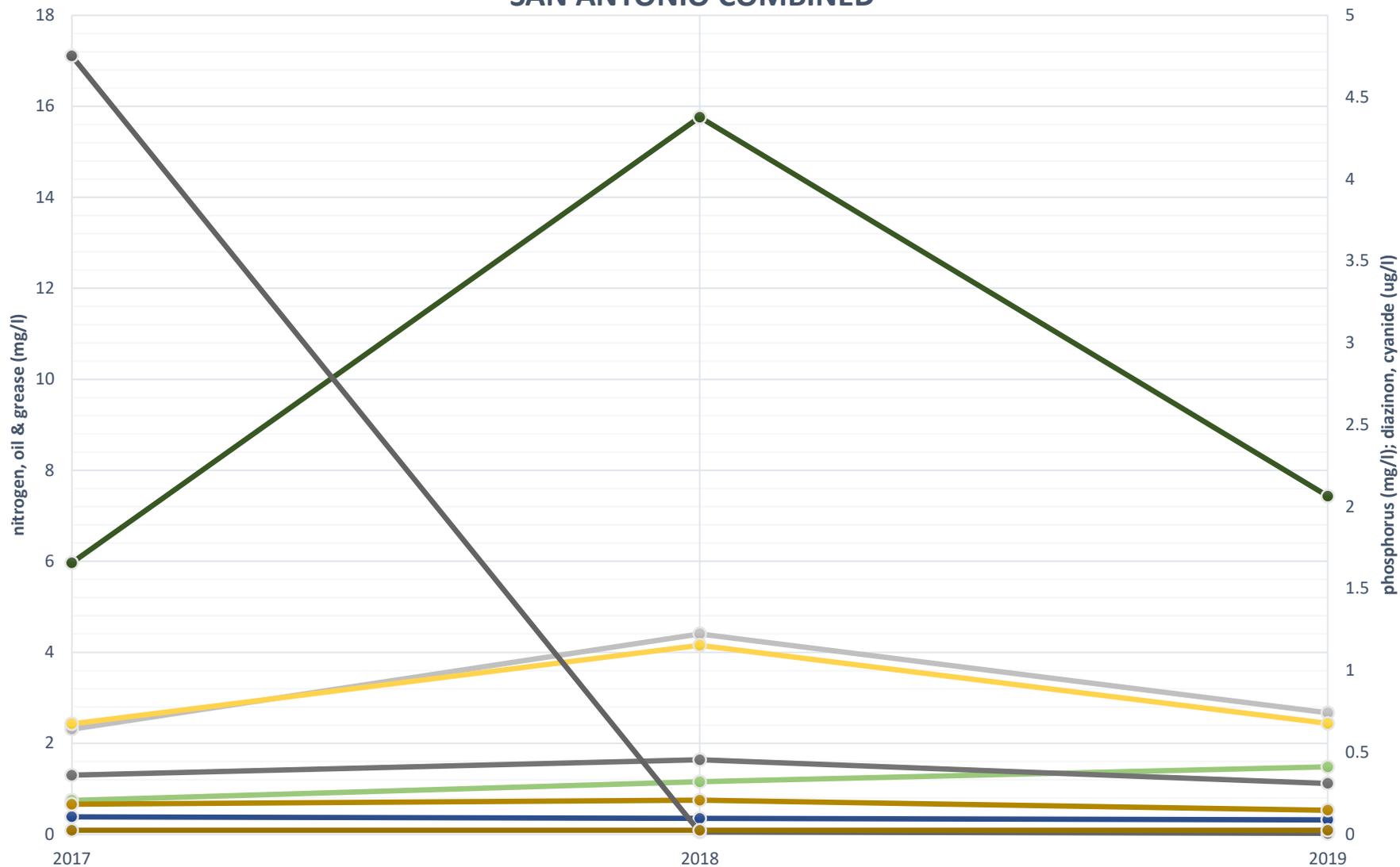
- Biological Oxygen Demand (MAX)
- Biological Oxygen Demand (AVG)
- E. coli (MAX)
- Chemical Oxygen Demand (MAX)
- Chemical Oxygen Demand (AVG)
- E. coli (AVG)
- pH (MAX)
- pH (AVG)
- Temperature (MAX)
- Temperature (AVG)

# SAN ANTONIO COMBINED



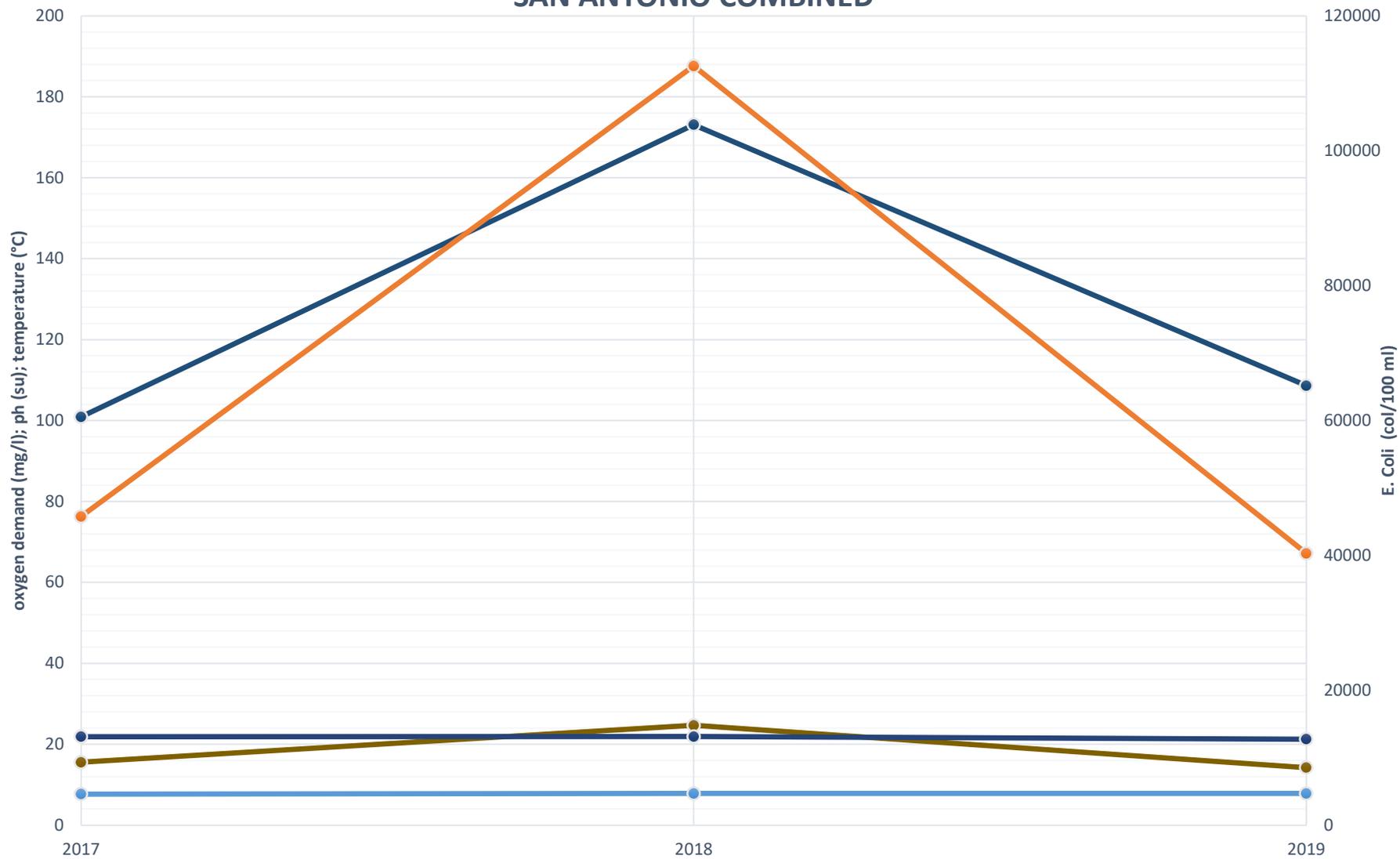
- Cadmium (AVG)
- Lead (AVG)
- Total Suspended Solids (AVG)
- Chromium (AVG)
- Zinc (AVG)
- Total Dissolved Solids (AVG)
- Copper (AVG)
- Nickel (AVG)
- Hardness (AVG)

# SAN ANTONIO COMBINED



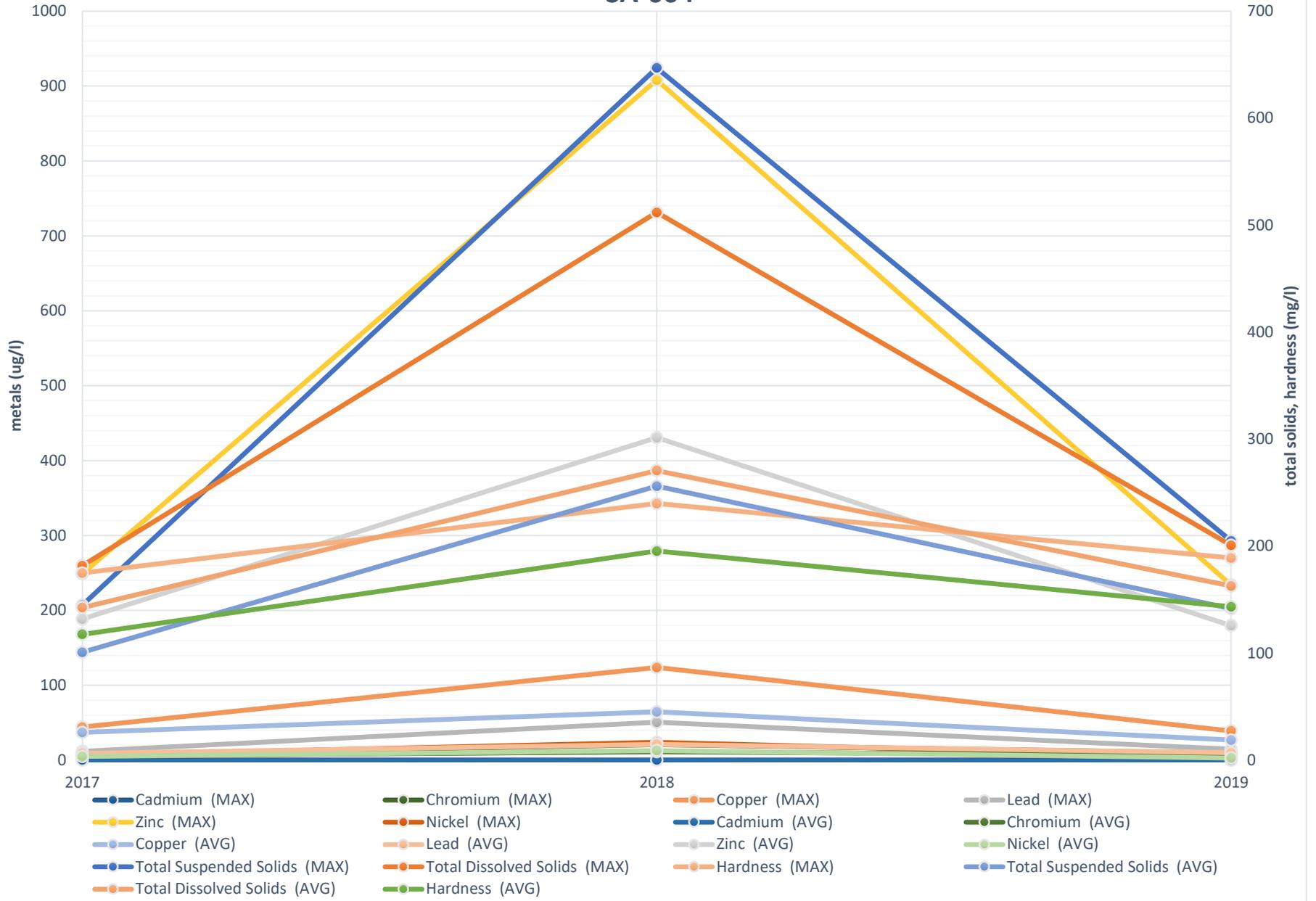
- Oil and Grease (AVG)
- Nitrate N (AVG)
- Dissolved Phosphorus (AVG)
- Total Kjeldahl Nitrogen (AVG)
- Ammonia N (AVG)
- Cyanide (AVG)
- Total Nitrogen (AVG)
- Total Phosphorus (AVG)
- Diazinon (AVG)

# SAN ANTONIO COMBINED

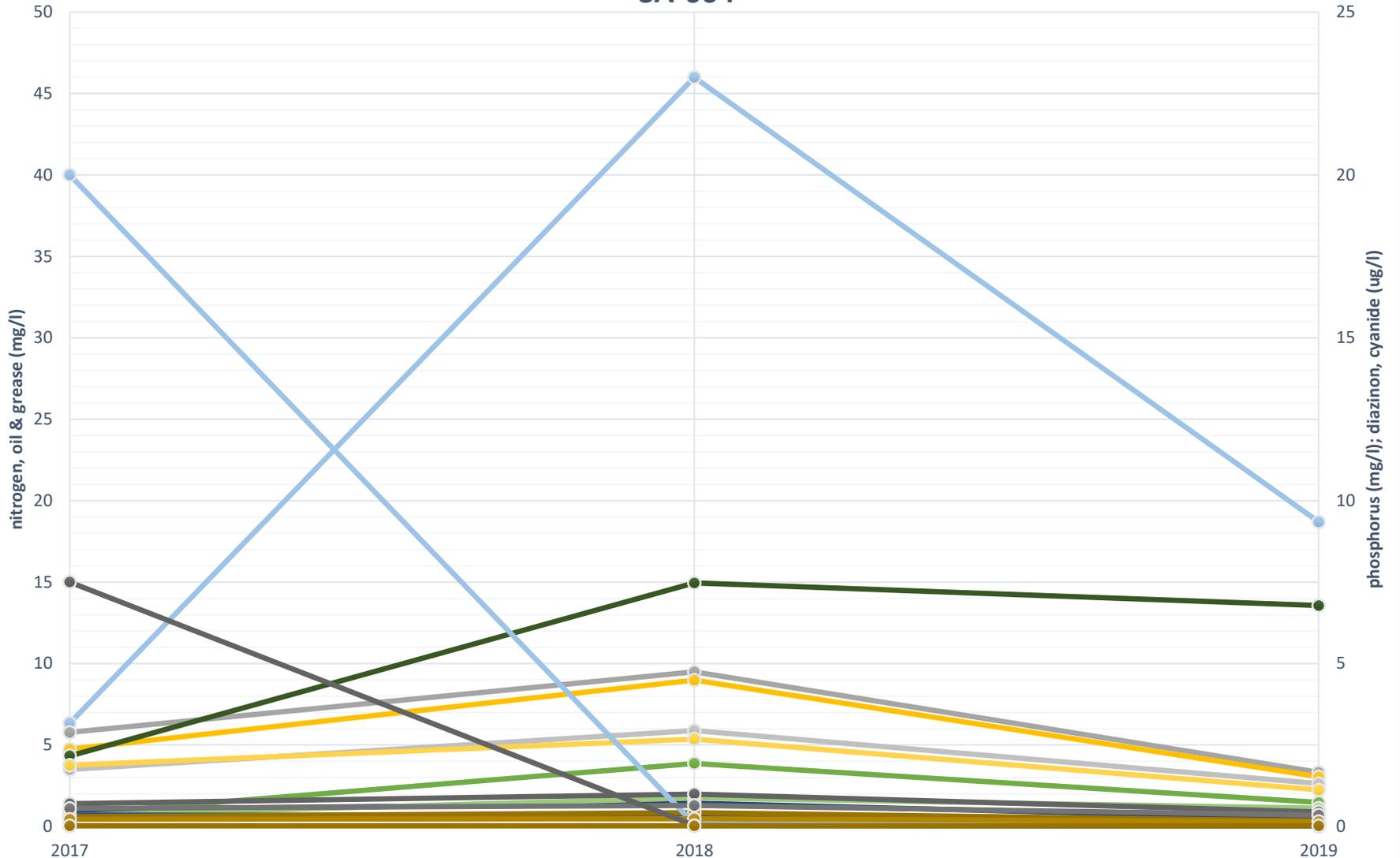


● Biological Oxygen Demand (AVG) ● Chemical Oxygen Demand (AVG) ● pH (AVG) ● Temperature (AVG) ● E. coli (AVG)

