

# TMDL'S & ARLINGTON

## An Overview of Phase I MS4 Programming

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# AGENDA

- Overview of Arlington's TMDL permit language and the City's interpretation
- How the City met the Remand Rule with its SWMP
- Arlington's TMDL programmatic activities (current and future)
- Begin a dialogue with other MS4's about their programs focusing on practical applications of the rules.



# ARLINGTON'S MS4 PERMIT

## ■ Part II.C: Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements

- Part II.C.2.a – Discharges directly to a Water Quality Impaired Water Bodies with an Approved TMDL
- Part II.C.2.b – Discharges directly to Water Quality Impaired Water Bodies without a TMDL

City of Arlington  
The University of Texas at Arlington

TPDES Permit No. WQ0004635000

**PART II: DISCHARGES AUTHORIZED BY THIS PERMIT, PERMITTEE RESPONSIBILITIES, IMPAIRED WATER BODIES, AND TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS**

**A. Authorized Discharges.**

1. This permit authorizes existing or new stormwater point source discharges to surface water in the state from those portions of the Municipal Separate Storm Sewer System (MS4) owned or operated by the permittees.
2. The following discharges, whether discharged separately or commingled with municipal stormwater, are not authorized by:
  - a. discharges of non-stormwater;
  - b. stormwater discharges associated with i
  - c. stormwater discharges that must be an Elimination System (TPDES) permit; at
  - d. discharges of materials resulting from a loss of life, personal injury, or severe pe
3. This permit does not negate any person's abli God, war, strike, riot, or other catastrophe) d Administrative Code (TAC) § 70.7.
4. This permit does not transfer liability for disc National Pollutant Discharge Elimination Sys the responsible party of the discharge to the j
5. The requirements in this permit must provide Surface Water Quality Standards (TSWQS) as

**B. Responsibilities of the permittees.**

- a. compliance with permit conditions;
- b. implementation of the Stormwater Mana
- c. compliance with annual reporting require
- d. collection of monitoring data, accordi t permittees; and
- e. a plan of action to assume responsibility f management and monitoring programs o jurisdictional agreements allocating resp dissolved or in default.

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**C. Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements**

1. Discharges of the pollutant(s) of concern to impaired water bodies where there is a TCEQ and EPA-approved total maximum daily load (TMDL) are not eligible for this permit unless they are consistent with the approved TMDL. A water body is impaired for purposes of the permit if it has been identified, pursuant to the latest TCEQ and EPA-approved Texas Integrated Report Index of Water Quality Impairment, as not meeting Texas Surface Water Quality Standards.
2. The permittees shall control the discharges of pollutant(s) of concern to impaired waters and waters with approved TMDLs as provided in section(s) a and b below and shall assess the progress in controlling those pollutants.
  - a. Discharges to Water Quality-Impaired Water Bodies with an Approved TMDL  
For any portion of the MS4 that discharges to a portion of a watershed with an approved TMDL, and because stormwater has the potential to cause or contribute to the impairment, the permittees shall include in the SWMP controls targeting the pollutant(s) of concern along with any additional or modified controls required in the TMDL and this section.  
The SWMP and required annual reports must include information on implementing any targeted controls required to reduce the pollutant(s) of concern as described below:
    - i. Targeted Controls  
The SWMP must include a detailed description of all targeted controls to be implemented, such as identifying areas of focused effort or implementing additional Best Management Practices (BMPs) to reduce the pollutant(s) of concern in the impaired waters.
    - ii. Measurable Goals  
For each targeted control, the SWMP must include a measurable goal and an implementation schedule describing BMPs to be implemented during each year of the permit term.
    - iii. Identification of Benchmarks  
The SWMP must identify a benchmark for the pollutant(s) of concern. Benchmarks are designed to assist in determining if the BMPs established are effective in addressing the pollutant(s) of concern in stormwater discharges(s) from the MS4 to the maximum extent practicable (MEP). The BMPs addressing the pollutant of concern must

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# TACKLING C2A AND C2B

- Part II.C.2.a – Discharges directly to a Water Quality Impaired Water Bodies with an Approved TMDL
  - Steps:
    - Identify the TMDL waterbodies in Arlington
    - Identify POC for Arlington
    - Identify areas of focused effort or targeted controls
    - Create measurable goals
    - Identify benchmarks for each POC



# IDENTIFYING TMDL WATERBODIES

- 2016 Integrated Report
  - Latest report available at the time SWMP was written.
  - 2018 Integrated Report
  - 2020 Integrated Report
    - Updates to TMDL waterbodies occurs with newest version of the Integrated Report

## 303(d) Submissions: Integrated Reporting Categories

With the Integrated Report option, EPA encourages States/Tribes to use a five-category system for classifying all water bodies (or segments) within its boundaries regarding the waters' status in meeting the State's/Tribe's water quality standards. The categories are listed. The classification system uses designated uses as the basis for reporting on water quality.

