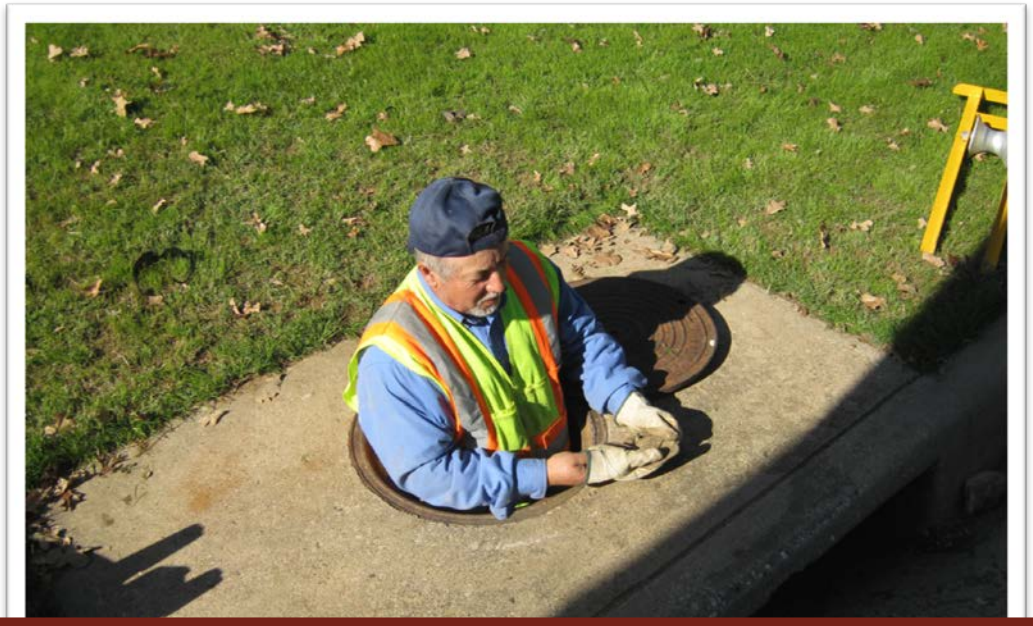
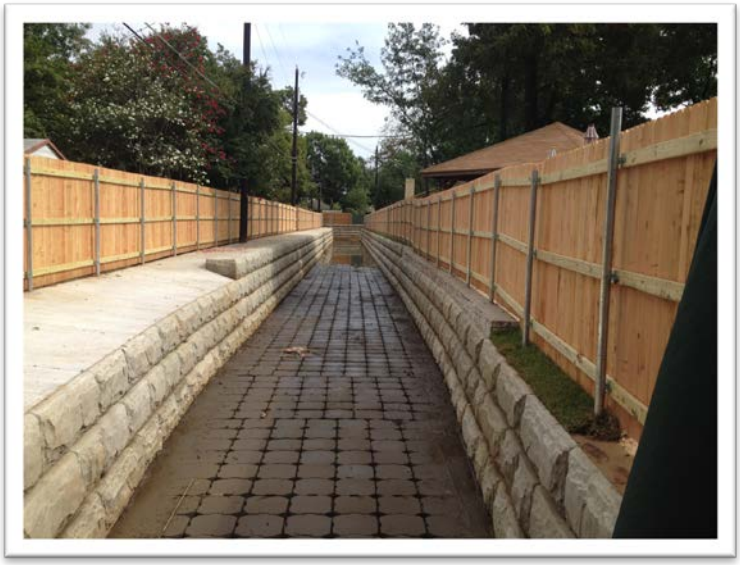


TPDES Stormwater Annual Report | October 2013 – September 2014



Prepared by:

The City of Arlington, Texas

TPDES Permit #: WQ0004635000

Co-Permittees
Texas Department of Transportation, Fort Worth District
University of Texas – Arlington

March 17, 2015

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Certification Statement

TPDES Permit No. WQ0004635000
Annual Report for October 1, 2013 – September 30, 2014

I certify under penalty of law that this document and all attachments (applying to the City of Arlington) were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Keith Melton, P.E.
Director of Public Works & Transporation
City of Arlington

3/17/15
Date

J. William Brown, P.E.
Stormwater Executive Manager
City of Arlington

3/17/2015
Date

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I. Status of Implementing the Stormwater Management Program (SWMP)

TPDES MS4 permit (WQ0004635000) was reissued to the City of Arlington and its co-permittees, the Texas Department of Transportation, Fort Worth District (TXDOT) and the University of Texas – Arlington (UTA), on April 26, 2012. This annual report provides a synopsis of implementation activies for the **third** reporting period beginning **October 1, 2013** and ending **September 30, 2014**. Each co-permittee reports implementation and/or continuation of activities as required by the TPDES MS4 permit and as outlined in their respective Stormwater Management Programs (SWMPs).

The body of this report summarizes the City of Arlington's activities according to the eight sections outlined in its MS4 permit:

MCM 1: MS4 Maintenance Activities

MCM 2: Post-Construction Stormwater Control Measures

MCM 3: Illicit Discharge Detection & Elimination (IDDE)

MCM 4: Pollution Prevention & Good Housekeeping for Municipal Operations

MCM 5: Industrial and High Risk Stormwater Runoff

MCM 6: Construction Site Stormwater Runoff

MCM 7: Public Education & Outreach / Public Involvement and Participation

MCM 8: Monitoring, Evaluation, and Reporting

The annual reports prepared by co-permittees TXDOT and UTA are located in Appendices A and B, respectively. Co-permittees continue to cooperate and mutual assistance has been readily afforded.

MCM 1: MS4 Maintenance Activities

I. Structural Controls

The Stormwater Maintenance Crew maintains the stormwater conveyance infrastructure, i.e. the stormwater conveyance infrastructure that is within the city's rights-of-way including, major bridges, culverts, inlets and barrow ditches. The crew performs inspections to identify maintenance and repair needs. The crew accomplished the following during the reporting period:

Activity	Man Hours	Cubic Yards of Material
Channel Inspections	822.50	76.00
Clean / Grade Barrow Ditch	232.00	81.00
Clean Concrete Channel	1,390.25	1,126.51
Clean Culvert / Bridge	1,749.50	1,692.64
Clean Earthen Channel	1,661.00	1,625.20
Clean Flume	641.50	311.00
Clean Inlet	483.50	25.45
Drainage Pipe Repair	142.00	8.11
GPS Inventory	2,480.25	N/A
Illegal Dumping Response	28.50	13.10
New Drainage Construction	137.50	24.40
Pipe Inspection	1,460.75	N/A
Repair Drainage Structure	485.00	29.96
Sweeping (In-house)	403.00	217.50
Trim Trees, Limbs, Brush	159.25	50.50
Totals	**12,276.50**	**5,281.38**

II. Floatables

a. Source Controls and Monitoring

The Stormwater Maintenance Crew performs maintenance activities that reduce the volume of sediment and floatable materials that have the potential to reach the MS4 and receiving waters. The Stormwater Management Division also contracts street sweeping activities for the removal of sediment and floatables from the MS4. The following tables summarize their contribution to the removal of sediment and floatables.

Activity	Man Hours	Cubic Yards of Material
Removal of Illegally Dumped Material	28.50	13.10
Street Sweeping (in-house)	403.0	217.50
Main Street Inlet Inserts (organic matter & trash)	197.75	10.8
Totals	**629.25**	**241.40**

Contracted Street Sweeping Activities:

	Residential Areas	Intersections	Airport	Entertainment District
Each	N/A	**405**	N/A	N/A
Hours	N/A	N/A	N/A	N/A
Hours	N/A	N/A	**34.6**	N/A
Curb Miles	**1580**	N/A	N/A	**837.3**
Cycles	N/A	N/A	N/A	**44**
Cubic Yards of Material	**947.48**	N/A	**27.76**	N/A
Loads	**308.98**	N/A	N/A	N/A

b. Litter Pickup

The litter pick up program reduces the discharge of floatables into the MS4 by engaging citizens and businesses in litter collection activities throughout the year. The program consists of litter clean up citizen events as well as contracted litter pick up services. Below is a report of litter pickup activities:

Waste Contractor Litter Control Monthly Totals		
Month	Days	Weight (lbs)
October	23	46,060
November	21	33,480
December	21	55,220
January	23	47,200
February	20	28,320
March	21	35,622
April	22	46,680
May	22	59,800
June	21	43,020
July	23	42,980
August	21	42,057
September	21	35,300
Totals	**259**	**515,739**

Mobile Litter Unit (Citizen Volunteers)			
Event	# of Attendees	Types of Litter	Weight (lbs) or # of bags collected
Pantego Christian Academy	123	Floatables / paper	5,250 lbs
See Litter, Pick it Up	168	Floatables / paper	6,000 lbs
River Legacy Clean Up	72	Various	410 lbs
Totals	**363**		**11,660 lbs**

c. Automated Curbside Recycling and Leaf Recycling Program

The City of Arlington's automated cart recycling program replaced the previous open bin recycling program in June 2013. The new recycling carts are equipped with a lid to reduce the incidence of wind-blown litter that could potentially pollute streets and water drainage systems. With the implementation of the cart system, approximately **45,726,000** pounds of recyclable material has been collected – with **4,000** fewer tons of trash sent to the landfill; and increase of **13.5%** in tons of recycling collected.[1]

The City of Arlington Solid Waste Division also offers leaf recycling drop off locations throughout the city from November through February of each year. Arlington residents may bring bagged leaves to one of five collection sites for leaf recycling.

Recycling activities for this reporting period are listed below:

Activity	Collected Amount (tons)
Automated Curbside Recycling Program	4398.16
Leaf (and Brush) Recycling Program	2,026
Totals	**6,424.16**

III. Roadways

The City of Arlington operates and maintains public streets and roads in a manner to minimize the discharge of pollutants to the MS4, including those pollutants related to deicing and/or sanding activities. The program includes street sweeping activities (previously described), spill response (hazardous and non-hazardous materials to roads and streets, and deicing and/or sanding activities.

The City spill response program is explained in more detailed under **MCM 3: Illicit Discharge Detection and Elimination**, *Section VIII: Spill Prevention and Response*.

In times of inclement weather, the city may deploy sanding and/or deicing crews. The city experienced approximately **six (6)** events that necessitated a severe weather response. Material usage is outlined below.

Material	Quantity
Deicing Sand	737 yd^3
Meltdown 20	8,287 lbs
Salt	8,337 lbs
Sand	8,350 yd^3

Street sweeping recovers deicing material after storm events. The recovered material contains an unknown amount of sediment and debris that were present on streets before deicing. Actual recovery rates of the deicing material vary depending on weather conditions.

[1] Data is for the period July 2013 through June 2014.

MCM 2: Post-Construction Stormwater Control Measures

I. Areas of New Development and Significant Redevelopment

The City of The City of Arlington's Unified Development Code (UDC), formerly the Subdivisions Ordinance, acts as the regulatory mechanism for the enforcement of post-structural stormwater controls. The UDC specifies in Article 6, Section 6.1, H, that one of the purposes of the regulation is to: "minimize the pollution of streams and ponds; to provide for the adequacy of drainage facilities; to control stormwater runoff; to minimize erosion and siltation problems, to safeguard the water table; to encourage the wise use and management of natural resources; and enhance the stability and beauty of the community and the value of the land."

The UDC also provides that each subdivision (development) shall provide "adequate public facilities" that include the drainage necessary to serve the proposed development (see UDC, Article 6, Section 6.2.1). Drainage and stormwater facilities are adequate when: (1) stormwater runoff attributable to new development or redevelopment complies with the minimum standards of the UDC and the Design Criterial Manual (DCM); and (2) to the maximum extent practicable, permanent BMPs, as described in the DCM, maintain the predevelopment characteristics of any natural creek that ultimately receives stormwater runoff from the development. That is, "designs for development shall manage stormwater in a manner that protects and/or improves stormwater quality by addressing the development's potential to cause erosion, pollution, siltation, and sedimentation in the MS4 and natural creeks. The goal is to maintain after development, to the maximum extent practicable, the predevelopment characteristics of stormwater runoff from the development. It is the developer's responsibility to ensure that designs for the development meet the stormwater management requirements of adopted City Codes" (see UDC, Article 6, Section 6.5.1, D.)

The Design Criteria Manual was adopted by City Council Ordinance in June 2003 and went into effect on August 12, 2003. Various stormwater revisions made between 2003 and 2010 were described in past Annual Reports. Stormwater related revisions to the Design Criteria Manual including the Public Improvements submittal process, stormwater standards, permit process and terminology, definitions and regulations for public improvements and street appurtenances were adopted in January, April and June of 2010. The City continues to apply the Design Criteria Manual requirements to new developments.

NOTE: The City has selected a consultant to update the City's Design Criteria Manual and create a Unified Stormwater Ordinance. Drafts of these documents have been created and are currently under review by city staff and an external advisory committee. Consideration of the documents by the City Council is anticipated by October 2015.

II. Flood Control Projects

The City completed the following drainage projects during the reporting period:

- Green Meadows Drainage Improvements – drainage improvements to alleviate residential flooding

- Willow Bend/Thousand Oaks Drainage Improvements – drainage improvements to alleviate residential flooding

- Woodside, Shorewood and Autumn Glen Drainage Improvements – drainage improvements to alleviate residential flooding

- Flood Forecasting – installation of stream gauges to provide information for public use and flood study model calibration

- FEMA Severe Repetitive Loss Grant Buyouts – 3 of 4 homes categorized as FEMA Severe Repetitive Losses have been purchased and demolished as part of a FEMA grant. The 4th home is pending homeowner acceptance of the offer.

- Arbrook-Melear Drainage Improvements – improvements in the existing natural channel and culverts to alleviate flooding in the immediate vicinity

The following projects were under construction during the reporting period:

- McKinney Street Drainage Project – drainage improvements to alleviate residential flooding

- Royce Drive and Chimney Court Drainage Improvements – drainage improvements to alleviate residential flooding and concrete channel reconstruction

The following projects were under design during the reporting period:

- Laguna Vista Drainage Improvements – drainage improvements to alleviate residential flooding

- Matthews Court and Susan Drive Drainage Improvements – drainage improvements to alleviate residential flooding and concrete culvert expansion to alleviate flooding based on the Cottonwood Creek Watershed Study.

- Little Creek Ct. Drainage Improvements – drainage improvements to alleviate residential flooding

- Westview Terrace Sanitary Sewer Renewal and Channel Stabilization – partnership with Water Utilities Department to protect an exposed sanitary sewer line and repair channel erosion.

- Allen Avenue and Green Oaks Blvd. Bridge Repair – bridge repair due to slipped bearing pads and undermining of embankment. These repairs were identified as part of TXDOT's bridge inspection program.

- Village Creek Erosion Repair – repair of significant erosion in the creek through a city golf course that is threatening existing cart bridges and increasing sedimentation in the creek. Partnership with the Parks Department

- Meadow Park Estates Drainage Improvements - drainage improvements to alleviate residential flooding

- Miscellaneous Channel Improvements – Three channels are failing structurally beyond the abilities of our drainage crew. The existing concrete channels will be removed and replaced with modular block channels that will be sized to meet current hydraulic standards.

- Orion Park Drainage Improvements – This is small project that will be constructed with the Village Creek Erosion Repair due to its proximity. It is an erosion repair project.

The following watershed studies were underway during this reporting period:

- Rush Creek Watershed – The model is being modified to make it more user-friendly. Once the modifications are complete, it will be packaged for FEMA submittal.

- Johnson Creek Watershed –Hydraulic analysis is complete and under review. Geomorphology tasks are underway.

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

I. Illicit and Allowable Discharges

The City of Arlington has listed all allowed and prohibited discharges in its Stormwater Pollution Control Ordinance (SWPCO). The SWPCO was formally adopted by City Council on December, 17, 1996, with the most recent amendments in October 2014. The code describes stormwater violations and the associated enforcement actions. Currently, efforts are underway to create a Unified Stormwater Ordinance that outlines prohibited and allowable discharges as well as development regulations.

II. Detection and Elimination of Illicit Discharges

During the permit year, the following IDDE activities were performed:

- **13** Dry Weather Field Screens
- **247** Monthly Routine Screenings
- **264** Investigations, inspections, and/or spill responses (includes citizen complaints, SSOs, hazardous response; and industrial inspections)
- **62** Corrective warnings issued
- **1** Criminal citation issued

COA policy is to assign the responsible party a specified time frame to correct the illicit discharge. The time frame for both residents and industrial facilities is no more than 30 days and is determined at the discretion of the Environmental Compliance Officer. Justification is required for any time extensions.

> *Status of complying with new requirements:* The SWMP includes a list of techniques used for detecting illicit discharges. These techniques include dry weather sampling, monthly routine sampling, complaint investigations, and inspections. Enforcement actions associated with these activities are also outlined in the SWMP.

III. Overflows and Infiltration

The City of Arlington Water Utilities Department (WUD) responds to sanitary sewer overflows and uses a GIS system to track and manage data on stoppages that caused the overflows. Quarterly maps are generated with location, cause, frequency, and type of stoppage. This system is used to identify problems that contribute to sanitary sewer overflows and to issue work orders for correcting the problems.

When a sanitary sewer overflow occurs, the WUD crew checks the public sewer line to determine if the problem is in the public system or in the private sewer service. If the overflow is caused by a problem in a private service, the WUD crew notifies an Environmental Compliance Officer (ECO) in the Stormwater Management Division. The ECO initiates enforcement action that requires the responsible party to stop the overflow and remove any sewage that entered the MS4. If the overflow is due to a problem in the public sewer, the WUD crew corrects the problem, removes any sewage that entered the MS4, and reports the overflow to the city's Stormwater Management Division, TCEQ or EPA, as appropriate.

The following table presents the efforts expended during this permit year for maintenance and repairs to prevent sanitary sewer overflows:

Activity	# of Work Orders	Linear Footage
Manhole & Cleanout Investigation	43	N/A
Sewer Investigation	1243	433,835
Televised	724	56,876
Unstop Overflow	93	30,941
Manhole & Cleanout Repair	44	N/A
Sewer Backup (residence)	19	8,108
Unstop Sewer	81	28,803
Totals	**2247**	**588,563**

There were a total number of **95** (reportable quantity) Sanitary Sewer Overflows during the permit year.

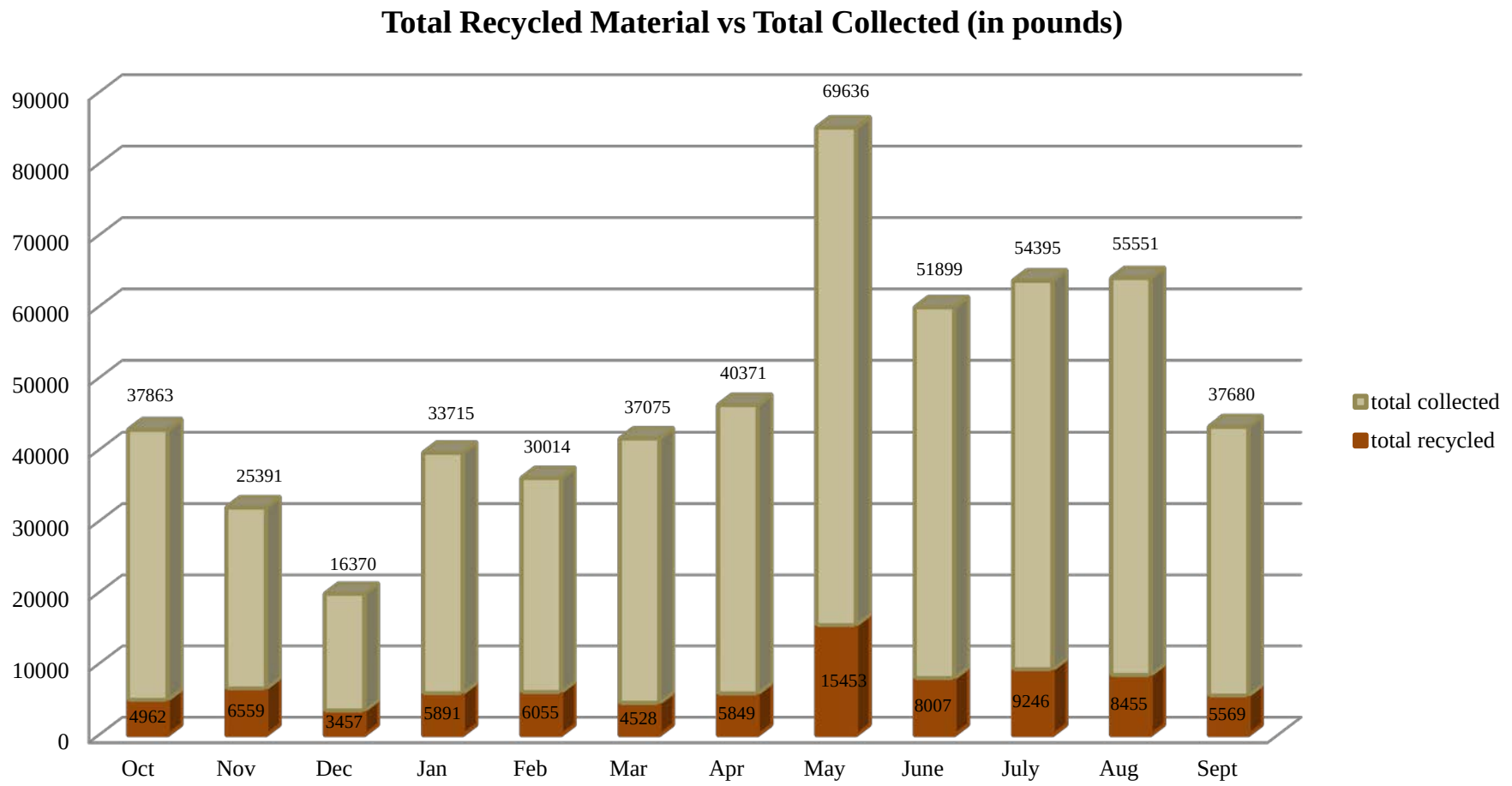
IV. Household Hazardous Waste (HHW) and Used Motor Vehicle Fluids

The City of Arlington continued its participating with the Environmental Collection Center (ECC) operated by the City of Fort Worth, Texas. Under an annual contract, Arlington citizens may take their HHW to the ECC free of charge. A Mobile Collection Unit (MCU) is scheduled once per month (except December) in various sections of the city for satellite collection of HHW.