# SA-004

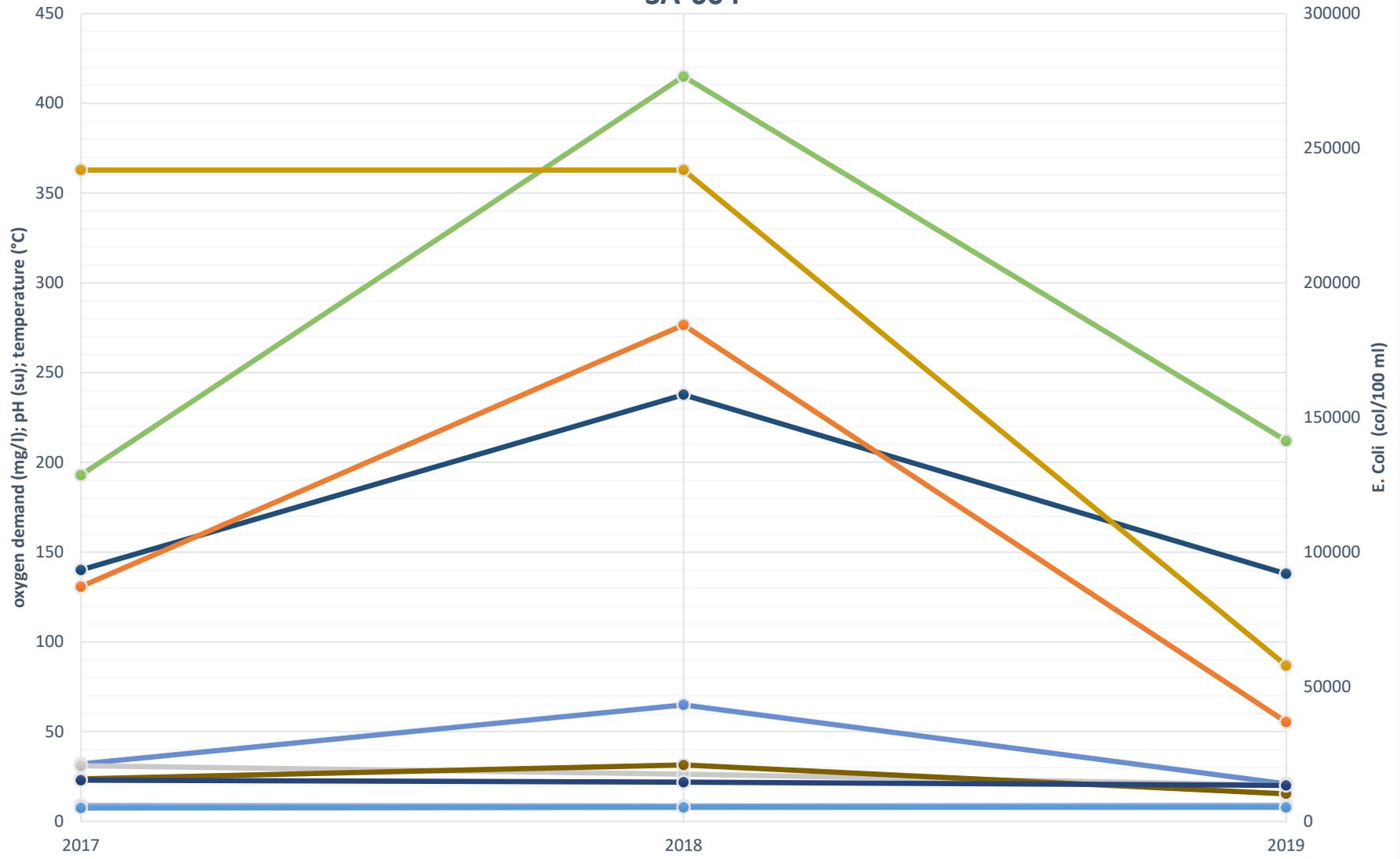


# SA-004



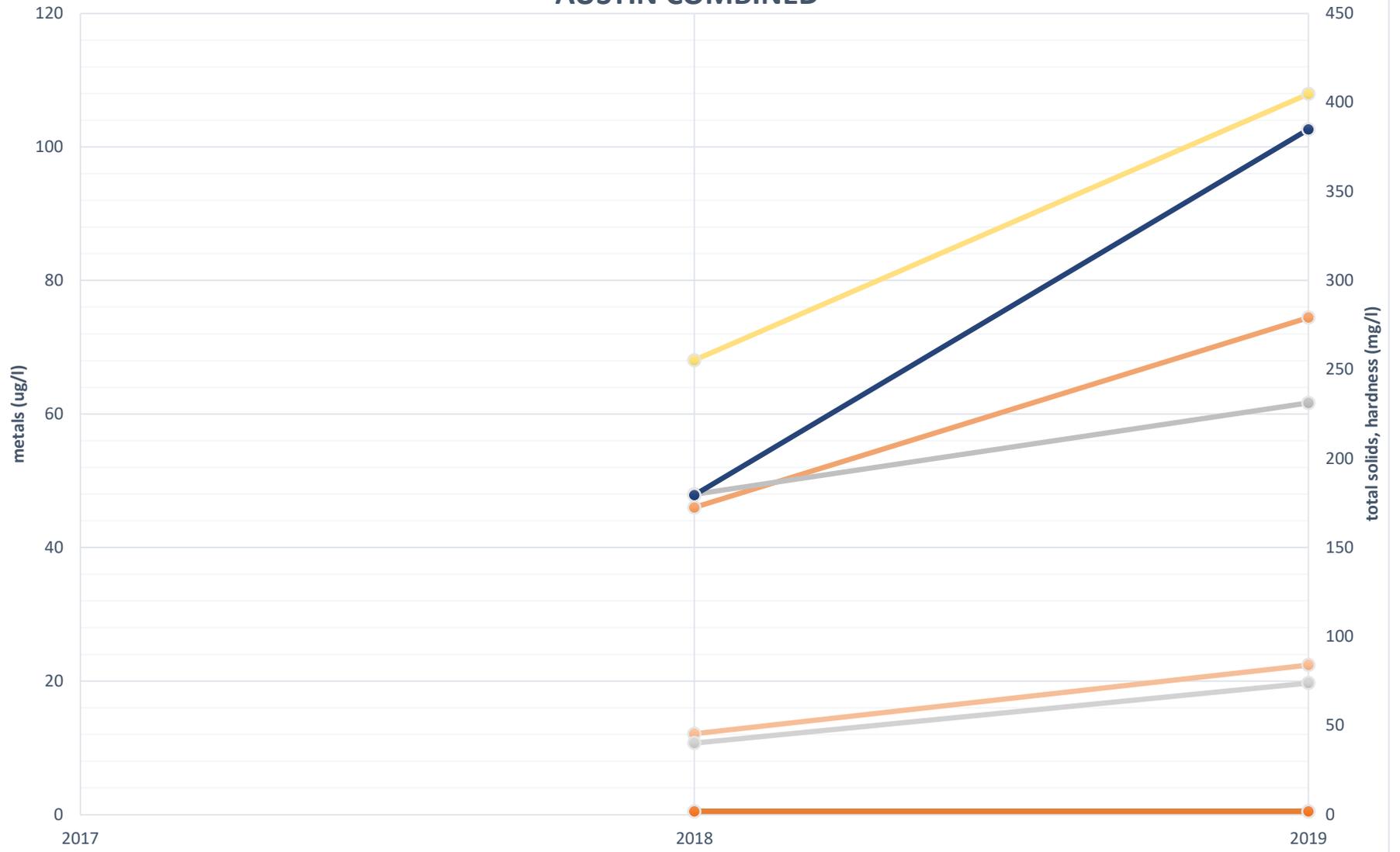
- Oil and Grease (MAX)
- Ammonia N (MAX)
- Nitrate N (AVG)
- Cyanide (MAX)
- Cyanide (AVG)
- Total Kjeldahl Nitrogen (MAX)
- Oil and Grease (AVG)
- Ammonia N (AVG)
- Diazinon (MAX)
- Diazinon (AVG)
- Total Nitrogen (MAX)
- Total Kjeldahl Nitrogen (AVG)
- Total Phosphorus (MAX)
- Total Phosphorus (AVG)
- Total Nitrogen (AVG)
- Dissolved Phosphorus (MAX)
- Dissolved Phosphorus (AVG)

# SA-004



- Biological Oxygen Demand (MAX)
- Biological Oxygen Demand (AVG)
- E. coli (MAX)
- Chemical Oxygen Demand (MAX)
- Chemical Oxygen Demand (AVG)
- E. coli (AVG)
- pH (MAX)
- pH (AVG)
- Temperature (MAX)
- Temperature (AVG)

# AUSTIN COMBINED



● Cadmium (AVG)

● Copper (AVG)

● Lead (AVG)

● Zinc (AVG)

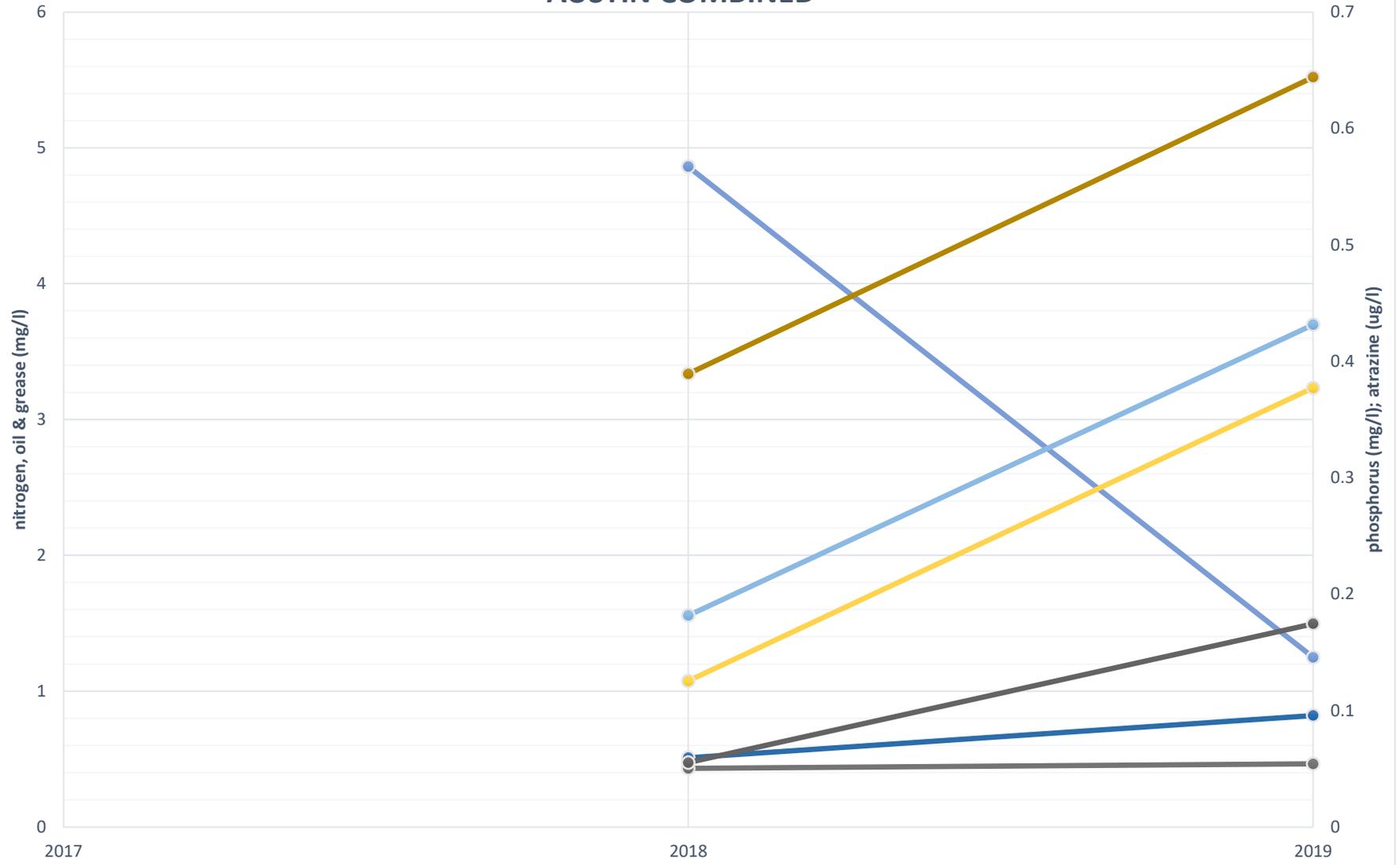
● Silver (AVG)

● Total Suspended Solids (AVG)

● Total Dissolved Solids (AVG)

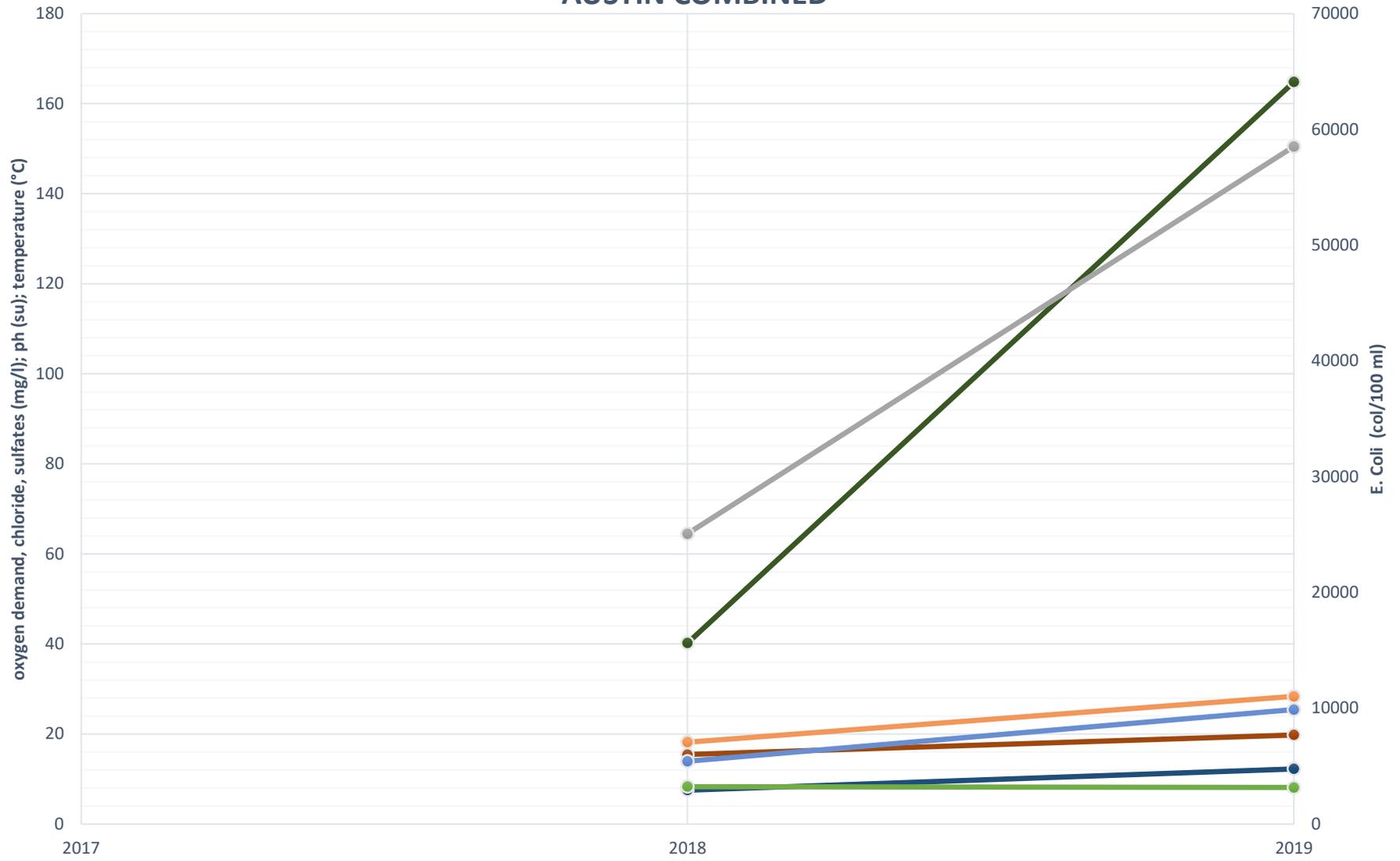
● Hardness (AVG)

# AUSTIN COMBINED



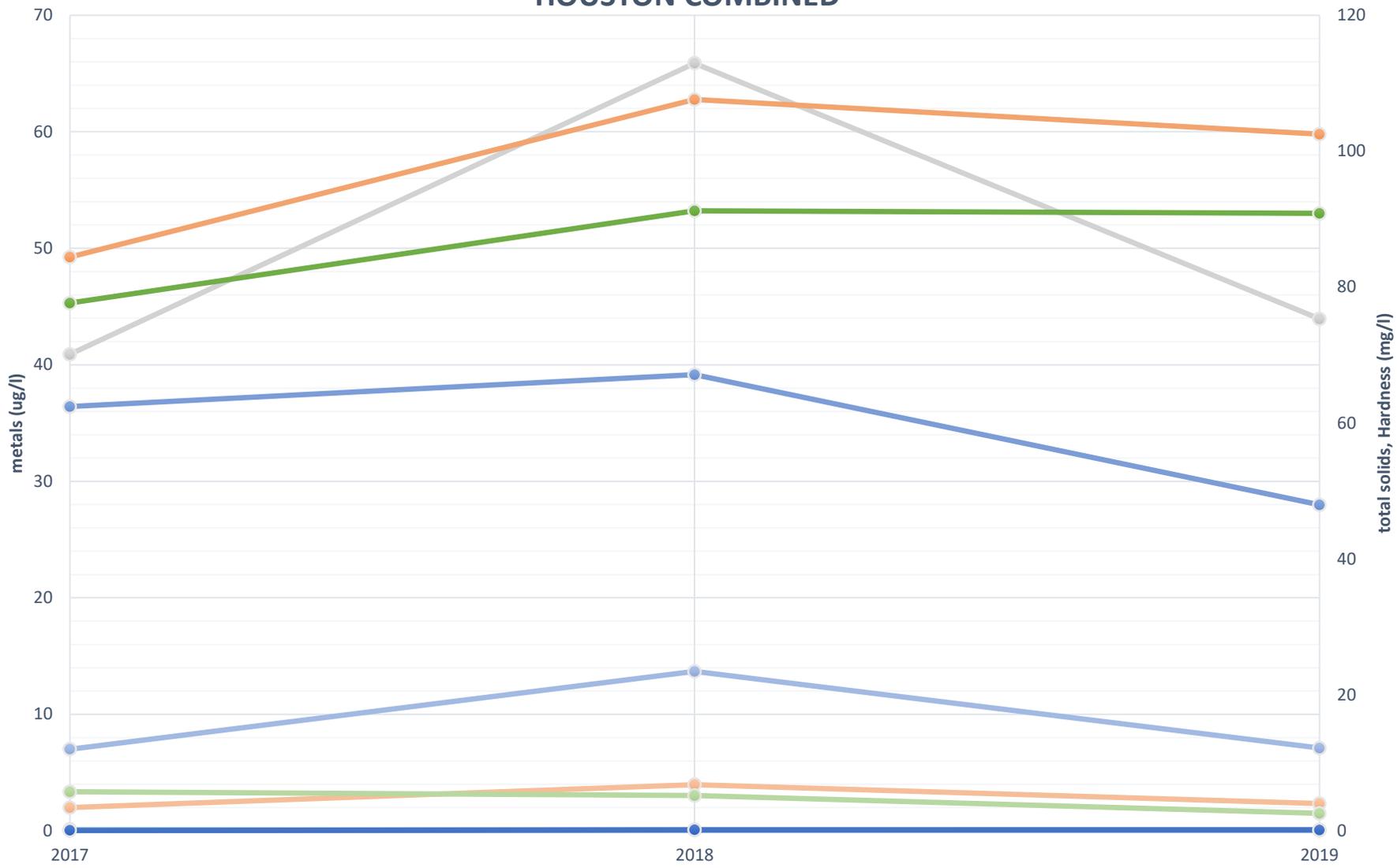
- Oil and Grease (AVG)
- Total Kjeldahl Nitrogen (AVG)
- Total Nitrogen (AVG)
- Nitrate + Nitrite N (AVG)
- Total Phosphorus (AVG)
- Dissolved Phosphorus (AVG)
- Atrazine (AVG)

# AUSTIN COMBINED



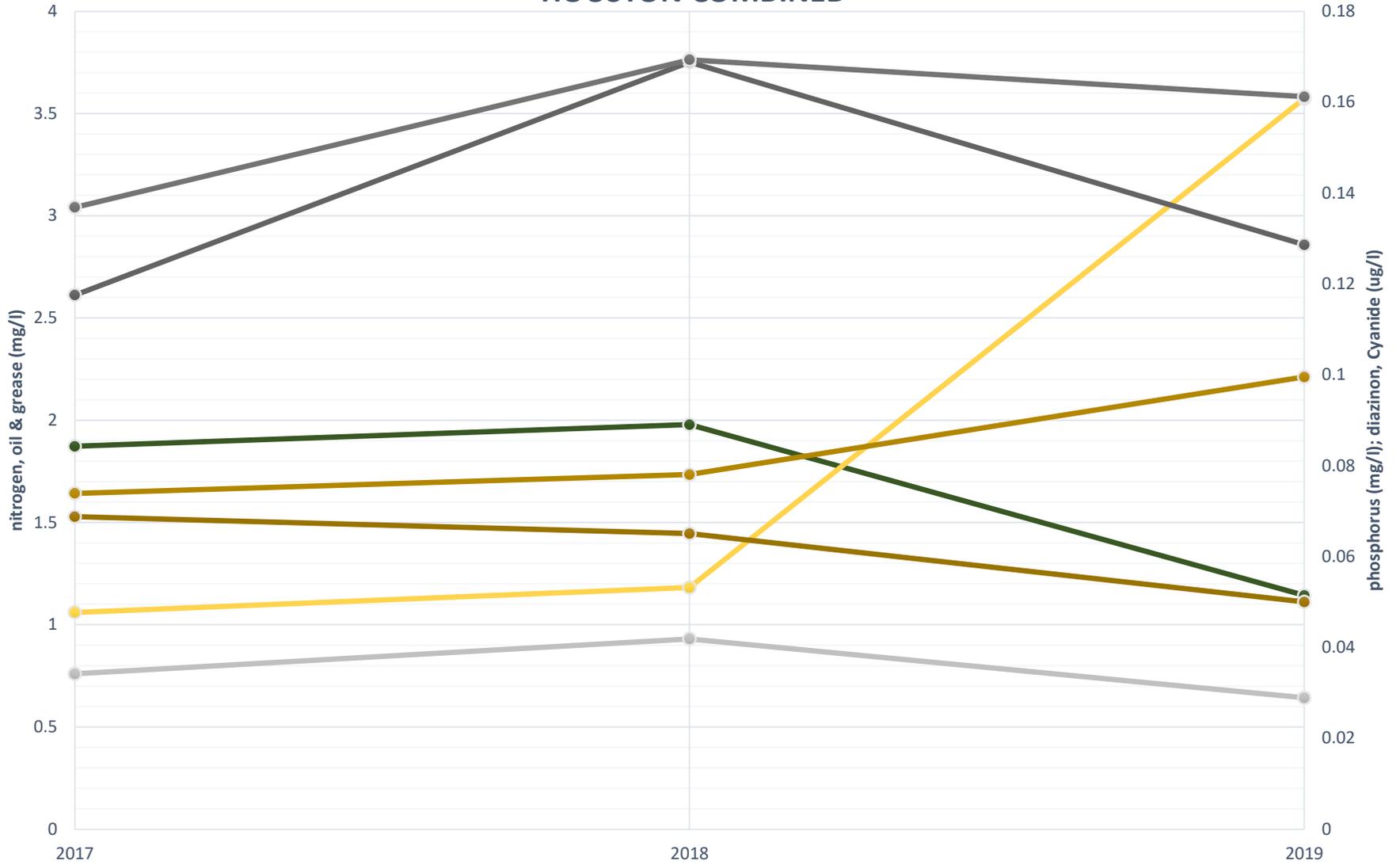
- Biological Oxygen Demand (AVG)
- Chemical Oxygen Demand (AVG)
- pH (AVG)
- Temperature (AVG)
- Chloride (AVG)
- Sulfate (AVG)
- E. coli (AVG)