Category/Subcategory	Description
Category 1	All designated uses are supported, no use is threatened.
Category 2	Available data and/or information indicate that some, but not all, designated uses are supported.
Category 3	There is insufficient available data and/or information to make a use support determination.
Category 4	Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed.
• Category 4a	A State developed TMDL has been approved by EPA or a TMDL has been established by EPA for any segment-pollutant combination.
• Category 4b	Other required control measures are expected to result in the attainment of an applicable water quality standard in a reasonable period of time.
• Category 4c	The non-attainment of any applicable water quality standard for the segment is the result of pollution and is not caused by a pollutant.
<b>Category 5</b>	Available data and/or information indicate that at least one designated use is not being supported or is threatened, and <b>a TMDL is needed.</b>

The waters from Category 5 constitute the Section 303(d) list of impaired or threatened waters within the State/Tribe's boundaries.

### SegID: 0841L Johnson Creek

Four mi stretch of Johnson Creek running upstream from confluence with the Arbor Creek to just upstream of 130 in Grand Prairie, Tarrant Co.

#### Parameter(s)

#### bacteria (Recreation Use)

0841L\_01

From the confluence with the Lower West Fork Trinity River, upstream to just south of Mayfield Road in Arlington, Tarrant, Co..

#### Category

4a

#### Carryforward

No

# IDENTIFYING THE POLLUTANT OF CONCERN: BACTERIA

## 3.2 DISCHARGES TO WATER QUALITY-IMPAIRED WATERBODIES WITH AN APPROVED TMDL

The Permit requires that the City address discharges to impaired waterbodies with an approved TMDL by implementing a program that includes: **targeted controls, measurable goals, benchmark identification, annual reporting, addressing bacteria impairments, monitoring/assessing progress, and indicating observations of no progress.**



### a. Discharges to Water Quality-Impaired Water Bodies with an Approved TMDL

For any portion of the MS4 that discharges to a portion of a watershed with an approved TMDL, and because stormwater has the potential to cause or contribute to the impairment, the permittees shall include in the SWMP controls targeting the pollutant(s) of concern along with any additional or modified controls required in the TMDL and this section.

Based on the 2016 Integrated Report listings for TMDLs and impaired waterbodies, *bacteria* is identified as the primary pollutant of concern in the waterbodies within the City's jurisdiction. As such, Arlington's TMDL programming will focus primarily on targeting bacteria reductions in the impaired waterbodies identified above.

# TARGETED CONTROLS (AREAS OF FOCUSED EFFORTS)

- NCTCOG I-Plan
  - 9 Strategies (with several subcategories)
    - Wastewater, Stormwater, P&D, Pets, Livestock, & Wildlife, OSSFs, Monitoring Coordination, Education & Outreach, BMP Library, Strategy Evaluation
  - Not all strategies were included as an area of focused effort and only some subcategories within each strategy were chosen.

## 3.2.1 TARGETED CONTROLS



### i. Targeted Controls

The SWMP must include a detailed description of all targeted controls to be implemented, such as identifying areas of focused effort or implementing additional Best Management Practices (BMPs) to reduce the pollutant(s) of concern in the impaired waters.

#### 3.2.1.1 Areas of Focused Effort (Targeted Controls)

To aid in identifying the most essential BMPs to implement to reduce discharges of the identified POC, the City of Arlington references those strategies identified in the available TMDL Implementation Plan for the North Central Texas Region: *Implementation Plan for Twenty-Two Total Maximum Daily Loads for Bacteria in the Greater Trinity Region (I-Plan)*. Approved by the TCEQ on December 11, 2013 and revised by the Coordination Committee on June 13, 2019, the I-Plan outlines strategies or best management practices that many entities in the region have completed, will complete, or continue ongoing efforts to address bacteria concerns in TMDL and impaired areas. To this end, the City will continue to implement the relevant strategies outlined in the I-Plan. The I-Plan outlines implementation strategies in nine (9) areas: Wastewater, Stormwater, Planning and Development, Pets, Livestock, and Wildlife, OSSFs, Monitoring Coordination, Education and Outreach, BMP Library, and Strategy Evaluation.

The following table identifies the areas of focused effort for bacteria reduction for the City of Arlington based on the I-Plan.