HHW Arlington Residents (including mobile events) in pounds													
	2013			2014									
Type of Waste	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	**Totals**
Antifreeze	607	518	97	389	275	348	455	1,236	520	750	1055	370	6,620
Batteries (Lead)	600	1,690	250	300	2,400	260	370	4,940	2,810	1,920	1020	370	16,930
Motor Oil	2,367	3,055	1,657	2,671	1,799	1,926	3,161	6,316	2,839	4,107	4045	3,868	37,811
Oil Filters	167	102	16	63	48	35	79	247	71	81	153	68	1,130
Pesticides	2,138	1,450	502	2,238	1,968	2,356	2,884	4,179	2,861	2,793	2243	1,380	26,992
Paint Products	26,502	14,637	10,712	20,970	17,773	25,348	26,176	41,354	35,424	35,639	38,700	24,286	317,521
Aerosol	878	370	363	889	647	778	1,127	1,363	1,434	1,391	1,469	1,338	12,047
Solvents/Thinners	1,015	562	312	671	1,028	1,163	692	1,248	844	842	1,687	1,539	11,603
Household Cleaners	1,009	773	437	1,322	1,008	1,390	1,371	2,371	1,369	1,674	980	819	14,523
Flammables	760	814	401	1,372	1,236	1,110	1,574	2,418	1,351	2,037	1,342	2,397	16,812
Household Batteries	363	379	207	797	423	549	411	733	480	947	560	378	6,227
Pharmaceuticals	87	25	33	0	0	0	0	0	5	0	0	0	150
Cooking Oil	340	410	1,050	1,090	735	758	810	971	692	1,055	1,110	185	9,206
Light Bulbs	518	405	180	581	375	652	563	1,010	595	386	512	330	6,107
Corrosives	231	115	152	356	298	382	677	947	441	521	410	193	4,723
Miscellaneous	281	86	1	6	1	20	21	303	163	252	265	159	1,558
Total Collected	37,863	25,391	16,370	33,715	30,014	37,075	40,371	69,636	51,899	54,395	55,551	37,680	**489,960**
	Q1 Total			**Q2 Total**			**Q3 Total**			**Q4 Total**			
	79,624			**100,804**			**161,906**			**147,626**			

Some of the material collected at the ECC and mobile events is recycled. An accounting of the recycled material is outlined below.

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Totals
Total recycled	4,962	6,559	3,457	5,891	6,055	4,528	5,849	15,453	8,007	9,246	8,455	5,569	**84,031**
Total collected	37,863	25,391	16,370	33,715	30,014	37,075	40,371	69,636	51,899	54,395	55,551	37,680	**489,960**



V. MS4 Screening and Illicit Discharge Inspections

The City of Arlington has implemented a Dry Weather Screening and Monthly Routine Screening program to locate portions of the MS4 with suspected illicit discharges and improper disposals. Results of screening efforts during this permit term as well as a more complete description of the program may be found in **MCM 8, Monitoring, Evaluation, and Reporting**. The entire MS4, but not necessarily each individual outfall, is screened at least one during the five year permit term.

VI. NPDES and TPDES Permittee List

The City of Arlington maintains an industrial and construction database containing a list of operators and construction sites that are located within the Arlington city limits. This database contains the name, location, and permit number (when applicable) that authorizes stormwater discharges from construction activities.

VII. MS4 Map

The City of Arlington presently operates a system with approximately **1,135** storm sewer outfalls, **78.77** miles of storm sewer pipe, and about **5,945** inlets. In the previous permit term, the City implemented an asset identification and inventory program to track all MS4 assets. Unique identifiers are assigned to allow for efficient tracking of system conditions, inspections, and maintenance. The system is GIS based and integrates system inventory data into a system map. Outfall verifications, inlet and manhole locations, and storm sewer pipe identification is currently ongoing.

VIII. Spill Prevention and Response

The Hazardous Materials Response Team (HMRT) of the City's Fire Department and Environmental Compliance Officers (ECOs) provide spill response for hazardous material spills. The HMRT provides initial response and containment, while ECOs ensure removal of the spilled material in a manner that protects water quality. If the spill is minor, the HMRT will respond and perform the necessary removal actions themselves. There were no changes to the hazardous material spill response procedures during this reporting period.

During this reporting period, the HMRT expended approximately **51** staff hours responding to **11** major HAZMAT incidents and **66** minor incidents. No funds were reclaimed through the Cost Recovery Program (back charging the responsible parties for cleanup).

In addition to supporting the HMRT, ECOs respond to small spills in the MS4 when the responsible party is unknown or unable to accomplish the cleanup. Absorbents, booms, and pads are used for removing used oil and other petroleum products. The waste is collected and stored in drums for classification and disposal. HAZMAT Contractor services are used for sampling and disposal of these wastes. Additionally, the HAZMAT contractor is contacted for cleanup services when the size or type of spill exceeds the ECOs capability. Total costs for HAZMAT contract services for the reporting year were approximately: **$15,566.50.**

Wrecker services operating within the City are required by ordinance to absorb and remove all spilled fluids of 25 gallons or less and to store and dispose of these fluids in accordance with applicable state and

federal regulations. For larger spills and accidents where the responsible parties are unable to call a wrecker service, the City's emergency response crew contains the fluids with absorbent and calls a contract wrecker service for cleanup and removal of the absorbent. The contract wrecker service delivers the used absorbent to the City for classification and disposal. Absorbent with automotive fluids from the wrecker service is collected and held in a covered roll-off container. When sufficient material is accumulated, the material is characterized then shipped for disposal. During the reporting period, total costs for the rental, sampling, and/or disposal of accumulated wastes from automobile accidents was **$1800.00**.

MCM 4: Pollution Prevention / Good Housekeeping for Municipal Operations

I. Pollution Prevention / Good Housekeeping Program

The City of Arlington has been under continuous MS4 coverage since 1998, therefore some of the components of this MCM such as reduction of pollutants from pesticide, herbicide, and fertilizer use, and the maintenance of structural controls, and waste handling procedures were previously established prior to this new program element. For the remaining new requirements, new programs have been developed with the goal of preventing and /or reducing pollutant runoff and existing program have been or are being enhanced to ensure compliance with the new requirements.

II. Structural Control Maintenance

Structural Control Maintenance is addressed in MCM 1 of this report (**MS4 Maintenance Activities**: *Section I, Structural Controls*.

III. Waste Handling

The City maintains a contract for recycling and proper disposal of used oil and other fluids collected as a result of equipment maintenance and fleet activities. Contracts are also held with waste disposal and/or recycling contractors for the collection and proper disposal of wastes including but not limited to hazardous, non-hazardous, special, and solid wastes; a variety of lights, lamps, ballasts including high pressure sodium HID lamps, incandescent bulbs, fluorescent lamps and tubes, multi vapor lamps, metal halide HID lamps, and electronic light ballasts that do not contain PCBs. Contracts are also held to properly dispose of e-wastes, HVAC refrigerants, and biohazardous materials.

HVAC refrigerants and non-functioning lights are stored by the Public Works and Transportation Department. Refrigerants are stored in DOT approved cylinders and lights are piled until contractors and recyclers are called to remove the materials. None of these materials are exposed to stormwater. Removal of these wastes typically occurs on a quarterly schedule.

Additionally, the City maintains a hazardous materials dumpster (housed at the Public Works South Field Operations location) as a collection point for hazardous materials spills resulting from automobile accidents or other incidents requiring clean-up of liquids such as motor oil, antifreeze, transmission fluid, hydraulic oil, gasoline, or diesel fuel. The City's contracted wrecker service notifies the Stormwater Utility Crew when they are ready to deliver a new load to the dumpster. The bagged and tagged material is loaded into the dumpster, and type and quantity are logged on a paper form.

IV. Pesticide, Herbicide, and Fertilizer Application

<u>Municipal Uses Management Program</u>

The Parks and Recreation Department applies the majority of the fertilizers, pesticides, and herbicides on city-owned property. The department maintains a staff of licensed applicators to treat parkland and other City grounds as needed, including weed control in rights-of-way and medians. These applicators ensure full compliance with federal and state regulations when applying chemicals to public lands. There have been no changes to the program during this reporting period.

The City of Arlington continues to follow a "least toxic alternative" approach to pesticide management through the use of Integrated Pest Management (IPM) practices. The IPM philosophy uses a coordinated strategy to identify when and where pest suppression treatment is needed, and what strategy and mix of measures should be used that are effective, but also low in cost and environmentally sound. IPM measures include structural, cultural, biological and chemical control in combinations which offer efficient and safe means of keeping pests at tolerable levels.

The following departments have limited uses of pesticides, herbicides and fertilizers for targeted needs such as controlling vegetation growing in pavement joints at the airport and treating for mosquitoes: Public Works and Transportation, Neighborhood Services, Fire, Water Utilities, and Facility Services. Applications by these departments are accomplished through a combination of their own staff, Parks and Recreation Department's staff, and contractors. All Federal and State regulations are followed and licensed applicators are used as required.

Pesticide Applicators Program

There are four state agencies which issue certificates and licenses for pest control applicators as mandated by the Texas Pesticide Law. Applicators for restricted-use and state-limited-use pesticides for agricultural related categories are licensed by the Texas Department of Agriculture (TDA). Under Authority of article 135b-6 V.T.C.S., the Structural Pest Control Board (SPCB) tests and licenses businesses, commercial and non-commercial applicators including most municipal applicators. All applicators are required to be licensed by the SPCB under its jurisdiction regardless of the pesticides classification. The Texas Department of Health (TDH) certifies municipal applicators for health related vector control. Certification and re-certification are provided by the Texas Agricultural Extension Service (TAEX) by means of continuing education for the TDA and SPCB, which are the primary state agencies responsible for pesticide regulation in Texas. Current U. S. Environmental Protection Agency (EPA) regulations include provisions for the control of the use of pesticides through the Federal, Insecticide, Fungicide and Rodenticide Act (FIFRA). This program outlines the minimum requirements regarding the registration, labeling, and uses of pesticides. Restricted-use pesticides warrant special labeling because they present a potential of harm to human health and the environment.

Categories in which examinations are to be given for licenses are listed as follows: Termite Control, Pest Control, Lawn and Ornamental, Commodity Fumigation, Weed Control, Wood Preservation.

The Parks and Recreation Department has several applicators that are licensed under the SPCB under the Lawn and Ornamental, and Weed Control categories. The department also has applicators licensed under TDA for Ornamental and Turf control, Plant Pest Control, Greenhouse Pest Control, Weed Control, Right-of-Way Pest Control, Aquatic Plant Pest Control and Aquatic Animal Pest Control. The City of Arlington also operates four municipal golf courses under the Programs division of the Parks and Recreation Department. The application of pesticides and herbicides on the golf courses are conducted by licensed applicators. One of the golf courses, Tierra Verde, only utilizes organic fertilizers and herbicides as part of its ongoing commitment to sustainable environmental practices. The City financially supports the re-certification requirements of its licensed applicators.

There are currently:

58 TDA applicators – plant, pest, and weed category
2 SPCB applicators – lawn, ornamental, and weed category

Along with the golf courses, Parks manages seventy-seven sports fields. Best management practices and natural resource protection measures have been integrated into the daily operations throughout the park system. These practices and measures have not changed from prior years.

All of Parks' playing fields and golf courses are subject to turf management, including weed and pest control and fertilization. The turf management practices are designed to minimize operational effects on the environment. Golf course management is the same as was submitted in the prior years' reports. Tierra Verde Golf Club, a certified Audubon International Signature Sanctuary, continues to be the City's leading facility for integrating environmental standards into the turf management program. Experience gained at this facility is used to develop environmentally friendly practices for other park facilities.

The Fire Department manages all fire station sites. Station personnel apply fertilizers and insecticides for fire ant control and lawn maintenance.

The Neighborhood Services Department does not spray for mosquito control. Instead, mosquito control is accomplished through public education, surveillance, and controlling the breeding of mosquitoes on public property through larvicide with B.T.I. briquettes in areas that are known to have concentrations of larva.

Integrated Pest Management

An Integrated Pest Management (IPM) program is in place for the City of Arlington golf courses and has been introduced at all parks. IPM is a holistic approach to facility maintenance that focuses on identifying pests and pest activity before they reach critical levels as well as all other aspects of maintenance. IPM does not preclude the use of pesticides, but emphasizes the importance of utilizing adapted plant species, understanding environmental conditions, following recommended cultural practices, monitoring pest populations and using the most effective solutions to combat problems. These solutions, which include cultural, biological, and chemical methods, are designed to balance environmental concerns with plant management. Select golf and park employees are designated as "scouts" and are responsible for monitoring and reporting any potential pest activity, recording vital information such as location, weather conditions, changes in turf appearance, and symptoms. Through early detection of pest activity, cultural practices can be implemented as the first means of reducing pest activity and often the need for chemical control is avoided. As part of the management strategy, nest boxes and bat houses have been erected at the golf courses and various parks to entice insect-eating birds and bats to park properties.

While chemicals continue to be used on an as needed basis, park managers developed an approved list of chemicals for the Parks and Recreation Department. The chemical selection was based on environmental impact and cost effectiveness. In addition, Park Operations has adopted a "just in time" chemical

inventory process. This process ensures that chemicals are purchased in quantities for a single application and eliminates the unnecessary storage of chemicals thus reducing potential risks for accidental spills.

The City ensures compliance with established use of guidelines of pesticides with licensed and trained applicators. These applicators apply appropriate rates and use of pesticides according to labels and comply with regulations governing the legal disposal of used containers. Materials are properly stored under cover and protected from stormwater. Licensed applicators consider the climatological conditions such as wind and rain for proper timing of applications. In addition, preventative maintenance programs are conducted to ensure that spray equipment properly dispenses accurate applications and to reduce the possibility of leakage from tanks, hoses or nozzles. Drainage channels are policed to ensure that chemical containers or other hazardous substances, which may threaten water quality, are properly disposed.

The most frequently used control of unwanted vegetation in the City of Arlington's park system is organic mulches to cover bare soil in ground cover, annual, and shrub beds. Mulches reduce erosion, increase infiltration of rain and irrigation water and reduce irrigation requirements. The organic breakdown of mulches enhances the effectiveness of pesticides, herbicides, and fertilizers. Local tree services also add their tree chips to stockpiles in the various parks for mulching.

Following the IPM philosophy, City personnel conduct soil tests to diagnose soil conditions before fertilizer applications are administered, and before shrubs are planted in the City parks. The City follows proper mowing cycles that reduce the amount of grass clippings of turf for biodegradation. This reuse of plant material provides nutrients, which reduces the amount of fertilizer required. The golf courses and parks use organic and slow release fertilizers to minimize runoff potential. Nutrient experimentation continues with various natural products such as compost, corn gluten, sea kelp and molasses to find the most effective products to use throughout the park system.

V. List of Municipal Facilities

The City of Arlington has identified those municipal operations that may have an impact on water quality.

- Park and Open Spaces Maintenance
- Street Maintenance
- Building Maintenance
- Fleet Vehicle and Equipment Maintenance and Storage Areas
- Salt/Sand Storage Locations
- Municipal Landfill
- Municipal Airport

The Stormwater Management Division, Environmental Compliance is working with the City's Real Estate Division to identify all properties that house these operations. The Real Estate Division is currently compiling a list of all city owned and leased properties. This list will serve as the basis for the updated list of municipal facilities subject to this MCM.

MCM 5: Industrial & High Risk Runoff

I. Priorities and Procedures for Inspections and Implementing Control Measures

Historically, the City of Arlington Public Works and Transportation Department, Stormwater Management Division, employed an environmental engineer to inspect all industrial facilities within the city limits. The Industrial Inspection Program investigated industrial sources based on past inspections and surveys of the areas where industrial facilities are primarily located: along Business 287, Great Southwest Industrial Park, West Industrial Park, and South Industrial (Commercial Drive and Peyco Drive, respectively). During past inspections, industrial areas were monitored and found to be a good indicator of the conditions in all permitted industries. Industrial area evaluations were conducted on a quarterly basis.

In July 2014, after internal review, it became evident that simply monitoring the industrial areas was not sufficient to provide a comprehensive overview of Arlington's regulated industrial facilities. Therefore, the program was revised to include scheduled and unscheduled inspections of the permitted facilities.

The inspection schedule is as follows:

Facility Type	Minimum Inspection Frequency
Municipal Landfills	Annual (with more frequent follow-up as necessary)
Facilities Operating with an TPDES MSGP Permit (NOI)	Annual (with more frequent follow-up as necessary)
Facilities with No Exposure Certification (NEC)	Every two years (with more frequent follow-up as necessary
Non-Compliant Facilities, or sites with benchmark exceedances	Quarterly (with additional follow-up and/or sampling until the site is in compliance).
High Risk Facilities subject to EPCRA Title III, Section 313; SARA 313 facilities	Annual (with more frequent follow-up as necessary)

The City's Environmental Compliance Officers are now primarily responsible for inspecting industrial and high risk facilities operating with the potential to discharge pollutants to the MS4. Checklists and inspection forms have been developed by the Stormwater Management Division to ensure consistency and accuracy in inspection reporting and recordkeeping. These forms are reviewed and updated as necessary to ensure permit compliance. An initial inspection at a facility operating under an NOI typically includes a comprehensive inspection of the facility, BMPs, and the facility's SWPPP. If deficiencies and/or discrepancies are noted, the facility may be issued a Notice of violation (NOV) or citation depending on the severity of the violation and/or the facility's prior knowledge of the violation. The facility is then given the opportunity to comply within a time frame designated by the inspector (typically 30 days or less). Follow-up inspections are then conducted to verify that the discrepancies and/or deficiencies noted in the violation or citation have been remedied and that no other new concerns are found.

Industrial facilities that have an NEC for no exposure of their operations to stormwater are inspected to verify that site conditions warrant the no-exposure waiver.

Unscheduled inspections occur if an industry is unresponsive or an illicit discharge is reported or suspected.

Those facilities that are required by their TPDES industrial stormwater permit to conduct benchmark monitoring are required to submit the results of such tests to the City of Arlington for review. Any facility that is not regulated by a TPDES or NPDES permit but that are determined to contribute a substantial pollutant load to the MS4 may also be required to conducts inspections, monitor discharges, install BMPs, or establish a stormwater pollution prevention plan as determined necessary by the Stormwater Executive Manager.

Inspection results are reviewed by Environmental Compliance and Stormwater personnel who will determine if corrective and enforcement actions are needed. If the City is unable to bring the facility into compliance after following the procedures outlined above, the Stormwater Management Division will inform the TCEQ Region 4 investigation team and/or the EPA Region 6 Enforcement Division to further encourage compliance.

City of Arlington records indicate that there are **48** facilities with a NOI and **99** facilities with a NEC.

II. Industrial and High Risk Monitoring

The details regarding the requirements for Industrial and High Risk Monitoring are included in MCM 8 (Monitoring, Evaluation, and Reporting).

MCM 6: Construction Site Stormwater Runoff

I. Requirements for Structural and Nonstructural BMPs

Structural and nonstructural BMPs are required by construction site operators through local ordinance that requires operators of construction sites to have an NPDES or TPDES permit to discharge stormwater. Additionally, the ordinance requires these facilities to operate in strict compliance with the requirements of its NPDES or TPDES permit. These permits require operators to utilize appropriate erosion and sediment control BMPs.

The City of Arlington's Community Development and Planning (CD&P) Department reviews and accepts construction plats, site plans public improvement plans, and issues demolition, commercial, and residential construction permits. During the reporting period, CD&P reviewed and/or issued the following:

Reviews	Quantity
Plats (preliminary SWMSP)	76
Site Plans (SWPPP and SWMSP)	80
Public Improvements	64
Commercial / Residential Demo (SWPPP)	123

The City requires Stormwater Pollution Prevention Plans (SWPPPs) for all building and construction permit applications greater than one acre. The city's permitting process requires BMPs for erosion and sediment controls to protect water quality. During the reporting period, the Environmental Compliance Group received **77** reviewed and approved CD&P SWPPPs as part of the construction application process.

II. Inspection of Construction Sites and Enforcement Requirements

Environmental Compliance Officers inspect construction sites for compliance with stormwater management requirements and practices and initiate enforcement actions as necessary. Inspections are for **large** construction sites (5 acres or greater land disturbance, or that of any size and located within a common plan of development); **small** construction sites (between 1 and 4.99 acres); and sites with land disturbances **less than one acre** in size. Inspections, investigations, and resulting enforcement actions during the inspection period are itemized below.

Inspection Data:

Residential and Commercial Construction	Quantity
Total Construction Sites (Residential & Commercial: **176**)	
5 acres or greater	**21**
1 to 4.99 acres	**29**
Less than 1 acre	**126**
Total Initial Inspections (new construction)	**76**
Total Site Inspections (all construction)	**289**

Enforcement Data:

Action	Quantity
Verbal Warnings	36
Warning Notice	18
Notices of Violation	6
Stop Work Orders	1
Citations	1
Total	**62**

III. Education and Training of Construction Site Operators

The City of Arlington participated with other local municipalities (Dallas, Fort Worth, Irving, Garland, Mesquite, and Plano) in assist the North Central Texas Council of Governments (NCTCOG) in designing a National Pollutant Discharge Elimination System (NPDES) Construction Inspection Training Program. The final program consists of a one (1) day workshop. All aspects of the TPDES program are stressed including SWPPP development, BMP selection, site inspections, and NOI/NOT filing. The course is designed for use by municipal inspectors, site owners and/or operators, and general construction site personnel. The NCTCOG offers this course regularly.

IV. Notification of Requirements to Construction Site Operators

Notification to construction site operators performing work for the City of Arlington is provided through pre-development meetings and pre-construction conferences as well as through the City of Arlington's Design Criteria Manual that requires all public and private construction operators to reduce discharge of pollutants from construction sites via compliance with the TPDES Construction General Permit.

Additionally, construction site plans are reviewed through the development process for conformance with the City of Arlington's Design Criteria Manual. SWPPPs are evaluated by the Community Development and Planning Department. The City's reviewing engineer meets on an individual basis with developers, consulting engineers, and contractors to discuss permit and ordinance requirements for construction sites. The meetings include a discussion of adopting development and construction methods that have the least impact on stormwater quality. Review checklists have been developed by the City and are used to educate the development community about SWPPP requirements.

V. List of Construction Sites

The City of Arlington maintains a database containing a list of developers and/or operators and construction sites located within the city limits. Approximatively **176** construction sites were active (in progress) during the reporting period. These sites are regularly inspected by the city's Environmental Compliance Officers.

VI. Status of Complying with New Requirements

The City of Arlington's MS4 permit contained two new requirements be implemented in regard to this MCM within one year of permit issuance:

Part III.B.f.iii.A: Within one year from the date of permit issuance, the permittees shall require construction site contractors to implement appropriate erosion and sediment control BMPs and control waste (for example, discarded building materials, concrete truck washout water, chemicals, litter, and sanitary waste) at the construction site, that may cause adverse impacts to water quality.

This requirement has been met and if fully implemented through the City's current site plan and development review process (through CD&P), the City of Arlington Stormwater Pollution Control Ordinance, The Unified Development Code (formerly Subdivision Ordinance) as well as the Design Criteria Manual for Development. A checklist regarding control of construction site waste must be included in the developer's SWPPP upon submittal to the City.

Part III.B.f.iii.B: Within one year from the date of permit issuance, the permittees shall develop procedures for site plan reviews that incorporate consideration of potential water quality impacts, receipt and consideration of information submitted by the public, and site inspection and enforcement of control measures to the extent allowable under state and local law.

This requirement has been met and if fully implemented through the City's current site plan and development review process through CD&P. Public input is considered in cases where re-zoning of a site is necessary. Public hearings have been established for citizens to provide input on construction projects before City Council. Outside of re-zoning issues, citizens may request information or submit input regarding private construction projects to the Community Development and Planning Department.

Note: Regulatory Update

The Stormwater Management Division, with the help of consultants and external stakeholders, is currently developing a new Unified Stormwater Ordinance (USO) and updating the Design Criteria Manual. The current draft includes Total Suspended Solids (TSS) removal requirements for new development and redevelopment as well as hydrocarbon removal requirements for large parking lots and vehicle service businesses. The proposed Design Criteria Manual contains a list of recommended BMPs with their TSS removal efficiency. The Manual refers to the Integrated Stormwater Management Manual (iSWM) developed for the region by the NCTCOG. Adoption of these new policies is anticipated in fall 2015.