# HOUSTON COMBINED



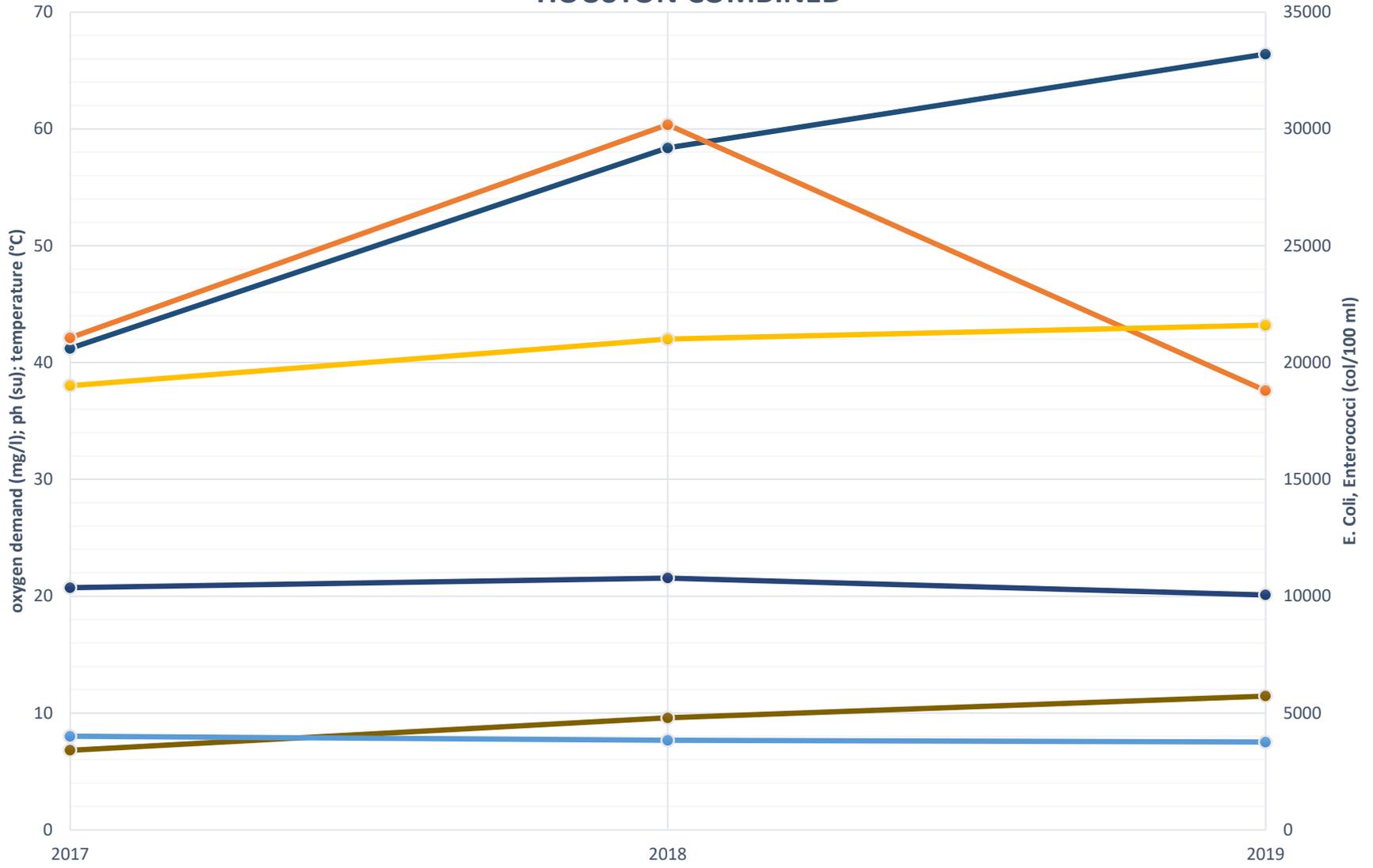
- Cadmium (AVG)
- Copper (AVG)
- Lead (AVG)
- Zinc (AVG)
- Mercury (AVG)
- Nickel (AVG)
- Silver (AVG)
- Total Suspended Solids (AVG)
- Total Dissolved Solids (AVG)
- Hardness (AVG)

# HOUSTON COMBINED



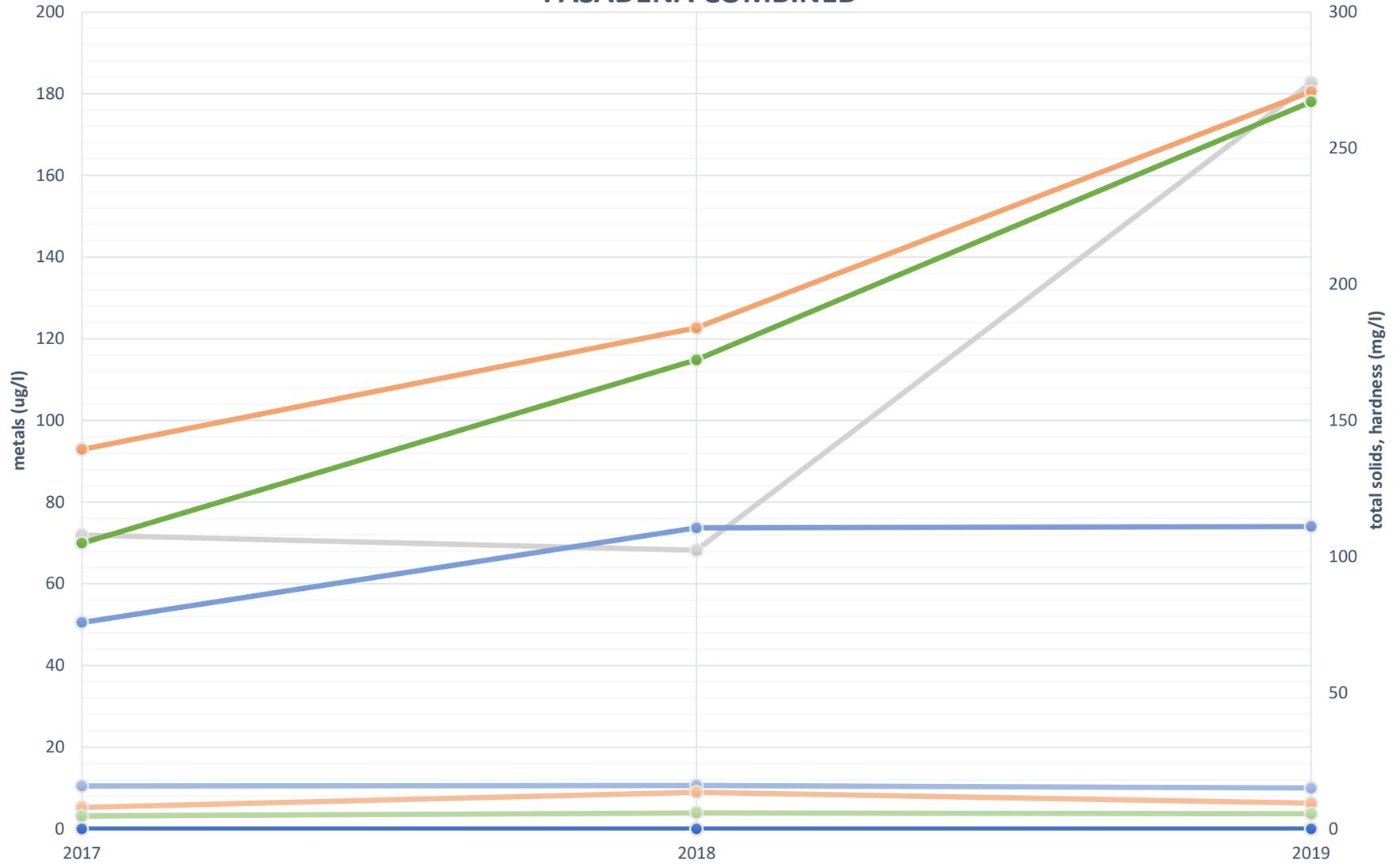
- Oil and Grease (AVG)
- Total Kjeldahl Nitrogen (AVG)
- Total Nitrogen (AVG)
- Cyanide (AVG)
- Total Phosphorus (AVG)
- Dissolved Phosphorus (AVG)
- Diazinon (AVG)

# HOUSTON COMBINED



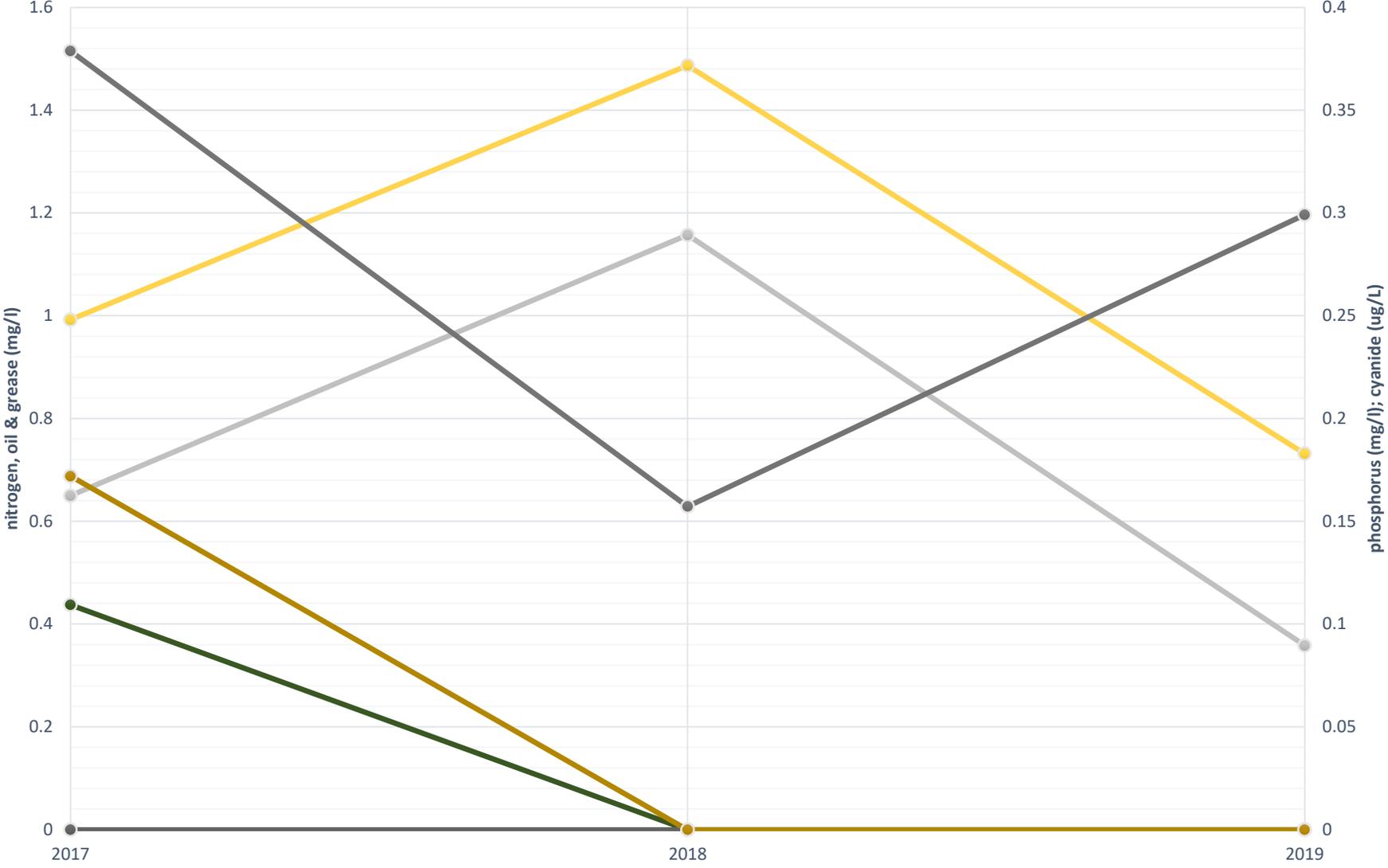
- Biological Oxygen Demand (AVG)
- Chemical Oxygen Demand (AVG)
- pH (AVG)
- Temperature (AVG)
- E. coli (AVG)
- Enterococci (AVG)

# PASADENA COMBINED



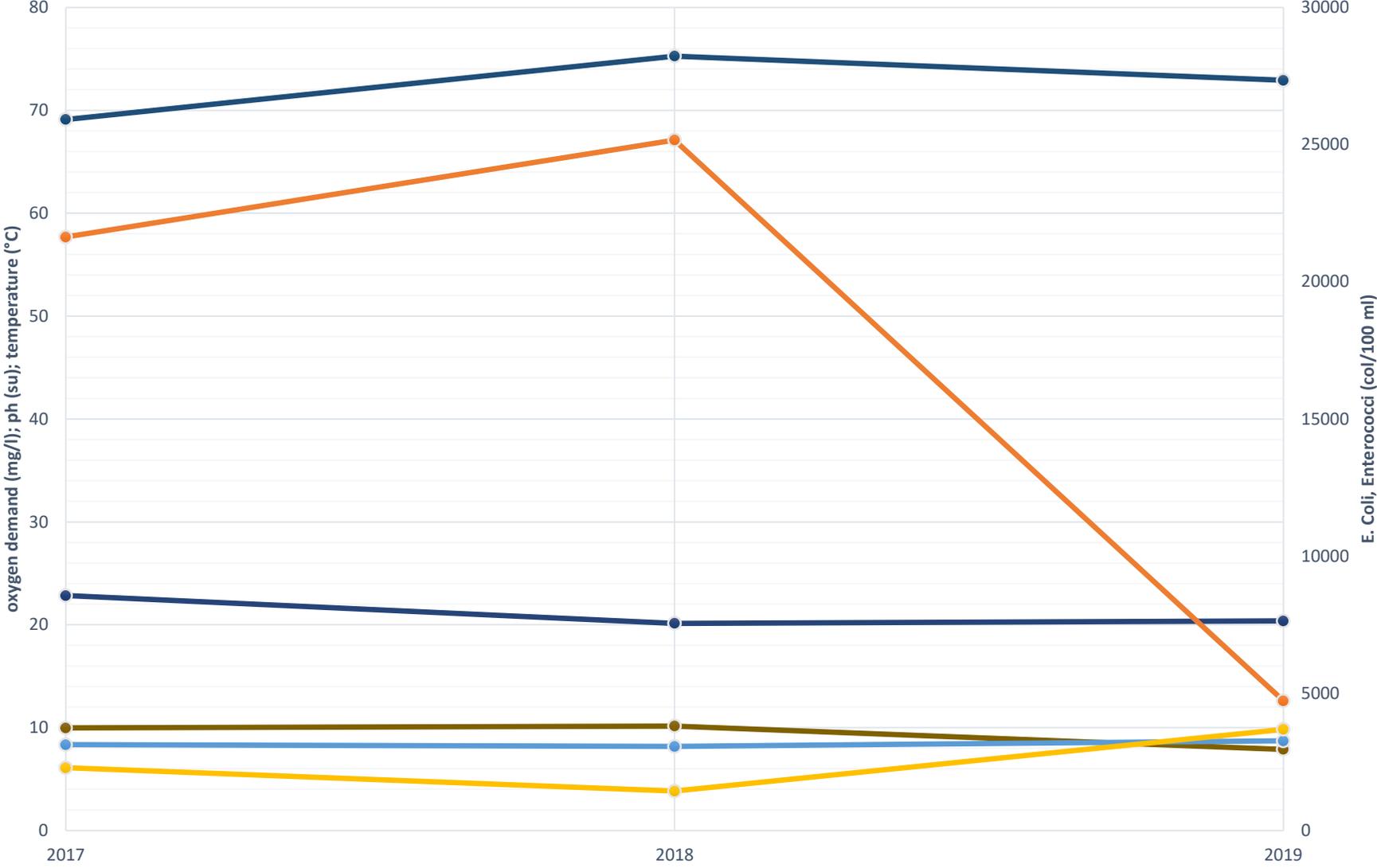
- Cadmium (AVG)
- Copper (AVG)
- Lead (AVG)
- Zinc (AVG)
- Mercury (AVG)
- Nickel (AVG)
- Silver (AVG)
- Total Suspended Solids (AVG)
- Total Dissolved Solids (AVG)
- Hardness (AVG)

# PASADENA COMBINED



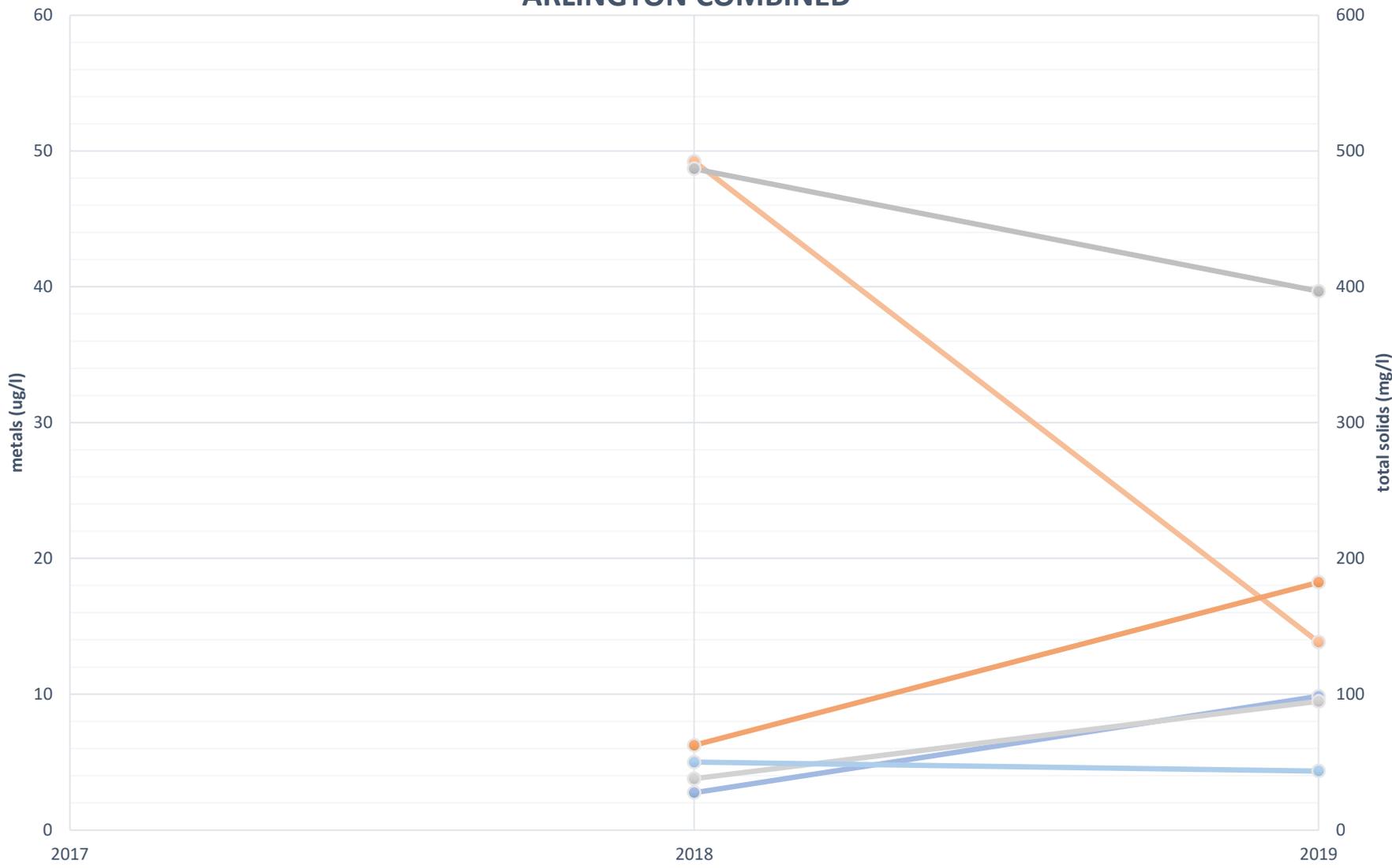
- Oil and Grease (AVG)
- Cyanide (AVG)
- Total Kjeldahl Nitrogen (AVG)
- Total Phosphorus (AVG)
- Total Nitrogen (AVG)
- Dissolved Phosphorus (AVG)

# PASADENA COMBINED



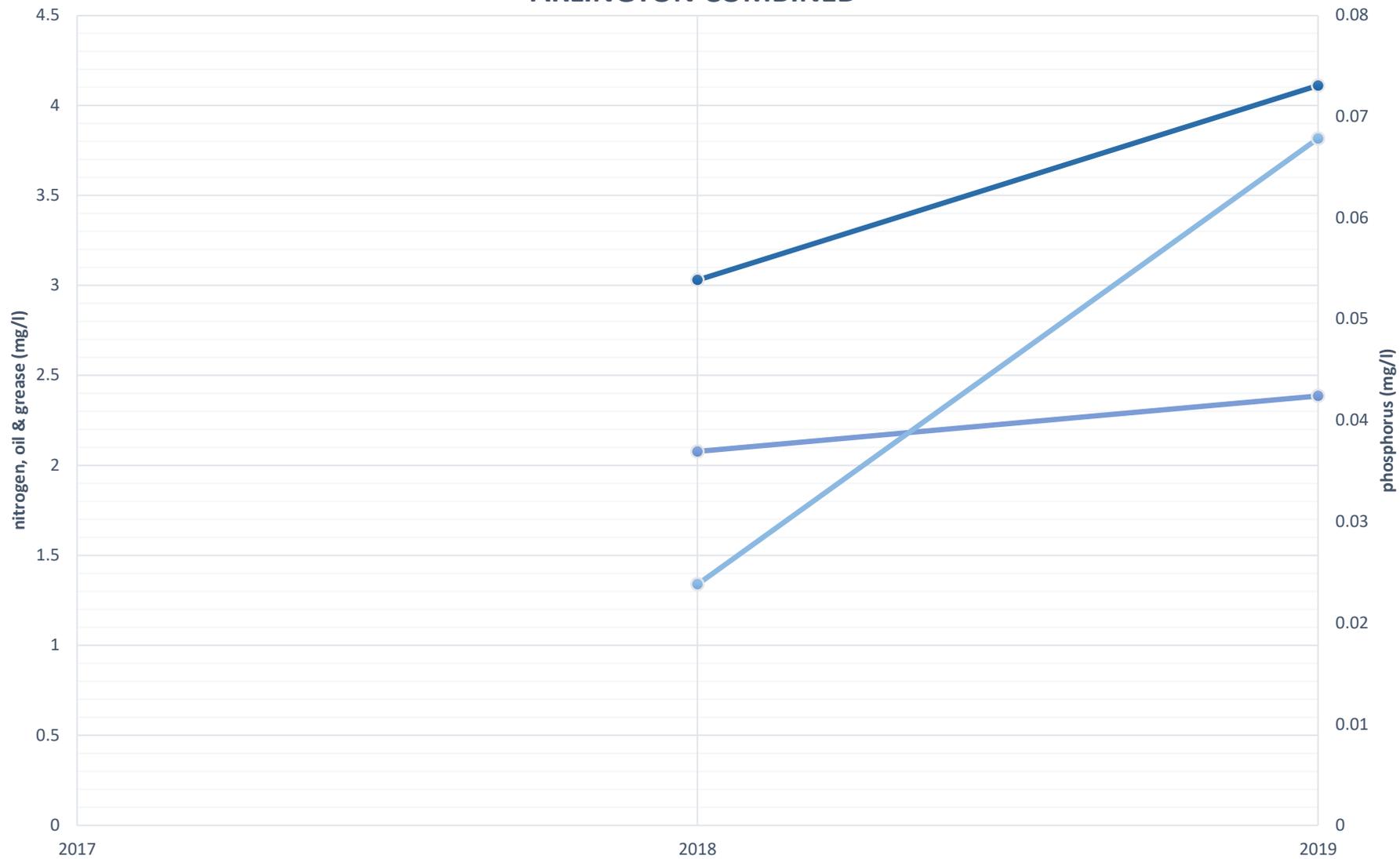
- Biological Oxygen Demand (AVG)
- Chemical Oxygen Demand (AVG)
- pH (AVG)
- Temperature (AVG)
- E. coli (AVG)
- Enterococci (AVG)

