

Municipal Separate Storm Sewer System (MS4) Annual Report
“Summary” for Dallas Area Rapid Transit (DART)
Report for calendar year 2020 (1/1/2020 to 12/31/2020) Permit # TXR040232

Information concerning DART’s Municipal Separate Storm Sewer System (MS4) status and actions is submitted to the Texas Commission on Environmental Quality (TCEQ) on form #20561, prior to March 31 each year. Future submissions are expected to be via the State of Texas Environmental Electronic Reporting System (STEERS) when the TCEQ makes this system available for MS4 reporting. The following is a concise summary of DART’s 2020 MS4 annual report.

Compliance with the MS4 General Permit:

DART submitted an updated Stormwater Management Program (SWMP) and Notice of Intent (NOI) to the TCEQ in July 2019 to comply with the recently updated general permit TXR040000. This MS4 permit applies to DART-owned rail corridors; the permit does not apply to corridors where DART trains operate on land owned by a city or other MS4 entity. DART has complied with the Texas MS4 permit requirements since its 2008 inception, the purpose of which is to protect water quality in the region. In July 2020, TCEQ requested two minor clarifications of DART’s SWMP; then completed its technical review of the updated SWMP in September 2020. TCEQ has informed DART that current COVID-19 restrictions may cause a delay with their process to provide DART instructions to fulfil the public notice requirement to publish the SWMP.

In 2013, DART participated with other MS4s to develop a regional Implementation Plan (I-plan) to address impaired water bodies subject to a Total Maximum Daily Load (TMDL) (these impaired water bodies are located in the North Texas region and are on or near the DART MS4). DART is active with the North Central Texas Council of Governments (NCTCOG) regional stormwater management coordinating council and a TMDL I-Plan subcommittee. While the I-plan did not identify any DART-specific bacteria sources, DART’s MS4 maintenance activities reduce bacteria discharges at or near the ROW. Another TMDL was adopted by TCEQ on January 16, 2019, for the north Texas watershed of Sycamore Creek (0806E); however, DART’s MS4 is not within this watershed.

A summary of DART’s SWMP compliance activities for 2020 are as follows:

1. The first section of the SWMP involves public education, outreach and public involvement.
 - 1.1 Public Education via a Regionally Developed Initiative (RDI): A message intended to promote sustainable practices, reduce pollution sources, and improve water quality for the North Texas region was developed by the NCTCOG. DART displays this message as a Public Service Announcement (PSA) on transit vehicles to reach a broad audience. DART’s goal is to run a PSA for one month each year. A PSA promoting Texas SmartScape© was broadcast for six months, from March through September 2020. This PSA was initially displayed on over 500 DART buses; however, the COVID-19 pandemic severely affected transit ridership and operation, so by July the active fleet had been reduced to approximately 300 buses.
 - 1.2 Environmental Compliance Manager (ECM) at Construction Sites: DART’s goal is to require an ECM on DART’s greater-than-one-acre transit construction projects permitted under the Texas Construction General Permit (CGP) TXR150000. In performing his/her duties, the ECM maintains compliance with the CGP and promotes environmental awareness to construction personnel to reduce pollution from construction activities. An ECM was assigned to two construction projects permitted under the CGP:

DART's Silver Line commuter rail project from Plano to DFW Airport, and construction of the upcoming Hidden Ridge light rail station in Irving. DART exceeded the goal by also requiring ECMs on some small projects (less-than-one-acre of disturbance) along the existing transit corridors that did not require permits under the CGP. Additionally, DART provided introductory stormwater awareness training for 414 construction workers on DART's transit construction projects.