MCM 7: Public Education and Outreach / Public Involvement and Participation

I. Public Education and Outreach

The City of Arlington's public education, outreach, involvement, and participation program encourages stewardship of the City's surface water resources by raising awareness of the issues, providing information on best management practices that may be used to improve water quality, and providing opportunities for the public to provide meaningful input into the program. The education and outreach program promotes, publicizes, and facilitates public reporting of spills, fish kills, illicit discharges, and improper disposal of materials, and the management and disposal of HHW. The program also focuses on the proper use, application, and disposal of pesticides, fertilizers, and herbicides, pet waste management, and yard waste management. It also encourages citizens to report blocked or broken storm drain pipes and other infrastructure to prevent flooding. The program is targeted to various audiences including children, residents, businesses, non-governmental entities, commercial and industrial facility operators/owners, and city staff.

During the reporting period, Stormwater, Recycling, and Water Conservation Educators continued to reach out to the public throughout a variety of educational activities. The following activities for the three divisions were provided during the reporting period. Regional educational activities through the North Central Texas Council of Governments (NCTCOG) are also included for the reporting period.

Stormwater: The Environmental Education Specialist (henceforth, Stormwater Educator) is responsible for all education activities (internal & external) in support of the Stormwater Management Program. The Stormwater Educator attended and/or held **7** internal and external training and education events during the reporting period.

Event	Date	Attendance
Earth Day - UTA	April 16,2014	200
Career Day- Sherrod Elementary School	May 2, 2014	100
Learn & Grow Fair	May 3, 2014	100
Community Outreach-Sleepy Hollow Apartment Complex	June 3, 2014	20
Public Works and Transportation- South Field Operations – SWPPP/Hazmat Safety Training	August 4, 2014	46
Public Works and Transportation- North Field Operations-SWPPP/Hazmat Safety Training	August 12, 2014	40
Ecofest Arlington	September 20, 2014	12,000
Total		**12,506**

The Stormwater Educator also distributed the following information and/or items to the public during the reporting period:

Item	Quantity	Water Quality Message	Flood Safety Message
"Berenstain Bears Don't Pollute" Books – Stormwater School Education Program	363	x	
"Feed the Trash Bins – Don't Litter" Bags	50	x	
"Go Green" Canvas Owl Bags	180	x	
"Love The Mug" Reusable Coffee Mug	26	x	
"Love Where You Live" Canvas Bag	134	x	
"Love Where You Live" ink pens	1815	x	
"Sink or Swim" – COA Flood Safety Novella	450		x
"Storm Drain Savers" Teenage Mutant Ninja Turtles Coloring Book	293	x	
"Talking Trash" Coloring Book	12	x	x
"Tex & Dot" Coloring Book	290	x	
"The Wartville Wizard Books – Stormwater School Education Program	100	x	
COA Citizen's Guide to Stormwater Pollution Prevention	910	x	x
COA Stormwater Hacky Sacks	600	x	
COA Stormwater Pocket Ashtray	60	x	
COA Stormwater Water Tumbler	25	x	
Curbs to Creek Cups	600	x	
Curbs to Creek Post-it Notes	50	x	
Curbs to Creeks Auto Trash Bags	320	x	
Curbs to Creeks Rain Slickers	270	x	
Eco-Warrior Dog Tags	705	x	
Eco-Warrior Infuser Cup	392	x	
Eco-Warrior T-shirts	175	x	
FEMA Flood Awareness Handouts	20		x
Flood Safety Awareness Newspaper Advertisement (2 runs)	377,186		x
Flood Safety Awareness Utility Bill Insert	94,000		x
HHW Flyers	30	x	
Proper Prescription Drug Disposal Utility Bill Insert (in conjunction with Recycling)	94,000	x	
Reverse Litter Hand Sanitizer	100	x	
Reverse Litter Ink Pens	150	x	
Reverse Litter Pencils	150	x	
Reverse Litter T-shirts	28	x	
What is Stormwater? Utility Bill Insert	94,000	x	

Recycling: The Recycling Coordinator is responsible for educational activities in support of the recycling program, including recycling education, HHW, and backyard composting. The Recycling Coordinator participated in **41** activities and/or events during the reporting period including school

presentations, composting classes, community events, and landfill tours. Attendance at these events is outlined below.

Activity / Event	Attendance
School Presentations	262
Composting Classes	301
Community Events (Learn & Grow Fair, UTA Earth Day, Tarrant County College Arbor Day, Water Conservation Plant Sale, EcoFest Arlington)	13,000
Landfill Tours	140
Total	**13,703**

Water Conservation: The Water Conservation Coordinator is responsible for educational activities in support of the water conservation program. These activities also support pollution prevention activities of the Stormwater Management Division of Public Works and Transportation. The Water Conservation Coordinator held **10** community presentations/events and **24** landscape design, native plant, and smart yard classes with approximately **2,567** participants.

Regional Activities: The City of Arlington continues to participate in the NCTCOG Stormwater Public Education Task Force (PETF). The PETF develops regional education efforts, materials, outreach programs, and season promotional items in an effort to educate the public about water quality issues. A copy of the NCTCOG PETF Public Education Report is available in **Appendix E**.

II. Public Involvement and Participation

The City engages the community in stormwater related activities to encourage the protection and enhancement of stormwater quality. Similar to the education and outreach program, the public involvement and participation program includes opportunities for a wide variety of people who live in Arlington to participate in SWMP development and implementation and other volunteer opportunities.

For example, the City's TPDES MS4 permit, as well as its Stormwater Management Plan, is available for public review at the Public Works and Transportation Department at City Hall. Additionally, the Stormwater Educator acts as staff liaison to the Citizen's Environmental Committee – the environmental advisory committee to City Council. The committee discusses all aspects of environmental quality including stormwater issues.

A minimum of **4** CEC meetings are held in each reporting period.

MCM 8: Monitoring, Evaluation, and Reporting

The City of Arlington maintains a comprehensive monitoring program to protect water quality of receiving waters within the MS4 and comply with permit requirements. The City of Arlington has elected to perform the required storm event discharge monitoring under Section IV, Section A.1: NCTCOG Regional Wet Weather Characterization Program (RWWCP) as supplemented by dry weather monitoring and local monthly grab sampling.

Screening and monitoring efforts include storm event discharge monitoring (RWWCP) , dry weather screening, Inner-City Creek Sampling (Monthly/CRP), and industrial and high risk runoff monitoring.

Wet Weather Monitoring – RWWCP

The City monitors wet weather events through a wet weather screening program designed to identify and investigate areas that may contribute excessive concentrations of pollutants to the MS4, and to establish baseline data on receiving streams. The City's wet weather monitoring efforts are coordinated by the NCTCOG through its RWWCP. Participation in the RWWCP was offered as an option in Part IV.A.1 of the City's TPDES Phase 1 MS4 permit. NCTCOG provides all RWWCP data to the TCEQ on behalf of the participating entities. The City collects water quality data from NCTCOG quarterly or when published. Wet Weather Monitoring Data for Arlington locations is available in **Appendix C**. RWWCP sample locations for the reporting period are identified below:

Watershed	Station ID	Location	Latitude and Longitude	Date Sample Taken
Johnson Creek	AR1301	Johnson Creek @ Matlock Road	32.693000 -97.1165556	**October 5, 2013**
	AR1302	Johnson Creek @ Meadowbrook Park	32.7338333 -97.0924389	
	AR1303	Johnson Creek @ Six Flags	32.7588056 -97.0670278	
Rush Creek	AR1401	Rush Creek @ Sublett Road	32.648889 -97.146389	**February 2, 2014** **February 25, 2014** **April 6, 2014** **July 14, 2014**
	AR1402	Kee Branch @ Pleasant Ridge Road	32.682222 -97.178056	
	AR1403	Rush Creek @ Woodland Park Blvd.	32.713889 -97.172778	

Dry Weather Monitoring

The City's dry weather screening program focuses on detecting the presence of illicit discharges, eliminating illicit connections, and assessing dry weather water quality changes. Environmental Compliance Officers are responsible for conducting all dry weather screening. Dry weather sampling occurs when there has been no significant precipitation (less than 0.10 inches) within 72 hours to ensure flow is not from rainfall runoff. Tests and observations are made when the flow is first observed and again within 24 hours, but no sooner than four hours to increase the potential to detect illicit flows.

The dry weather outfall screening summary for this reporting period is outlined below.

Month	Number of outfalls screened	Number of Outfalls with Flow	Illicit Connections or Discharges
December 2013	5	0	0
January 2014	8	2	0
Total	**13**	**2**	**0**

Historically, a quarter mile grid system was used to select 500 outfalls to be screened over the 5-year permit term. A GIS application was deployed that identified major outfalls in each grid cell and updated the map as each grid cell was screened. In July 2014, after internal review, it became evident that a quarter mile grid system was not sufficient to properly detect the presence of illicit connections and improper discharges to the MS4. Stormwater Management believes that a watershed approach to outfall screenings is more pragmatic. Therefore, in subsequent reporting periods, dry weather outfall screening will consist of screening a representative sample of the major outfalls in each of Arlington's ten watersheds: Trinity Tributaries, Lower Village, Upper Village, Johnson Creek, Rush Creek, Cottonwood Creek, Fish Creek, Lynn Creek, Bowman Branch, and Walnut Creek. Outfalls screenings will also occur in identified areas of concentrated industrial activity.

Monthly Inner City Creek Sampling

Since 1988, the City of Arlington Environmental Compliance staff has, on a monthly basis, conducted sampling activities in its inner-city creek system. Over time, sites have been added, discontinued, or moved in order to provide a representative sampling of inner-city creeks. Currently, the city monitors thirty-two (32) sample sites. Sampling at each of the thirty-two sites includes eleven (11) water quality parameters determined to provide a good indication of the presence of illicit discharges. Parameters include: pH, dissolved oxygen, specific conductivity, air temperature, sample temperature, surfactants, chlorine, copper, phenols, ammonia, and visual observation. Sampling is typically conducted in dry weather conditions. A total of **247** monthly inner creek samples were taken to determine the presence of illicit discharges; none were found. A sample (N=99) of monthly routine monitoring data is reported in **Appendix D**.

Clean Rivers Program (CRP)

In addition to monthly inner-city creek sampling, eight (8) of the monthly sites are part of the TCEQ's CRP. The CRP program is coordinated through the Trinity River Authority of Texas (TRA). The number of CRP sites was recently reduced from twelve (12) sites to eight (8) to avoid duplication of efforts with other cities and to remove those sites that historically had no flow. Sampling at each of the eight CRP sites includes several water quality parameters. Parameters include: pH, dissolved oxygen, specific conductivity, air temperature, sample temperature, surfactants, chlorine, copper, phenols, ammonia, and visual observation. Lab analyses include the following parameters: Cadmium, Chromium, Copper, Manganese, Nickel, Zinc, Iron, Lead, Chlorophyll, TKN, Nitrate, Nitrite, Orthophosphate, Total Phosphate, Hardness, and E.coli.

The eight CRP sites are located on larger bodies of water. This provides a broader view of the health of the entire stormwater collection system as well as indicating the presence of any pollutants from illicit discharges upstream. TRA provides all CRP data to the TCEQ on behalf of the participating entities.

CRP sampling occurred in **December 2013, March 2014, and June 2014.** In September 2014, the City of Arlington converted to the TRA CRP reporting and sampling schedule. Thus, the fourth sample cycle in 2014 became the first sample cycle for FY 2015 and is therefore not reported here.

Industrial and High Risk Monitoring

Historically, the City of Arlington reviewed benchmark monitoring data during the annual inpsection and made note of compliance or non-compliance. A July 2014 internal review revealed that it was neither sufficient or efficient to simply make note of compliance and/or non-compliance without a copy of the actual record. Therefore, in subsequent reporting periods the City will send notice to all facilties on file with benchmark monitoring requirements to remind them of their reporting requirements to TCEQ and will request that a copy of the report also be sent to the Stormwater Management Divison, Environmental Compliance Group. Those who do not submit the benchmark monitoring data to the City will be asked to provide a hard copy of the data upon annual inspection of their facility to be reviewed and filed with industrial inspections records.

II. Proposed Changes to the Stormwater Management Program

In accordance with Part III.G.2 of the City of Arlington's TPDES MS4 permit, the Stormwater Management Plan (SWMP) may be revised with permission from the TCEQ. The City of Arlington proposes the following revisions to its SWMP, delineated by MCM below. The rationale for each program revision is outlined below. A new SWMP that incorporates these revisions is provided under separate cover.

The new, revised SWMP contains several revisions to strengthen the program, streamline program administration, and eliminate duplication of efforts for increased program efficiency. Revisions to the SWMP were made in consideration of state and federal water quality standards and historical program data.

MCM 1: MS4 Maintenance Activities

- **Program Changes:** No program changes at this time.
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they do not replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
Structural Controls	❖ # of inlets inspected ❖ # of culverts inspected ❖ # of channels inspected ❖ # of concrete channels cleaned ❖ # of earthen channels cleaned ❖ # of flumes cleaned ❖ # of repairs performed ❖ # of pipes inspected ❖ # of bar ditches cleaned	**PY 4 - 5**
Roadways – Street Sweeping ***In-house*** ***Contract***	❖ Total gutter miles swept; ❖ Total gutter miles swept	**PY 4-5**
Deicing and/or Sanding Activities	❖ # of icy events ❖ Amount of material deployed	**PY 4-5**

MCM 2: Post Construction Stormwater Control Measures

- **Program Changes:**
  a. The Stormwater Management Division, with the help of consultants and external stakeholders, is currently developing a new Unified Stormwater Ordinance (USO) and updating the Design Criteria Manual (DCM). The current draft includes Total Suspended Solids (TSS) removal requirements for new development and redevelopment as well as hydrocarbon removal requirements for large parking lots and vehicle service businesses. The proposed Design Criteria Manual contains a list of recommended BMPs with their TSS removal efficiency. The DCM refers to the Integrated Stormwater Management Manual (iSWM) developed for the region by the NCTCOG. Adoption of these new policies is anticipated in fall 2015. The USO will replace the current Stormwater Pollution Control Ordinance upon which all Stormwater Management activity is currently based.
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they do not replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
Comprehensive Planning Process ***Adopt and implement USO & DCM***	❖ City Council Adoption of the Unified Stormwater Ordinance and Design Criteria Manual	**PY 4**
New Development & Redevelopment ***Implement new ordinance and manual requirements for post construction stormwater control measures***	❖ Number of sites reviewed; ❖ Number of sites constructed	**PY 4-5**
Implementation & Maintenance of Structural & Non-structural BMPs ***Develop program for owner annual inspection forms and City's inspection***	❖ Develop a BMP tracking program; ❖ Number of annual inspections received; ❖ Number of sites inspected by City	**PY 4-5**

MCM 3: Illicit Discharge Detection & Elimination (IDDE)

- **Program Changes:** Program changes are outlined in MCM 8: Monitoring, Evaluation, and Reporting
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they do not replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
Elimination of Illicit Discharges & Improper Disposal ***Continue to correct the discharge, remove the improperly disposed materials within 30 days or as soon as reasonably possible***	❖ # of illicit discharges and illegal disposal sources identified; ❖ Time taken to resolve issue	**PY 4-5**
MS4 Mapping ***Continue to identify existing drainage assets (inlets, outfalls, pipes, and other features*** ***Compile new drainage asset data (inlets, outfalls, pipes, and other features)***	❖ Number and type of updates to the asset mapping database ❖ Number and type of updates to the asset mapping database	**PY 4-5**

MCM 4: Pollution Prevention & Good Housekeeping for Municipal Operations

- **Program Changes:**
  - **a.** The City of Arlington proposes redeveloping its lists of municipal facilities based on the creation of a master-list of city owned or leased properties by the Community Development & Planning Real Estate Division. The list is to be created by the end of FY15.
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they do not replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
PP/GH Creation & Implementation	❖ # of parks mowed & cleaned ❖ Schedule of mowing and cleaning activities for park properties ❖ # of city buildings with regular maintenance schedules ❖ # of city-owned projects under construction ❖ # of City vehicles receiving preventative maintenance and/or repairs for leaks ❖ # of vehicular spills ❖ Identify salt/sand storage locations ❖ Quantity of salt/sand on hand (annually) and how stored	**PY 4-5**
New Development & Redevelopment ***Implement new ordinance and manual requirements for post construction stormwater control measures***	❖ Number of sites reviewed; ❖ Number of sites constructed	**PY 4-5**
Implementation & Maintenance of Structural & Non-structural BMPs ***Develop program for owner annual inspection forms and City's inspection***	❖ Develop a BMP tracking program; ❖ Number of annual inspections received; ❖ Number of sites inspected by City	**PY 4-5**

MCM 5: Industrial and High Risk Stormwater Runoff

- **Program Changes:**
  - **a.** The City of Arlington proposes to change the industrial inspection schedule for those facilities with NECs. The current inspection schedule is to inspect NECs once per permit term or every five years. The City proposes to inspect NEC facilities biennially – once every two years. The facility inspection schedule is available for review in this report under **MCM 5: Industrial and High Risk Stormwater Runoff**.
  - **b.** The City of Arlington proposes eliminating quarterly area evaluations to provide information on compliance status of Arlington's regulated industrial facilities. The City's Dry Weather Monitoring Program, Inner Creek Sampling Program, as well as industrial inspections provide a more comprehensive overview of the City's regulated industrial facilities' compliance status.
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they do not replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
Industrial & High Risk Monitoring Program ***Use benchmark monitoring data review to enhance facility compliance.***	❖ # or % of industrial facilities submitting required benchmark monitoring data ❖ # or % facility data sets that are compliant with benchmark parameters ❖ # or % facility data sets that are non-compliant with benchmark parameters ❖ # of corrective action plans required to achieve compliance ❖ # or % action plan facilities brought into compliance	**PY 4-5**

MCM 6: Construction Site Stormwater Runoff

- **Program Changes:** No program changes at this time.
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they do not replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
Notification of Construction Site Operators of their Responsibilities ***Review and revise construction applicant procedures to ensure a process that emphasizes notification of requirements under TPDES permit regulations, and incorporation of appropriate water quality measures***	❖ # of revisions to process procedures	**PY 4-5**
Procedures for Site Plan Review ***Review and revise site plan procedures for water quality***	❖ # of revisions to process procedures	**PY 4-5**

MCM 7: Public Education & Outreach / Public Involvement & Participation

- **Program Changes:** No program changes at this time.
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they do not replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
Public Education & Outreach – Education Programs ***Media Program: Implement a social media education program via Facebook & Twitter*** ***Develop a stormwater education YouTube channel*** ***Develop a Stormwater Guide Series for citizens***	❖ # of followers on Facebook & Twitter ❖ # of YouTube views • # of downloads from the SW website	**PY 4-5**
Public Education & Outreach – Education Programs ***In-House Training Program: Present a minimum of 2 internal workshops for employees identified as having an impact on stormwater*** ***Publish or post a minimum of one educational newsletter or poster in spill prone or other maintenance locations*** ***Publish at least one electronic announcement addressing SW issues for internal staff*** ***Educate new employees about SWPP practices with the development of a Stormwater Awareness Training Module***	❖ # workshops provided ❖ # of employees attending ❖ # of educational materials posted ❖ # of electronic announcements created and published ❖ # of employees attending SW Awareness training	**PY 4-5**

SWMP Development and Public Involvement ***Update SW website to include SWMP for online viewing and include an email address for comments and questions*** ***Maintain the SWMP at City Hall for in-person viewing*** ***Solicit input from the public during period ds of annual update and revision***	❖ # of online views ❖ # of in-person views / requests ❖ Date of public notice publication ❖ Comments received	**PY 4-5**

MCM 8: Monitoring, Evaluation, and Reporting

- **Program Changes:**
  - **a.** The City of Arlington proposes a name change to its current monthly "wet weather" monitoring program. The City suggests changing the name of this program from Wet Weather Screening Program to Inner-City Creek Sampling Program or ICCS. Monthly creek sampling primarily occurs in dry conditions. Screening may occur in wet conditions due to scheduling, but is very rare. Additionally, given that the North Central Texas Council of Governments (NCTCOG) conducts the city's wet weather sampling through the Regional Wet Weather Characterization Program (RWWCP), the City requires a more accurate description of the program. Changing the name will avoid confusion with the NCTCOG RWWCP and existing definitions and explanations of how wet weather sampling should occur.
- **Measurable Goals:** Incorporate the following **new** measurements: *New elements are in addition to existing goals; they <u>do not</u> replace current activities.*

Activity (BMP)	Measurable Goal (Tracked Annually)	Implementation Schedule
Industrial and High Risk Runoff Monitoring Program ***Identify facilities that are required to conduct benchmark monitoring***	❖ # of facilities required to submit monitoring data ❖ # of data sets received and reviewed ❖ See also MCM 5	**PY 4-5**

Additional and/or minor changes:

a. SWMP Element Definitions

Consistent with MS4 Permit instructions that "*encourage SWMP modifications and changes that strengthen, update, replace, de-emphasize, or remove SWMP elements*", the City has re-organized its current Best Management Practices (BMPs) into new SWMP elements. The fifteen (15) categories from the prior SWMP have been reduced to eight (8) elements that correspond to the SWMP components (or minimum control measures) as outlined in the new permit. These changes help align the SWMP with national movements towards greater consistency in the Phase I and Phase II MS4 program requirements. Consideration of State and Federal regulations including 40 CFR 122.26(d)(1)(iii)(B), the City's new TPDES MS4 permit, and the recent EPA MS4 Permit Improvement Guide (April 2010) have been incorporated into the development of the proposed elements. Table 1 below provides a comparison of the eight (8) proposed elements to the existing fifteen (15) elements.

Proposed SWMP Component		Previous SWMP Categories	
1	MS4 Maintenance Activities a. Structural Controls b. Floatables c. Roadways	**Section 1**	**Structural Controls, Operation, and Maintenance**
		Section 3	**Street Operations and Maintenance**
		Section 9	**Storm Sewer Investigation**
2	Post-Construction Stormwater Control Measures	**Section 2**	**New Development Regulations**
		Section 4	**Flood Control Projects**
3	Illicit Discharge Detection and Elimination	**Section 7**	**Implement and Enforce Ordinances (Illicit Discharges)**
		Section 8	**Field Screening Program**
		Section 10	**Prevent and Contain Spills**
		Section 13	**Sanitary Sewage Seepage**
4	Pollution Prevention and Good Housekeeping*	**Section 6**	**Pesticide, Herbicide, and Fertilizer Application**
		Section 10	**Prevent Contain Spills**
5	Industrial and High Risk Runoff	**Section 5**	**Landfill Monitoring**
		Section 14	**Inspection and Control Measures**
6	Construction Site Stormwater Runoff	**Section 15**	**Construction Activity**
		Section 14	**Inspection and Control Measures**
7	Public Education, Outreach, Involvement, and Participation	**Section 12**	**Public Education – Used Oil and Toxics**
8	Monitoring, Evaluation, and Reporting	**Section 11**	**Public Reporting**

Comparison of SWMP categories (Proposed vs. Previous) **** new permit element***

b. SWMP Format

The format of the SWMP has been restructured to include definitions, descriptions, and overviews of each new SWMP component, an outline of related activities, measurable goals, responsible parties, and implementation schedules. This new format provides a more readable and streamlined SWMP and is intended to provide a more intuitive documentation procedure.