# ARLINGTON COMBINED



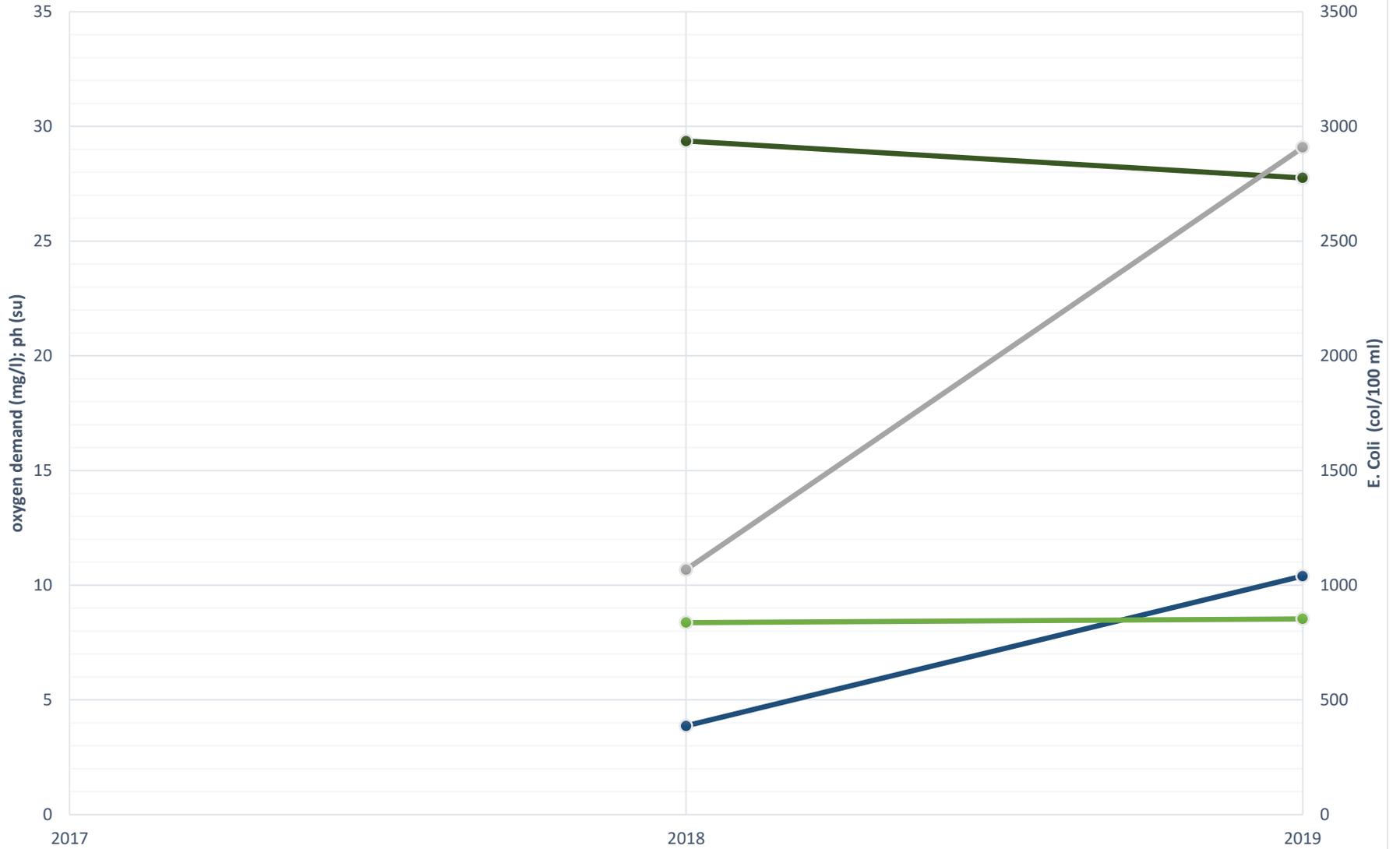
● Chromium (AVG) ● Copper (AVG) ● Lead (AVG) ● Arsenic (AVG) ● Total Suspended Solids (AVG) ● Total Dissolved Solids (AVG)

# ARLINGTON COMBINED



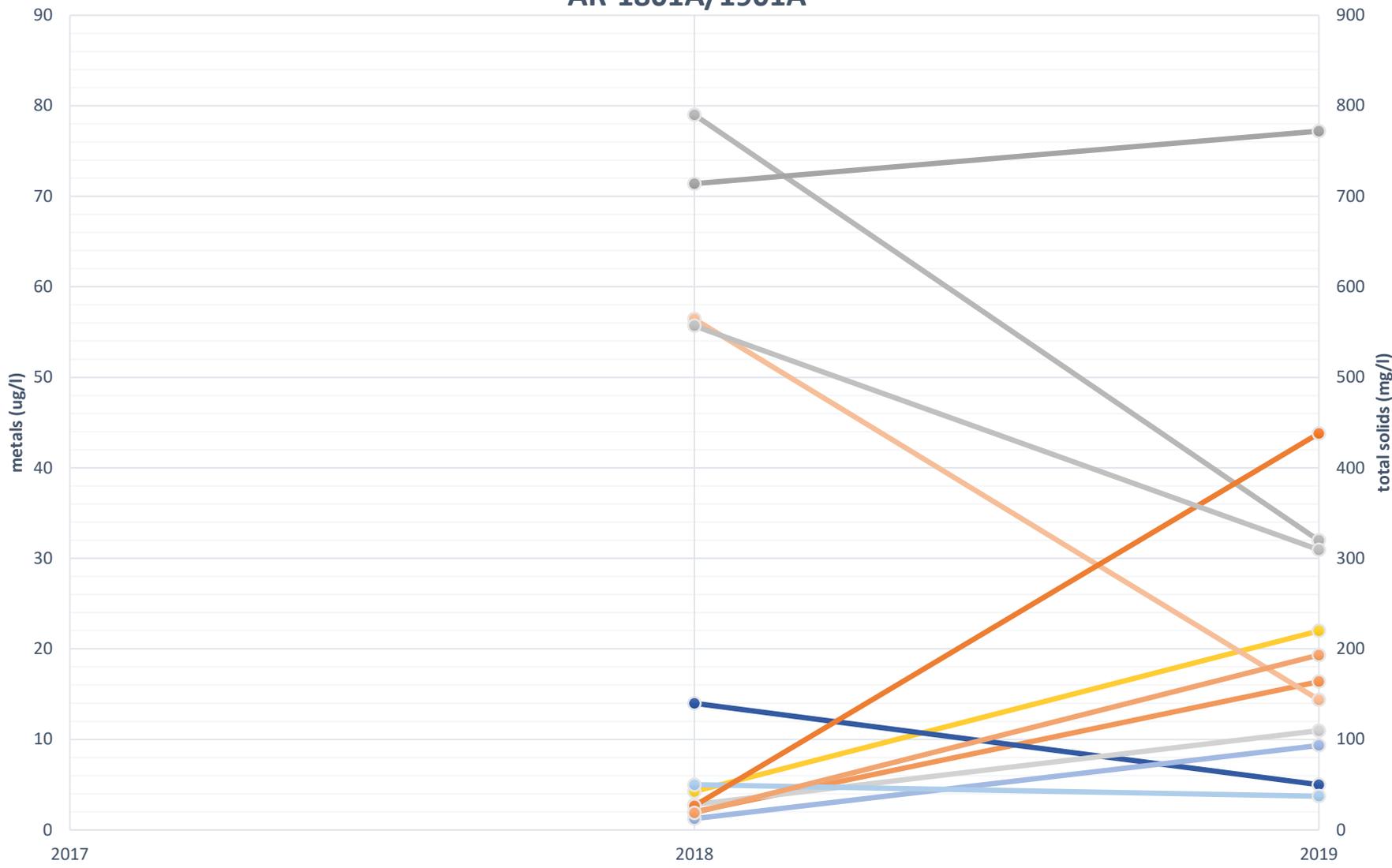
Oil and Grease (AVG)    Total Nitrogen (AVG)    Dissolved Phosphorus (AVG)

# ARLINGTON COMBINED



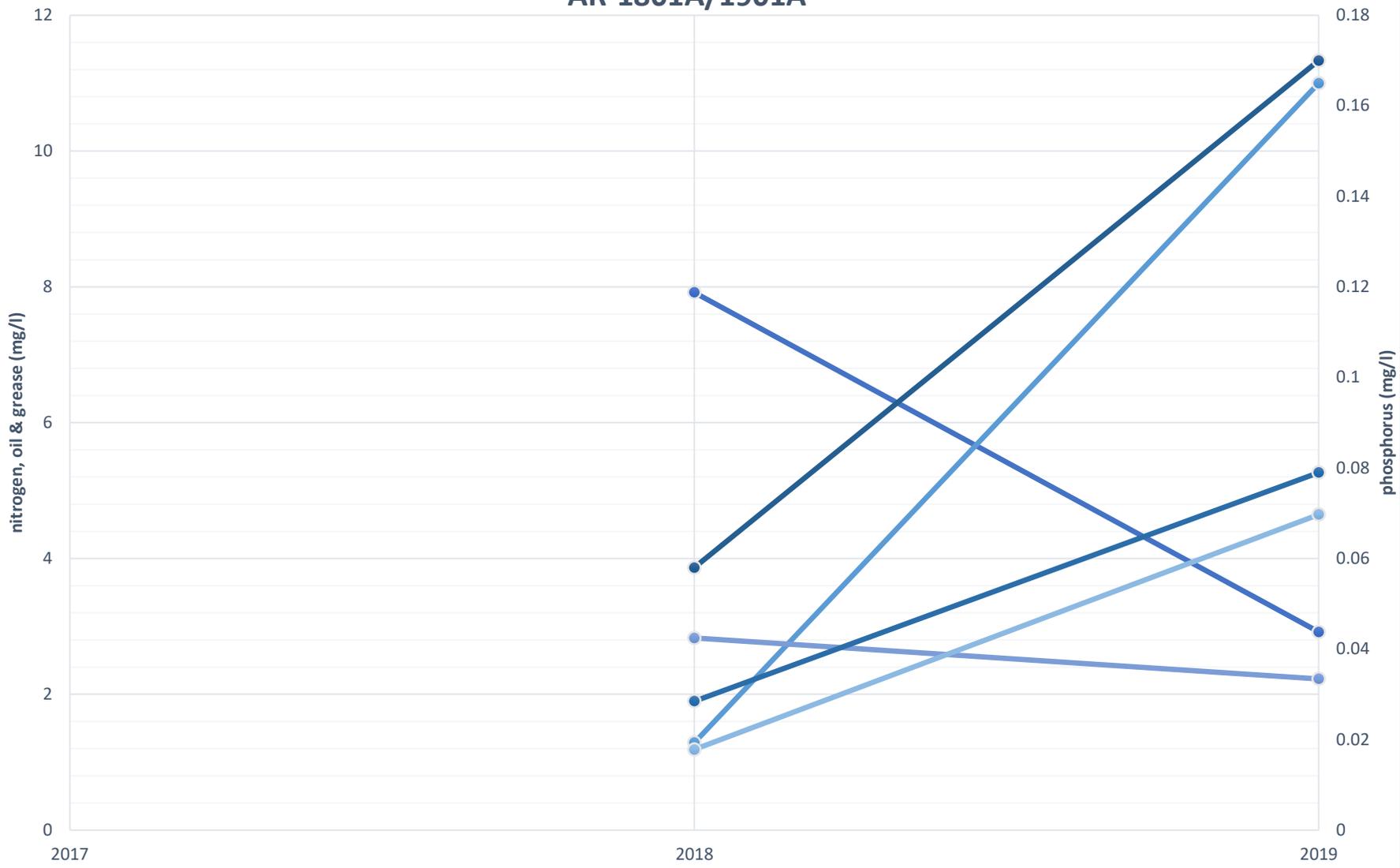
● Biological Oxygen Demand (AVG) ● Chemical Oxygen Demand (AVG) ● pH (AVG) ● E. coli (AVG)

# AR-1801A/1901A



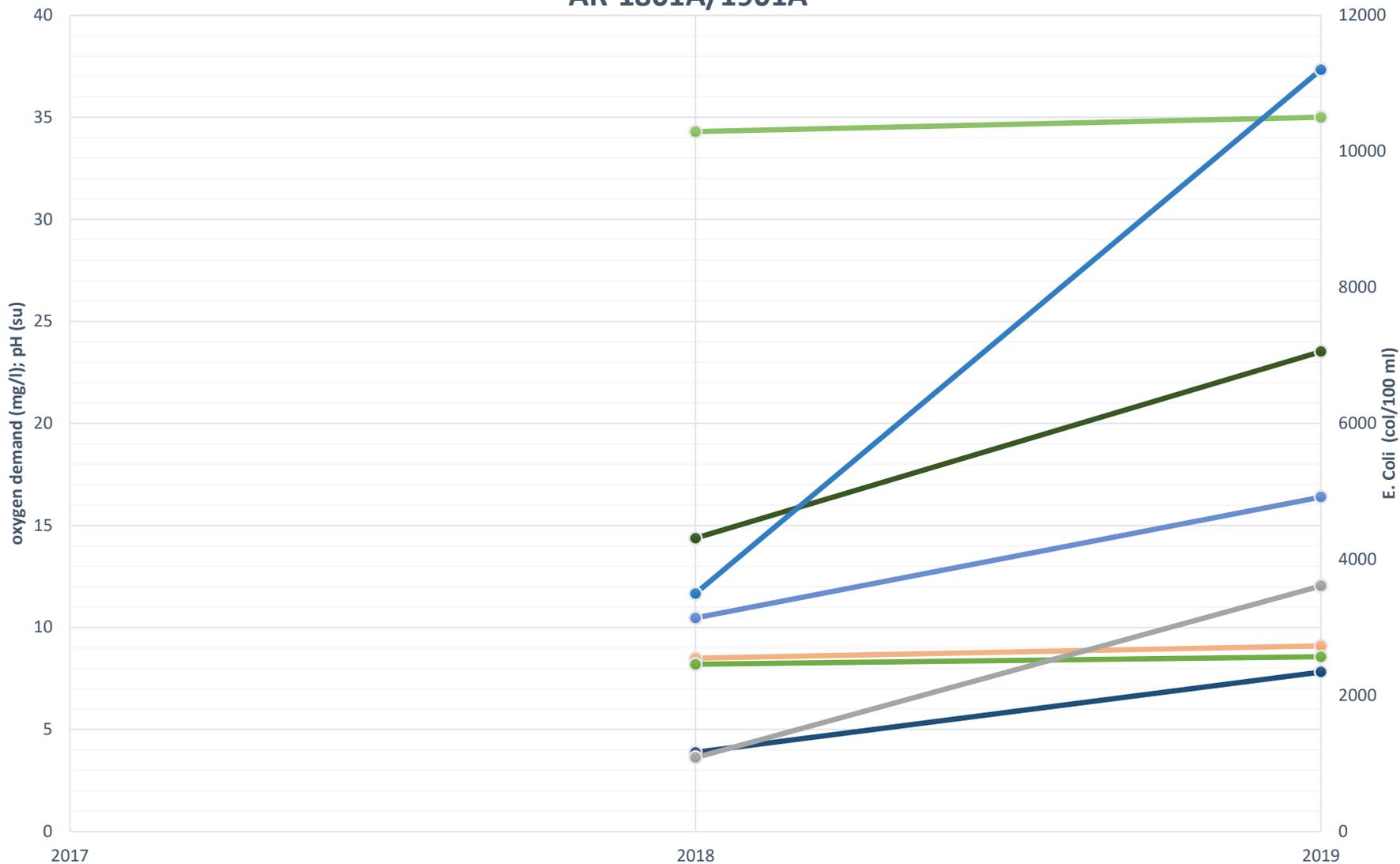
- Chromium (MAX)
 ● Copper (MAX)
● Lead (MAX)
● Arsenic (MAX)
- Chromium (AVG)
 ● Copper (AVG)
● Lead (AVG)
● Arsenic (AVG)
- Total Suspended Solids (MAX)
 ● Total Dissolved Solids (MAX)
● Total Suspended Solids (AVG)
● Total Dissolved Solids (AVG)

# AR-1801A/1901A



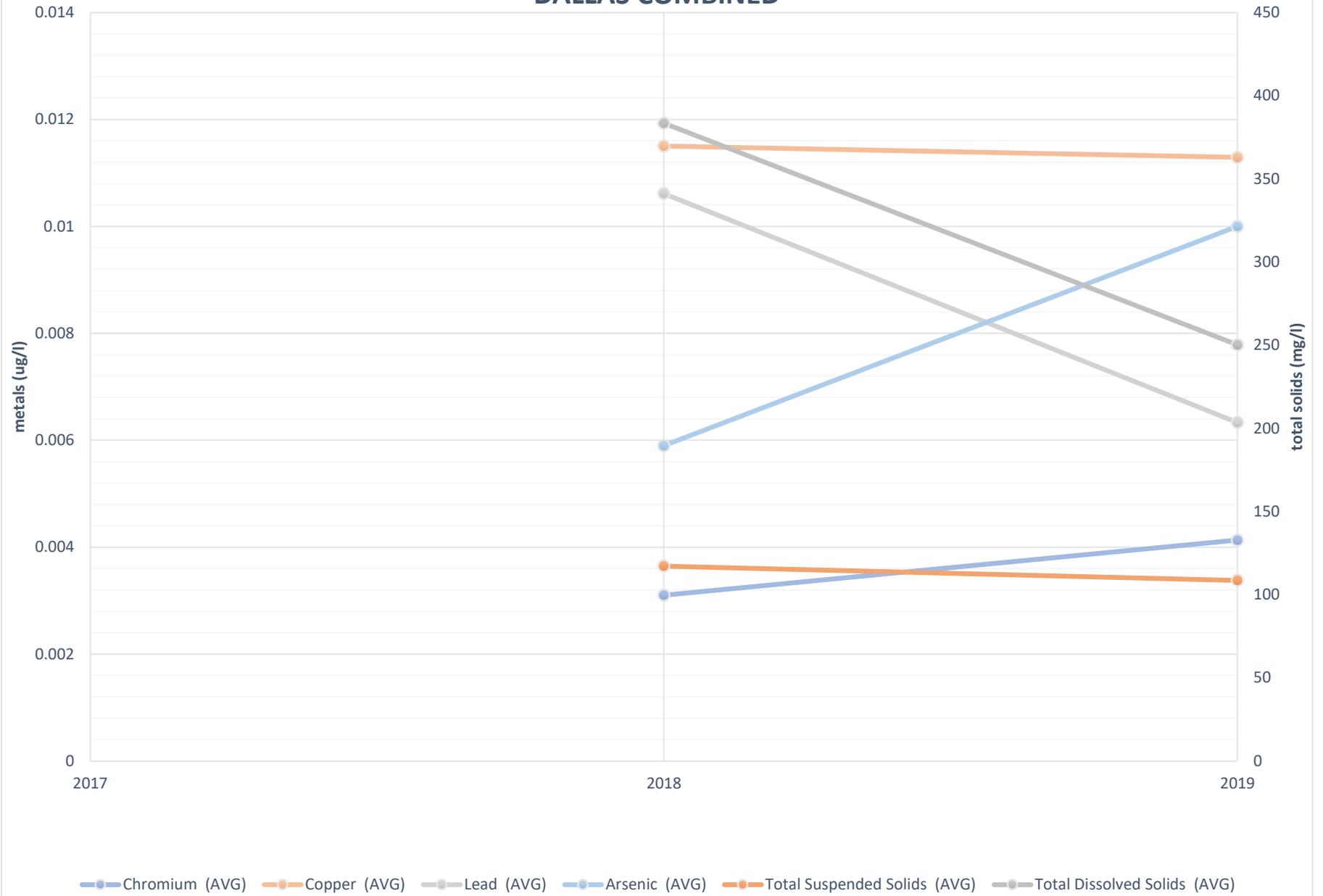
- Oil and Grease (MAX)
- Total Nitrogen (MAX)
- Oil and Grease (AVG)
- Total Nitrogen (AVG)
- Dissolved Phosphorus (MAX)
- Dissolved Phosphorus (AVG)