- 1.3 Education of School Children: Education of the next generation regarding pollution prevention helps reduce future pollution sources. DART's goal is to provide 100 presentations to school children; however, only forty-four presentations were conducted in 2020. DART's Community Affairs/Education Outreach group did not meet the goal because COVID-19 pandemic restrictions halted classroom presentations in March 2020. Only thirty-one presentations were completed prior to the curtailment of classroom presentations. Some virtual presentations were conducted later in the year; however, the future for this program will be dependent on subsequent class schedules and formats being determined by local school district administrators.
 - 1.4 Public Meetings: Meetings provide the public with the opportunity to express their comments, opinions, and suggestions regarding the environmental aspects of the transit corridor system. DART's goal is to have at least two meetings each year. In 2020, DART held twenty-one transit board meetings, and twenty-two public meetings specifically about rail transit expansion projects. Denton County Transit Authority (DCTA) and Trinity Metro operate on some DART MS4 corridors; these agencies also held twelve and ten public meetings, respectively. In 2020, a total of sixty-five public meetings were held. After February 2020, most public meetings were conducted virtually via computer or phone interfaces due to COVID-19 virus restrictions.
 - 1.5 Public Involvement/Communication Alternatives: DART's goal is to investigate all notices from the public that may relate to water quality. Receiving communication from cities or citizens concerning environmental situations helps DART respond to potential pollutants. In 2020, sixteen notices of potential water quality events were received and addressed. These external communications supplemented DART's internal program to reduce pollution on DART property.
2. The second section of the SWMP involves Illicit Discharge Detection and Elimination (IDDE).
 - 2.1 Right-of-Way (ROW) Map: DART typically updates its Graphical Information System (GIS) storm sewer map after new transit corridor construction is completed. In 2020, the streams and rivers that intersect nineteen miles of DART-owned ROW between Parker Road in Plano, TX, and Melissa, TX, was added to the GIS map. This section of DART ROW is not currently planned for transit development; however, it is within an urbanized area and is within DART's MS4. Because this nineteen-mile portion of ROW was not scheduled to be added until 2023, it exceeds the SWMP goal. Trinity Metro operates the TEXRail transit system on a DART MS4 corridor; the TEXRail area map update is scheduled to be conducted by October 2021.
 - 2.2 Illicit Discharge Detection Elimination (IDDE): Discovering a condition or incident with the potential to pollute the ROW allows DART to respond, manage, or remove a pollutant source. DART's goal is to inspect transit ROW at least monthly. Approximately 180 miles of transit ROW were inspected on an approximate weekly basis under track inspection programs. Homeless encampments and illicit trash dumping on the rail ROW are common water quality problems found during these inspections. In 2020, eighty-six sites were discovered and removed from DART's light rail and commuter rail corridors.
 3. The third section of the SWMP involves control of construction site stormwater runoff.
 - 3.1 Environmental Compliance Manager (ECM) at Construction Sites: DART's experience has shown requiring a contractor to appoint a knowledgeable ECM improves compliance and implementation of

sediment control practices at transit construction sites. DART's goal is to have an ECM on all DART construction projects exceeding one-acre of disturbance. In 2020, ECMs were assigned to two transit construction projects; one from Plano to DFW Airport (Silver-Line) and a new light rail transit station (Hidden Ridge). DART exceeded the goal by requiring ECMs on eleven transit station platform expansion projects with soil disturbance of less-than-one-acre.

3.2 Erosion and Sedimentation Control via the Texas CGP: DART chose to utilize the established CGP to reduce discharges from DART's construction projects rather than utilizing the option to control construction discharges via this MS4 permit. DART's goal is to have construction projects of one or more acres adhere to the CGP and have a DART environmental representative attend coordination meeting or inspect the construction site every two months. In 2020, the Silver-Line and the Hidden Ridge Station projects were permitted under the CGP. DART inspected erosion controls located at the two project sites more than once a month with the project's ECM.

3.3 Miscellaneous Construction Access - (License agreements): DART utilizes a license agreement procedure to review requests for construction by others on DART property. This procedure allows DART to avoid or modify proposals that could introduce and/or increase pollution or erosion. DART issued 222 agreements for construction activities on DART property in 2020.

4. The fourth SWMP section involves transit design affecting storm water quality following construction:

4.1 Rail Transit Corridor Design Best Management Practices (BMPs): DART's transit design guidelines were developed to promote incorporation of environmentally friendly features during the planning stages of the transit system. The design guidelines are intended to reduce or avoid increases in potential pollutants from the ROW corridors after they have been developed for transit. The transit design BMPs were utilized during DART's design of the Silver-Line commuter rail project from Plano to DFW Airport and the Hidden Ridge light rail station in Irving, TX, that was under construction in 2020.

5. The fifth section of the SWMP involves pollution prevention and good housekeeping practices:

5.1 Potential Pollution Management: Responding to notices from cities, citizens, or potential pollutant sites found by transit workers on the ROW helps DART reduce pollution discharges from the DART MS4. In 2020, sixteen external notices from cities or citizens were received concerning debris, homeless encampments, and drainage obstructions. A total of eighty-six locations along DART ROW with pollution potential were cleaned, these included thirty-six homeless encampments and debris removals, ten vehicle accidents, and seventeen animal removals. Additionally, DART's ROW maintenance personnel reported 529 routine trash clean ups and 171 drainage cleaning actions.