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III. Annual and Projected Expenditures

The following table addresses major department and/or divisional expenditures related to the Stormwater Management Program. The information represents the actual costs during the reporting period and estimated program costs for the subsequent reporting period. During the reporting period, the City expended **$15,705,160.28** related to implementing the major elements of the SWMP. The City expects to spend **$11,519,327.66** related to implementing the major SWMP elements in FY 15 (October 1, 2014 – September 30, 2015).

Program / Activities	Actual Program Costs	Estimated Program Costs
Public Works & Transportation – Stormwater Management Division • Administration – TPDES / SWMP • Inspection & Enforcement • Water Quality Monitoring • Spill Response & Monitoring • Public Education & Involvement • Vehicle Accident Waste • Construction & Industrial Compliance • Regional Stormwater Monitoring (Contract) • NCTCOG Regional Stormwater Management (Contract) • HHW Collection & Disposal	$3,052,188.32	$4,070,583.00
Public Works & Transportation – Stormwater Capital Improvements	$9,852,098.97	$4,145,000.00
Public Works & Transportation – Stormwater Maintenance Crew • MS4 Maintenance Activities	$1,606,561.24	$2,190,396.00
Public Works & Transportation – Engineering Operations • Installation and Maintenance of BMPs (Capital Improvement Projects)	$152,770.86	$150,000.00
Public Works & Transportation – Solid Waste & Recycling • Curbside Recycling • Public Education	$108,551.00	$49,665.00
Airport • MSGP Administration & Monitoring	$13,939.00	$14,947.00
Community Development & Planning • Coordination of Construction Plan Reviews	$34,913.53	$35,262.66
Parks & Recreation – Construction • Construction Installation and Maintenance of BMPs	$61,111.00	$48,222.00
Parks & Recreation – Operations • P2 Practices for Parks Operations & Maintenance • Integrated Pest Management (IPM) • Litter Clean Up • Erosion Controls	$727,310.00	$760,252.00

Water Utilities – Information Technology • GIS Mapping (As Builts & Field Verifications)	$45,483.37	$0.00
Water Utilities – Engineering Operations	$45,000.00	$50,000.00
Water Utilities – Water Resource Services • Stormwater Related Efforts during Pretreatment • Plan Review of Illicit Connections	$5232.99	$5000.00
Total	**$15,705,160.28**	**$11,519,327.66**

IV. Revisions to Assessment of Controls or Budget from Previous Reporting Period

There are no necessary revisions to the assessment of controls or fiscal year analysis reporting in the Year Two Annual Report covering the period beginning October 1, 2012 through September 30, 2013.

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V. Summary of Water Quality Improvements, Degradations, and Progress toward Measured Reduction in Pollutants

The City of Arlington assesses improvements and/or degradations in water quality by analyzing CRP data. The purpose is to monitor changes in and to determine overall watershed health. Assessment of CRP data offers the most comprehensive view of watershed health as it captures chemical, metal, bacteria, and nutrient indicators. Also, CRP program data is collected from sample sites in most of Arlington's watersheds (including impaired segments of the Trinity River), an evaluation of the trends in the analytes measured can be used to assess water quality improvements, degradations, and progress.

The table below provides a summary of water quality trends that compare mean or average values across Arlington from the previous fiscal year (FY 13: October 1, 2012 – September 30, 2013) and the reporting period outlined in this report (FY 14: October 1, 2013 – September 30, 2014).

Water Quality Parameter	FY 2013 (July – Q4)	FY 2014 (June – Q3)	Assessment
Water Temperature (°C)			
Minimum	***27.4***	***24.4***	No significant Change
Maximum	***28.6***	***28.8***	
Mean	**27.9**	**25.6**	
Dissolved Oxygen (mg/L)			
Minimum	***2.6***	***1.91***	No Significant Change
Maximum	***13.8***	***8.33***	
Mean	**5.44**	**4.52**	
Specific Conductance (µs/cm)			
Minimum	***288***	***366.8***	Slight Increase
Maximum	***631***	***1184.0***	
Mean	**442.5**	**615.68**	
pH			
Minimum	***7.2***	***7.12***	No Significant Change
Maximum	***8***	***7.88***	
Mean	**7.68**	**7.47**	
Total Phosphorus (mg/L)			
Minimum	***0.04***	***0.05***	No significant change
Maximum	***0.13***	***0.11***	
Mean	**0.07**	**0.09**	
E. Coli **(MPN)**			
Minimum	***61***	***28***	Slight increase
Maximum	***1000***	***2599***	
Mean	**377.13**	**630.88**	

These data indicate no significant change for the majority of the analytes. Additional analytes may be added in subsequent reporting periods to gauge overall watershed health.

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VI. Summary of NPDES and/or TPDES Permit Notifications Received

The City of Arlington receives notices of intent for construction activity that will disturbed one acre or more and are received by the City of Arlington's Community Planning and Development Department as part of the SWPPP. Notifications are cross referenced with the TCEQ's General Water Quality Permit Database. During the reporting period, there were **39** active Construction NOIs. Twenty-four (**24**) entities terminated construction during the reporting period. No NOCs were received.

Twenty (**20**) TPDES MSGP NOIs and **24** NECs were received during the reporting period.

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VII. Summary of Enforcement Actions and Inspections

Environmental Compliance Officers conduct construction inspections a minimum of twice per month, with additional inspections occurring more often when corrective actions are required. Industrial inspections occur according to the schedule provided under **MCM 5: Industrial & High Risk Runoff.** Environmental Compliance Officers maintain records of site conditions observed during inspection and record all violations.

The City maintains legal authority to inspect construction and industrial sites, require site compliance, and provide enforcement of non-compliance via Education, Notices of Violation (NOVs), Criminal and Civil Citations, and Stop Work Orders (SWOs).

Enforcement Data:

Action	Quantity
Verbal Warnings	36
Warning Notice	18
Notices of Violation	6
Stop Work Orders	1
Citations	1
Total	**62**

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VIII. Summary of Industrial and Construction Site Inspections

During the reporting period, approximately **176** construction sites were active in the City of Arlington. Environmental Compliance officers conducted a total of **289** inspections, **76** of which were initial inspections for new construction.

Water Resource Services (WRS) inspects industrial facilities for compliance with pre-treatment requirements. During their inspections, they also look for potential sources of stormwater pollution. WRS inspected **67** industries during this reporting period and conducted **53** surveys of businesses.

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IX. Summary of Representative Monitoring Data (and any other data)

Representative monitoring data and any additional data collecting over the reporting period is outlined above. Data accumulated during the reporting period is summarized in Section 1, MCM 8: Monitoring, Evaluation, and Reporting. Water quality samples are obtained as part of several ongoing stormwater management programs, including dry weather screening, routine monthly screening, the Clean Rivers Program, and the NCTCOG Wet Weather Monitoring Program. Sampled analytes vary by program and are explained in MCM 8 above.

During the reporting period, **13** outfalls were screened as part of the dry weather program. No illicit discharges or connections were detected. A total of **247** monthly inner creek samples were taken to determine the presence of illicit discharges. Parameters measured include level of flow, pH, DO, specific conductivity, water temperature, surfactants, chlorine, copper, phenols, ammonia, and other visual indicators. No illicit connections or discharges were found.

The Trinity River Authority (TRA) provides all Clean Rivers Program (CRP) data to the TCEQ on behalf of the participating entities. CRP sampling occurred in **December 2013, March 2014, and June 2014.** In September 2014, the City of Arlington converted to the TRA CRP reporting and sampling schedule. Thus, the fourth sample cycle in 2014 became the first sample cycle for FY 2015 and is therefore not reported here.

The City monitors wet weather events through a wet weather screening program designed to identify and investigate areas that may contribute excessive concentrations of pollutants to the MS4, and to establish baseline data on receiving streams. The City's wet weather monitoring efforts are coordinated by the NCTCOG through its RWWCP. Participation in the RWWCP was offered as an option in Part IV.A.1 of the City's TPDES Phase 1 MS4 permit. NCTCOG provides all RWWCP data to the TCEQ on behalf of the participating entities. The City collects water quality data from NCTCOG quarterly or when published. Wet Weather Monitoring Data for Arlington locations is available in **Appendix C**.

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Appendices

Appendix A: TXDOT Annual Stormwater Report

Appendix B: UTA Annual Stormwater Report

Appendix C: NCTCOG Regional Monitoring Data

Appendix D: COA Inner Creek Sampling Data (N=99)

Appendix E: NCTCOG Public Education Task Force (PETF) Summary Report

Appendix F: COA Public Education & Outreach Supplemental Materials

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Appendix A: TXDOT Annual Stormwater Report

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Fort Worth District

Municipal Separate Storm Sewer System Annual Report
TPDES Permit No. WQ00046350000
City of Arlington, University of Texas at Arlington, and Texas Department of Transportation – Fort Worth
October 2013 – September 2014

Prepared by
Texas Department of Transportation
Fort Worth District
2501 S.W. Loop 820
Fort Worth, Texas 76133

February 19, 2015

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Tables

Section 1.0 Introduction

1.1 Background

On July 29, 2011, the Texas Commission on Environmental Quality (TCEQ) issued Texas Pollutant Discharge Elimination System (TPDES) Permit Number WQ00046350000 (Permit) to the Texas Department of Transportation (TxDOT) – Fort Worth District (District) as a co-permittee to the City of Arlington and University of Texas - Arlington. This Permit authorizes the District to discharge from the TxDOT Municipal Separate Storm Sewer System (MS4), located within the corporate boundary of the City of Arlington and University of Texas - Arlington owned or operated by the permitees, located in Tarrant County, Texas, 76001-76018 via the MS4 to various ditches.

In accordance with the Permit, Part III, the District prepared and implemented a comprehensive Stormwater Management Plan (SWMP) which includes pollution prevention measures, pollutant removal techniques, stormwater monitoring, and other appropriate means to control the quality of stormwater discharged from the MS4 to the Maximum Extent Practicable (MEP).

The District has prepared this Annual Report as required by Part IV.C of the Permit.

1.2 Changes to the Stormwater Management Program

The District Stormwater Management Plan (SWMP) was updated with non-substantive changes related to revised formatting of the document and Table of Contents modifications in August 2012. Revisions were also related to making the SWMP format consistent with current TCEQ review guidelines.

Section 2.0 MS4 Maintenance Activities

2.1 Structural Controls

TxDOT has implemented a statewide Maintenance Management System (MMS), known as COMPASS, which is used for planning, decision support, and reporting of maintenance activities. COMPASS tracks information by Function Code. A Function Code describes the activity being engaged in when TxDOT resources are being consumed. Table 14.0 has a complete listing of Function Codes, referenced throughout this report, that are used to track activities impacting the District's Stormwater Program.

During the reporting period, TxDOT spent $338,607.00 on cleaning and reshaping of ditches (Function Code 561 & 562), and $213,635.00 for storm sewer and inlet maintenance (570 & 571). See Table 2.1.

Table 2.1 Structural Controls Maintenance Expenditures		
Function Code	Description	Total
561	Ditch Maintenance	$186,212.00
562	Reshaping Ditches	$152,395.00
570	Culvert and Storm Drain Maintenance	$213,635.00
571	Stormwater Pump Station Maintenance	$0.00
620	Bridge Channel Maintenance	$0.00
	Total	**$552,242.00**

2.2 Floatables

2.2.1 Litter Pickup

A TxDOT pilot program which was started in 1985 has now grown into the nationally and internationally recognized programs known as Don't Mess with Texas (www.dontmesswithtexas.org) and Adopt-A-Highway (AAH).

The AAH program reduces the discharge of floatables into the MS4 by engaging volunteer groups in different litter collection activities throughout the year. The District has successfully implemented two separate components of the AAH litter pickup program, which has resulted in a significant reduction of floatables to the MS4. A primary component of the AAH program is the roadway section adoption; where individuals, or groups, adopt and become responsible for litter collection along a specified roadway section. The assigned groups have visited their adopted sections numerous times during the reporting period. Another component of the AAH program implemented by the District is the annual Trash-Off campaign; where volunteer groups participate in a one day litter cleanup event. Table 2.2.1(a) below displays the results for both components of the program.

Table 2.2.1(a) AAH Program Results for the Reporting Period		
Program Component	Bags Litter Collected	Volunteers
AAH Regular Collection Results	800	500
AAH Trash-Off Program Results	1400	1000
Totals	**2,200**	**1,500**

In addition to the events listed above, the District also uses private contractors to perform litter collection along the TxDOT right-of-way (ROW). Two private contractors were utilized during this reporting period. Because of contracting requirements, the

contractor collection services are awarded for a specified number of acres along an assigned section(s) of roadway. Therefore, contractors keep a record of how many acres they collect litter on rather than the volume of litter collected. Table 2.2.1(b) below displays the results of private contractor litter collection for the reporting period.

Table 2.2.1(b) Contract Litter Collection for the Reporting Period			
Contractor Name	**Date**	**Acres Collected**	**Contract Expense**
Liberty Proclaimed Ministry	8/2013 - 7/ 2014	5,193	$62,255.00
Lift for Life Outreach Center	8/2013 - 7/2014	5,057	$82,294.00
	Totals	**10,250**	**$144,549.00**

2.2.2 Source Control and Monitoring

During the reporting period the District spent approximately $1,156,953.00 on litter control and debris removal activities. Table 2.2.2 below indicates expenditures for the reporting period.

Table 2.2.2 Source Control Monitoring Expenditures		
Function Code	**Description**	**Total**
521	Litter	$1,065,280.00
523	Debris	$56,077.00
524	Spot Litter	$16,020.00
525	Adopt-A-Highway	$16,801.00
527	Hand Sweeping	$2775.00
810	Assistance to Traffic - Debris Removal	$0.00
	Total	**$1,156,953.00**

2.3 Roadways

The District has implemented an effective combination of best management practices (BMPs) specifically targeted to the operation and maintenance of our roadways and facilities in a manner that consistently minimizes the discharge of potential pollutants. The following sections provide detailed information about the specific BMPs implemented by the District.

2.3.1 Mowing and Vegetation Management

TxDOT's use of vegetated buffers requires extensive mowing and vegetation management, and is an important part of the maintenance program. To ensure that these

non-structural controls continue to operate at peak efficiency, careful attention is paid to mowing and vegetation maintenance activities. Expenditures for mowing and spot mowing, within the District ROW, amounted to $857,089.00 during the reporting period; while seeding, sodding, hydro-mulching, landscaping, and tree and brush control accounted for $14,212.00. During this reporting period, TxDOT spent over $871,301.00 on mowing and vegetative management items. Table 2.3.1 below indicates expenditures for the reporting period.

Table 2.3.1
Mowing and Vegetation Management Expenditures

Function Code	Description	Total
511	Mowing	$828,070.00
513	Spot Mowing	$29,019.00
548	Seeding, Sodding, Hydro-mulching and Blanketing	0
551	Landscaping	0
552	Tree and Brush Control	$14,212.00
	Total	**$871,301.00**

2.3.2 Materials Storage / Stockpiles

The District's Division of Occupational Safety has implemented a program of inspection at each District/Section maintenance facility, see Table 2.3.2, with an objective to note hazards within the workplace that may contribute to employee accidents or violate state and federal regulations (including water quality). An important component of this program addresses material storage and stockpiles to ensure they comply with state and federal regulations and do not have any potential effect on local water quality. The District performs these inspections on a semi-annual basis.

Table 2.3.2
District Facilities

Facility Name	Address	Times Inspected
Fort Worth Maintenance Office	5501 McCart Ave, Ft Worth, 76133	**3**

2.3.3 Spill Response

When TxDOT discovers or is notified of hazardous material spills on its ROW, the District has an emergency response plan in place with the TCEQ to address the cleanup of oil and hazardous material spills. TxDOT has implemented an Interagency Agreement with TCEQ, which provides for cleanup of spills throughout the State. Implementation of the Interagency Agreement is accomplished through TxDOT

Headquarters Maintenance Division and the TCEQ "Spill Response Unit." The District also retains an Emergency Response Contractor to assist with cleanups anytime they are found in the District.

In addition to the Interagency Agreement, the District may incur additional expense for emergency spill-related activities. When the District incurs costs for emergency response, it is accounted for as an overhead item by the Maintenance section responsible for the area in which the incident occurred. Table 2.3.3 below indicates expenditures for the reporting period.

Table 2.3.3
Spill Response Expenditures

Function Code	Description	Total
520	Illegal Dumpsite Removal and Disposal	0
830	Hazardous Materials Cleanup - Spills or Leaking Storage Tanks	$15,332.00
831	Hazardous Materials Cleanup - Abandoned Materials	$22,995.00
	Total	**$38,327.00**

2.3.4 Bridge, Heavy Equipment and Paint Removal

All paint removal projects within the District are performed by private contractors. Contractors monitor paint removal projects to ensure that potentially hazardous materials do not adversely affect the environment. Prior to any paint removal activities, testing is performed to determine proper removal and disposal options. Containment, abatement, and removal are performed, when warranted, in accordance with all federal regulations to ensure no adverse impacts on local water quality.

2.3.5 Other Maintenance Considerations

When requested, TxDOT has granted the temporary use of the ROW for investigation and remediation of leaking petroleum storage tanks (LPST). Applicants are either private property owners or public entities. With cooperation from the TCEQ, TxDOT has successfully implemented an agreement process with LPST site owners and contractors. Applicants are required to follow an abbreviated planning and design process for the investigation and remediation stages. This process has substantially reduced soil disturbances within the ROW during all stages of the work.

2.3.6 Sanding and Deicing Activities

Removal of snow and ice from the roadway is classified as an emergency operation that takes precedence over all other work to ensure public safety. The preferred

method of maintaining a safe roadway during icy conditions is through the use of sand, without salt. Only during the most severe conditions are other measures used. Since 2007, TxDOT has utilized more environmentally friendly deicing agents. Meltdown 20™ and calcium magnesium acetate (CMA) are now being used in place of salts for severe conditions. During and after the icy conditions, inspections are conducted to ensure proper cleanup operations minimize pollutant discharge from the District MS4.

In January 2013, the District and regional area experienced two consecutive days below freezing with up to 4 inches of snow and 1 inches of ice accumulation. This freeze event was responsible for the decreased costs associated with assistance to traffic for ice and snow mitigation (FC 811) compared to the previous reporting period. However, the increased use of liquid deicing materials has resulted in a decrease in the cost to remove ice, sand, and debris (FC 526), and has resulted in a decrease in this expense. Table 2.3.6 below indicates expenditures for the reporting period.

Table 2.3.6
Sanding and Deicing Activities Expenditures

Function Code	Description	Total
526	Sweeping Ice Rock	$0
811	Assistance to Traffic - Snow and Ice	$1,410,732.00
	Total	**$1,410,732.00**

2.3.7 Roadway Maintenance

TxDOT roadway maintenance activities do not meet the definition of a regulated construction activity and, therefore, do not require special controls or record keeping for purposes of the TPDES program.

2.3.8 Storm Sewer System and Drainage Ditch Cleaning

TxDOT utilizes two manuals to conduct maintenance: the Maintenance Management Manual (January 2009) and the Maintenance Operations Manual (September 2005). Both manuals provide guidance on how the District will address permit requirements and resultant stormwater quality. The more recent Hydraulic Design Manual (March 2009) addresses stormwater management, erosion control, and maintenance of control measures.

Roadway maintenance activities, which can reduce the discharge of potential pollutants into the District MS4, were performed at variable frequencies during the reporting period. One of the most significant maintenance activities that affects stormwater runoff quality is routine street and hand sweeping. Street sweeping is

normally done once or twice a year, but, on elevated sections, it is performed more often and/or on an as needed basis.

In addition to street and hand sweeping, other roadway maintenance activities for reshaping unpaved shoulders, riprap installation, ditch maintenance, reshaping ditches, and slope repair/stabilization affect stormwater runoff quality. Table 2.3.8 below indicates expenditures for the reporting period.

Table 2.3.8
Storm Sewer System and Drainage Ditch Cleaning

Function Code	Description	Total
455	Reshaping Unpaved Shoulders	$74,379.00
522	Street Sweeping	$568,945.00
527	Hand Sweeping	$2,775.00
560	Riprap Installation and Maintenance	$20,992.00
561	Ditch Maintenance	$46,553.00
562	Reshaping Ditches	$38,099.00
563	Slope Repair/Stabilization	$27,461.00
	Total	**$779,204.00**

Section 3.0 Post-Construction Stormwater Control Measures

3.1 Areas of New Development and Significant Redevelopment

TxDOT has developed the *Stormwater Planning and Design guidelines for New Development and Significant Redevelopment* for its construction and reconstruction projects. This program addresses water quality and storm water management in early stages of the planning process. Storm water management includes both permanent structural controls and non-structural controls to reduce pollutants from roadway runoff.

The District had no further scheduled activities or requirements for this BMP for this reporting period.

3.2 Flood Control Projects

The District does not construct flood management projects. If the District does propose to construct a flood control project, the SWMP will be updated with applicable control measures for Flood Control Projects and TCEQ will be notified of the change.

Section 4.0 Illicit Discharge Detection and Elimination

The District's SWMP requires implementation of programs that address non-stormwater (illicit) discharges, overflows and infiltration, floatables, household hazardous waste, used motor vehicle fluids, and spill prevention response.

4.1 Illicit and Allowable Discharges

TxDOT exempts the following non-stormwater discharges to the MS4:

- Water line flushing;
- Landscape irrigation;
- Diverted steam flows;
- Rising ground waters;
- Uncontaminated ground water infiltration;
- Uncontaminated pumped ground water;
- Discharges form potable water sources;
- Foundation drains;
- Air conditioning condensation;
- Irrigation water;
- Springs;
- Water from crawl space pumps;
- Footing drains;
- Lawn watering;
- Street wash water;
- Individual residential vehicle washing;
- Wash waters using only potable water which are similar in quality and character to street wash water or individual residential vehicle washing but without the use of detergents or surfactants;
- Flows from riparian habitats and wetlands;
- De-chlorinated swimming pool discharges;
- Other allowable non-stormwater discharges listed in 40 CFR 122.26(d)(2)(iv)(B)(1);
- Other allowable non-stormwater discharges as listed in the TPDES Construction General Permit No. TXR150000 and TPDES Multi-Sector General Permit No. TXR050000, as well as other similar occasional incidental non-stormwater discharges, unless the TCEQ develops permits or regulations addressing these discharges.

4.2 Detection and Elimination of Illicit Discharges

During this reporting period, the District has retained consultants to continue and expand upon the Districts ongoing mapping and illicit discharge inspection program. The consultants will focus on two areas:

- Re-inspection and verification of 100% previously mapped outfall locations.
- Mapping and inspection of new outfalls in areas that have been annexed by the City of Arlington.

As the mapping and inspection program progresses the consultants will implement TxDOT protocols (**ENV 302** and **ENV 303**) to handle and mitigate any illicit discharge that may be discovered.

4.2.1 Elimination of Illicit Discharges and Improper Disposal

As noted above, TxDOT protocols outline sampling and mitigation measures that will be followed by personnel who are performing field inspections. The protocols are on file with the TxDOT Environmental Division in Austin.