# AR-1801A/1901A

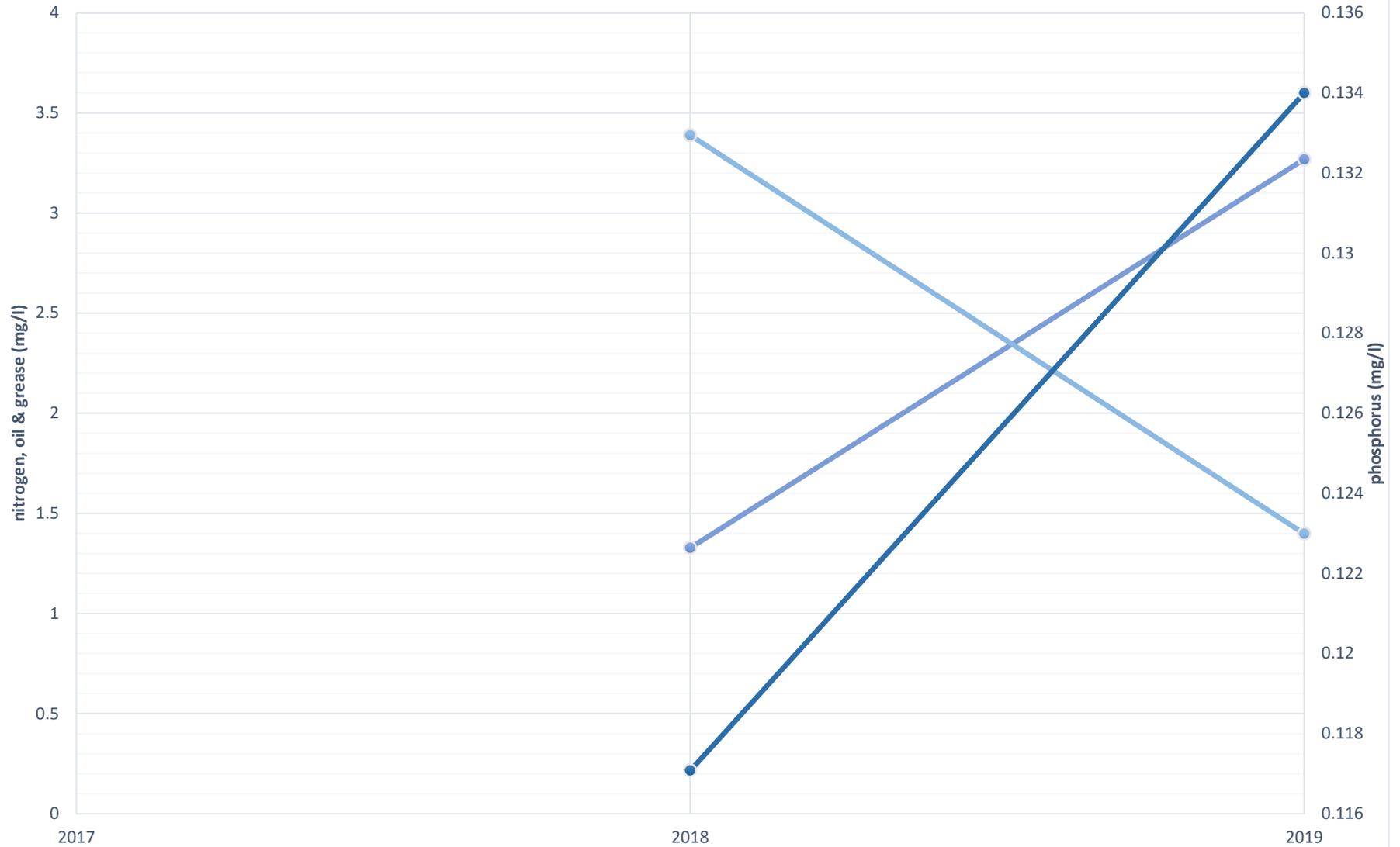


- Biological Oxygen Demand (MAX)
- Chemical Oxygen Demand (MAX)
- pH (MAX)
- Biological Oxygen Demand (AVG)
- Chemical Oxygen Demand (AVG)
- pH (AVG)
- E. coli (MAX)
- E. coli (AVG)

# DALLAS COMBINED

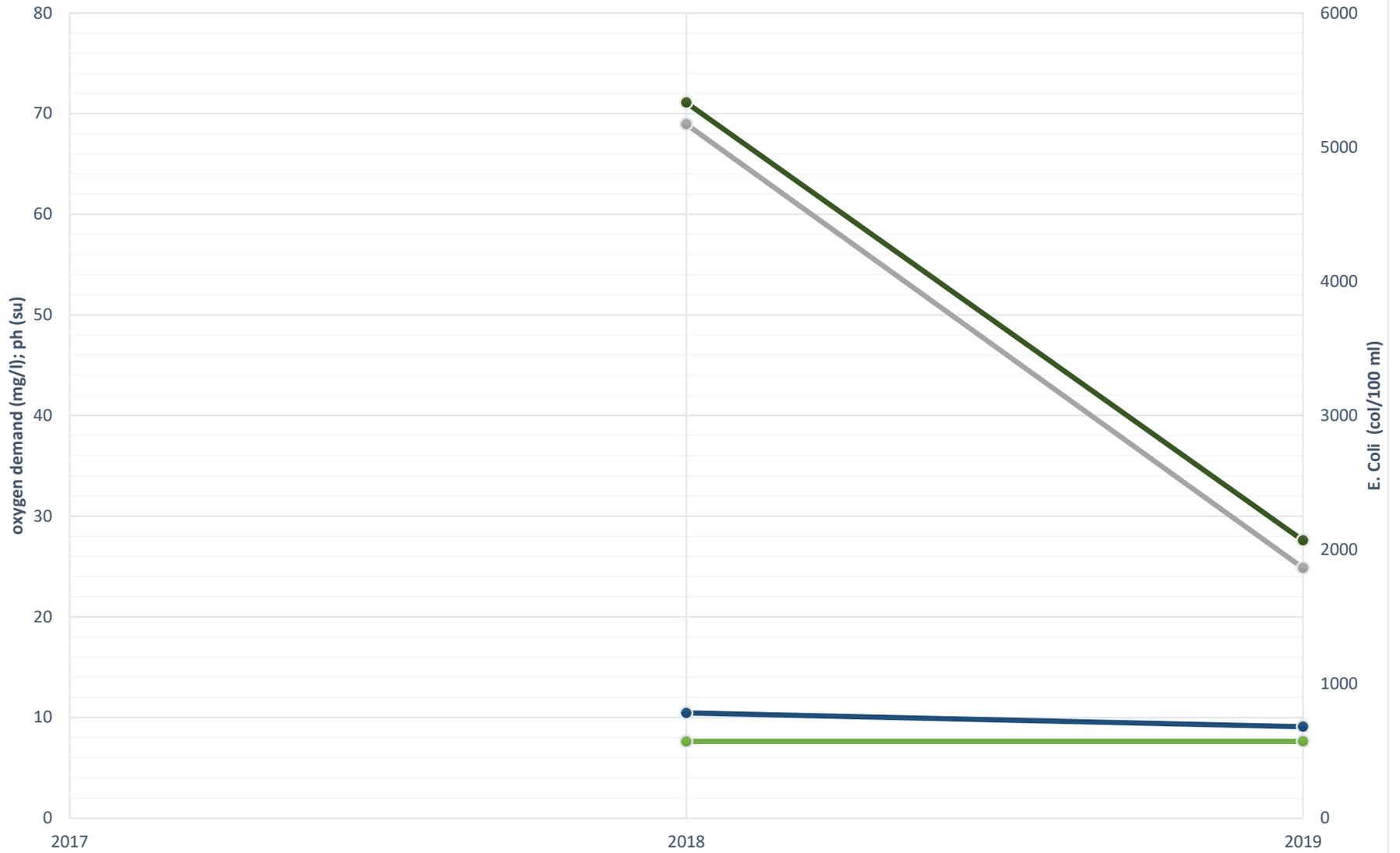


# DALLAS COMBINED



Oil and Grease (AVG) Total Nitrogen (AVG) Dissolved Phosphorus (AVG)

# DALLAS COMBINED



● Biological Oxygen Demand (AVG)

● Chemical Oxygen Demand (AVG)

● pH (AVG)

● E. coli (AVG)

# **Attachment L**

**Report Any USFWS Coordination Conducted During the Reporting Year -  
BMP 2.3.10.b**



# **Attachment M**

**If Changes are Made to the List of Prohibited Discharges, Provide Updated List -  
BMP 3.3.4**

**No changes were made to the List of Prohibited Discharges.**

# **Attachment N**

**Include List of Active NPDES/TPDES Permitted Construction Sites - BMP 3.3.9.a**

## Attachment N

### Active NPDES/TPDES Permitted Construction Sites - BMP 3.3.9

Phase I District	Name	Permit #	Location
<b>Abilene</b>	Lone Star Transmission	TRX1598CM	7.5 miles north of Baird, Texas on County Road 190 from Hwy 283
<b>Amarillo</b>	None		
<b>Austin</b>	Lower Colorado River Authority	None provided	T143 Hi-Cross to Turnersville TL Storm Hardening
	Lower Colorado River Authority	TXR1590DC	Hornsby Substation S-768 Addition, 2 miles south/southwest of Webberville Road and TX13C
	Ritter, Botkin Prime Construction Company	TXR1519DE	Heritage Trail West, Brushy Creek From Wonder Dr To N Mays St
	PR South, Inc.	TXR1591DG	Parmer Ranch Phase 1, Southeast of The Intersection of Ronald Reagan Blvd. And Ranch Road 233E
	DNT Construction, Inc.	TRX1583DG	Parmer Ranch Phase 1, Southeast of The Intersection of Ronald Reagan Blvd. And Ranch Road 233E
	McCoy Corporation	NA	McCoy's Building construction, 2505 FM 1869
	Jimmy Evans Company, Ltd.	TXR15014H	Spicewood Trails, North of The Intersection of Sh 71 And Parr Avenue, Spicewood, TX 7866E
	Embree Construction Group, Inc.	TXR1525DK	McCoy's Building construction, 2505 FM 1869
	Charles N. White Construction Company	TXR1541DO	Oaks At Slaughter, Southeast of The Intersection of S. Congress Avenue And Ralph Ablanedo Drive
	Irby Construction Company	TXR1586DU	Transmission line T359/457 Rivery to Gabriel to Glasscock
	Vistas Millas Development Company, Inc	TXR1532EC	The Canyons At Hch Ranch Phase 1, Northeast of The Intersection of Cr 289 And FM 3405, Georgetowr
	Jhj Dream Homes of Texas, LP	TXR1530EC	The Canyons At Hch Ranch Phase 1, Northeast of The Intersection of Cr 289 And FM 3405, Georgetowr
<b>Beaumont</b>	None		
<b>Corpus Christi</b>	NuStar Energy LP	None provided	Located on the west side of US 281 just north of Premont, Tx
<b>Dallas</b>	Oncor Electric Delivery Company, LLC	NA	Plano West Substation Expansion Project, 1,400 feet southwest of the intersection of Alma Road and President George Bush Turnpike in Collin County
	Oncor Electric Delivery Company, LLC	None provided	Sargent Road - East Network 138 kV Line Section
	Bonner Carrington Construction LLC	TXR1599CZ	Cypress Creek Apartments At Waxahachie, South of The Intersection of FM 813 Brown Street And U.S. Highway, Waxahachie
	Oncor Electric Delivery Company, LLC	None provided	Norwood Switch - Denton Drive Switch 138 kV Line Rebuild, appr 600 S of Bachman Lake, south to intersection of Shorecrest Dr & Harry Hines Blvd, SW crossing N Stemmons Fwy, & parallel to Regal Row & W across levee to Norwood SW
	Oncor Electric Delivery Company, LLC	None provided	Cedar Hill to Sorcey Rd, from Cedar Hill Switch, 7751 W Camp Wisdom Rd, Dallas, traveling SW to pass Cedar Ridge preserve and end at Sorcey Rd Substation
	Oncor Electric Delivery Company, LLC	None provided	Plano/Tennyson to Renner line, from substation at 6401 Windcrest to 4243 Plano Parkway, Planc
	Oncor Electric Delivery Company, LLC	None provided	Simpson Stuart to Camp Wisdom Rd, 3000 Simpson Stuart, Dallas, TX 75241 and travels west about 3.5 miles to end at Camp Wisdom Substation 530 East Camp Wisdom, Dallas
<b>El Paso</b>	None		
<b>Fort Worth</b>	Oncor	None provided	Grapevine Switch Line Work Project, approximately 0.31 miles south of the intersection of Keller Grapevine Road and Texan Trail Highway in Grapevine
	Oncor	None provided	Duval to Bryan Ave Tap, 1600 Duval St, Ft Worth, 76104 and travels south about 2.2 mis to BryanAve Tap Sub off of Hunting Dr before turningnorthwest for about 2.1 mis and ending atBryan Ave Sub 3200 Bryan Ave, Ft Worth
<b>Houston</b>	Toll Houston Tx LLC	TXR15554A	Northgrove, Southeast of The Intersection of FM 2978 And Carraway Lane, Magnolia

	Unitas Construction, Inc.	TXR1558DD	Northgrove, Southeast of The Intersection of FM 2978 And Carraway Lane, Magnolia
	Sendero Industries, LLC	None provided	NE Corner of Spring Stuebner Rd & Northcrest Drive, Spring
	Lovett Industrial	TXR1562DL	NE Corner of Spring Stuebner Rd & Northcrest Drive, Spring
	VMAX Construction, Inc.	None provided	Fuel Maxx 64 Gas Station, 7815 E. Sam Houston Parkway N, Houston
	AVEX - Land Development	None provided	Detention, Mitigation, & Grading Ph II-Winward, 1 mi W of Longenbaugh Rd and Katy Hockley Rc
<b>Laredo</b>	None		
<b>Lubbock</b>	None		
<b>San Antonio</b>	Lennar Homes of Texas Land And Constructi	TXR15832F	Waterwheel 1-1 1-2 2-1 And Stockpiles Ld, North of The Intersection of Culebra Road And Wind Gate Parkway, San Antonio
	DHJB Development, LLC	TXR15X55	Johnson Ranch, N of Johnson Way and FM1863
	Capital Excavation Company	TXR1544BU	Harry Wurzbach Austin Highway Interchange & Www Improv At The Intersection of Harry Wurzbach Road And Austin Highway, San Antonio
	Rausch Coleman Homes San Antonio, LLC	TXR1580BU	Ridge View Estates Unit 1 West of The Intersection of W. IH-10 And FM 725, Seguin
	Rialto Homes, LP	NA	SW of US281 and Paso Del Norte St, Hill Country Village
	SAK CONSTRUCTION, LLC	None provided	SAWS W-6 Upper Segment: Hwy 90 to SW Military Dr Sewer Main
	Lennar Homes of Texas Land And	TXR1520CT	Guadalupe Heights, NW of SH46 and FM725, Seguin
	Dale Lowden Excavating, Inc.	TXR1541CV	Guadalupe Heights, NW of SH46 and FM725, Seguin
	Lennar Homes of Texas Land And Constructi	TXR1533DH	Parkside, Northeast of The Intersection of Sh 46 And Pieper Road, New Braunfel:
	Dale Lowden Excavating, Inc.	TXR1521DI	Parkside, Northeast of The Intersection of Sh 46 And Pieper Road, New Braunfel:
	Santa Clara Construction, Ltd.	TXR1578DN	North Kuehler 42 Inch Sewer Upgrade, Northwest of The Intersection of Rio Drive And Madrid Drive, New Braunfel
	KB Home Lone Star Inc.	TXR1559DR	Preserve At Culebra Unit 1, Southwest of The Intersection of FM 471 Culebra Road And Kallison Bend, San Antonic
	Yc Partners, Ltd.	TXR1580DR	Preserve At Culebra Unit 1, Southwest of The Intersection of FM 471 Culebra Road And Kallison Bend, San Antonic
	AEP Texas, Inc.	TXR1550DZ	6.1-mile long 138kV T-line north of Moore, TX between the Big Foot SW Substation and the Moore (STEC) Substation.
	Triple "c" Contractors, Inc.	TXR1558EB	Byrom I-10 Storage, Southwest of The Intersection of I-10 Frontage Road And Weir Road, Converse
<b>Waco</b>	BRCT, LLC dba Blackrock Construction	TXR1586CD	WW system improvements, HWY84 from Val Verde Rd. to Harris Creek Rd. to Walking Horse Ln, Wacc

# **Attachment 0**

**Report Any Changes to Current Regulatory Mechanisms - BMP 4.3.2**

### Changes to Regulatory Mechanisms

No changes to regulatory mechanisms.

NA

NA

NA

NA

# **Attachment P**

## **Map of Permanent Structural Controls - BMP 5.3.2.c**

**Structural controls are displayed on the map found in Attachment E.**

# **Attachment Q**

**Report Impaired Waterbodies and POCs Identified and  
Update SWMP, Tables 7.2 and 7.3 - BMP 7.3.1**

Name of TMDL	POC
N/A	N/A

# **Texas Department of Transportation**

## **Statewide Stormwater Management Program**

### **Pollutants of Concern**

**October 2020**

#### **Overview**

TRC Environmental Corporation (TRC) was retained by the Texas Department of Transportation (TxDOT) and authorized by Work Authorization (WA) Number 2 under Contract 579XXSM004, to perform additional environmental services required to meet the conditions of TxDOT's Texas Pollutant Discharge Elimination System (TPDES) Municipal Separate Storm Sewer System (MS4) permit. Per the MS4 permit, TxDOT must meet permit conditions and implement a Statewide Stormwater Management Program (SWMP). As part of this effort, TxDOT must annually assess whether the MS4 discharges directly into an Impaired Water Body (IWB) and determine if those MS4 discharges would be likely to contain pollutants of concern (POCs), pursuant to the latest TCEQ and Environmental Protection Agency (EPA) approved Clean Water Act (CWA) Texas 303(d) list.

This document provides a summary of the updated list of stream segments and associated pollutants of concern (POCs) presented in the attached TxDOT SWMP Tables 7.2 and 7.3. To complete this summary, TRC assessed each TxDOT MS4 area discharging directly into an IWB with or without an approved total maximum daily load (TMDL). All updates were made in accordance with the 2020 Texas Integrated Report 303(d) list recently approved by the EPA on May 12, 2020. Additionally, this document further discusses potential significant sources of bacteria impairment, or lack thereof, within the MS4, and POCs not previously identified within the MS4 during prior annual IWB assessment reviews.

#### **Analysis of Existing Approved TMDLs and Implementation Plans with TxDOT Best Management Practices (BMPs)**

To update SWMP Table 7.2, TRC evaluated completed TMDL and Implementation Plans ("I-Plans") listed by TxDOT resulting in the addition of 17 approved TMDLs and I-Plans across 6 TxDOT Districts, bringing the total number of existing TMDLs and I-Plans included within Table 7.2 to 72 across 13 TxDOT Districts. Updates made to SWMP Table 7.2 are described below:

#### **Segment TMDLs and I-Plans added to Table 7.2**

- I-Plan Segment 1113 – Armand Bayou, subsumed in the BIG I-Plan approved 1/30/2013, Houston District
- I-Plan Segment 1102F – Clear Creek, subsumed in the BIG I-Plan approved 1/30/2013, Houston District

- I-Plan Segment 1806D, 1806E – Guadalupe River Above Canyon Lake, approved 8/31/2011, San Antonio District
- I-Plan Segment 2425B – Jarbo Bayou, subsumed in the BIG I-Plan approved 1/30/2013, Houston District
- I-Plan Segment 1008J, 1010C – Lake Houston Watersheds, subsumed in the BIG I-Plan approved 1/30/2013, Houston District
- I-Plan Segment 1602, 1602B – Lavaca River Above Tidal, approved 8/14/2019, Yoakum District
- I-Plan Segment 2004, 2004B – Mission and Aransas Rivers, approved 5/25/2016, Corpus Christi District
- I-Plan Segment 0841Q – Mountain Creek Lake Upstream Watersheds, subsumed in the Greater Trinity I-Plan approved 12/11/2013, Fort Worth District
- I-Plan Segment 1209 – Navasota River Below Lake Limestone, approved 8/28/2019, Bryan District
- I-Plan Segment 2485A – Oso Creek, not yet approved, Corpus Christi District
- I-Plan Segment 1910 – Salado Creek, I-Plan not needed, San Antonio District
- I-Plan Segment 1015A – San Jacinto River East and West forks, subsumed in the BIG I-Plan approved 1/30/2013, Houston District
- I-Plan Segment 1007A – Sims Bayou, subsumed in the BIG I-Plan approved 1/30/2013, Houston District
- I-Plan Segment 0806E – Sycamore Creek, subsumed in the Greater Trinity I-Plan approved 12/11/2013, Fort Worth District
- I-Plan Segment 1501 – Tres Palacios Creek, approved 1/24/2018, Yoakum District
- I-Plan Segment 1245 – Upper Oyster Creek, approved 1/15/2014, Houston District
- I-Plan Segment 1911I – Upper San Antonio River, approved 4/06/2016, San Antonio District

#### **Analysis of TxDOT MS4 Discharging Directly into Impaired Water Bodies**

To update SWMP Table 7.3, TRC evaluated newly listed IWB stream segment lists and identified multiple segments to either include, remove, or partially remove from the table. The evaluation identified 18 of 25 TxDOT Districts directly discharging into IWBs. This evaluation includes new segments found in most all districts previously represented on Table 7.3. The evaluation also included the removal of the Odessa District from Table 7.3 and the addition of the Paris District to Table 7.3, which was not previously represented. The updates made to Table 7.3 under this work authorization were as follows:

### **Segments added to Table 7.3**

Segments were added to Table 7.3 based on the following reasons (1) the segment was added to the 2020 Texas 303(d) list, (2) POCs were added to current segments found on Table 7.3, and (3) the MS4 area was expanded thus including the segment.