5.2 Storm Sewer System Maintenance: ROW inspection and maintenance programs provide a means to locate and remove potential pollutants and identify needed drainage repairs. DART's yearly goal is to inspect transit ROW at least monthly and vehicle maintenance facilities at least quarterly. In 2020, DART's 180 miles of transit ROW were inspected approximately weekly. (NOTE: inspection & maintenance is conducted along ROW operated by DART, Trinity Railway Express (TRE), DCTA, and Trinity Metro.) Each of the four vehicle maintenance facilities (listed in MCM 5.5) was inspected between four and six times. In December 2020, DART performed erosion prevention repairs at a bridge near White Rock Creek, north of White Rock station.

5.3 Employee Training: Employee education increases awareness and the necessity of protecting water resources; knowledgeable workers can better implement work practices, resulting in reductions of potential pollutants to stormwater. In 2020, 144 transit operation employees received stormwater training; this number includes DART, as well as employees of contract operators for the TRE, Trinity Metro, and DCTA rail system workers.

- 5.4 Spill Response Facilities and Operations: Responding and taking quick action at spill incidents can remove or reduce pollutant impacts to water. DART utilizes TCEQ regulatory definitions of “reportable spills” to measure spills. In 2020, one reportable spill occurred near DART ROW: the spill involved a hit-and-run accident with a DART-owned truck on a city street near a transit station. An emergency response contractor was utilized to remediate the fuel spilled from the DART truck. Additionally, small, non-reportable spills are routinely addressed. For example, on March 26, 2020, during construction at a transit station, a non-reportable quantity of hydraulic oil was spilled and immediately cleaned up by the contractor before the oil could migrate to a storm drain.
- 5.5 Facilities and Operations: DART reduces the potential for pollutants to be released from maintenance operations by utilizing the pollution prevention measures, inspections, and training required by the Texas Multi-Sector [Industrial] General Permit (TXR050000) (Industrial Permit) at maintenance facilities. The following four maintenance facilities within DART’s MS4 are separately permitted under the Industrial Permit and adhere to the pollution prevention requirements for these sites: Central Rail Operation Facility – Permit # TXR05L796; Northwest Bus Services Facility – Permit # TXR05O249; Northwest Rail Operation Facility – Permit # TXR05AD29; and the TRE Equipment Maintenance Facility - Permit # TXR05Q216.

Stormwater Data Summary:

DART is a small, non-traditional MS4 limited to linear transportation corridors; it does not monitor or manage any water bodies. Water conveyance structures within and along the corridors receive a significant amount of water discharged from outside the DART MS4, which precludes effective monitoring that could be used to evaluate DART’s efforts; therefore, analytical water monitoring is not performed. After a new transit corridor is developed, DART schedules mapping of the ROW drainage features during dry weather to detect and identify potential illicit flows onto the ROW. DART also utilizes a routine track safety and maintenance inspection program to look for illicit discharges along active transit corridors.

DART’s ongoing maintenance of the MS4 removes potential pollutant sources from the ROW. Homeless encampments and illicit dumping are the most numerous items encountered that potentially could affect water quality. DART removes debris and homeless encampments from the ROW to reduce pollutants in stormwater runoff; however, encampments and dumping often reoccur later at the same locations after a site is cleaned up. In 2020, DART installed fencing at some locations to discourage the return of encampments and dumping.

Impaired Waterbodies:

1. Identify whether an impaired water within the permitted area was added to the latest EPA-approved 303(d) list or the Texas Integrated Report of Surface Water Quality for CWA Sections 305(b) and 303(d). List any newly identified impaired waters below by including the name of the water body and the cause of impairment.