4.3 Overflows and Infiltration

The District neither owns nor operates any municipal sanitary sewer lines within its ROW nor regulates this activity within its ROW. If a sanitary sewer discharges into the District MS4, the District will notify the sewer owner and request that they provide TxDOT with a description of the corrective measures to be taken along with an implementation schedule. If either the measures and/or schedule are deemed unacceptable, or if the owner cannot be located, the case will be referred to the TCEQ for enforcement. In accordance with the permit, all illicit discharges are reported to TCEQ as part of the District's Annual Report. During the reporting period, there were no reportable events.

4.4 Household Hazardous Waste, Used Motor Vehicle Fluids, and Other Wastes

The District has implemented programs to collect used motor vehicle fluids at all of its facilities for recycle, reuse, and/or proper disposal. During the reporting period, 100% of all used motor oils and fluids were collected by a private contractor, Waste Oil Services, Inc. of Fort Worth for recycling. The District also collects hazardous waste materials (including paint and solvents) for recycle, reuse, and/or proper disposal. During the reporting period, 100% of all solvents were collected for cleanup and disposal by a

separate contractor, Safety Clean, while all paints were disposed of by the District environmental office.

4.5 MS4 Screening and Illicit Discharge Inspections

As noted in Section 4.2 above, consultants have been hired to continue the Districts ongoing mapping and illicit discharge inspection program.

4.6 NPDES and TPDES Permittee List

The District relies upon the City of Arlington identification of TPDES permitted entities that may discharge to the TxDOT ROW.

4.7 MS4 Map

As noted in Section 4.2, consultants have been hired to continue the Districts ongoing mapping activities and will update the District map as new outfalls are identified.

4.8 Spill Prevention and Response

As noted in Section 2.3.3, TxDOT has an emergency response plan in place with the TCEQ to address the cleanup of oil and hazardous material spills. The District also retains an Emergency Response Contractor, Protect Environmental, to address cleanup when the responsible party of a spill cannot be identified.

Section 5.0 Pollution Prevention and Good Housekeeping for TxDOT Operations

5.1 The Pollution Prevention and Good Housekeeping Program

One important component of the Districts pollution prevention and good housekeeping program is employee training. The TxDOT training program lists over 229 courses. Table 5.1 below indicates employee education courses applicable to our Stormwater program and attendance for the reporting period.

Table 5.1
Employee Training

Class Code	Name of Class	Individuals Trained
31SPCC	Spill Prevention Controls & Countermeasures	125
ENV103	Stormwater Pollution Prevention Plans	55
ENV300	Stormwater Erosion & Sediment Control	45
ENV414	EMS Awareness Training	60
	Total Individuals Trained	**285**

Another important component of the Pollution Prevention and Good Housekeeping program consists of inspection and maintenance of installed structural controls along the ROW. During routine maintenance activities along the ROW, any deficiencies discovered are noted and repaired by the appropriate maintenance section. During the reporting period, there were no dredge spoils generated that required special handling or disposal.

5.2 Waste Handling

The District has contracted with a private waste handler for the collection and disposal of all wastes that cannot be discharged to the publically owned treatment works (wastewater plant). This contractor is responsible for the proper disposal of any waste in accordance with permits they have been issued by TCEQ.

5.2.1 Wash Waste from Striping Trucks

The District utilizes private contractors for striping operations. These contractors are responsible for the disposal of any wash waste generated by their activities in accordance with permits they have been issued by TCEQ.

5.2.2 Unknown Materials Found Within the Right-of-Way

The District has contracted with a private contractor for the handling, analysis, collection, and proper disposal of any unknown materials found within the ROW. Section 2.3.3 above is used to address all unknown materials found.

5.3 Pesticide, Herbicide, and Fertilizer Application

TxDOT landscape architects continually review application rates of herbicides to determine the minimum amount of product that will achieve the desired result. The determination of application rates are based on the condition of the ROW, types of vegetative plants involved, and other environmental conditions. TxDOT's landscape architects are also responsible for the training and certification of all TxDOT employees assigned to this duty. During the reporting period, 100% of the personnel involved in the application of herbicides were certified for herbicide application. All herbicide related equipment is also inspected and calibrated each year before the season begins. During the reporting period TxDOT spent $380,953.00 on chemical vegetative control. Table 5.3 below indicates expenditures for the reporting period.

Table 5.3
Pesticide and Fertilizer Application Expenditures

Function Code	Description	Total
540	Hand Vegetation	$16,599.00
541	Chemical Vegetation Control, Edges	$238,828.00
542	Chemical Vegetation Control, Overspray	$142,125.00
544	Chemical Vegetation Control, Rope-Wick	$0.00
545	Chemical Vegetation Control, Basal Application	$0.00
	Total	**$397,552.00**

5.4 List of TxDOT Facilities

TxDOT has no facility within the Arlington city limits.

Section 6.0 Industrial and High Risk Runoff

Not Applicable

The District owns, operates, and maintains the roadways and MS4 within its ROW. There are no industrial or high risk facilities within the District's ROW. If a discharge were being made by an industrial or high risk facility onto District ROW, it would be detected during an illicit discharge inspection. The District has no regulatory authority over any industrial facilities located outside of its ROW, therefore the District will rely on the TCEQ, and adjacent MS4 programs, as applicable, to regulate these facilities and monitor for pollutants in stormwater discharges to the MS4 from these facilities.

Section 7.0 Construction Site Stormwater Runoff

7.1 Structural and Non-structural Control Measures

During the reporting period, there were a total of five new construction projects within the permitted area. Of these projects, three were 5 or more acres in size and had an NOI; the remaining two had only construction site notifications. The District has implemented a formal review process for all construction projects. One part of this review, requires identification of adequate erosion control measures for the project. All five construction projects, that were initiated during the reporting period, were reviewed for the presence of adequate erosion control measures. The District utilizes private contractors to install and maintain appropriate erosion control measures on all construction projects. These measures limit the possibility of pollutants leaving the site.

7.2 Inspection and Enforcement

The Fort Worth District has implemented a construction inspection program which assures compliance with the permit. The District has implemented a policy of 14-day inspection cycles by TxDOT personnel for each project that has a Stormwater Pollution Prevention Plan (SW3P). If a deficiency is found, the contractor is required to correct the deficiencies noted, and a follow-up inspection is performed. This is an iterative process which ensures 100% compliance. TxDOT inspectors evaluate all installed stormwater control measures specified in the SW3P.

7.3 Site Operator Education and Training

Prior to initiation of construction activities, all contractors must meet with the District Area Engineer in a Pre-Construction meeting and discuss stormwater issues for the construction site. At this meeting, contractors are made aware of SW3P practices and policies as they pertain to the Districts Stormwater Program. Compliance with program policies and practices is emphasized. Additionally, the District delivers educational materials to all contractors, and requires the posting of educational materials on all project boards at construction site entrances.

7.4 Site Operators Permitting Responsibility Notification

At all Pre-Construction meetings, the District notifies site operators of their TPDES permitting responsibilities associated with construction activities. This was accomplished for all projects during the reporting period.

Section 8.0 Public Education, Outreach, Involvement, and Participation

8.1 Public Education and Outreach

In addition to the nationally recognized AAH Program, the District has also conducted educational seminars, held special educational activities, and delivered Public Service Announcements throughout the reporting period. At the seminars and special events, different elements of the AAH program are discussed, materials are distributed, and public participation occurs. Table 8.1(a) below provides a listing of activities held during the reporting period. Table 8.1(b) lists information for Public Service Announcements during the reporting period.

Table 8.1(a)
Public Education and Outreach Activities

Date	Organization	Attendees / Distribution
3/25/2014	Crowley Chamber of Commerce	65
3/30/2014	City of Crowley Spring Clean Activity	265
4/11/2014	Somervell/Glen Rose Optimist Club	24
11/6/2013	Texas Community Services Association	86
11/15/2013	Crowley High School	25
1/10/2014 - 2/2/2014	Fort Worth Annual Stock Show (Many different educational materials were made available at a TxDOT Kiosk that addressed litter and water quality) Approximately 1.1 million people attended the event.	N/A
11/22/2013	City of Arlington- Stormwater Awareness materials distribution	4,000
	Total	**4,492**

Table 8.1(b)
Public Service Announcements

Date	Program - Media	Distribution
4/1/2014	News Release - Trash-Off Program - Fort Worth Star Telegram	198,747
4/6/2014	News Release - Trash-Off Program - Fort Worth Star Telegram	279,218
	Total	**477,965**

8.2 Public Involvement and Participation

During the reporting period, more the 60 different civic and school groups and employee organizations participated in litter collection and Trash-Off campaigns. Table 8.2 below lists the names of groups that registered with the District.

Table 8.2	
Public Participation - Groups Engaged	
Group Name	
287 Ryderz Taking Care of Business	Members of Emerald Dragon Circle
Alpha Phi Alpha Zeta Chi Chapter	Metroplex Atheists
American Legion Post 379	Mid-Cities Democrats
Bell Helicopter Textron Employees	Mossier Valley Lodge 103 PHA
Black Student Association - UTA	N.W. YMCA Active Older Adults
Blue Knights LEMC Texas 1	NAS JRB Ft Worth E-6 Assoc
Boswell & Saginaw High Schools	Panther City Lodge #159 PHA Masons
Brad Cavnar Insurance	Phi Alpha Delta
Crowley High School	Professional Ferrier Service / Hoof Pros
Crowley Neighborhood Watch Program	Richland Hills Masonic Lodge 1348
David Eisenberg	River Oaks Lions Club
David Hall State Farm Agency	Shalyn S Clark Insurance Agency
Delta Xi Nu Sorority, Inc.	Shane's Lawn Maintenance
Eaton Corporation	Sigma Gamma Rho/Zeta Delta Sigma
Edward Jones Investments	Six R., Inc
Family and Friends of Anthony J. Kelly	Smithfield Masonic Lodge 455
Filipino American Association of Ft Worth	Southlake Heating and Air
Friends and Family of Nik Evans	Super Value Pharmacy
Girl Scout Troop #3449	TD Ameritrade Corp Services
Golden Rule Printing	TD Ameritrade Professionals
Haslet Lions Club	Texas Power, LP
Hornco Commercial Services	TexComm Company
In memory of Danielle Kelton and Richard Minnaar	The Huffaker Family
Keep Haltom City Beautiful	Tim and Susan Matheus
Keep NRH Beautiful	TX 031 AFJROTC Wing
Keller Church of Christ	UTA - ITE & TSPE
Knights of Columbus	Waverly Park Garden Club
Life Community Church	Western Hills High School Key Club
Lifegate Church	Western Hills High School, AFJROTC
Lockheed Martin Corporation	Young Mens Service League (Trailblazers)

Section 9.0 Monitoring Evaluation and Reporting

9.1 Dry Weather Screening Program

During this reporting period, consultants have been retained to manage and conduct the Districts dry weather screening program. The consultants will focus on two areas:

- Screening of 100% of known outfall locations in the permit area, and
- Identification, mapping, and inspection of new outfalls within the permitted area.

As the mapping and inspection program progresses, the consultants will implement TxDOT protocols to respond to and mitigate any illicit discharge that may be discovered.

9.2 Wet Weather Screening Program

The Fort Worth District has executed an agreement with the North Central Texas Council of Governments (NCTCOG) to participate in the Dallas-Fort Worth Regional Wet Weather Characterization Program (RWWCP).

The NCTCOG RWWCP Plan for the Third Permit Term, dated December 2010, was submitted to the TCEQ and approved on February 11, 2011, this Plan is hereby incorporated by reference. The RWWCP protocol and Quality Assurance Project Plan are also incorporated by reference. Both reports are on file at the District Operations office and can be made available for review upon request.

9.3 Industrial and High Risk Monitoring Program

The District owns, operates, and maintains the roadways and MS4s within its ROW and there are no industrial or high risk facilities within the District's ROW. Therefore, this program does not apply to TxDOT. However, the District does perform environmental reviews of roadway construction projects. The reviews include hazardous materials assessments to identify nearby industrial and other high risk facilities which may impact a proposed construction project from a stormwater quality, waste management, and health and safety perspective. As appropriate, these initial assessments are supplemented with subsurface investigations, which typically include collection and analysis of soil and water samples, to determine the full impact upon the project. As a result of these efforts, the construction projects are designed to avoid, minimize and/or mitigate impacts associated with industrial and high risk facilities.

9.4 Storm Event Discharge Monitoring

TPDES permit No. WQ00046350000 requires the District to select one of three wet weather characterization sampling programs. The Fort Worth District has executed an agreement with NCTCOG to participate in the Dallas-Fort Worth RWWCP (Permit Section IV.A.3.). See section 9.2 above.

9.5 Floatables Monitoring

Floatables monitoring is performed by the City of Arlington and the results are included in the annual report submitted by the City of Arlington.

Section 10.0 Area Specific Requirements

The Texas Surface Water Quality Standards establish water quality goals and provide a basis for regulatory programs to attain those goals. Water quality standards identify water bodies in which the quality may be inadequate to meet its "designated uses." In Texas, the following water use categories are defined: aquatic life use, general, public water supply, contact recreation, and fish consumption. The TCEQ will identify a water body in the Texas Integrated Report for Clean Water Act Sections 305(b) and 303(d), should data reveal water quality does not meet the water body's designated use. Once a water body is on the state's 303(d) list, then that water body is subject to a Total Maximum Daily Load (TMDL) assessment.

The 303(d) list water bodies are located at the following TCEQ website:

http://www.tceq.state.tx.us/compliance/monitoring/water/quality/data/wqm/305_303.html

Section 11.0 Deadlines For SWMP Compliance

TPDES Permit No. WQ00046350000 requires full implementation of the SWMP upon issuance. However, the TCEQ can issue a compliance schedule for certain items contained in the SWMP and/or specify a timeline for compliance as part of the permit. All permit required deadlines were attained by the District.

Section 12.0 Roles and Responsibilities

Per permit requirements, the SWMP, together with any interagency agreements, have identified the roles and responsibilities of TxDOT and the District. Roles and responsibilities for TPDES Permit Citation Part III.B requirements are included in Appendix D of the SWMP which has been incorporated by reference. The District is a party to one stormwater related Inter-local Agreement with the North Central Texas Council of Governments which provides funding and participation in the RWWCP. The District is a co-Permittee with the City of Arlington and University of Texas - Arlington.

Section 13.0 Legal Authority

The Texas Transportation Commission, as provided in Article 6673, Vernon's Annotated Texas Statutes (V.A.T.S.), is authorized to plan, construct, operate, and maintain the state highways system in Texas. TxDOT is the state agency charged with carrying out this authorization. It is stated in Article 6674w-3, V.A.T.S., that TxDOT may acquire lands for the purpose, among many others, of draining any state highway. The statutes, along with rules set forth in the Texas Administrative Code (TAC), give TxDOT the power to construct, operate, and maintain a drainage system for state highways to accommodate the stormwater that originates within, and reaches highway right-of-ways.

TxDOT contracts with others for the construction, and sometimes for the maintenance, of these systems. Article 6674k, V.A.T.S., provides that the form of such contracts must be prescribed by the Texas Transportation Commission and may contain language advantageous to the state. The department may control these systems in this manner. Article 6673b, V.A.T.S., allows TxDOT to enter into necessary contracts with cities regarding various aspects of state highways within their corporate limits. TxDOT, through the TAC, has adopted rules governing these agreements. As a result, there are Municipal Maintenance Agreements with cities that outline the responsibilities regarding, among other things, the maintenance of the highways, which would include the maintenance of the drainage systems appurtenances to the highways.

The TAC further provides that when others desire to cross highways with a drainage facility, the design, construction, operation, and maintenance of the facility must be acceptable to TxDOT. The statutes of the State of Texas give TxDOT the power to control, virtually, all of the activities occurring within the ROW but there is little, if any, authority to regulate discharges occurring off the ROW and flowing into state maintained drainage systems.

Section 14.0 SWMP Resources

TxDOT provides adequate finances, staff, equipment, and support capabilities to implement activities specified in the SWMP. The District spends program funding on litter removal, street sweeping, spot litter pick-up, Adopt-a-Highway programs, vegetation control, ditch maintenance, culvert and storm drain maintenance, stormwater construction activities, and channel maintenance. The cost of District environmental and stormwater training classes are charged to the overhead of each section being trained and are not specifically tracked for stormwater costs. Public involvement and education programs are funded by TxDOT. In the past, some minor funding for specific tasks has come out of the overhead of the District's Advance Project Development section.

All funding for stormwater maintenance, administration and training, and public involvement and education originates with the Texas Legislature and is allocated by this legislature to the department.

Allocation of funds for environmental controls, stormwater management, and training are projected to remain somewhat constant for the foreseeable future. The funding described herein for environmental control, stormwater management, and training do not include money that will be spent directly by the TxDOT on public awareness, public education, promotion, and public reporting programs statewide.

These funds are allocated to the District through TxDOT from the State Highway Trust Fund, which, in turn, receives its funding from the following sources:

- Motor Fuel Tax (46 percent);
- Vehicle Registration Fees (18 percent);
- Lubricant Sales Tax (one percent); and,
- Federal Reimbursements (31 percent).

Annual Stormwater related Function Code expenditures for this reporting period are listed in Table 14.0 below.

Table 14.0 Program Expenditures by Function Code		
Function Code	**Description**	**Total**
455	Reshaping Unpaved Shoulders	$74,379.00
511	Mowing	$828,070.00
513	Spot Mowing	$29,020.00
520	Illegal Dumpsite Removal and Disposal	$3,833.00
521	Litter	$1,065,280.00
522	Street Sweeping	$568,945.00
523	Debris	$560,767.00
524	Spot Litter	$16,020.00
525	Adopt-A-Highway	$16,801.00
526	Sweeping Ice Rock	$0.00
527	Hand Sweeping	$2775.00
540	Hand Vegetation	$165,039.00
541	Chemical Vegetation Control, Edges	$238.828.00
542	Chemical Vegetation Control, Overspray	$165,039.00
544	Chemical Vegetation Control, Rope-Wick	$0.00
545	Chemical Vegetation Control, Basal Application	$0.00
548	Seeding, Sodding, Hydro-mulching and Blanketing	$0.00
551	Landscaping	$0.00
552	Tree and Brush Control	$14,212.00
558	Stormwater Pollution Protection	$0.00
560	Riprap Installation and Maintenance	$20,992.00
561	Ditch Maintenance	$46,553.00
562	Reshaping Ditches	$38,099.00
563	Slope Repair/Stabilization	$27,461.00
570	Culvert and Storm Drain Maintenance	$53,409.00
571	Stormwater Pump Station Maintenance	$0.00
620	Bridge Channel Maintenance	$0.00
809	Assistance to Traffic - Flood Water Removal	$0.00
810	Assistance to Traffic - Debris Removal	$0.00
811	Assistance to Traffic - Snow and Ice	$1,410,732.00
814	Assistance to Traffic - Erosion Control	$0.00
830	Hazardous Materials Cleanup, Spills or Leaking Storage Tanks	$11,641.00
831	Hazardous Materials Cleanup - Abandoned Materials	$29,053.00
	Total	**$5,236,141.00**

Section 15.0 SWMP Review and Updates

The SWMP program is evaluated annually to determine the plan's effectiveness and efficiency. The SWMP will be revised as necessary to support needed changes based on the SWMP evaluation and/or requests made through permit requirements. The annual review of the current SWMP will be conducted in conjunction with the preparation of the annual report, and/or permit renewal process, required under this permit. If required, the SWMP will be revised by TxDOT during the term of the permit in accordance with the approved permit procedures. While not anticipated, TxDOT will implement the SWMP on all new areas added to their portion of the MS4 (or for which they become responsible for implementation of stormwater quality controls) as expeditiously as practicable, but not later than three years from addition of the new areas. Within 90 days of a transfer of ownership, operational authority, or responsibility for SWMP implementation, TxDOT will create a plan for implementing the SWMP on all affected areas

Section 16.0 Retention of SWMP Records

The Fort Worth District SWMP is on file with TCEQ and a copy is maintained at the Fort Worth District office located at 2501 S.W. Loop 820, Fort Worth, Texas 76133.

TxDOT retains the SWMP and all associated records for the permit term, plus three years after coverage under the permit terminates. This holding period is consistent with the permit required retention.

Section 17.0 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 gather and evaluate 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.

2-20-15
(Date)

Brian Barth, P.E.
District Engineer
Fort Worth District

Appendix B: UTA Annual Stormwater Report

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UNIVERSITY OF TEXAS ARLINGTON
OFFICE OF ADMINISTRATION AND CAMPUS OPERATIONS

Annual Report – TPDES Permit No. TXS000301
October 1, 2013 – September 30, 2014

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 gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or these 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

John D. Hall
Vice President for Administration and Campus Operations

OFFICE OF ADMINISTRATION AND CAMPUS OPERATIONS
The University of Texas at Arlington Box 19119 305 Davis Hall Arlington, Texas 76019-0119
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THE UNIVERSITY OF TEXAS AT ARLINGTON
Annual Report – NPDES Permit No. TXS000301
October 1, 2013 – September 30, 2014

1. **Status of Storm Water Management Program** – The University of Texas at Arlington (UT Arlington) has implemented a Storm Water Management Plan covering the portion of the municipal separate storm sewer system within the corporate boundary of the City of Arlington, operated by UT Arlington. The City of Arlington and UT Arlington have an interlocal agreement which clearly identifies the respective roles and responsibilities of the parties.. In addition, a copy of the University's Storm Water Management Plan was submitted to the Environmental Protection Agency (EPA), Region 6 and the City of Arlington, in compliance with Part III, Schedules for Implementation and Compliance, of the City's NPDES Permit No. TXS000301.

   - **Implementation Status** – Prior to implementing a Storm Water Management Plan, UT Arlington had storm water protection procedures in place. The University has complied with regulations set forth in the City's Industrial Waste and Pollution Ordinance and Storm Water Pollution Control Ordinance. In addition, the University developed a policy document referred to as *University Construction Site Procedures for Contractors* outlining Best Management Practices (BMPs) which contractors are required to follow. Future implementation of UT Arlington's Storm Water Management Plan (SWMP) will be guided by the University's Storm Water Management Team (SWM team). Formed in September 1998, the SWM team is headed by the Environmental Health & Safety (EH&S) Office and includes representatives from the Office of Facilities Management, including Grounds and Construction Services. The SWM team reviews all construction plans as required for potential impact on water quality and determines if construction and post construction requirements of UT Arlington's Storm Water Management Plan have been met. A member of the SWM team will participate in meetings of the campus master planning committee to address storm water management needs for future construction.

   - **Structural Controls Operation and Maintenance** – The University monitors open channel drainage systems and restrictions and recommends maintenance or repair to maintain appropriate flow during flood conditions and to maintain water quality.

   - **New Development Regulations** – The UT Arlington policy document, *University Construction Site Procedures for Contractors* and the *Storm Water Quality Best Management Practices for Construction Activities* manual produced by the North Central Texas Council of Governments

(NCTCOG) provides the design criteria for permanent and temporary structural controls during preconstruction, construction and post construction phases. During this reporting period, the SWM team has provided oversight on multiple construction projects.