- Segment 0103A– East Amarillo Creek, Amarillo District, Added in 2018
- Segment 1248C – Mankins Branch, Austin District
- Segment 1403A – Bull Creek, Austin District
- Segment 1427A – Slaughter Creek, Austin District
- Segment 1429C – Waller Creek, Austin District
- Segment 0501B – Little Cypress Bayou, Beaumont District
- Segment 0601 – Neches River Tidal, Beaumont District Segment 0702A – Alligator Bayou and Main Canals A, B, C, and D, Beaumont District
- Segment 0801C – Cotton Bayou, Beaumont District
- Segment 1242B – Cottonwood Branch, Bryan District
- Segment 1242C – Still Creek, Bryan District
- Segment 2482 – Nueces Bay, Corpus Christi District
- Segment 2484 - Corpus Christi Inner Harbor, Corpus Christi District
- Segment 2485A – Oso Creek, Corpus Christi District
- Segment 2485OW – Oso Bay (Oyster Waters), Corpus Christi District
- Segment 0819 – East Fork Trinity River, Bacteria added in 2020, Dallas District
- Segment 0820B – Rowlett Creek, Dallas District
- Segment 0821C– Wilson Creek, Dallas District
- Segment 0821D – East Fork Trinity Above Lake Lavon, Dallas District
- Segment 0827A – White Rock Creek Above White Rock Lake, Dallas District
- Segment 0841A – Mountain Creek Lake, Dallas District
- Segment 0841I – Dry Branch Creek, Dallas District
- Segment 0841Q – North Fork Fish Creek, Dallas District
- Segment 2308 – Rio Grande Below International Dam, El Paso District
- Segment 0806D – Marine Creek, Fort Worth District
- Segment 0807 – Lake Worth, Fort Worth District
- Segment 0809B – Ask Creek, Fort Worth District
- Segment 0809C – Dossier Creek, Fort Worth District
- Segment 0828A – Village Creek, Fort Worth District
- Segment 0829A – Lake Como, Fort Worth District
- Segment 0841P – North Fork Cottonwood Creek, Fort Worth District
- Segment 1004J – White Oak Creek, Houston District

- Segment 1007I – Plum Creek Above Tidal, Houston District
- Segment 1007K – Country Club Bayou Above Tidal, Houston District
- Segment 1007R – Hunting Bayou Above Tidal, Houston District
- Segment 1010 – Caney Creek, Houston District
- Segment 1013A – Little White Oak Bayou, Houston District
- Segment 1014C – Horsepen Creek, Houston District
- Segment 1014M – Newman Branch (Neimans Bayou), Houston District
- Segment 1101E – Unnamed Tributary of Clear Creek Tidal, Houston District
- Segment 1103A – Bensons Bayou, Houston District
- Segment 1103B – Bordens Gully, Houston District
- Segment 1103C – Geisler Bayou, Houston District
- Segment 1103G – Unnamed Tributary of Gum Bayou, Houston District
- Segment 1103F – Unnamed Tributary of Dickson Bayou Tidal, Houston District
- Segment 1109 – Oyster Creek Tidal, Houston District
- Segment 1245C – Bullhead Bayou, Houston District
- Segment 1245F – Alcorn Bayou, Houston District
- Segment 2421B – Little Cedar Bayou, Houston District
- Segment 2424A – Highland Bayou, Houston District
- Segment 2424C – Marchand Bayou, Houston District
- Segment 2424G – Highland Bayou Diversion Canal, Houston District
- Segment 2425 – Clear Lake, Houston District
- Segment 2425B – Jarbo Bayou, Houston District
- Segment 2426C – Goose Creek Tidal, Houston District
- Segment 2431C – Unnamed Tributary to the Southern Arm of Moses Lake (West), Houston District
- Segment 2432A – Mustang Bayou, Houston District
- Segment 1241A – North Fork Double Mountain Fork Bravos River, Lubbock District
- Segment 0202E – Post Oak Creek, Paris District
- Segment 1811A – Dry Comal Creek, San Antonio District
- Segment 1902A – Martinez Creek, San Antonio District
- Segment 1911I – Martinez Creek, San Antonio District
- Segment 0505B – Grace Creek, Tyler District
- Segment 0506A – Harris Creek, Tyler District
- Segment 0606D – Black Fork Creek, Tyler District
- Segment 0611D – West Mud Creek, Tyler District
- Segment 1218C – Little Nolan Creek, Waco District

- Segment 1218D – Long Branch, Waco District

### **Segments removed from Table 7.3**

Segments were removed from Table 7.3 based on the following reasons (1) the segment is no longer present on 2020 Texas 303(d) list, (2) the segment falls outside the TxDOT MS4 and right of way (ROW), and (3) the segment POC was moved to another assessment unit (AU) or the POC is no longer an impairment to the segment.

- Segment 0103 – Canadian River Above Lake Meredith, not in MS4, Amarillo District
- Segment 1212 – Somerville Lake, not in MS4, Austin District
- Segment 1214 – San Gabriel River, sulfate removed 2016, chloride removed 2018, Austin District
- Segment 1248 – San Gabriel/North Fork San Gabriel, TDS removed 2016, chloride removed 2018, Austin District
- Segment 1403 – Lake Austin, depressed DO removed 2016, Austin District
- Segment 1428 – Colorado River Below Town Lake, segment not on 2020 list, Austin District
- Segment 1429 – Town Lake, TDS, segment not on 2020 List, Austin District
- Segment 1805 – Canyon Lake, not in MS4, Austin District
- Segment 0604 – Neches River Below Lake Palestine, not in MS4, Beaumont District
- Segment 0704 – Hillebrandt Bayou TDS, not in MS4, Beaumont District
- Segment 1209 – Navasota River Below Lake Limestone, not in MS4, Bryan District
- Segment 2485 – Oso Bay, bacteria removed 2008, Corpus Christi District
- Segment 2401 – Laguna Madre, not in MS4, Corpus District
- Segment 0507 – Lake Tawakoni, pH removed in 2016, Dallas District
- Segment 0804 – Trinity River Above Lake Livingston, not in MS4, Dallas District
- Segment 0819 – East Fork Trinity River, TDS removed in 2018, Dallas District
- Segment 0821 – Lavon Lake, segment not on 2020 list, Dallas District
- Segment 0841 – Lower West Fork Trinity River, bacteria removed in 2014, Dallas District
- Segment 2307 – Rio Grande Below Riverside Diversion Dam, not in MS4, El Paso District
- Segment 0804 – Trinity River Above Lake Livingston, not in MS4, Fort Worth District
- Segment 0838 – Joe Pool Lake, segment not on 2020 list, Fort Worth District
- Segment 0841 – Lower West Fork Trinity River, bacteria removed in 2014, Fort Worth District
- Segment 1001 – San Jacinto River Tidal, chlordan, dieldrin, heptachlor epoxide removed in 2016, Houston District
- Segment 1002 – Lake Houston, segment not on 2020 list, bacteria removed in 2016, Houston District
- Segment 1003 – East Fork San Jacinto River, bacteria removed in 2016, Houston District

- Segment 1004 – West Fork San Jacinto River, segment not on 2020 list, bacteria removed in 2016, Houston District
- Segment 1005 – Houston Ship Channel/San Jacinto River Above Tidal, chlordane, dieldrin, heptachlor epoxide removed in 2016, Houston District
- Segment 1006 – Houston Ship Channel Tidal, chlordane, dieldrin, heptachlor epoxide removed in 2016, Houston District
- Segment 1007 – Houston Ship Channel/Buffalo Bayou Tidal, depressed DO removed in 1996, Houston District
- Segment 1008 – Spring Creek, depressed DO removed in 2016, Houston District
- Segment 1013 – Buffalo Bayou Tidal, depressed DO removed in 2010, Houston District
- Segment 1014 – Buffalo Bayou Above Tidal, bacteria removed in 2016, Houston District
- Segment 1016 – Greens Bayou Above Tidal, bacteria removed in 2012, Houston District
- Segment 1017 – Whiteoak Bayou Above Tidal, bacteria removed in 2010, Houston District
- Segment 1101 – Clear Creek Tidal, depressed DO removed at unknown date, Houston District
- Segment 1102 – Clear Creek Above Tidal, bacteria removed in 2010, Houston District
- Segment 1103 – Dickinson Bayou Tidal, bacteria removed in 2016, Houston District
- Segment 1105 – Bastrop Bayou Tidal, depressed DO unknown date, Houston District
- Segment 1113 – Armand Bayou Tidal, bacteria removed in 2016, impaired fish and microbenthic communities removed in 2012, Houston District
- Segment 1245 – Upper Oyster Creek, bacteria removed in 2012, Houston District
- Segment 2424 – West Bay, bacteria removed in 2010, Houston District
- Segment 2425 – Clear Lake, bacteria unknown date, Houston District
- Segment 2429 – Scott Bay, not in MS4, Houston District
- Segment 2436 – Barbours Cut, not in MS4, Houston District
- Segment 2438 – Bayport Channel, not in MS4, Houston District
- Segment 1241 – Double Mountain Fork Brazos River, not in MS4, Lubbock District
- Segment 1412 – Colorado River Below J.B. Thomas, not in MS4, Odessa District
- Segment 2201 – Arroyo Colorado Tidal, not in MS4, Pharr District
- Segment 2491 – Laguna Madre, not in MS4, Pharr District
- Segment 2494 – Brownsville Ship Channel, bacteria removed in 2020, Pharr District
- Segment 2501 – Gulf Waters, not in MS4, Pharr District
- Segment 1421 – Concho River, bacteria removed in 2016, San Angelo District
- Segment 1903 – Medina River Below Medina Diversion Dam, not in MS4, San Antonio District
- Segment 1906 – Lower Leon Creek, depressed DO removed in 2016, San Antonio District
- Segment 1908 – Upper Cibolo Creek, chloride removed in 2018, San Antonio District

- Segment 1910 – Salado Creek, bacteria removed in 2008, depressed DO removed 2004, San Antonio District
- Segment 1911 – Upper San Antonio River, bacteria removed in 2010, San Antonio District
- Segment 0605 – Lake Palestine, not in MS4, Tyler District
- Segment 0611 – Angelina River Above Sam Rayburn Dam, not in MS4, Tyler District
- Segment 1226 – North Bosque River, not in MS4, Waco District

### **Pollutants of concern requiring further evaluation**

Previous evaluations of POC contributions to impaired waters from the TxDOT MS4 area were outlined by TRC in reports titled *Pollutants of Concern Description*, dated November 2017, and *Texas Department of Transportation Statewide Storm Water Management Program Pollutants of Concern*, dated February 2019. Further evaluation of newly listed stream segments within Table 7.3 yielded additional POCs requiring further analysis. Specifically, copper, toxicity in water, and bacteria were evaluated during this permit term to determine TxDOT’s potential contribution to IWB, which is presented in the following.

#### ***Copper in Water***

To determine TxDOT’s copper contribution to IWB, TRC evaluated copper sources, TxDOT’s copper usage, and streams within TxDOT’s ROW. Copper is a metal occurring naturally throughout the environment, including plants and animals, and is typically used in the production of metal alloys for items such as wire, metal piping, and various other metal products (ASDR 2004). Significant sources of copper can be generally released through copper mining and the mining of other metals, but can also enter the environment through waste dumps, the combustion of fossil fuels, domestic wastewater, and the production of wood and fertilizers (ASDR 2004). Copper can often be emitted into the air, or enter into the environment through stormwater runoff, from these production sources, eventually collecting in the sediment of nearby rivers, lakes, and estuaries (ASDR 2004). Over time, high concentrations of copper in water can lead to negative health effects on animals and humans.

Section 5.3.6(1) of TxDOT’s SWMP states that TxDOT identified copper as a potential POC that could discharge during standard roadway operation and maintenance activities. These activities include, but are not limited to, bridge maintenance (e.g. saw cutting, chipping, grinding), road and parking lot maintenance, and ROW maintenance (e.g. mowing, herbicide, pesticide, and fertilizer applications) (TxDOT 2017a). TxDOT has however implemented multiple controls to reduce the discharge of pollutants from pesticides, herbicides, and fertilizers, including proper vegetation management, using licensed applicators, and the use of proper mowing and application coordination (TxDOT 2017a). These measures, along with TxDOT’s usage of more environmentally benign materials and their potential POC exposure limitation through operational changes, has resulted in an approximate 57% reduction of total copper concentrations through TxDOT processes, according to

TxDOT studies (TxDOT 2017a). In addition to these measure taken by TxDOT, a January 21, 2015 Memorandum of Understanding (MOU) between the U.S. EPA and the automotive industry, has committed to the reduction of copper and other compounds used in motor vehicle brake pads to <5 percent by weight by 2021, thus greater reducing this potential source of copper within the MS4 (EPA).

Copper is identified as a POC for three IWB segments listed to the Texas 303(d) list in 2016, which are located in the TxDOT Corpus Christi and Houston Districts. The Segments include *Segment 2482 – Nueces Bay* and *Segment 2484 – Corpus Christi Inner Harbor*, which are two connected bodies of water in the Corpus Christi District and *Segment 2425 – Clear Lake* located just outside League City, Texas, in TxDOT’s Houston District.

As a general practice, TxDOT does not conduct the industrial activities (i.e., metal manufacturing, manage waste landfills, or maintain major metal or fertilizer storage) that are considered significant copper contributors and TxDOT does not have any storage yards within these stream contribution zones. The burning of fossil fuels within their ROW, and the minor copper contributions that may occur through typical roadway maintenance does not suggest that they would be a major source of copper.

### ***Toxicity in Water***

Substances resulting in the toxicity of water vary extensively, including contribution from various organic and inorganic compounds, heavy metals, polychlorinated biphenyls (PCBs), oils, chemicals, and even nutrients. These substances often bioaccumulate in rivers, lakes, and estuaries, which effect aquatic plant and animal life, as well as human health. Often the most significant sources of these pollutants come from point sources such as manufacturing, chemical and oil spills, leaky wastewater systems, and illegal dumping but occasionally come from nonpoint sources like agricultural or stormwater runoff as well (Denchak 2018).

TxDOT is not a major contributor of toxicity in water since it does not operate wastewater treatment plants or conduct industrial, mining, or oil and gas activities within the MS4 ROW, which can result in the release of various, chemicals, nitrates, pathogens, and other contaminants. Only minor contributions of toxicity in water have the potential to occur within the TxDOT MS4. These potential contributions include oil runoff and heavy metal deposits from passing cars and traffic accidents as well as other minor contributions from fertilizers, herbicides and pesticides used when maintaining TxDOT ROWs. Each of these contributions is considered negligible; however, TxDOT closely monitors these activities and uses both structural and non-structural controls to manage stormwater runoff from the TxDOT ROW, reducing the potential for POC contributions into MS4 water bodies. These controls and other best management practices minimize and prevent TxDOT from being a significant source of toxicity in water.

## ***Bacteria***

*[Source: 2017 SWMP (TxDOT, 2017a)]*

TxDOT does not own or operate sanitary sewer systems or on-site sewage facilities within its regulated area. Illicit discharges from septic systems, grease traps, and grit traps do not originate from the TxDOT MS4; rather the illicit discharges originate from adjacent MS4s and third-party discharges into the TxDOT MS4. In addition, there are no rest areas constructed within TxDOT's MS4 regulated area; therefore, pet wastes are not a potential source of bacteria to the TxDOT MS4.

To further identify potential animal sources for bacteria on TxDOT's regulated area, TxDOT utilizes current research studies performed by the Bacteria Sources Tracking group of the Texas Water Resources Institute (TWRI), and TxDOT's own research programs.

Bacteria Sources Tracking (BST) is a methodology that is currently being used to determine the sources of fecal bacteria in environmental samples (e.g., from human, livestock or wildlife origins, and faulty on-site waste disposal systems). The BST group has compiled a bacteria DNA library that includes bacteria pollution indicators and fecal bacteria source indicators to quantify possible impacts to water from animal and sewage wastes. The BST's research indicates that *Escherichia coli* (E. Coli), Total Coliform (TC), and Fecal Coliform (FC) sources are associated with the gastrointestinal tracts of humans and warm-blooded animals while Fecal Streptococci (FS) and Enterococci Groups sources of bacteria are in animal feces.

BST assessments indicate contributions made by humans, avian and non-avian wildlife, as well as domestic animals, account for appreciable bacteria loading within water bodies with little seasonal fluctuation (TCEQ 2014). Some targeted studies conducted on birds roosting under TxDOT bridges and overpasses suggest that nesting birds can lead to elevated levels of bacteria (TIAER 2013), however the presence of avian wildlife alone often does not serve as the sole significant source contribution of bacteria due to the migratory nature of roosting species and the contributions made from non-avian species. Cliff Swallows, for example, are a common Texas migratory bird that roost from March to August (UGRA 2018) having the potential to create temporary elevated bacteria levels during annual migrations. Studies conducted on roosting Cliff Swallows in Texas have indicated that under wet weather conditions bacteria contributions were found to have exceeded the recreation contact criteria for E. Coli when the birds were both present and absent (JAWRA 2011). These exceedances during wet weather conditions are likely a result of various upstream bacteria sources such as wastewater treatment plants and dog parks, etc. when birds are not present and from accumulated feces on terrestrial surfaces being washed into downstream waterways when the birds are present. This data further indicates that though roosting birds can make significant bacteria contributions to underlying surface waters, focusing on less difficult to control bacteria sources such as upstream waste water treatment facilities and parks is more practicable than controlling the movements and roosting habits of wild birds and other avian species (JAWRA 2011).

As demonstrated above, though bridges and overpasses located within TxDOT's regulated area have the potential for bacteria contributions from roosting and nesting avian wildlife, these structures should not be considered a major source of bacteria as elevated concentrations generally occur during migratory periods or during occasional wet weather period spikes. These concentration increases are often compounded by other, more regulatable upstream bacteria sources not controlled by TxDOT. TxDOT remains committed to the implementation of necessary BMPs, if identified and assigned in any approved I-Plans, to reduce bacteria to the maximum extent practicable. This commitment includes all stream segments with approved TMDLs found during the 2020 analysis of IWB stream segments within the TxDOT MS4 in which bacteria was a POC and for all other future stream segments in which bacteria may be listed as a POC of concern.

## **SOURCES**

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Pendergrass, D., Hauck, L., McFarland, A., Texas Institute for Applied Environmental Research, Tarleton State University (TIAER 2013). July 2013. "Instream Bacteria Influences from Bird Habitation of Bridges."

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Table 7.2

<b>EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS</b>							
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT <sup>1</sup> BMPS
WAC	1254	Aquilla Reservoir	Atrazine	Original 3/23/01; Revised 6/14/02	1/18/2002	No	-
HOU	1113, 1113A, 1113B, 1113C, 1113D, 1113E	Armand Bayou in the Houston-Galveston Region	Bacteria	8/5/2015	Subsumed in BIG I-Plan approved 01/30/2013	No	-
HOU	1113	Armand Bayou in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 10/2018	Subsumed in BIG I-Plan approved 01/30/2013	No	-
PHR	2202 2202A	Arroyo Colorado  Donna Reservoir (Unclassified Waterbody)	DDE, Chlordane, Toxaphene  PCBs	1/17/2001	9/14/2001	No	-
PHR	2202	Arroyo Colorado	DDT, DDD, dieldrin, endrin, lindane, hexachlorobenzene, heptachlor, heptachlor epoxide	7/25/2003	Same activities as in I-Plan approved 9/14/2001	No	-
AUS	Waller Creek, 1429C; Walnut Creek, 1428B; Spicewood Tributary to Shoal Creek, 1403J; and Taylor Slough South, 1403K	Austin Area Watersheds	Bacteria	1/21/2015	1/21/2015	No	-
AUS	Walnut Creek, Segments 1428B_01, 1428B_02, 1428B_03, and 1428B_04	Austin Area Watersheds Attachment	Bacteria	Submitted via WQMP 04/2015	Same activities as in I-Plan approved 01/21/2015	No	-
HOU	1007B, 1007C, 1007E, 1007L	Brays Bayou in the Houston-Galveston Region	Bacteria	9/15/2010	BIG I-Plan approved 01/30/2013	No	-

<sup>1</sup> TxDOT not a potential source for impairment. TxDOT employs statewide BMPS to reduce pollutant contributions to water bodies.