DART’s SWMP lists waters potentially affected by DART MS4 ROW and those waters listed as impaired. Periodically and prior to preparation of the annual MS4 report, DART reviews TCEQ’s water quality impairment reports. The following water bodies within DART’s MS4 were added to the 2020 impairment list:

- Dry Branch Creek (0841-I) for bacteria (DART’s TRE ROW is at the headwaters of this creek). This is a category 5c impaired water, which TCEQ defines as “*Additional information will be collected before a management strategy is selected*”

The following waters were not carried forward from last year; therefore, removed from the impaired water list in 2020:

- Elm Fork Trinity River Below Lewisville Lake (0822) for sulfate (crosses rail ROW operated by DCTA, DART, and TRE)
- Muddy Creek (0820C) for copper (crosses freight rail ROW, east of DART's Silver Line project)

The following water was carried forward from last year onto the 2020 impaired water list:

- White Rock Creek Above White Rock Lake (0827A) for bacteria (crosses ROW of DART's existing Red/Orange Line and the future Silver Line project)

DART has existing BMPs implemented to address bacteria at the DART ROW as discussed in sections 2 through 7, below.

2. If applicable, explain below any activities taken to address the discharge to impaired waterbodies, including any sampling results and a summary of the small MS4's BMPs used to address the pollutant of concern.

A Total Maximum Daily Load (TMDL) for bacteria is in effect for the following North Texas water bodies: Upper Trinity River (0805), Cottonwood Branch & Grapevine Creek (0822A and 0822B) and the Lower West Fork Trinity River (0841, 0841B, 0841C, 0841E, 0841G, 0841H, 0841J, 0841L, 0841M, 0841R, 0841T, and 0841U). DART's MS4 ROW intersects the following water bodies with a TMDL for bacteria:

- Lower West Fork Trinity River (ROW crosses tributary segments 0841H, 0841B, and 0841U)
- Upper Trinity River – 0805 (ROW crossing at segment 0805_04)
- Grapevine Creek (ROW crossing at 0822B)

DART, as a permitted stormwater discharger, participated with other MS4s and the NCTCOG to establish a regional I-Plan to address potential bacterial sources. The regional I-Plan was approved by TCEQ in December 2013. DART's potential for bacteria discharge was considered inconsequential due to the lack of significant bacteria sources on the ROW and the relatively small drainage area from DART ROW. DART's SWMP includes some actions that address bacteria sources; however, the I-Plan did not recommend any BMPs for DART's transit system. Specifically, DART's ROW inspection program has identified potential bacteria discharges from properties adjacent to the DART ROW as well as animal sources at the ROW.

In January 2019, TCEQ adopted a TMDL for bacteria at Sycamore Creek (0806E), which may affect the regional I-Plan; however, Sycamore Creek is not within DART's MS4 area.

The Upper Trinity River (0805) and the West Fork Trinity River (0806) are listed as impaired with dioxin and polychlorinated biphenyl's (PCBs) because these chemicals were found in fish tissue from these rivers. Some bridges on DART MS4 ROW directly cross these impaired waters. This impairment is caused by legacy pollutants from sources dating back decades and outside DART's ROW. DART took early actions during the development of the transit system (prior to the MS4 permit) to implement procedures to properly handle and dispose of dioxin and PCB materials to avoid releasing these pollutants into the environment. These precautionary actions remove potential sources from properties and structures being renovated or demolished, thereby

preventing DART from contributing to the existing pollution. In 2018, DART disposed of potential PCB-containing florescent lamp ballasts from the demolition or renovation of old buildings. No legacy pollutant materials were encountered in 2020.

3. Describe the implementation of targeted controls if the small MS4 discharges to an impaired water body with an approved TMDL.

DART's MS4 ROW and operations are not considered a significant contributor of bacteria to the watersheds under the TCEQ-approved I-Plan; therefore, DART does not have a specific control for bacteria. DART's SWMP IDDE program has identified potential bacteria sources such as grease-traps outside of DART's MS4 and animal sources within the MS4. An IDDE is listed as an appropriate BMP for bacteria within Part II Section D.4(a)(5) of TXR040000. DART's efforts to reduce bacteria discharges are described in sections 6 & 7 below.

4. Report the benchmark identified by the MS4 and assessment activities:

The bacteria benchmark number for *E. coli* bacteria in water for human contact (recreational use) is 126 (bacteria count) per 100ml of water. There were no sources or actions identified by the regional I-Plan that apply to the DART MS4.

5. Provide an analysis of how the selected BMPs will be effective in contributing to achieving the benchmark:

There were no BMPs identified by the regional I-Plan that apply to the DART MS4. While DART does not have a specific BMP to improve bacteria-impaired water, DART's management practices are effective in preventing potential bacteria discharges as discussed within section 6, below.