- **Construction Site Erosion Control Inspections** – The University's EH&S Office developed and administers an inspection program. The EH&S Office inspects all construction sites weekly and checks for proper documentation, proper BMPs, trash / debris collection, chemical storage and other activities associated with construction sites.

- **University Construction Site Procedures** – *The University Construction Site Procedures for Contractors* was amended to include an entire section on storm water management and is updated as needed. A representative of the EH&S Office attends pre-construction and weekly progress meetings to advise contractors on all storm water requirements. The EH&S Office reviews erosion control plans and the plans must be approved before any work begins.

- **Adding Green Space** – The President of the University has directed that green space be added to the campus where it is feasible. The University is now adding green space to parking lots, removing paved areas when possible and replacing with landscaping.

- **Dry Weather Screening** – The EH&S Office conducts water quality monitoring at two sites on campus. These tests are performed monthly using a LaMotte WWMD kit. The purposes of these tests are to aid in locating any illicit connections to the storm drain system that may exist on campus.

- **Street Operations and Maintenance** – The University's Grounds Services provides regular scheduled maintenance to manage sediment, trash, debris, and organic materials on mall areas, sidewalks, streets and in parking garages. Contractors are responsible for maintaining streets and sidewalks associated with construction projects.

- **Flood Control Projects** – Watercourses, storm sewers and structural controls are monitored for severe erosion, bank instability and channel restrictions.

- **Pesticides, Herbicides and Fertilizers** – The University's Grounds Services employs one individual who directs the application of pesticides. This individual is certified by the Texas Structural Pest Control Board.

The University utilizes an integrated pest and fertilizer management program which has reduced the storage, application and disposal of pesticides, herbicides and fertilizers on campus. Grounds Services also assists in the revegitation of disturbed areas associated with construction, maintenance and demolition.

- **Prevent and Contain Spills** – The University has a written *Spill Prevention Control and Counter Measure (SPCC) Plan* to prevent discharge to surface waters of any substance which could cause pollution. EH&S personnel supply, maintain and inspect SPCC drums and conduct monthly inspections of campus emergency generators. University employees receive Hazardous Communication Training as required by the Texas Hazard Communication Act (THCA), which includes general instructions on spill cleanup procedures. EH&S personnel responsible for managing hazardous waste receive Hazardous Waste Operations and Emergency Response (HAZWOPER) training. EH&S personnel respond 24 hours a day, 7 days a week to spills on University properties which threaten or impact surface water quality. The EH&S Office has and maintains a response trailer that is equipped with clean up materials and equipment to respond to any spills on University property.

- **Public Education** – The University publicizes the storm water pollution prevention program through a number of mechanisms such as the EH&S newsletter *Maverick Safety Matters,* the EH&S web page and the student newspaper *The Shorthorn*. The University also provides a drop-off site for the City of Arlington's Leaf Collection Program.

2. **Changes to the Storm Water Management Program** – The Storm Water Management Plan was reviewed and updated in 2013.

3. **Revisions to Assessment of Controls and Fiscal Analysis** – The University is a co-permitee with the City of Arlington and therefore would rely on the City to make recommendations for revisions to Assessment of Controls and Fiscal Analysis. There are no revisions during this reporting period.

4. Annual Expenditures and Projected Expenditures –

FY 13-14 Budget

UT Arlington landscape projects	$ 88,690.00
UT Arlington Earth Day	$ 2,979.00
Total Expenditures	**$ 91,669.00**

FY 14-15 Estimated Budget

UT Arlington landscape projects	$ 16,590.40
Total Expenditures	**$ 16,590.40**

5. Summary of Inspections, Enforcement Actions and Public Education Programs

Inspections (Construction)

Demolition of Forest Glen Apartments - EH&S personnel participated in the pre-construction planning and conducted weekly site inspections.

New Clubhouses - EH&S personnel participated in the pre-construction planning and conducted weekly site inspections.

Green Space Additions – EH&S personnel monitor green space additions and improvements.

Parking Lot Improvements – EH&S personnel monitor parking lot additions and improvements.

Maintenance (Non-Construction)

Removal of foliage, trash and debris from Trading House Creek (ongoing) – Facilities Management personnel conduct continuous maintenance to minimize floatables from entering campus waterways.

Inspection of Facilities Management complex work areas (ongoing) - EH&S personnel monitor the Facilities Management complex work areas to ensure operations do not impact the storm water system.

Incidents (Illicit Discharges)

2-13-14 *Lot 50* – Oil spill cleaned with absorbent.

2-21-14 *Lot 25* - Diesel spill cleaned with absorbent.

6-17-14 *Starbucks* – Oil spill cleaned with absorbent.

8-21-14 *Facilities dumpster/compactor area* - Republic contacted to clean hydraulic fluid.

9-25-14 *Lot 6* – Transmission fluid cleaned with absorbent.

9-25-14 *Lot 47* – Oil and gas cleaned with absorbent.

Public Education Programs

COA Leaf Collection Program - From November till February the university provides a collection site for the City of Arlington's Leaf Collection Program.

Earth Day 2014 - The University's Sustainability Committee sponsored an Earth Day event. The event was held on the University Center Mall area in April 2014. The UT Arlington Sustainability Office, City of Arlington Recycling Coordinator, City of Arlington Environmental Management Office and many other environmental and civic groups were on site to provide information to the students and staff members that attended the event.

Storm Water Pollution Prevention Training – The EH&S Office has developed a Storm Water Pollution Prevention Training program. The training is offered to University employees on an as needed basis. The training includes a history of the Clean Water Act and information on how to reduce non-point source pollution.

6. **Identification of Water Quality Improvements or Degradation** – The University has complied with City ordinances governing storm water for a number of years, resulting in improved water quality. Implementation of the University's Storm Water Management Plan and the associated Best Management Practices (BMPs) has improved the controls on construction sites on campus. The EH&S Office monitors water quality, locates and corrects illicit discharges and monitors the day-to-day operations of various University departments to help improve water quality.

Appendix C: NCTCOG Regional Monitoring Data (RWWCP)

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NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
NCTCOG STORMWATER QUALITY MONITORING PROJECT
NCTCOG PROJECT ID 100031239
City of Arlington 2013

Sample Collection Report
Event Date: October 5, 2013

Storm Summary

Storm description: Moderate to heavy rain moving from the northwest to the southeast occurred.

Rain event start time and date:	1840 10/5/13	Rainfall total:	0.22 in
Rain event end time and date:	2135 10/5/13	Peak 1-hr rate:	0.2 in/hr

Rainfall station:	AR1301
Antecedent dry period:	169 hrs

Comments: Antecedent dry period determined by the Arlington Municipal Airport weather station (KGKY) from www.weatherunderground.com.

AR 1301

Station location description: Johnson Creek at Matlock Road

Flow start time and date:	1850 10/5/13	Time first aliquot collected:	1904 10/5/13
Flow end time and date:	1605 10/6/13	Time last aliquot collected:	2107 10/5/13

Peak depth:	0.529 ft	Aliquots collected:	6
Average depth:	0.073 ft	Total sample volume:	3.5 gal

Comments:

AR 1302

Station location description: Johnson Creek at Meadowbrook Park

Flow start time and date:	1850 10/5/13	Time first aliquot collected:	1929 10/5/13
Flow end time and date:	0005 10/7/13	Time last aliquot collected:	1338 10/5/13

Peak depth:	0.983 ft	Aliquots collected:	6
Average depth:	0.417 ft	Total sample volume:	3.5 gal

Comments:

AR 1303

Station location description: Johnson Creek at E. Copeland Road

Flow start time and date:	1910 10/5/13 Time first aliquot collected: 1920 10/5/13		
Flow end time and date:	0840 10/7/13 Time last aliquot collected: 2124 10/5/13		
Peak depth:	0.978 ft	Aliquots collected:	6
Average depth:	0.469 ft	Total sample volume:	3.5 gal

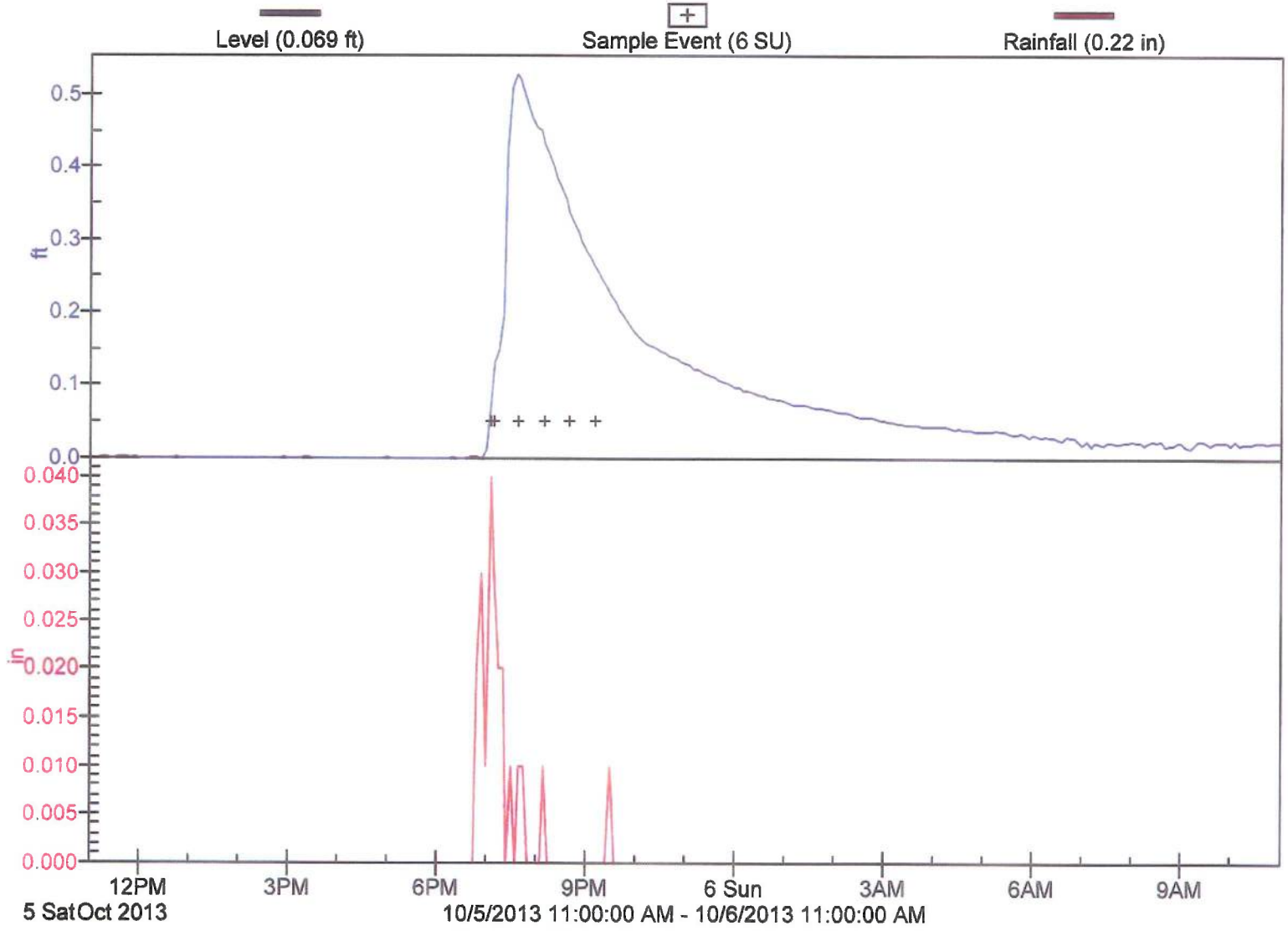
Comments:

Prepared By: Ryan Deal Date: 10-25-13

Checked By: Ty Stanford Date: 10-18-13

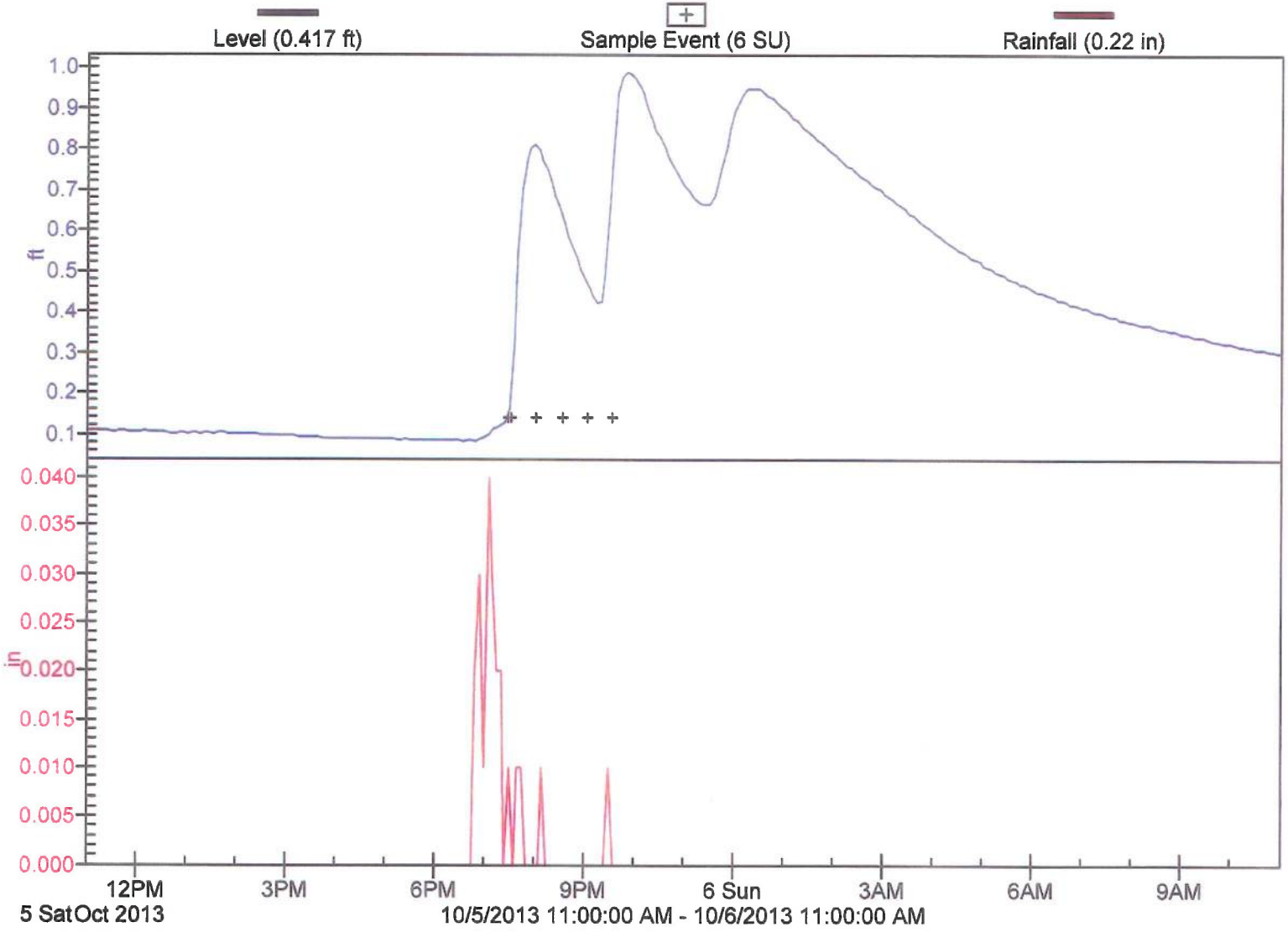
Arlington Johnson Creek

AR1301-4th Quarter



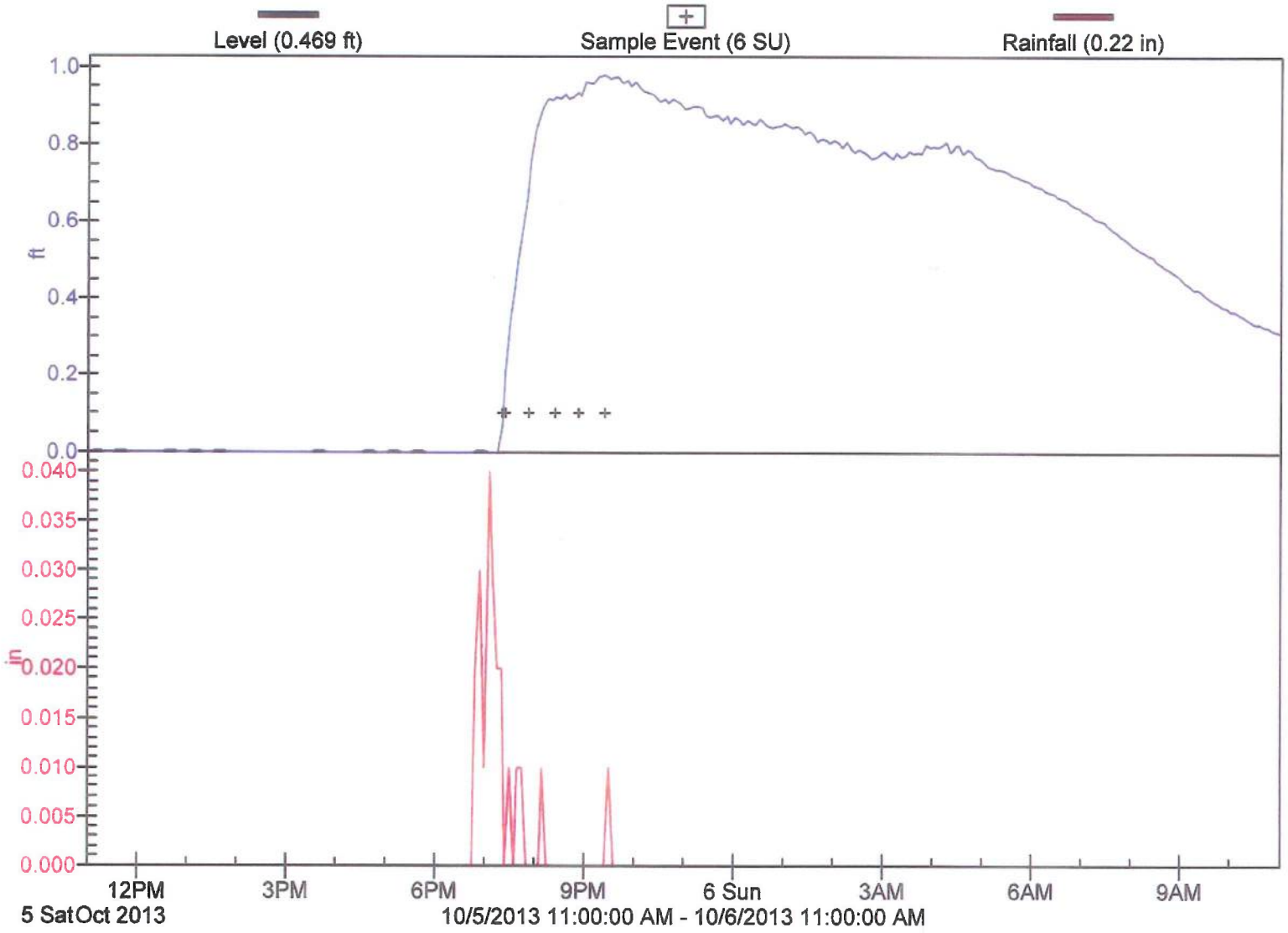
Arlington Johnson Creek

AR1302-4th Quarter



Arlington Johnson Creek

AR1303-4th Quarter



Analytical Results Summary
NCTCOG Stormwater Quality Monitoring Project
NCTCOG Project 100037643
CITY OF ARLINGTON 2013

Storm Event: 10/05/2013 Project Number: 100037643	**AR 1301**	**AR 1302**	**AR 1303**	
PARAMETER NAME	**COMPOSITE**	**COMPOSITE**	**COMPOSITE**	**UNIT**
Total Dissolved Solids (TDS)	174	307	215	mg/L
Total Suspended Solids (TSS)	161.0	33.00	12.67	mg/L
Biochemical Oxygen Demand	12.0	44.0	9.00	mg/L
Chemical Oxygen Demand	28.0	78.0	<1.00 U	mg/L
Total Nitrogen	2.38	<0.05 U	2.05	mg/L
Phosphorus, Dissolved	0.07	0.13	0.09	mg/L
Carbaryl	<0.060 U	<0.060 U	<0.060 U	µg/L
Arsenic, Total	<0.002 U	<0.002 U	<0.002 U	mg/L
Copper, Total	0.018 J	0.018 J	0.013 J	mg/L
Lead, Total	<0.004 U	<0.004 U	<0.004 U	mg/L
Zinc, Total	0.034	0.061	0.027	mg/L
Chromium, Total	0.004 J	0.005 J	0.003 J	mg/L
Phosphorus, Total	0.16	0.23	0.19	mg/L
PARAMETER NAME	**GRAB**	**GRAB**	**GRAB**	**UNIT**
Oil & Grease(HEM)	<1.40 U	<1.40 U	<1.40 U	mg/L
pH (field)	8.7	8.2	8.3	su
Ambient Air Temperature (field)	59.1	58.1	58.7	ºF
Water Temperature (field)	66.7	65.2	64.5	ºF
E. Coli	17.0	20.0	23.0	col/100 mL
Specific Conductivity	343	281	338	µS/cm
Total Coliforms	49000	72000	31000	col/100 mL

">" - Not Identified Above the Upper Detection Limit
"<" - Not Identified Below the Lower Detection Limit
J - Positively Identified Below the Lower Detection Limit
NST - No Sample Taken
U - Undetected

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
NCTCOG STORMWATER QUALITY MONITORING PROJECT
NCTCOG PROJECT ID 100037643
City of Arlington 2014

Sample Collection Report
Event Date: February 2, 2014

Storm Summary

Storm description: Light sleet/rain mix moving west to east.

Rain event start time and date:	0953 2/2/14	Rainfall total:	0.17 in
Rain event end time and date:	1553 2/2/14	Peak 1-hr rate:	0.09 in/hr

Rainfall station:	KGKY
Antecedent dry period:	1029 hrs

Comments: Antecedent dry period determined by the Arlington Municipal Airport weather station (KGKY) from www.weatherunderground.com.

AR 1401

Station location description: Rush Creek @ W. Sublet Road

Comments: Samples were not collected and rainfall data was lost due to pump malfunction/internal battery failure. Will be collected during the next qualifying storm event.