Table 7.2

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS							
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT <sup>1</sup> BMPS
HOU	1007S, 1007T, 1007U	Brays Bayou in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 04/2013	Subsumed in BIG I-Plan approved 01/30/2013	No	-
HOU	1013, 1013A, 1013C, 1014, 1014A, 1014B, 1014E, 1014H, 1014K, 1014L, 1014M, 1014N, 1014O, 1017, 1017A, 1017B, 1017D, 1017E	Buffalo and White Oak Bayous in the Houston-Galveston Region	Bacteria	4/8/2009	BIG I-Plan approved 01/30/2013	No	-
HOU	1017C	Buffalo and White Oak Bayous in the Houston-Galveston, Addendum I	Bacteria	04/2013	Subsumed in BIG I-Plan approved 01/30/2013	No	-
HOU	1017F	Buffalo and White Oak Bayous in the Houston-Galveston, Addendum II	Bacteria	04/2015	Subsumed in BIG I-Plan approved 01/30/2013	No	-
BRY	1209C, 1209D, 1209L	Carters Creek Watershed	Bacteria	8/22/2012	8/22/2012	No	-
HOU	1101, 1102	Clear Creek Above and Below Tidal	Chlordane	1/17/2001	9/14/2001	No	-
HOU	1101, 1102	Clear Creek Above and Below Tidal	Trichloroethane, Dichloroethane	Original 02/9/01; Revised 06/14/02	10/12/2001	No	-
HOU	1101, 1101B, 1101D, 1102, 1102A, 1102B, 1102C, 1102D, 1102E	Clear Creek and Tributaries in the Houston-Galveston Region	Bacteria	9/10/2008	BIG I-Plan approved 01/30/2013	No	-

<sup>1</sup> TxDOT not a potential source for impairment. TxDOT employs statewide BMPS to reduce pollutant contributions to water bodies.

Table 7.2

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS							
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT <sup>1</sup> BMPS
HOU	1101A, 1101C, 1101E, and 1102G	Clear Creek and Tributaries in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 10/2012	Subsumed in BIG I-Plan approved 01/30/2013	No	-
HOU	1102F	Clear Creek and Tributaries in the Houston-Galveston Region, Addendum II	Bacteria	Submitted via WQMP 10/2018	Subsumed in BIG I-Plan approved 01/30/2013	No	-
SJT	1426	Colorado River Below E.V. Spence Reservoir	Chloride, Total Dissolved Solids	2/7/2007	10/10/2007	No	-
DAL	0822A, 0822B	Cottonwood Branch and Grapevine Creek in the Greater Trinity Region	Bacteria	9/21/2011	Greater Trinity I-Plan approved 12/11/2013	No	-
DAL	0805, 0841	Dallas Legacy	Chlordane, DDD, DDE, DDT, PCBs, Chlordane, Dieldrin, Heptachlor epoxide	12/20/2000	8/10/2001	No	-
HOU	1103, 1103A, 1103B, 1103C, 1104	Dickinson Bayou	Bacteria	2/8/2012	1/15/2014	No	-
HOU	1103, 1103D, 1103E	Dickinson Bayou, Addendum I	Bacteria	Submitted via WQMP 07/2016	Same activities as in I-Plan approved 01/15/2014	No	-

<sup>1</sup> TxDOT not a potential source for impairment. TxDOT employs statewide BMPS to reduce pollutant contributions to water bodies.

Table 7.2

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPs							
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT <sup>1</sup> BMPs
HOU	1006F, 1006H, 1007F, 1007G, 1007H, 1007I, 1007K, 1007M, 1007O, 1007R	Eastern Houston in the Houston-Galveston Region	Bacteria	9/15/2010	BIG I-Plan approved 01/30/2013	No	-
HOU	1007V	Eastern Houston in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 04/2013	Through BIG I-Plan approved 01/30/2013	No	-
SJT	1411	E.V. Spence	Sulfate, TDS	Original 11/17/2000; Revised 06/14/2002	8/10/2001	No	-
FTW	0806, 0806A, 0806B, 0829, 0829A	Fort Worth Legacy	Chlordane, DDE, PCBs, Chlordane, Dieldrin	11/17/2000	7/13/2001	No	-
AUS	1428C	Gilleland Creek	Bacteria	8/08/2007	2/09/2011	No	-
HOU	1016, 1016A, 1016B, 1016C, and 1016D	Greens Bayou in the Houston-Galveston Region	Bacteria	6/02/2010	BIG I-Plan approved 01/30/2013	No	-
SAT	1806	Guadalupe River Above Canyon Lake	Bacteria	7/25/2007	8/31/2011	No	-
SAT	1806D, 1806E	Guadalupe River Above Canyon Lake, Addendum I	Bacteria	Submitted via WQMP 01/2018	Same activities as I-Plan approved 8/31/2011	No	-
HOU	1006D, 1006I, 1006J	Halls Bayou in the Houston-Galveston Region	Bacteria	9/15/2010	BIG I-Plan approved 01/30/2013	No	-

<sup>1</sup> TxDOT not a potential source for impairment. TxDOT employs statewide BMPs to reduce pollutant contributions to water bodies.

Table 7.2

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPs							
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT <sup>1</sup> BMPs
HOU	1001, 1005, 1006, 1007, 1013, 1014, 1016, 1017, 2426, 2427, 2428, 2429, 2430, 2436	Houston Ship Channel	Nickel	Original 08/11/2000; Revised 06/14/2002	7/13/2001	No	-
HOU	2425B	Jarbo Bayou	Bacteria	01/24/2018	Subsumed in BIG I-Plan approved 1/30/13	No	-
AUS	1403	Lake Austin	DO	11/17/2000	7/13/2001	No	-
HOU	1004E, 1008, 1008H, 1009, 1009C, 1009D, 1009E, 1010, and 1011	Lake Houston Upstream Watersheds in the Houston-Galveston Region	Bacteria	4/06/2011	BIG I-Plan approved 01/30/2013	No	-
HOU	1008B, 1008C, 1008E, and 1011	Lake Houston Watersheds in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 10/2013	Subsumed in BIG I-Plan approved 1/30/2013	No	-
HOU	1008J, 1010C	Lake Houston Watersheds in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 10/2019	Subsumed in BIG I-Plan approved 1/30/2013	No	-
ATL	0403	Lake O' the Pines	DO	4/12/2006	7/09/2008	No	-
FTW	0807	Lake Worth Watershed	PCBs	8/10/2005	8/23/2006	No	-

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<b>EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPs</b>							
<b>District Name</b>	<b>Segment Number</b>	<b>Segment Name</b>	<b>Pollutant of Concern</b>	<b>TMDL Adopted</b>	<b>IP Approval</b>	<b>Is TxDOT MS4 potential source for impairment?</b>	<b>TxDOT<sup>1</sup> BMPs</b>
FTW	0808	Lake Worth Watershed, Addendum I	PCBs	Submitted via WQMP 07/2014	Same activities as in I-Plan approved 08/23/2006	No	-
YKM	1602, 1602B	Lavaca River Above Tidal and Rocky Creek	Bacteria	08/14/2019	08/14/2019	No	-
SAT	2110	Lower Sabinal River	Nitrate-nitrogen	8/10/2005	8/23/2006	No	-
SAT	1901	Lower San Antonio River	Bacteria	8/20/2008	8/18/2018	No	-
FTW	0841, 0841B, 0841C, 0841E, 0841G, 0841H, 0841J, 0841L, 0841M, 0841R, 0841T, and 0841U	Lower West Fork Trinity River Watersheds in the Greater Trinity Region	Bacteria	09/24/2013	Greater Trinity I-Plan approved 12/11/2013	No	-
CRP	2001, 2003	Mission and Aransas Rivers	Bacteria	5/25/2016	5/25/2016	No	-
CRP	2004, 2004B	Mission and Aransas Rivers, Addendum I	Bacteria	Submitted via WQMP 10/2017	Same activities as in I-Plan approved 05/25/2016	No	-
FTW	0841F, 0841K, 0841N, 0841V	Mountain Creek Lake Upstream Watersheds in the Greater Trinity Region	Bacteria	11/2/2016	Subsumed in Greater Trinity I-Plan approved 12/11/2013	No	-
FTW	0841Q	Mountain Creek Lake Upstream Watersheds in the Greater Trinity Region, Addendum I	Bacteria	Submitted via WQMP 10/2019	Subsumed in Greater Trinity I-Plan approved 12/11/2013	No	-

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Table 7.2

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPs							
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT <sup>1</sup> BMPs
BRY	1209	Navasota River Below Lake Limestone	Bacteria	08/28/2019	08/28/2019	No	-
WAC	1226, 1255	North Bosque River	Phosphorus	2/09/2001	12/13/2002	No	-
CRP	2482	Nueces Bay	Zinc in Oyster Tissue	11/01/2006	10/24/2007	No	-
BMT	0508, 0508A, 0508B, 0508C, 0511, 0511A, 0511B, 0511C, and 0511E	Orange County Watersheds	Bacteria, Dissolved Oxygen, pH	6/13/2007	8/05/2015	No	-
CRP	2485	Oso Bay	Bacteria	8/22/2007	NA	No	-
CRP	2485A	Oso Creek	Bacteria	07/31/20019	NA	No	-
CRP	2204	Petronila Creek Above Tidal	Chloride, Sulfate, Total Dissolved Solids	1/10/2007	10/10/2007	No	-
SAT	1910	Salado Creek	DO	10/21/2001	Creek is supporting the aquatic life use, so an IP is not needed.	No	-
HOU	1002, 1003, 1004, 1004D	San Jacinto River, East and West Forks; Lake Houston; and Crystal Creek in the Houston-Galveston Region	Bacteria	8/24/2016	Subsumed in BIG I-Plan approved 1/30/2013	No	-

<sup>1</sup> TxDOT not a potential source for impairment. TxDOT employs statewide BMPs to reduce pollutant contributions to water bodies.

Table 7.2

EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT'S BMPS							
District Name	Segment Number	Segment Name	Pollutant of Concern	TMDL Adopted	IP Approval	Is TxDOT MS4 potential source for impairment?	TxDOT <sup>1</sup> BMPS
HOU	1015A	San Jacinto River, East and West Forks; Lake Houston; and Crystal Creek in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 10/2018	Subsumed in BIG I-Plan approved 1/30/2013	No	-
HOU	1007A, 1007D, 1007N	Sims Bayou in the Houston-Galveston Region	Bacteria	9/15/2010	BIG I-Plan approved 01/30/2013	No	-
HOU	1007A	Sims Bayou in the Houston-Galveston Region, Addendum I	Bacteria	Submitted via WQMP 04/2013	Subsumed in BIG I-Plan approved 1/30/2013	No	-
FTW	0806E	Sycamore Creek in the Greater Trinity Region	Bacteria	1/16/2019	Subsumed in the Greater Trinity I-Plan approved 12/11/2013	No	-
YKM	1501	Tres Palacios Creek	Bacteria	1/24/2018	1/24/2018	No	-
HOU	1245	Upper Oyster Creek	Bacteria	8/08/2007	1/15/2014	No	-
HOU	1245	Upper Oyster Creek	DO	07/28/2010	1/15/2014 (bacteria and dissolved oxygen in same plan)	No	-
SAT	1910, 1910A, 1911	Upper San Antonio River	Bacteria	7/25/2007	4/06/2016	No	-

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<b>EXISTING APPROVED TMDLS AND IMPLEMENTATION PLANS (I-Plans) WITH TXDOT’S BMPS</b>							
<b>District Name</b>	<b>Segment Number</b>	<b>Segment Name</b>	<b>Pollutant of Concern</b>	<b>TMDL Adopted</b>	<b>IP Approval</b>	<b>Is TxDOT MS4 potential source for impairment?</b>	<b>TxDOT<sup>1</sup> BMPs</b>
SAT	1910D, 1911B, 1911C, 1911D, 1911E	Upper San Antonio River, Addendum I	Bacteria	Submitted via WQMP 04/2016	Same activities as in I-Plan approved 04/06/2016	No	-
SAT	1911I	Upper San Antonio River, Addendum II	Bacteria	Submitted via WQMP 10/2019	Same activities as in I-Plan approved 04/06/2016	No	-
HOU	2421, 2422, 2423, 2424, 2432, 2439	Upper Texas Coast Oyster Waters with Addendum I	Bacteria	8/20/2008	8/19/2015	No	-
HOU	2435OW	Upper Texas Coast Oyster Waters— Addendum II	Bacteria	Submitted via WQMP 01/2012	Same activities as in I-Plan approved 08/19/2015	No	-
HOU	2433OW, 2434OW	Upper Texas Coast Oyster Waters— Addendum III	Bacteria	Submitted via WQMP 04/2012	Same activities as in I-Plan approved 8/19/2015	No	-
DAL	0805	Upper Trinity River in the Greater Trinity Region	Bacteria	5/11/2011	Greater Trinity I-Plan approved 12/11/2013	No	-

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Table 7.3

<b>ANALYSES OF TXDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)</b>						
<b>TxDOT District</b>	<b>303(d) Listed Stream</b>	<b>Stream Segment</b>	<b>Pollutant of Concern</b>	<b>Is TxDOT MS4 potential source for impairment?<sup>1</sup></b>	<b>Does TxDOT MS4 discharge directly into IWB?</b>	<b>River Basin</b>
<b>List Compiled From the 2020 Texas Integrated Report - Texas 303(d) List (Category 5)</b>						
Amarillo	East Amarillo Creek	0103A	Bacteria	No	Yes	Canadian
Austin	Brushy Creek	1244	Bacteria	No	Yes	Brazos
	Mankins Branch	1248C	Bacteria	No	Yes	
	Bull Creek	1403A	Depressed DO	No	Yes	Colorado
	Slaughter Creek	1427A	Impaired macrobenthic communities	No	Yes	
	Waller Creek	1429C	Bacteria, impaired macrobenthic communities	No	Yes	
Beaumont	Little Cypress Bayou	0501B	Bacteria, depressed DO, toxicity in water	No	Yes	Sabine
	Neches River Tidal	0601	Bacteria, PCBs in edible tissue	No	Yes	Neches
	Pine Island Bayou	0607	Depressed DO	No	Yes	

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<sup>2</sup> Brake pads could be a potential source, however, per the January 21, 2015 Memorandum of Understanding between the U.S. EPA and the automotive industry, mercury, in addition to copper and other compounds, will be reduced in the use of motor vehicle brake pads. As such, no further action is required by TxDOT.

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	Village Creek	0608	Mercury in edible tissue	Yes <sup>2</sup>	Yes	
	Alligator Bayou and Main Canals A, B, C, and D	0702A	Toxicity in sediment and water	No	Yes	Neches-Trinity Coastal
	Cotton Bayou	0801C	Bacteria, depressed DO	No	No	Trinity River
	Cedar Bayou Tidal	0901	Bacteria, dioxin and PCBs in edible tissue	No	No	Trinity San Jacinto Coastal
Bryan	Cottonwood Branch	1242B	Bacteria	No	Yes	Brazos
	Still Creek	1242C	Bacteria	No	Yes	
Corpus Christi	Corpus Christi Bay (Recreational Beaches)	2481CB	Bacteria	No	Yes	Bays and Estuaries
	Nueces Bay	2482	Copper in water	Yes	Yes	
	Corpus Christi Inner Harbor	2484	Copper in water	Yes	Yes	
	Oso Bay	2485	Depressed DO	No	Yes	
	Oso Creek	2485A	Bacteria	No	No	
	Oso Bay (Oyster Waters)	2485OW	Bacteria (oyster water)	No	Yes	
Dallas	Upper Trinity River	0805	Dioxin and PCBs in edible tissue	No	Yes	Trinity

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	East Fork Trinity River	0819	Bacteria, Sulfate	No	No	
	Rowlett Creek	0820B	Bacteria	No	No	
	Wilson Creek	0821C	Bacteria	No	Yes	
	East Fork Trinity above Lake Lavon	0821D	Bacteria	No	Yes	
	White Rock Creek above White Rock Lake	0827A	Bacteria	No	Yes	
	Lower West Fork Trinity River	0841	Dioxin and PCBs in edible tissue	No	Yes	
	Mountain Creek Lake	0841A	Dioxin in edible tissue	No	Yes	
	Dry Branch Creek	0841I	Bacteria	No	No	
	North Fork Fish Creek	0841Q	Bacteria	No	Yes	
El Paso	Rio Grande Below International Dam	2308	Bacteria	No	No	Rio Grande
	Rio Grande Above International Dam	2314	Bacteria	No	No	
Fort Worth	West Fork Trinity River Below Lake Worth	0806	Dioxin and PCBs in edible tissue	No	Yes	Trinity
	Marine Creek	0806D	Bacteria	No	Yes	
	Lake Worth	0807	Dioxin in edible tissue	No	Yes	
	Ash Creek	0809B	Bacteria	No	Yes	
	Dosier Creek	0809C	Bacteria	No	Yes	

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<b>ANALYSES OF TxDOT MS4 DISCHARGING DIRECTLY INTO IMPAIRED WATER BODIES (IWB)</b>						
<b>TxDOT District</b>	<b>303(d) Listed Stream</b>	<b>Stream Segment</b>	<b>Pollutant of Concern</b>	<b>Is TxDOT MS4 potential source for impairment?<sup>1</sup></b>	<b>Does TxDOT MS4 discharge directly into IWB?</b>	<b>River Basin</b>
	Village Creek	0828A	Bacteria	No	Yes	
	Clear Fork Trinity River Below Benbrook Lake	0829	Bacteria, dioxin and PCBS in edible tissue	No	Yes	
	Lower West Fork Trinity River	0841	Dioxin and PCBS in edible tissue	No	Yes	
	North Fork Cottonwood Creek	0841P	Bacteria in water	No	Yes	
Houston	Cedar Bayou Tidal	0901	Bacteria, dioxin and PCBs in edible tissue	No	No	Trinity-San Jacinto Coastal
	San Jacinto River Tidal	1001	Dioxin and PCBs in edible tissue	No	No	San Jacinto
	White Oak Creek	1004J	Bacteria in water	No	No	
	Houston Ship Channel/San Jacinto River Tidal	1005	Dioxin and PCBs in edible tissue	No	No	
	Houston Ship Channel Tidal	1006	Bacteria, dioxin and PCBs in edible tissue, toxicity in sediment	No	Yes	
	Houston Ship Channel/Buffalo Bayou Tidal	1007	Bacteria, dioxin and PCBs in edible tissue, toxicity in sediment	No	Yes	
	Plum Creek Above Tidal	1007I	Depressed DO	No	Yes	
	Country Club Bayou Above Tidal	1007K	Depressed DO	No	Yes	
	Hunting Bayou Above Tidal	1007R	Depressed DO	No	Yes	
	Caney Creek	1010	Bacteria	No	Yes	

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<b>TxDOT District</b>	<b>303(d) Listed Stream</b>	<b>Stream Segment</b>	<b>Pollutant of Concern</b>	<b>Is TxDOT MS4 potential source for impairment?<sup>1</sup></b>	<b>Does TxDOT MS4 discharge directly into IWB?</b>	<b>River Basin</b>
	Little White Oak Bayou	1013A	Depressed DO	No	Yes	
	Horsepen Creek	1014C	Bacteria	No	Yes	
	Newman Branch (Neimans Bayou)	1014M	Depressed DO, impaired fish and macrobenthic communities	No	Yes	
	Clear Creek Tidal	1101	Dioxin and PCBs in edible tissue	No	Yes	San Jacinto-Brazos Coastal
	Unnamed Tributary of Clear Creek Tidal	1101E	Depressed DO	No	Yes	
	Clear Creek Above Tidal	1102	PCBs in edible tissue	No	Yes	
	Dickinson Bayou Tidal	1103	Dioxin and PCBs in edible tissue, Depressed DO	No	Yes	
	Bensons Bayou	1103A	Depressed DO	No	Yes	
	Bordens Gully	1103B	Depressed DO	No	Yes	
	Geisler Bayou	1103C	Depressed DO	No	Yes	
	Unnamed Tributary of Dickson Bayou Tidal	1103F	Bacteria, Depressed DO	No	Yes	
	Unnamed Tributary of Gum Bayou	1103G	Bacteria	No	Yes	
	Bastrop Bayou Tidal	1105	Bacteria	No	No	
	Oyster Creek Tidal	1109	Bacteria	No	Yes	

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	Armand Bayou Tidal	1113	Dioxin and PCBs in edible tissue, Depressed DO,	No	Yes	Brazos
	Bullhead Bayou	1245C	Bacteria	No	Yes	
	Alcorn Bayou	1245F	Bacteria	No	Yes	
	Upper Galveston Bay	2421	Dioxin and PCBs in edible tissue	No	No	Bays and Estuaries
	Littler Cedar Bayou	2421B	Bacteria	No	Yes	
	West Bay	2424	Dioxin and PCBs in edible tissue	No	No	
	Highland Bayou	2424A	Bacteria, depressed DO, dioxin and PCBs in edible tissue	No	Yes	
	Marchand Bayou	2424C	Bacteria, depressed DO	No	Yes	
	Highland Bayou Diversion Canal	2424G	Bacteria	No	Yes	
	Clear Lake	2425	Dioxin and PCBs in edible tissue, Copper in water	Yes	Yes	
	Jarbo Bayou	2425B	Dioxin and PCBs in edible tissue	No	Yes	
	Tabbs Bay	2426	Dioxin and PCBs in edible tissue	No	Yes	
	Goose Creek Tidal	2426C	Dioxin and PCBs in edible tissue	No	Yes	
	San Jacinto Bay	2427	Dioxin and PCBs in edible tissue	No	No	