6. If applicable, report on focused BMPs to address impairment for bacteria:

A focused BMP for bacteria is not applicable to the DART MS4 since the ROW is not a significant bacteria source. Notwithstanding, DART's BMPs have been effective in identifying and addressing potential bacterial sources near the ROW.

Potential bacteria pollution sources are unusual within a rail ROW; however, DART's IDDE program discovered discharges of grease trap material on property adjacent to DART ROW in 2010, 2011, and 2015. These discharges were reported to the adjacent MS4 with jurisdiction.

DART's ROW management program includes the removal of homeless encampments, trash, and debris from the transit corridors. Potential bacteria sources removed include dead animals found on the ROW. DART discovered and removed seventeen dead animals from its ROW in 2020.

DART operates a small septic system on transit property within the watershed of Fivemile Creek (0805D), which is not an impaired water. This septic system is monitored and maintained by DART. During 2020, no improper discharges occurred from this septic system.

7. Assess the progress to determine BMP's effectiveness in achieving the benchmark:

The ROW is not a significant bacteria source, so DART's efforts are relatively minor in relation to the watershed bacteria impairment. The regional I-Plan did not identify any specific BMPs for bacteria

applicable to the DART MS4; however, DART recently began to track dead animal removals from the ROW as a minor bacteria source. Additionally, DART's IDDE detection of discharges with bacteria potential primarily occurred outside of the DART MS4 in 2010, 2011 & 2015 as noted above at section #6; this may indicate progress since the discharges have not re-occurred.

Stormwater Activities, SWMP Modifications & Additional Information:

- In April 2021, this summary of the MS4 annual report will be posted on DART's website.
- DART reviews the SWMP implementation procedures each year; no changes are being proposed to the SWMP for 2020. DART has cooperative efforts with school systems outside of DART's MS4 to provide transit system presentations to children, (MCM 1.3). These presentations were curtailed during the COVID-19 pandemic because of shutdowns in classroom teaching. Reestablishing this program will be contingent on conditions set by the school systems as COVID-19 restrictions are modified.
- In 2020, an approximate 0.4-acre land parcel was purchased by DART. In 2021, many land parcels are expected to be acquired to facilitate construction of the future Silver Line transit corridor being developed along a railroad ROW owned by DART.
- TCEQ completed the technical review of DART's SWMP in September 2020 and indicated its instructions for DART to fulfill the public notification and review process will be forthcoming in 2021.
- In July 2020, TCEQ requested an amendment of the SWMP with a clarification of DART's protection of endangered species and stormwater Waste Load Allocations (WLAs) for impaired water bodies. On September 17, 2020, DART sent TCEQ an addendum to the SWMP to clarify compliance with endangered species requirements and to clarify discharge allocation limits to impaired waters from the DART MS4.
- In 2021, Trinity Metro has plans to repair or replace a 60-inch drainage culvert near Ira E. Woods Ave. adjacent to a Walmart in Grapevine.

Is the permittee relying on another entity to satisfy any permit obligations? -

Yes. As a non-traditional MS4, DART's IDDE program partially relies on cooperation from adjacent MS4 authorities to provide enforcement to eliminate illicit discharges. The physical nature of DART's narrow transit ROW creates a situation where an illicit discharge onto DART property may occur from adjacent property under the jurisdiction of another MS4. If such a discharge is encountered by a non-traditional MS4, notification to another entity with jurisdiction is allowed under Part III, section B, (2)(a)(2) of general permit TXR040000. In 2020, DART discovered an illicit discharge onto DART ROW from a nearby construction contractor. DART notified the adjacent city with jurisdiction over the site, (Plano, TX); the city issued a notice of violation and halted the illicit discharge.

As a non-traditional MS4 without municipal ordinance authority, DART utilizes contracts and agreements to facilitate compliance with environmental protection programs. DCTA and Trinity Metro are transit agencies operating rail transit systems on DART MS4 ROW via transportation access agreements. These agreements include provisions requiring compliance with environmental regulations.

Construction Activities:

DART does not utilize the option to conduct construction under the MS4 permit. DART requires construction sites greater than one acre within the its MS4 to comply with the Texas CGP TXR150000, including implementation of pollution prevention and erosion control during construction activities. In 2020, DART had two transit construction projects permitted under the CGP.