AR 1402

Station location description: Kee Branch @ James Martin High School

Flow start time and date:	1420 2/2/14	Time first aliquot collected:	1443 2/2/14
Flow end time and date:	2115 2/2/14	Time last aliquot collected:	1648 2/2/14

Peak depth:	0.417 ft	Aliquots collected:	6
Average depth:	0.046 ft	Total sample volume:	3.5 gal

Comments:

Sample Collection Report
City of Arlington
Event Date: February 2, 2014

AR 1403

Station location description: Rush Creek @ Woodland Park Blvd

Flow start time and date:	1443 2/2/14	Time first aliquot collected:	1443 2/2/14
Flow end time and date:	Unknown	Time last aliquot collected:	1651 2/2/14
Peak depth:	0.3 feet (est.)	Aliquots collected:	6
Average depth:	Unknown	Total sample volume:	3.5 gal

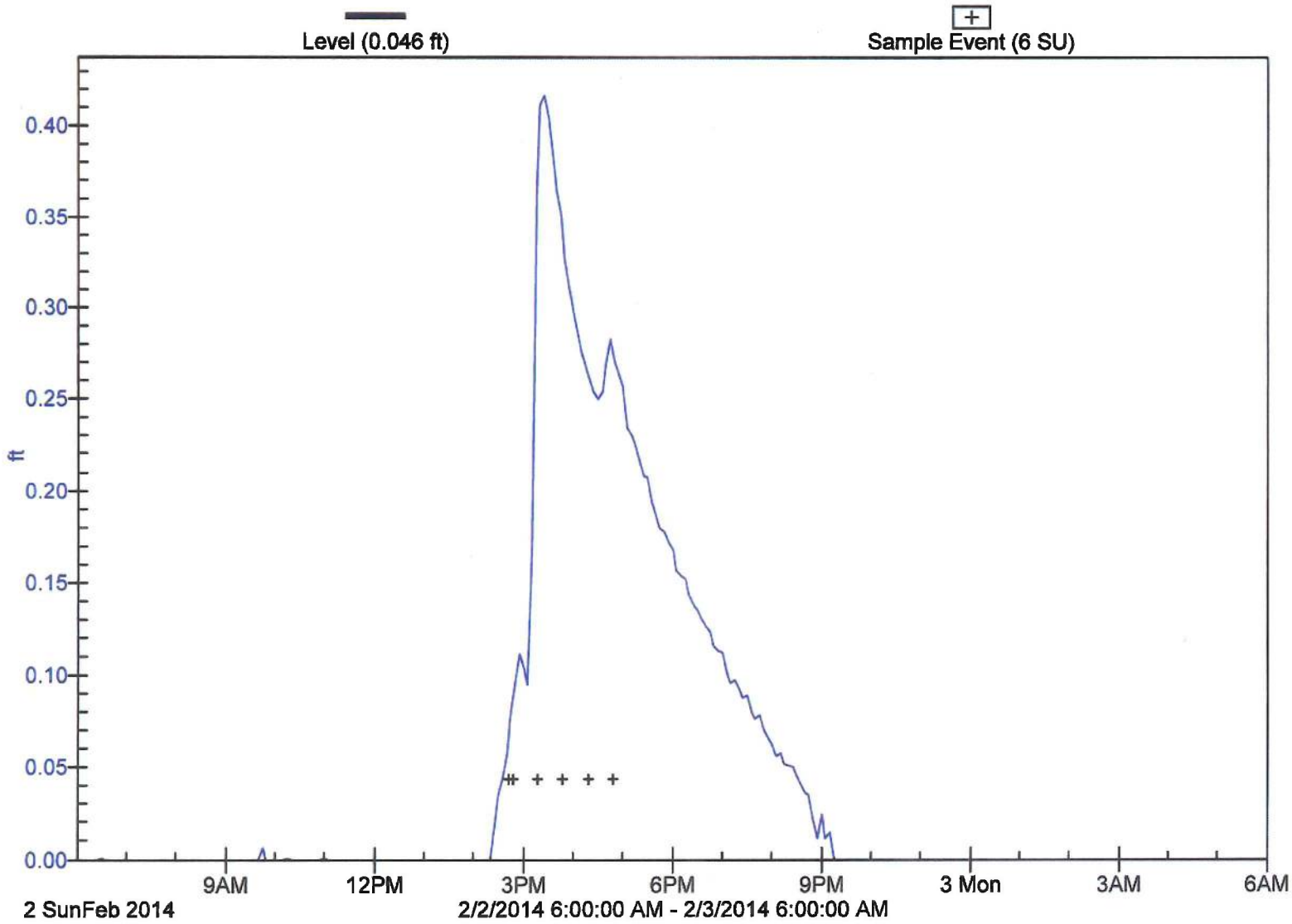
Comments: Samples were collected and taken to the lab. While the sampler was disconnected from power the internal battery failed. This resulted in level data being lost.

Prepared By: Ryan Deal Date: 5/9/14

Checked By: Tony Shadle Date: 5/12/14

Arlington Kee Branch

AR1402 - 1st Quarter



Analytical Results Summary
NCTCOG Stormwater Quality Monitoring Project
NCTCOG Project 100037643
CITY OF ARLINGTON 2014

Storm Event: 02/02/2014 Project Number: 100037643	**AR 1401**	**AR 1402**	**AR 1403**	
PARAMETER NAME	**COMPOSITE**	**COMPOSITE**	**COMPOSITE**	**UNIT**
Total Dissolved Solids (TDS)	NST	868	483	mg/L
Total Suspended Solids (TSS)	NST	21.00	16.00	mg/L
Biochemical Oxygen Demand	NST	3.00	8.00	mg/L
Chemical Oxygen Demand	NST	18.0	28.0	mg/L
Total Nitrogen	NST	1.58	1.77	mg/L
Phosphorus, Dissolved	NST	0.11	0.03	mg/L
Carbaryl	NST	<0.060 U	<0.060 U	µg/L
Arsenic, Total	NST	<0.002 U	0.002 J	mg/L
Copper, Total	NST	0.024	0.020	mg/L
Lead, Total	NST	<0.004 U	<0.004 U	mg/L
Zinc, Total	NST	0.052	0.084	mg/L
Chromium, Total	NST	0.009 J	0.005 J	mg/L
Phosphorus, Total	NST	0.26	0.25	mg/L
PARAMETER NAME	**GRAB**	**GRAB**	**GRAB**	**UNIT**
Oil & Grease(HEM)	NST	<1.40 U	<1.40 U	mg/L
pH (field)	NST	8.2	8.4	su
Ambient Air Temperature (field)	NST	29	29	ºF
Water Temperature (field)	NST	43.6	44.3	ºF
E. Coli	NST	65.00	24.00	col/100 mL
Specific Conductivity	NST	1,345	753	µS/cm
Total Coliforms	NST	12,500	49,500	col/100 mL

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J - Positively Identified Below the Lower Detection Limit
NST - No Sample Taken
U - Undetected

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
NCTCOG STORMWATER QUALITY MONITORING PROJECT
NCTCOG PROJECT ID 100037643
City of Arlington 2014

Sample Collection Report
Event Date: February 25, 2014

Storm Summary

Storm description: Quick moving thunderstorm developed just west of the site and moved east.

Rain event start time and date:	1805 2/25/14	Rainfall total:	0.10 in
Rain event end time and date:	1910 2/25/14	Peak 1-hr rate:	0.09 in/hr

Rainfall station:	AR1401
Antecedent dry period:	554 hrs

Comments: Antecedent dry period determined by the Arlington Municipal Airport weather station (KGKY) from www.weatherunderground.com.

AR 1401

Station location description: Rush Creek @ W. Sublet Road

Flow start time and date:	1810 2/25/14	Time first aliquot collected:	1827 2/25/14
Flow end time and date:	0855 2/26/14	Time last aliquot collected:	2057 2/25/14
Peak depth:	0.327 ft	Aliquots collected:	6
Average depth:	0.155 ft	Total sample volume:	3.5 gal

Comments:

AR 1402

Station location description: Kee Branch @ James Martin High School

Comments: This sample was collected in the last qualifying storm event on 2/2/14.

AR 1403

Station location description: Rush Creek @ Woodland Park Blvd

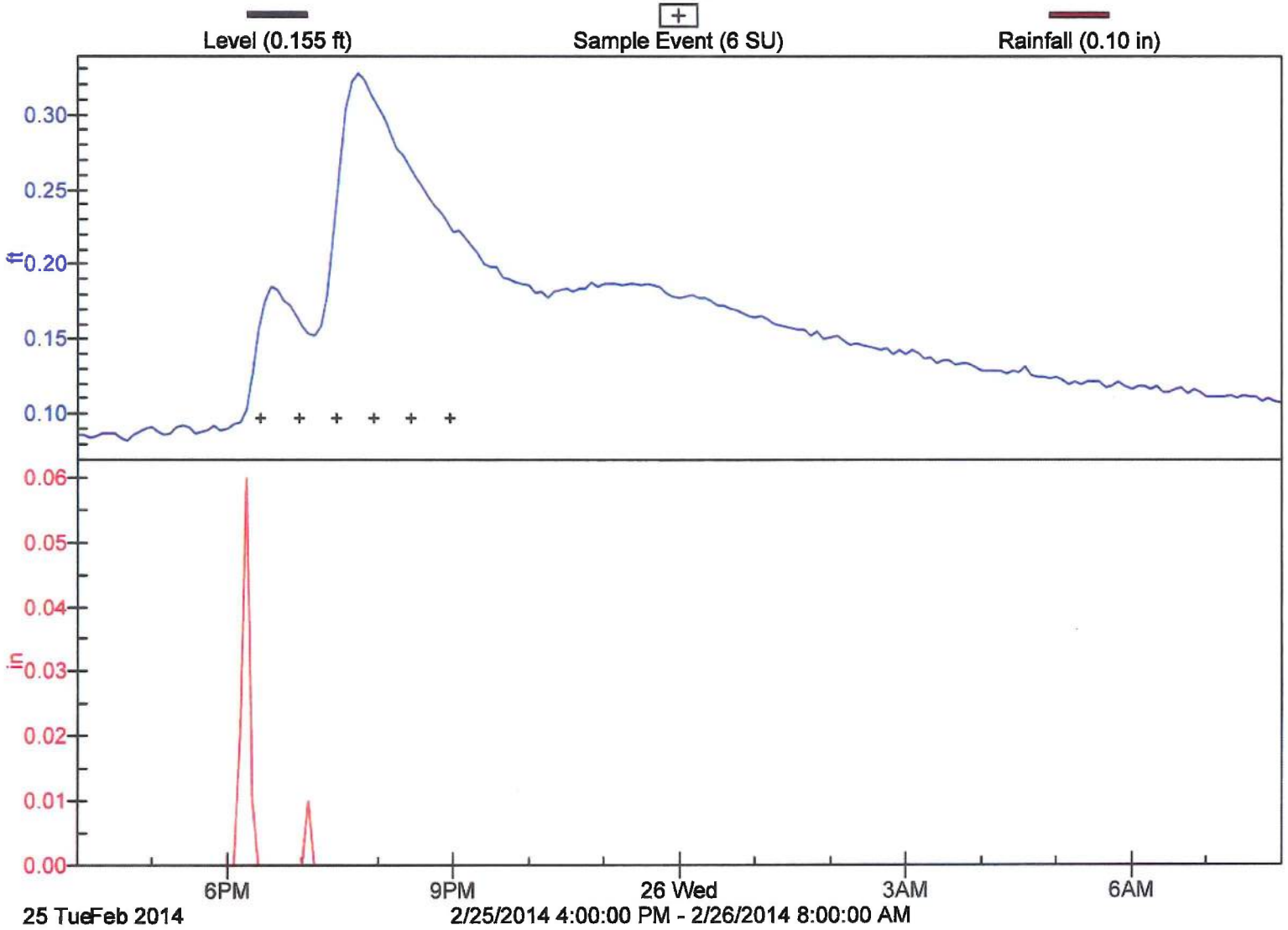
Comments: This sample was collected in the last qualifying storm event on 2/2/14.

Prepared By: Ryan Deal Date: 3-4-2014

Checked By: Ty Shank Date: 3-4-2014

Arlington Rush Creek

AR1401 - 1st Quarter



Analytical Results Summary
NCTCOG Stormwater Quality Monitoring Project
NCTCOG Project 100037643
CITY OF ARLINGTON 2014

Storm Event: 02/25/2014 Project Number: 100037643	**AR 1401**	**AR 1402**	**AR 1403**	
PARAMETER NAME	**COMPOSITE**	**COMPOSITE**	**COMPOSITE**	**UNIT**
Total Dissolved Solids (TDS)	949	NST	NST	mg/L
Total Suspended Solids (TSS)	10.20	NST	NST	mg/L
Biochemical Oxygen Demand	5.00	NST	NST	mg/L
Chemical Oxygen Demand	19.0	NST	NST	mg/L
Total Nitrogen	<0.05 U	NST	NST	mg/L
Phosphorus, Dissolved	<0.005 U	NST	NST	mg/L
Carbaryl	<0.060 U	NST	NST	µg/L
Arsenic, Total	<0.002 U	NST	NST	mg/L
Copper, Total	0.009 J	NST	NST	mg/L
Lead, Total	<0.004 U	NST	NST	mg/L
Zinc, Total	0.017	NST	NST	mg/L
Chromium, Total	0.006 J	NST	NST	mg/L
Phosphorus, Total	0.03	NST	NST	mg/L
PARAMETER NAME	**GRAB**	**GRAB**	**GRAB**	**UNIT**
Oil & Grease(HEM)	<1.40 U	NST	NST	mg/L
pH (field)	8.9	NST	NST	su
Ambient Air Temperature (field)	31	NST	NST	°F
Water Temperature (field)	44.1	NST	NST	°F
E. Coli	80.00	NST	NST	col/100 mL
Specific Conductivity	809	NST	NST	µS/cm
Total Coliforms	1,450	NST	NST	col/100 mL

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J - Positively Identified Below the Lower Detection Limit
NST - No Sample Taken
U - Undetected

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
NCTCOG STORMWATER QUALITY MONITORING PROJECT
NCTCOG PROJECT ID 100037643
City of Arlington 2014

Sample Collection Report
Event Date: April 6, 2014

Storm Summary

Storm description: Heavy rain moving southwest to northeast.

Rain event start time and date:	0420 4/6/14	Rainfall total:	0.25 in
Rain event end time and date:	0110 4/7/14	Peak 1-hr rate:	0.09 in/hr

Rainfall station:	AR1401
Antecedent dry period:	514.5 hrs

Comments: Antecedent dry period determined by the Arlington Municipal Airport weather station (KGKY) from www.weatherunderground.com.

AR 1401

Station location description: Rush Creek @ W. Sublet Road

Comments: Samples were not collected due to lack of rise. Will be collected during the next qualifying storm event.

AR 1402

Station location description: Kee Branch @ James Martin High School

Flow start time and date:	0730 4/6/14	Time first aliquot collected:	0732 4/6/14
Flow end time and date:	0355 4/7/14	Time last aliquot collected:	0937 4/6/14

Peak depth:	1.147 ft	Aliquots collected:	6
Average depth:	0.215 ft	Total sample volume:	3.5 gal

Comments:

AR 1403

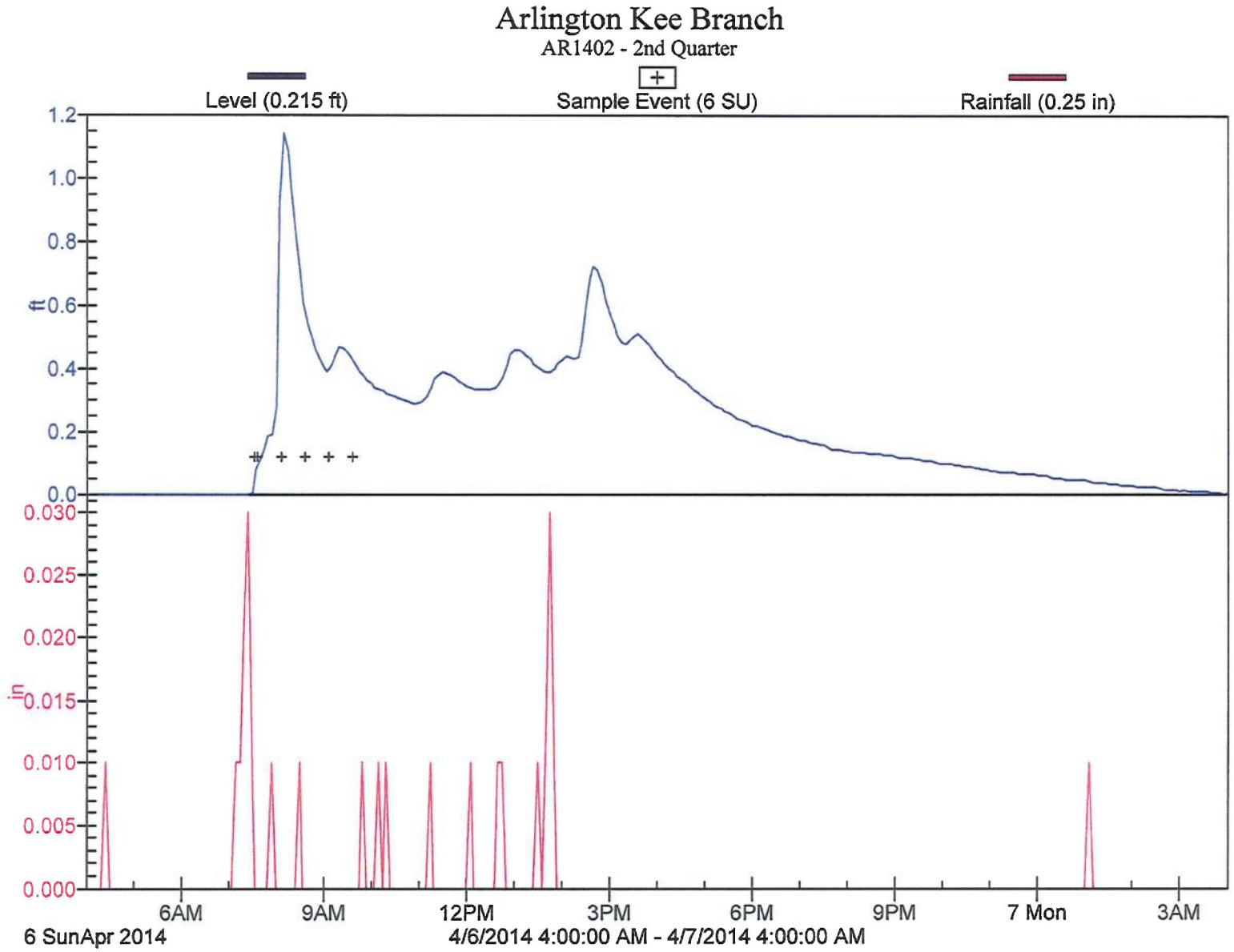
Station location description: Rush Creek @ Woodland Park Blvd

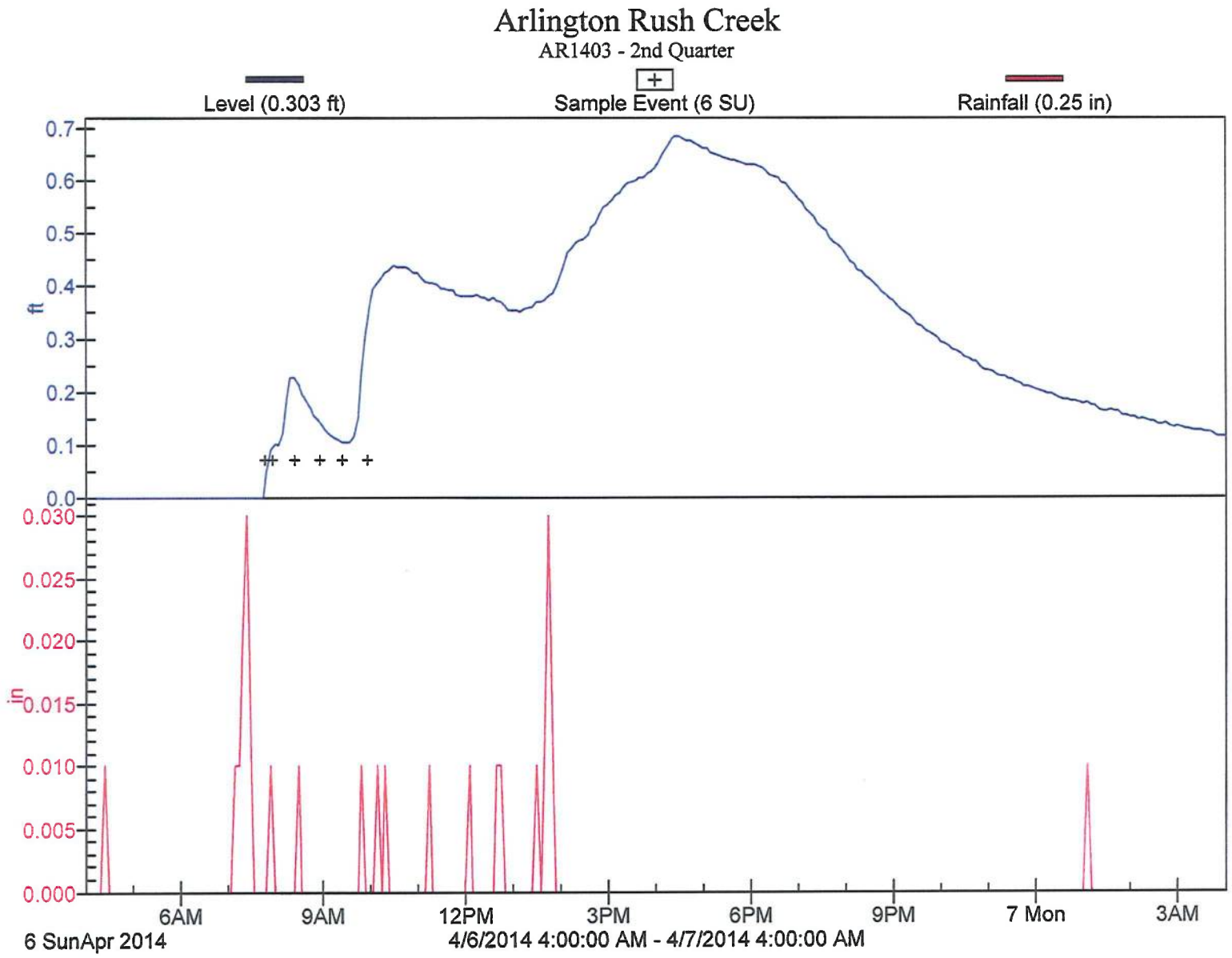
Flow start time and date:	0745 4/6/14	Time first aliquot collected:	0748 4/6/14
Flow end time and date:	1155 4/7/14	Time last aliquot collected:	0956 4/6/14
Peak depth:	0.686 ft	Aliquots collected:	6
Average depth:	0.303 ft	Total sample volume:	3.5 gal

Comments:

Prepared By: Ryan Deal Date: 4-18-14

Checked By: Tony Shanks Date: 4-18-14


Arlington Kee Branch
AR1402 - 2nd Quarter
Level (0.215 ft)
Sample Event (6 SU)
Rainfall (0.25 in)
ft
in
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.030
0.025
0.020
0.015
0.010
0.005
0.000
6AM
9AM
12PM
3PM
6PM
9PM
7 Mon
3AM
6 SunApr 2014
4/6/2014 4:00:00 AM - 4/7/2014 4:00:00 AM


Arlington Rush Creek
AR1403 - 2nd Quarter
Level (0.303 ft)
Sample Event (6 SU)
Rainfall (0.25 in)
ft
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
in
0.030
0.025
0.020
0.015
0.010
0.005
0.000
6AM
9AM
12PM
3PM
6PM
9PM
7 Mon
3AM
6 SunApr 2014
4/6/2014 4:00:00 AM - 4/7/2014 4:00:00 AM

Analytical Results Summary
NCTCOG Stormwater Quality Monitoring Project
NCTCOG Project 100037643
CITY OF ARLINGTON 2014

Storm Event: 04/06/2014 Project Number: 100037643	**AR 1401**	**AR 1402**	**AR 1403**	
PARAMETER NAME	**COMPOSITE**	**COMPOSITE**	**COMPOSITE**	**UNIT**
Total Dissolved Solids (TDS)	NST	258	457	mg/L
Total Suspended Solids (TSS)	NST	158.0	38.00	mg/L
Biochemical Oxygen Demand	NST	26.0	12.0	mg/L
Chemical Oxygen Demand	NST	50.0	36.0	mg/L
Total Nitrogen	NST	2.04	2.27	mg/L
Phosphorus, Dissolved	NST	0.08	0.09	mg/L
Carbaryl	NST	<0.060 U	<0.060 U	µg/L
Arsenic, Total	NST	<0.002 U	<0.002 U	mg/L
Copper, Total	NST	0.010 J	0.013 J	mg/L
Lead, Total	NST	<0.004 U	<0.004 U	mg/L
Zinc, Total	NST	0.024	0.059	mg/L
Chromium, Total	NST	0.004 J	<0.003 U	mg/L
Phosphorus, Total	NST	0.04 J	0.13	mg/L
PARAMETER NAME	**GRAB**	**GRAB**	**GRAB**	**UNIT**
Oil & Grease(HEM)	NST	2.60 J	2.80 J	mg/L
pH (field)	NST	8.5	8.1	su
Ambient Air Temperature (field)	NST	47	47	°F
Water Temperature (field)	NST	57.0	56.5	°F
E. Coli	NST	464.0	410.0	col/100 mL
Specific Conductivity	NST	1,366	998	µS/cm
Total Coliforms	NST	8,820	18,700	col/100 mL

">" - Not Identified Above the Upper Detection Limit
"<" - Not Identified Below the Lower Detection Limit
J - Positively Identified Below the Lower Detection Limit
NST - No Sample Taken
U - Undetected

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
NCTCOG STORMWATER QUALITY MONITORING PROJECT
NCTCOG PROJECT ID 100037643
City of Arlington 2014

Sample Collection Report
Event Date: April 13, 2014

Storm Summary

Storm description: Moderate to heavy thunderstorms moved from southwest to northeast across the area.