I-Plan Implementation Strategy	Area of Focused Effort (Targeted Controls)
Wastewater	1.2 Lift Station Evaluation
	1.3 Regional Participation in FOG Programs
	1.4 Sanitary Sewer Overflow Reporting
Stormwater	2.0 MS4 participation in Regional Stormwater Management Program
	2.2 Land use, business, and regulatory review
Planning & Development	3.2 Construction Sites
Pets, Livestock, & Wildlife	4.0 Feral Hog Management
	4.2 Pet waste control measures
	4.3 Avian Management
	4.5 Pet Waste Collection Stations and BMPs at Parks
	4.6 Distribution of pet waste education materials
On Site Sewage Facilities	5.2 OSSF education efforts for real estate agents, property inspectors, and homeowners
Monitoring Coordination	6.0 Routine Sampling

# CREATE MEASURABLE GOALS FOR EACH TARGETED CONTROL

- 1: Wastewater
  - 1.4 Sanitary Sewer Overflow Reporting
    - Report 100% of sanitary sewer overflows annually.
- 3: Planning & Development
  - 3.2 Construction Sites
    - Create in FY21, one (1) construction BMP video for permit applicants, contractors, and subcontractors and report viewership and certifications annually.



# CREATE MEASURABLE GOALS FOR EACH TARGETED CONTROL

- 6: Monitoring Coordination
  - 6.0 Routine Sampling
    - Monitor monthly water quality impacts at 13 established creek locations.
- 7: Public Educ...bacteria specific materials
  - 7.4 Partnerships
    - City of Arlington and UTA
      - City of Arlington will partner with UTA to collect monthly bacteria samples at four established creek locations within the UTA assessment unit.

# IDENTIFY BENCHMARKS

- Permit lists two options for identifying benchmarks
  - City of Arlington chose Option A.
    - Utilizing existing WLAs for regulated stormwater sources
      - Outlined in the I-Plan
      - The Tricky Part...
        - What is Arlington's contribution?

- A) If the MS4, or a portion thereof, is subject to a TMDL that identifies a Waste Load Allocation(s) (WLA) for permitted MS4 stormwater sources, then the SWMP may identify it as the benchmark. Where an aggregate allocation is used as a benchmark, all affected MS4 operators are jointly responsible for progress in meeting the benchmark and shall (jointly or individually) develop a monitoring/assessment plan as required in Part II.C.2.a.vi.
- B) Alternatively, if multiple MS4s are discharging into the same impaired watershed with an approved TMDL, with an aggregate WLA for all permitted stormwater MS4s, then the MS4s may combine or share efforts to determine an alternative sub-benchmark value for the pollutant(s) of concern (e.g., bacteria) for their respective MS4. The SWMP must clearly define this alternative approach and must describe how the sub-benchmark value would cumulatively support the aggregate WLA. Where an aggregate benchmark is broken into sub-benchmark values for individual MS4s, each permittee is only responsible for progress in meeting its sub-benchmark value.

The City will utilize the methodology outlined in Option A. Waste Load Allocations (WLAs) for regulated stormwater sources for TMDL and impaired waters are calculated and outlined in the I-plan. WLAs for impaired assessment units (AUs) within Arlington's jurisdiction are listed below. These WLAs will serve as the benchmarks for TMDL and impaired waters within Arlington. All loads are expressed as billion MPN/day.

Assessment Unit (AU)	Stream Name	WLA <sub>sw</sub>
0841_02	Lower West Fork Trinity River	1920.0
0841F	Cottonwood Creek	46.053
0841K	Fish Creek	103.393
0841L	Johnson Creek	491.0
0841M	Kee Branch	184.4
0841R	Rush Creek	678.7
0841T	Village Creek	357.9

Table 4: TMDL allocations for impaired AUs

# IDENTIFY BENCHMARKS

- Option A: Calculating Arlington's Contribution
  - Use available data to compare as a percentage of current total WLA for the AU.
  - Inflows & Outflows Initiative
- Option B: Literal Interpretation of the Benchmark
  - Arlington's contribution based on available data is below the benchmark for the entire AU.

# TACKLING C2A AND C2B

- Part II.C.2.b – Discharges directly to a Water Quality Impaired Water Bodies with an Approved TMDL
  - Steps:
    - Identify impaired waterbodies in Arlington
    - Do we discharge a POC?
    - Identify potential significant sources and develop and implement focused BMPs for those sources.



# THE REMAND RULE

BMP	BMP Quantified (Measurable Goal)	Performance Measure	Responsible Department	Goal Completion				
				Year 1	Year 2	Year 3	Year 4	Year 5

## Impaired Waterbodies & Total Maximum Daily Load (TMDL) Requirements

Objectives: Development and implementation of a program to address discharges to impaired water bodies with or without approved TMDLs; identify areas of create measurable goals to reduce the discharge of pollutants of concern to impaired and TMDL waters; identify benchmarks for program effectiveness; and m progress toward reaching benchmarks.