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<b>TxDOT District</b>	<b>303(d) Listed Stream</b>	<b>Stream Segment</b>	<b>Pollutant of Concern</b>	<b>Is TxDOT MS4 potential source for impairment?<sup>1</sup></b>	<b>Does TxDOT MS4 discharge directly into IWB?</b>	<b>River Basin</b>
	Black Duck Bay	2428	Dioxin and PCBs in edible tissue	No	No	
	Burnett Bay	2430	Dioxin and PCBs in edible tissue	No	Yes	
	Unnamed Tributary to the Southern Arm of Moses Lake (West)	2431C	Bacteria	No	Yes	
	Mustang Bayou	2432A	Bacteria	No	Yes	
	Gulf Waters	2501	Bacteria, mercury in edible tissue	Yes <sup>2</sup>	Yes	Gulf of Mexico
Laredo	Rio Grande Below Amistad Reservoir	2304	Bacteria	No	No	Rio Grande
Lubbock	North Fork Double Mountain Fork Brazos River	1241A	Bacteria	No	Yes	Brazos
Paris	Post Oak Creek	0202E	Bacteria	No	Yes	Red
Pharr	Arroyo Colorado Above Tidal	2202	Bacteria, mercury and PCBs in edible tissue	Yes <sup>2</sup>	Yes	Nueces-Rio Grande Coastal
	Rio Grande Below Falcon Reservoir	2302	Bacteria	No	No	Rio Grande
San Angelo	Concho River	1421	Bacteria, Depressed DO	No	Yes	Colorado
San Antonio	Dry Comal Creek	1811A	Bacteria	No	Yes	Guadalupe
	Martinez Creek	1902A	Bacteria	No	Yes	San Antonio
	Lower Leon Creek	1906	PCBs in edible tissue	No	Yes	
	Upper Cibolo Creek	1908	Bacteria	No	Yes	

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<b>TxDOT District</b>	<b>303(d) Listed Stream</b>	<b>Stream Segment</b>	<b>Pollutant of Concern</b>	<b>Is TxDOT MS4 potential source for impairment?<sup>1</sup></b>	<b>Does TxDOT MS4 discharge directly into IWB?</b>	<b>River Basin</b>
	Salado Creek	1910	Impaired fish and macrobenthic communities	No	Yes	
	Upper San Antonio River	1911	Impaired fish and macrobenthic communities	No	Yes	
	Martinez Creek	1911I	Bacteria	No	Yes	
Tyler	Grace Creek	0505B	Bacteria	No	Yes	Sabine
	Harris Creek	0506A	Depressed DO	No	Yes	
	Black Fork Creek	0606D	Bacteria	No	Yes	Neches
	West Mud Creek	0611D	Bacteria	No	Yes	
Waco	Nolan Creek/South Nolan Creek	1218	Bacteria	No	Yes	Brazos
	Little Nolan Creek	1218C	Bacteria	No	Yes	
	Long Branch	1218D	Bacteria	No	Yes	
Wichita Falls	Wichita River Below Diversion Lake	0214	Bacteria	No	NA	Red

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# **Attachment R**

## **Identify Areas of Focused Effort or Additional BMPs to Reduce POCs - BMP 7.3.1.1**

Name of TMDL	Measurable BMPs
N/A	N/A

# **Attachment S**

**Include Measurable Goal and Implementation Schedule for Targeted  
Controls - BMP 7.3.1.2**

Targeted Controls	Measurable Goal
N/A	N/A

# **Attachment T**

**Provide Benchmark Goals and Report the Options Selected - 7.3.1.3**

See Attachment Q

# **Attachment U**

**Provide Analysis of How BMPs Will be Effective in Contributing to the  
Benchmark Goal - BMP 7.3.1.4**

See Attachment Q

# **Attachment V**

**Provide a Summary of Findings Addressing Potential Bacteria Sources - BMP  
7.3.1.5**

See Attachment Q

# **Attachment W**

**Provide Documentation of Monitoring or Assessment of Bacteria - BMP 7.3.1.6**

See Attachment Q

# **Attachment X**

**Include Revised BMPs in SWMP and Annual Report - BMP 7.3.1.7**

No revisions are necessary in the SWMP. Tables 7.2 and 7.3 have been updated and provided in Attachment Q.

# Attachment Y

**Discharges to Impaired Waterbodies Require: Determining if Discharges Contain POCs at Levels of Concern; Include Focused BMPs, Along With Measureable Goals; and, Submit Notification of Additional BMPs to TCEQ -  
BMP 7.3.2.1**

See Attachment Q

# **Attachment Z**

## **Address Potential Bacteria Sources and Provide Summary of Findings - BMP 7.3.2.2**

See Attachment Q

# **Attachment AA**

**Provide Notification of Additional BMPs to Address POCs to TCEQ - BMP  
7.3.2.3**

See Attachment Q

# **Attachment BB**

**Provide a List of Agency Approved WPAPs for Respective Permit Year - BMP  
8.3.2**

The following is a list of TxDOT Agency approved WPAPs:

**Figure 8.2**

<b>TxDOT AGENCY APPROVED WPAPs</b>					
<b>EDWARDS ID</b>	<b>PLAN TYPE</b>	<b>REC DATE</b>	<b>REGULATED ENTITY NAME</b>	<b>TYPE OF RESPONSE</b>	<b>RESPONSE DATE</b>
00011401	WPAP	1/14/00	BLANCO ROAD EXTENSION FM 2696	Approved	3/21/00
99081101B	WPAP-MOD	3/1/00	CEDAR PARK CAMPUS	Approved	4/25/00
00040401	WPAP	4/4/00	I H 35 MAINLANES WIDENING	Approved	5/5/00
00072401	WPAP	7/24/00	LOOP 1 STATE HIGHWAY 45 FRONTAGE ROAD	Approved	9/25/00
00091901	WPAP	9/19/00	COUNTY ROAD 271 AT MEDINA RIVER	Approved	10/19/00
00101201	WPAP	10/12/00	LOOP 1604 FROM FM 1535 TO BITTERS ROAD	Approved	12/6/00
00121201	WPAP	12/12/00	FM 1325	Approved	1/22/01
01031301	WPAP	3/13/01	RM 620 WIDENING CSJ 0683 01 066	Approved	5/1/01
01041901	WPAP	4/19/01	US 281 SOUTHBOUND FRONTAGE ROADS	Approved	5/18/01
01051404	WPAP	5/14/01	FM 1863	Approved	6/15/01
01073003	WPAP	7/30/01	LOOP 1 SH 45 INTERCHANGE SECTION 3 PHASE 1 EAST	Approved	3/14/02
00011401A	WPAP-MOD	8/7/01	FM 2696 BLANCO ROAD	Approved	9/13/01
01091401	WPAP	9/14/01	FM 306 AT HOFFMAN LANE	Approved	2/22/02
01100106	WPAP	10/1/01	STATE HIGHWAY 45 SECTION 4A PHASE II	Approved	2/22/02
01122802	WPAP	12/28/01	FM 3406	Approved	2/1/02
00101201A	WPAP-MOD	2/4/02	LOOP 1604 FROM FM 1535 TO BITTERS ROAD	Approved	3/14/02
02022002	WPAP	2/20/02	RM 2244 WIDENING PROJECT	Approved	4/12/02
02051701	WPAP	5/17/02	LOOP 1 STATE HIGHWAY 45 INTERCHANGE PHASE 1 WEST	Approved	8/14/02
02052101	WPAP	5/21/02	LOOP 1 MAIN LANES	Approved	8/20/02
02121101	WPAP	12/11/02	LOOP 1 EXTENSION PARMER LANE TO TANDEM BOULEVARD	Approved	4/1/03

## TxDOT AGENCY APPROVED WPAPs

EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
03031203	WPAP	3/12/03	LOOP 1 EXTENSION SECTION 2	Approved	5/27/03
03050901	WPAP	5/9/03	SH 45 SECTION VII	Approved	9/12/03
03060201	WPAP	6/2/03	STATE HIGHWAY 130 SEGMENT 1 SECTION 1	Approved	9/12/03
03060501	WPAP	6/5/03	SH 45 SECTION 8 - PARMER LANE TO RIDGELINE BLVD	Approved	9/29/03
03060502	WPAP	6/5/03	RM 1431 ACCELERATION DECELERATION LANES	Approved	9/12/03
03072101	WPAP	7/21/03	US 183 SECTION 9	Approved	12/31/03
03082801	WPAP	8/28/03	STATE HIGHWAY 127	Approved	12/17/03
92022701A	WPAP-MOD	9/12/03	FM 734 LEFT TURN LANE	Approved	12/18/03
03091502	WPAP	9/15/03	STATE HIGHWAY 130 SEGMENT 1 PHASE 2	Approved	12/3/03
04030303	WPAP	3/3/04	STATE HIGHWAY 46	Approved	4/20/04
04031002	WPAP	3/10/04	LOOP 1604	Approved	5/13/04
04031101	WPAP	3/11/04	RM 12	Approved	4/26/04
04081010	WPAP	8/10/04	RM 1051	Approved	11/10/04
04101401	WPAP	10/14/04	STATE HIGHWAY 29 CSJ 0337-01-029	Approved	12/23/04
04031002A	WPAP-MOD	11/8/04	LOOP 1604 AT BULVERDE ROAD	Approved	12/3/04
05012101	WPAP	1/21/05	RM 620 CULVERT	Approved	4/1/05
05030401	WPAP	3/4/05	STATE HIGHWAY 29	Approved	5/17/05
05031001	WPAP	3/10/05	US 290 WIDENING	Approved	5/16/05
05032910	WPAP	3/29/05	US 281	Approved	7/26/05
05042510	WPAP	4/25/05	FM 1863	Approved	6/14/05
05052301	WPAP	5/23/05	STATE HIGHWAY 71 IMPROVEMENTS	Approved	9/22/05
05060901	WPAP	6/9/05	IH 35 FRONTAGE ROAD AND OVERPASS	Approved	8/17/05
05072501	WPAP	7/25/05	IH 35 FRONTAGE ROADS @ ONION BRANCH	Approved	8/15/05

## TxDOT AGENCY APPROVED WPAPs

EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
05072502	WPAP	7/25/05	IH 35 SOUTHBOUND FRONTAGE ROAD @ SOUTH FORK SAN GABRIEL RIVER	Approved	8/29/05
05090110	WPAP	9/1/05	LOOP 1604 TOLL STARTER SYSTEM	Approved	6/5/06
05032910B	WPAP-MOD	11/28/05	US 281	Approved	6/5/06
06010601	WPAP	1/6/06	RM 2243	Approved	4/14/06
06020302	WPAP	2/3/06	RM 3406 @ CREEK BEND BLVD	Approved	4/12/06
05030310A	WPAP	2/17/06	FM 1535	Approved	5/11/06
06031310	WPAP	3/13/06	STATE HIGHWAY 173 @ CR 241 AND CR 247	Approved	4/12/06
06042710	WPAP	4/27/06	FM 1283	Approved	6/27/06
06051810	WPAP	5/18/06	US 281 @ OVERLOOK PARKWAY	Approved	7/13/06
06060110	WPAP	6/1/06	STATE HIGHWAY 16 @ FM 1560 CSJ 0291-10-090	Approved	7/31/06
06092810	WPAP	9/28/06	STATE HIGHWAY 46	Approved	11/27/06
07031601	WPAP	3/16/07	IH 35 AT SH 29 TURNAROUNDS	Approved	4/25/07
07041610	WPAP	4/16/07	IH 10 LOOP 1604 SOUTH TO TRANSITION ZONE	Approved	6/20/07
07072301	WPAP	7/23/07	IH 35 @ RM 620 BRIDGE TURNAROUND	Approved	9/7/07
07081310	WPAP	8/13/07	SH 46 AT RM 2722 IMPROVEMENTS	Approved	10/22/07
08011001A	WPAP	1/15/08	RM 620 IMPROVEMENTS	Approved	2/29/08
08011001B	WPAP	1/15/08	RM 620 IMPROVEMENTS	Approved	3/3/08
08011001C	WPAP	1/15/08	RM 620 IMPROVEMENTS	Approved	3/3/08
08012910	WPAP	1/29/08	FM 2696 GLADE CROSSING TO WEST OAK ESTATES	Approved	4/7/08
08090501	WPAP	9/5/08	IH 35 NORTHBOUND ACCESS RAMP MODIFICATIONS	Approved	10/10/08
08090504	WPAP	9/5/08	FM 2338 IMPROVEMENTS - FM 3405 TO D B WOOD RD	Approved	11/3/08
08090810	WPAP	9/8/08	IH 10 EAST BOUND FRONTAGE ROAD AT LEON CREEK	Approved	10/27/08

## TxDOT AGENCY APPROVED WPAPs

EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
11-08102201	WPAP	10/22/08	IH 35 AT LAKEWAY DRIVE	Approved	12/31/08
05042510A	WPAP-MOD	4/9/09	FM 1863	Approved	5/11/09
10021101	WPAP	2/11/10	US 290 LOOP 1 DIRECT CONNECT RAMPs	Approved	4/22/10
11-09012702A	WPAP	3/5/10	IH 35 NORTHBOUND FRONTAGE ROAD	Approved	4/29/10
07120602A	WPAP-MOD	3/26/10	FM 971	Approved	5/5/10
11-10052401	WPAP	5/24/10	RM 12 IMPROVEMENTS	Approved	6/29/10
11-11021701	WPAP	2/17/11	RM 620 Improvements	Approved	4/28/11
	WPAP	7/21/11	SH 127	Approved	9/7/11
11-10102702A	WPAP-MOD	7/28/11	SH 45 O'Conner Drive	Approved	9/9/11
11-11070702	WPAP	7/7/11	FM 1626	Approved	9/21/11
	WPAP	8/11/11	Loop 337 at Ridge Hill	Approved	10/11/11
	WPAP	10/31/11	Loop 1604 at Vance Jackson	Approved	12/13/11
11-12022802	WPAP-MOD	2/28/12	IH 35 Northbound frontage	Approved	4/9/12
11-12070201	WPAP	7/2/12	SH 195 CR 240 to IH 35	Approved	9/11/12
	WPAP	7/19/12	FM 306	Approved	9/14/12
	WPAP-MOD	11/26/12	IH 10 LOOP 1604 SOUTH TO TRANSITION ZONE	Approved	1/7/13
11-13021101	WPAP	2/11/13	RM 12 at Oakwood loop	Approved	3/21/13
13-13021410	WPAP	2/14/13	FM 306 at Hunter road	Approved	4/4/13
	WPAP	5/3/13	North Walnut Ave	Approved	6/18/13
11-13030403	WPAP	3/4/13	Loop 1 Shared Use Path	Approved	7/2/13
11-13060301	WPAP	6/3/13	FM 1626	Approved	9/6/13
11-13101801	WPAP-EXC	10/18/13	IH 35 NORTHBOUND FRONTAGE ROAD	Approved	12/9/13
11-13101802	WPAP-EXC	10/18/2013	SH 195 CR 240 TO IH 35	Approved	1/6/14
11-13110101	WPAP	11/1/13	IH 35 ramp reversal	Approved	4/16/14
11-14021001	WPAP	2/10/14	RM 967	Approved	4/10/14

## TxDOT AGENCY APPROVED WPAPs

EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
11-14030501	WPAP	3/5/14	RM 1431 Diverging diamond intersection	Approved	5/28/14
	WPAP	4/9/14	Spur 53	Approved	5/29/14
11-14021203	WPAP	2/12/14	Loop 1 shared use path at 360	Approved	6/3/14
11-14032102	WPAP	3/21/14	FM 1460	Approved	7/18/14
11-14052201	WPAP	5/22/14	RM 12 Hugo Road to Pioneer Trail	Approved	8/27/14
11-14062601	WPAP	6/26/14	FM 487	Approved	9/10/14
	WPAP	4/22/14	SH 127 at Frio River	Approved	9/11/14
11-15011201	WPAP	1/14/15	SH 45 at Pearson Ranch Road	Approved	2/16/15
11-15011503	WPAP	1/15/15	RM 12 Saddleridge Drive to Hugo Road	Approved	2/20/15
11-15012601	WPAP	1/26/15	FM 3406	Approved	3/11/15
11-15012702	WPAP-EXC	1/28/15	FM 972	Approved	3/4/15
	WPAP	4/8/15	Loop 337 at Ridge Hill Drive	Approved	5/22/15
11-15040302	WPAP	4/3/15	RM 2244 Redbud to Walsh Tarlton	Approved	6/8/15
11-15040301	WPAP-EXC	4/3/15	SH 195 Turn Lane at CR 147	Approved	5/11/15
11-15071703	WPAP	7/17/15	Loop 360 at Loop 1	Approved	8/21/15
	WPAP	9/2/15	FM 306 from Hunter Rd to Hoffman Lane	Approved	10/09/15
11000114	WPAP	1/25/16	IH 35 US 79 TO SH 45 N	Approved	4/20/16
11000235	WPAP	5/2/16	IH 35 AT FM 3406 BRIDGE REPLACEMENT	Approved	6/16/16
	WPAP	5/27/16	FM 306 from River Chase Way to Hoffman Lane	Approved	7/07/16
11000318	WPAP	7/5/16	RM 1431 COTTONWOOD CREEK TRL TO MARKET ST	Approved	9/19/16
11000333	WPAP	8/2/16	RM 620 IMPROVEMENTS PHASE 2	Approved	9/15/16
11000467	WPAP	12/2/16	MOPAC INTERSECTIONS	Approved	2/28/17
	WPAP	12/28/16	US 281 from Loop 1604 to Stone Oak Pkwy	Approved	5/02/17
	WPAP	3/01/17	SH 16 at FM 1560	Approved	4/19/17
	WPAP	4/14/17	FM 1560 from SH 16 to Loop 1604	Approved	6/15/17

## TxDOT AGENCY APPROVED WPAPs

EDWARDS ID	PLAN TYPE	REC DATE	REGULATED ENTITY NAME	TYPE OF RESPONSE	RESPONSE DATE
11000712	WPAP	6/14/17	IH 35 FM 3406 Bridge Replacement	Approved	7/19/2017
	WPAP	6/30/17	Loop 337 from Hillcrest Drive to IH 35	Approved	8/25/17
11000866	WPAP-EXC	10/6/17	RM 1431 Noise Wall	Approved	11/13/17
11001176	WPAP-EXC	6/27/18	RM 620 W of IH 35	Approved	8/7/18
11001406	WPAP	1/19/19	IH 35 from FM 3406 to RM 1431	Approved	2/12/19
13000654	WPAP	3/29/18	Loop 1604 at Bulverde Road	Approved	6/6/18
13000664	WPAP	4/16/18	Loop 1604 at Bitters Road and Huebner Road	Approved	6/14/18
13000663	WPAP	4/16/18	Loop 1604 at FM 1535	Approved	6/18/18
13000702	WPAP	6/17/18	IH 10 Bexar County Line to Fair Oaks Pkwy	Approved	8/10/18
13000710	WPAP	6/14/18	US 281 from Stone Oak Pkwy to Bexar CL	Approved	9/27/18
11001406	WPAP	1/19/19	IH 35 from FM 3406 to RM 1431	Approved	2/12/19
11001523	WPAP-EXC	4/18/19	ADA Ramps and Sidewalks (various locations)	Approved	5/31/19
11001545	WPAP	5/2/19	RM 971	Approved	7/2/19
13001006	WPAP		FM 1535 LP 1604 to Shavano Park	Pending	Pending
13000926	WPAP	4/2019	I-10 at Balcones Creek	Approved	7/3/19
11001720	WPAP-EXC	9/17/2019	SH 195 at Berry Creek Drive	Approved	10/25/2019
11001710	WPAP	9/6/2019	RM 620 Grade Separation	Approved	10/30/2019
11001977	WPAP	3/12/2020	I-35 from Williams Dr to Lakeway Dr	Approved	5/7/2020
11001990	WPAP	3/5/2020	SH 29 at D.B. Woods Rd	Approved	5/22/2020
13001206	WPAP	8/7/2020	FM 462 at Hondo Creek, 1.8 mi N of CR 331	Approved	9/17/2020

**Definitions:**

WPAP=Water Pollution Abatement Plan

WPAPMOD=Water Pollution Abatement Plan Modification

# **Attachment CC**

**Provide Annual Cost Spent on the TxDOT Stormwater Program - BMP 9.1**

<b>Attachment CC</b>	
<b>Annual Cost Spent on the TxDOT Stormwater Program*</b>	
Contracted Work Authorizations	\$ 474,194
Costs reported in SWMP BMPs:	
Don't Mess With Texas Program	\$ 730,104
Structural Controls Maintenance	\$ 20,583,754
MMS/Compass Data (see Attachment F)	\$ 67,381,851
Annual Reporting Staff Time:	
Division	\$ 5,472
District	\$ 7,740
Program Implementation Staff Time:	
Division	\$ 137,000
District	\$ 51,308
DEQC 2448s completed	\$ 88,558
<b>Total Program Cost*</b>	<b>\$ 89,459,979</b>

\* This Total Program Cost includes the amount spent on activities reported in the MS4 Program as described in the TxDOT SWMP, and is not inclusive of the Construction General Permit or any other permits.

# **Attachment DD**

**Provide Maps of Points of Discharge Not Submitted with the Permit  
Application - BMP 10.1**

Refer to in Attachment E.

# **Attachment EE**

**Provide Map of Major Structural Controls - BMP 10.2**

Refer to in Attachment E.