### Discharges to Water Quality Impaired waterbodies with an Approved TMDL

BMP	BMP Quantified (Measurable Goal)	Performance Measure	Responsible Department	Year 1	Year 2	Year 3	Year 4	Year 5
Identify pollutants of concern (POCs).	<ul style="list-style-type: none"> <li>Review annually the Texas Integrated Report of Surface Water Quality Sections 305b and 303d to identify POCs for impaired waterbodies within the MS4.</li> </ul>	<ul style="list-style-type: none"> <li>List POCs in impaired waterbodies within the MS4.</li> </ul>	Environmental Management		by 9/30			
Identify areas of focused efforts (targeted controls) to address pollutants of concern.	<ul style="list-style-type: none"> <li>Identify by the end of FY21, a minimum of three (3) areas of focused efforts to address POCs</li> </ul>	<ul style="list-style-type: none"> <li>Identify and list areas of focused efforts in that are appropriate for the MS4 in the annual report (begin FY21).</li> </ul>	Environmental Management		by 9/30			
Create measurable goals for each targeted control.	<ul style="list-style-type: none"> <li>Identify by the end of FY21, a minimum of one (1) measurable goal for each targeted control.</li> </ul>	<ul style="list-style-type: none"> <li>Report measurable goals and associated data in the annual report (begin FY21).</li> </ul>	Environmental Management		by 9/30			
Identify benchmarks for each pollutant of concern.	<ul style="list-style-type: none"> <li>Identify by the end of FY21, a minimum of one (1) benchmark for each POC.</li> </ul>	<ul style="list-style-type: none"> <li>List benchmarks for the pollutants of concern in the annual report (begin FY21).</li> </ul>	Environmental Management		by 9/30			
Implement BMPs for bacteria impairments.	<ul style="list-style-type: none"> <li>Identify, by the end of FY21, a minimum of one (1) BMP associated with each targeted control.</li> <li>Implement, by the end of FY22, a</li> </ul>	<ul style="list-style-type: none"> <li>Continue or create programs specific to Sanitary Sewer Systems, OSSFs, illicit discharges and dumping, animal sources, and</li> </ul>	Environmental Management		by 9/30			

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		minimum of one (1) BMP for each targeted control.	residential education.						
Monitor or assess progress by utilizing Option A.2 as outlined in Part II.C.vi.A.2 of the Permit.	<ul style="list-style-type: none"> <li>Monitor bacteria levels monthly at 13 established locations throughout the MS4's watersheds.</li> </ul>	<ul style="list-style-type: none"> <li>Analyze historical data collected via CRP programming and through the Interim Bacteria Monitoring and Reduction Program.</li> <li>Collect data from co-permittees</li> </ul>	Environmental Management		by 9/30	by 9/30	by 9/30	by 9/30	by 9/30
Observe progress toward the benchmark.	<ul style="list-style-type: none"> <li>In Year 3, calculate progress toward the benchmark by percentage achieved or other applicable value or quantity.</li> </ul>	<ul style="list-style-type: none"> <li>Analyze first two years of data to gauge progress toward benchmark</li> </ul>	Environmental Management			by 9/30	by 9/30		
Reassessment of the benchmark.	<ul style="list-style-type: none"> <li>Reassess benchmarks in year 5 and update as necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Analyze first three years of data to gauge benchmark effectiveness</li> </ul>	Environmental Management						by 9/30
<b>Discharges Directly to Water Quality Impaired Waterbodies without an Approved TMDL</b>									
Determine if MS4 is a contributor of any POCs to any impaired waterbody without an approved TMDL.	<ul style="list-style-type: none"> <li>By the end of FY21, review all SSD discharges that reached a waterbody occurring from 2010-2019 to determine MS4 contribution.</li> </ul>	<ul style="list-style-type: none"> <li>Report annually status of MS4's contribution of any POC to any impaired waterbody without an approved TMDL.</li> </ul>	Environmental Management			by 9/30			
If determined to be a contributor, implement BMPs along with corresponding measurable goals to reduce the discharge of the POCs.	<ul style="list-style-type: none"> <li>By the end of FY22, identify and implement a minimum of one (1) BMP to reduce the discharge of the POC.</li> </ul>	<ul style="list-style-type: none"> <li>Report annually status of MS4's implementation of BMPs to reduce contribution of any POC to any impaired waterbody without an approved TMDL.</li> </ul>	Environmental Management				by 9/30		

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# CURRENT (AND FUTURE) TMDL PROGRAMMATIC ACTIVITIES

- Current:
  - Monthly Routine Sampling
  - Partnership with UTA
  - Inflows and Outflows
  - Data Analysis
  - TMDL Education
- Future:
  - I have absolutely no clue! I'm just trying to get through this first permit term!
    - However, I am open to "stealing" ideas from other MS4s. 😊



Phase I MS4's: How have you structured your TMDL programs and most importantly, how did you establish your benchmarks?

**QUESTIONS?**

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