Rain event start time and date:	0915 4/13/14	Rainfall total:	0.32 in
Rain event end time and date:	1310 4/13/14	Peak 1-hr rate:	0.20 in/hr

Rainfall station:	AR1401
Antecedent dry period:	176 hrs

Comments:

AR 1401

Station location description: Rush Creek @ W. Sublet Road

Flow start time and date:	1000 4/13/14	Time first aliquot collected:	1024 4/13/14
Flow end time and date:	0125 4/14/14	Time last aliquot collected:	1257 4/13/14

Peak depth:	0.635 ft	Aliquots collected:	6
Average depth:	0.360 ft	Total sample volume:	3.5 gal

Comments:

AR 1402

Station location description: Kee Branch @ James Martin High School

Comments: Samples were collected during the April 6th qualifying event.

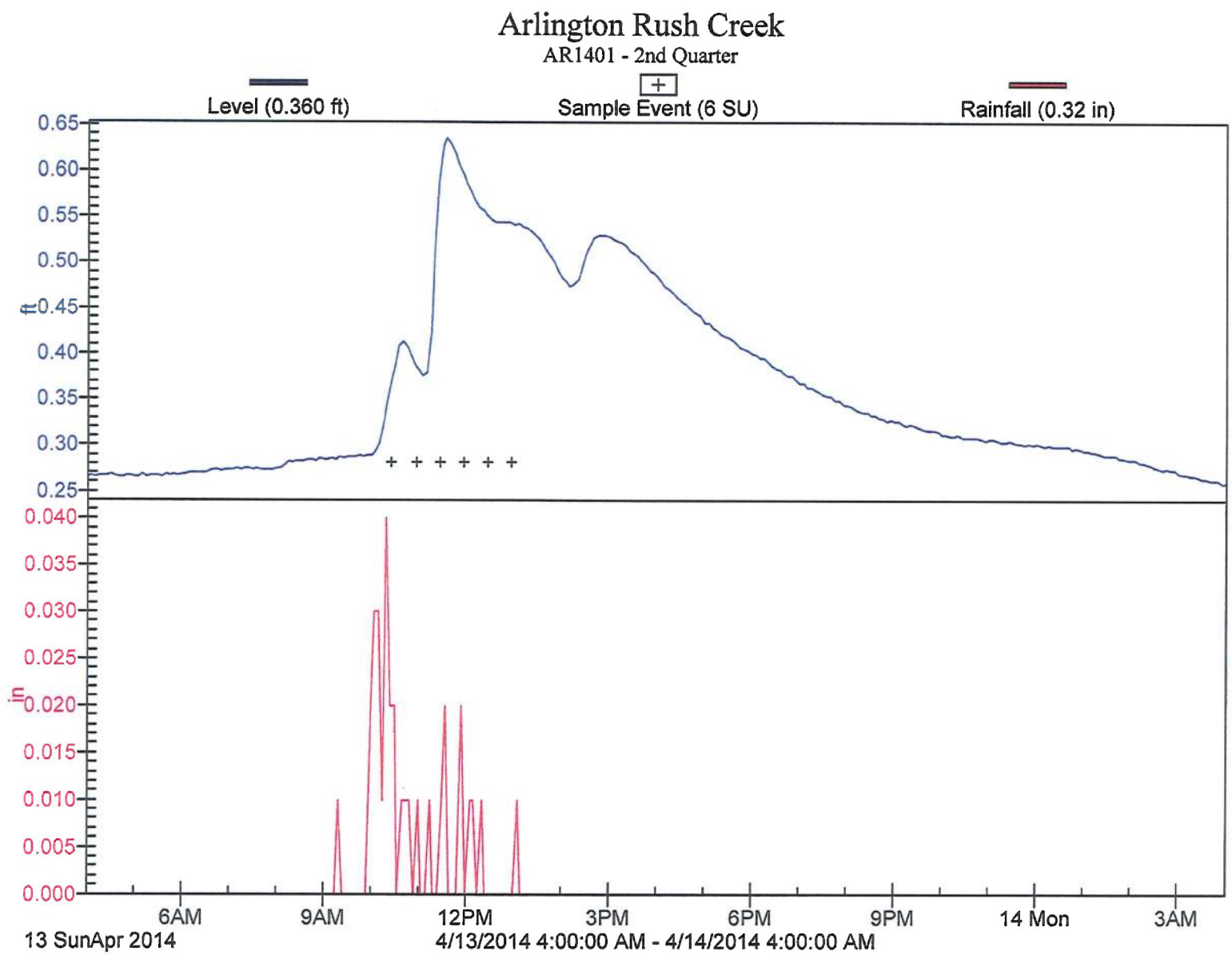
AR 1403

Station location description: Rush Creek @ Woodland Park Blvd

Comments: Samples were collected during the April 6th qualifying event.

Prepared By: Ryan Deal Date: 4-18-14

Checked By: Tony Stanley Date: 4-18-14


Arlington Rush Creek
AR1401 - 2nd Quarter
Level (0.360 ft)
Sample Event (6 SU)
Rainfall (0.32 in)
0.65
0.60
0.55
0.50
ft 0.45
0.40
0.35
0.30
0.25
0.040
0.035
0.030
0.025
in 0.020
0.015
0.010
0.005
0.000
6AM
9AM
12PM
3PM
6PM
9PM
14 Mon
3AM
13 SunApr 2014
4/13/2014 4:00:00 AM - 4/14/2014 4:00:00 AM

Analytical Results Summary
NCTCOG Stormwater Quality Monitoring Project
NCTCOG Project 100037643
CITY OF ARLINGTON 2014

Storm Event: 04/13/2014 Project Number: 100037643	**AR 1401**	**AR 1402**	**AR 1403**	
PARAMETER NAME	**COMPOSITE**	**COMPOSITE**	**COMPOSITE**	**UNIT**
Total Dissolved Solids (TDS)	414	NST	NST	mg/L
Total Suspended Solids (TSS)	19.00	NST	NST	mg/L
Biochemical Oxygen Demand	4.00	NST	NST	mg/L
Chemical Oxygen Demand	23.0	NST	NST	mg/L
Total Nitrogen	1.72	NST	NST	mg/L
Phosphorus, Dissolved	0.06	NST	NST	mg/L
Carbaryl	<0.060 U	NST	NST	µg/L
Arsenic, Total	<0.002 U	NST	NST	mg/L
Copper, Total	0.035	NST	NST	mg/L
Lead, Total	<0.004 U	NST	NST	mg/L
Zinc, Total	0.024	NST	NST	mg/L
Chromium, Total	<0.003 U	NST	NST	mg/L
Phosphorus, Total	0.12	NST	NST	mg/L
PARAMETER NAME	**GRAB**	**GRAB**	**GRAB**	**UNIT**
Oil & Grease(HEM)	3.50 J	NST	NST	mg/L
pH (field)	8.3	NST	NST	su
Ambient Air Temperature (field)	66	NST	NST	°F
Water Temperature (field)	67.8	NST	NST	°F
E. Coli	200.0	NST	NST	col/100 mL
Specific Conductivity	589	NST	NST	µS/cm
Total Coliforms	19,600	NST	NST	col/100 mL

">" - Not Identified Above the Upper Detection Limit
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J - Positively Identified Below the Lower Detection Limit
NST - No Sample Taken
U - Undetected

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS
NCTCOG STORMWATER QUALITY MONITORING PROJECT
NCTCOG PROJECT ID 100037643
City of Arlington 2014

Sample Collection Report
Event Date: July 14, 2014

Storm Summary

Storm description: Very heavy thunderstorms moved slowly from west to east.

Rain event start time and date:	1720 7/14/14	Rainfall total:	1.16 in
Rain event end time and date:	2025 7/14/14	Peak 1-hr rate:	1.06 in/hr

Rainfall station:	AR1401
Antecedent dry period:	480 hrs

Comments: Antecedent dry period determined by the Arlington Municipal Airport weather station (KGKY) from www.weatherunderground.com.

AR 1401

Station location description: Rush Creek @ W. Sublett Road

Flow start time and date:	1805 7/14/14	Time first aliquot collected:	1809 7/14/14
Flow end time and date:	1535 7/15/14	Time last aliquot collected:	2055 7/14/14

Peak depth:	1.635 ft	Aliquots collected:	6
Average depth:	0.420 ft	Total sample volume:	3.5 gal

Comments: An aliquot error did occur during the AR1401 sampling. Program was checked and was confirmed correct. Will perform testing on the sampler in question.

AR 1402

Station location description: Kee Branch @ James Martin High School

Flow start time and date:	1730 7/14/14	Time first aliquot collected:	1804 7/14/14
Flow end time and date:	Unknown	Time last aliquot collected:	2004 7/14/14
Peak depth:	0.67 feet	Aliquots collected:	6
Average depth:	Unknown	Total sample volume:	3.5 gal

Comments: While retrieving data a connection error occurred. As a result, storm data for 3rd quarter was not retrieved from AR1402. The flow end time, date, and average depth could not be determined.

AR 1403

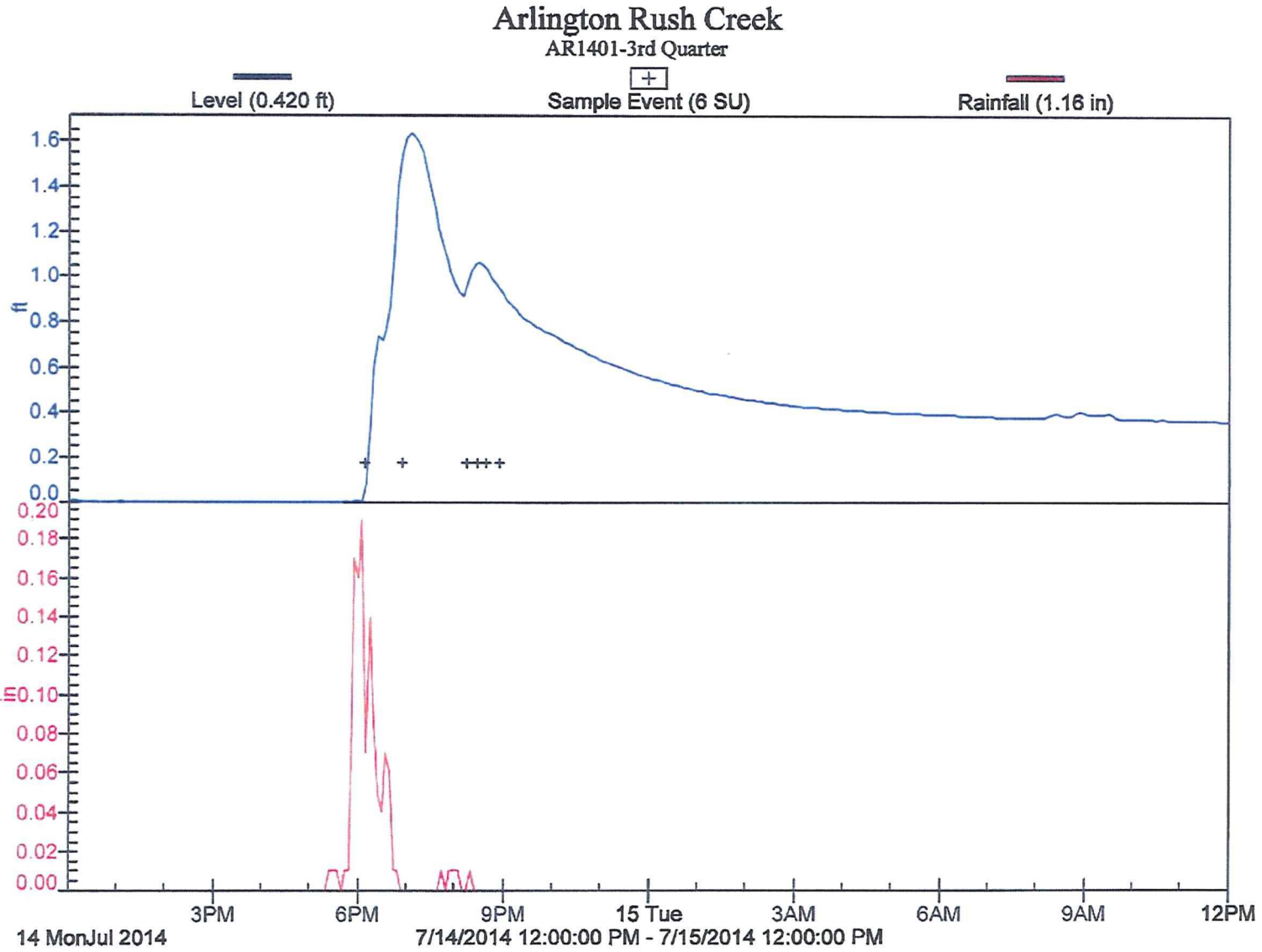
Station location description: Rush Creek @ Woodland Park Blvd

Flow start time and date:	1730 7/14/14	Time first aliquot collected:	1801 7/14/14
Flow end time and date:	Unknown	Time last aliquot collected:	2001 7/14/14
Peak depth:	3.8 feet	Aliquots collected:	6
Average depth:	Unknown	Total sample volume:	3.5 gal

Comments: While retrieving data a connection error occurred. As a result, storm data for 3rd quarter was not retrieved from AR1403. The flow end time, date, and average depth could not be determined.

Prepared By: Ryan Deal Date: 9-15-14

Checked By: Ty Shirley Date: 9-15-14


Arlington Rush Creek
AR1401-3rd Quarter
Level (0.420 ft)
Sample Event (6 SU)
Rainfall (1.16 in)
ft
in
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
3PM
6PM
9PM
15 Tue
3AM
6AM
9AM
12PM
14 MonJul 2014
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Analytical Results Summary
NCTCOG Stormwater Quality Monitoring Project
NCTCOG Project 100037643
CITY OF ARLINGTON 2014

Storm Event: 7/14/2014 Project Number: 100037643	**AR 1401**	**AR 1402**	**AR 1403**	
PARAMETER NAME	**COMPOSITE**	**COMPOSITE**	**COMPOSITE**	**UNIT**
Total Dissolved Solids (TDS)	1080	1260	1940	mg/L
Total Suspended Solids (TSS)	925.0	206.0	514.0	mg/L
Biochemical Oxygen Demand	17.1	4.97	23.3	mg/L
Chemical Oxygen Demand	33.0	47.0	88.0	mg/L
Total Nitrogen	25.3	1.65	3.68	mg/L
Phosphorus, Dissolved	0.12	0.12	0.11	mg/L
Carbaryl	<0.060 U	<0.060 U	<0.060 U	µg/L
Arsenic, Total	<0.002 U	<0.002 U	<0.002 U	mg/L
Copper, Total	0.010 J	0.010 J	0.018 J	mg/L
Lead, Total	0.004 J	<0.004 U	<0.004 U	mg/L
Zinc, Total	0.022	0.022	0.048	mg/L
Chromium, Total	0.006 J	<0.003 U	0.003 J	mg/L
Phosphorus, Total	0.19	0.14	0.20	mg/L
PARAMETER NAME	**GRAB**	**GRAB**	**GRAB**	**UNIT**
Oil & Grease(HEM)	<1.40 U	<1.40 U	1.80 J	mg/L
pH (field)	8.4	8.3	8.1	su
Ambient Air Temperature (field)	77	77	77	ºF
Water Temperature (field)	79.7	79.2	81.2	ºF
E. Coli	6.000	5.000	<1.000 U	col/100 mL
Specific Conductivity	483	423	339	µS/cm
Total Coliforms	3000	7500	5200	col/100 mL

">" - Not Identified Above the Upper Detection Limit
"<" - Not Identified Below the Lower Detection Limit
J - Positively Identified Below the Lower Detection Limit
NST - No Sample Taken
U - Undetected

Appendix D: City of Arlington Inner Creek Sampling Data (N=99)

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LOCATION	DATE	FISCAL YEAR	COLOR	CLARITY	HYDROCARBON SHEEN	ODOR	FLOW	pH	DO	SURFACTANTS	SPEC COND	COPPER	CHLORINE FREE	PHENOL	AMMONIA	SPECIAL CONDITIONS
E Abram Street at Gay Streeet (Meadowbrook Park)	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.01	ND	848	ND	ND	ND	ND	
Findley Drive at Portifino	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.11	ND	3-2.9	ND	ND	ND	ND	
Forum Drive at Cottownwood Creek	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.12	ND	542	ND	ND	ND	ND	
Johnson Creek at Highway 360 (East side of 360)	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.44	ND	590	ND	ND	ND	ND	
N Great Southwest at Randol Mill	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.66	ND	630	ND	ND	ND	ND	
NE Green Oaks At Legacy Park	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	6.09	ND	430.1	ND	ND	ND	ND	
Parkhill at Mossy Oak (N Randol Mill Park)	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.44	ND	355	ND	ND	ND	ND	
Village Creek at Green Oaks (under Interstate 30)	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.80	ND	415	ND	ND	ND	ND	
W Pioneeer Parkway (303) at Matlock	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.20	ND	592.1	ND	ND	ND	ND	
West Randol Mill at Park (adjacent to National Guard)	14-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.20	ND	437	ND	ND	ND	ND	
NE Green Oaks at Forestwood	15-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	10.50	ND	650	ND	ND	ND	ND	
East Mayfield at South 360 (North Fish Creek), South of Mayfield	28-Oct-13	2013-2014	CLEAR	CLEAR	N	N	3	7.50	5.60	ND	232.9	ND	ND	ND	0.00	
Fish Creek at Highway 360 S (Green Oaks and 360)	28-Oct-13	2013-2014	CLEAR	CLEAR	N	N	5	8.00	5.20	ND	489.4	ND	ND	ND	0.00	
Mayfield at Matlock	28-Oct-13	2013-2014	LIGHT BROWN	TURBID	N	N	3	7.00	5.80	ND	281.2	ND	ND	ND	0.00	
Johnson Creek at Center Street	29-Oct-13	2013-2014	CLEAR	CLEAR	N	N	3	7.00	5.20	ND	278	ND	ND	ND	.5	Ammonia due to decomposing organic matter. Light rain.
Rush Creek at Eden Road (by US Hwy 287)	29-Oct-13	2013-2014	NF	NF	N	N	1	0.00	0.00	ND		ND	ND	ND	ND	No Flow
Rush Creek at Sublett Road	29-Oct-13	2013-2014	CLEAR	CLEAR	N	N	3	7.00	4.20	ND	319.9	ND	ND	ND	.5	Ammonia hit due to decomposing organic material in the creek
South 360 at Lynn Creek	29-Oct-13	2013-2014	CLEAR	CLEAR	N	N	5	7.50	6.80	ND	598	ND	ND	ND	0.00	
Spring Miller Road at Mansfield Webb	30-Oct-13	2013-2014	CLEAR	CLEAR	N	N	5	8.00	4.20	ND	889	ND	ND	ND	.5	Ammonia hit due to decomposing organic matter in the creek.
South 360 at Bowman Branch	31-Oct-13	2013-2014	CLEAR	CLEAR	N	N	3	7.50	5.20	ND	763	ND	ND	ND	0.00	
South Collins at South Fish Creek	31-Oct-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.50	4.40	ND	611	ND	ND	ND	.5	Ammonia hit due to decomposing organic matter in the creek
E Abram Street at Gay Streeet (Meadowbrook Park)	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.20	ND	733	ND	ND	ND	ND	
Findley Drive at Portifino	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	6.79	ND	530	ND	ND	ND	ND	
Forum Drive at Cottownwood Creek	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.00	ND	499	ND	ND	ND	ND	
Johnson Creek at Highway 360 (East side of 360)	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.21	ND	612	ND	ND	ND	ND	
N Great Southwest at Randol Mill	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.41	ND	588	ND	ND	ND	ND	
NE Green Oaks At Legacy Park	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.00	ND	480	ND	ND	ND	ND	
Parkhill at Mossy Oak (N Randol Mill Park)	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.50	ND	545	ND	ND	ND	ND	
Village Creek at Green Oaks (under Interstate 30)	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.00	ND	520	ND	ND	ND	ND	
W Pioneeer Parkway (303) at Matlock	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.90	ND	611	ND	ND	ND	ND	
West Randol Mill at Park (adjacent to National Guard)	13-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.50	ND	766	ND	ND	ND	ND	
NE Green Oaks at Forestwood	14-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	8.27	ND	784	ND	ND	ND	ND	
NE Green Oaks At Legacy Park	14-Nov-13	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.47	ND	556	ND	ND	ND	ND	
Fish Creek at Highway 360 S (Green Oaks and 360)	27-Nov-13	2013-2014	CLEAR	CLEAR	N	N	5	6.50	8.80	ND	1068	ND	ND	ND	0.00	

LOCATION	DATE	FISCAL YEAR	COLOR	CLARITY	HYDROCARBON SHEEN	ODOR	FLOW	pH	DO	SURFACTANTS	SPEC COND	COPPER	CHLORINE FREE	PHENOL	AMMONIA	SPECIAL CONDITIONS
South Collins at South Fish Creek	27-Nov-13	2013-2014	LIGHT BROWN	TURBID	N	N	3	6.50	8.20	ND	334	ND	ND	ND	0.00	
Johnson Creek at Center Street	16-Dec-13	2013-2014	CLEAR	CLEAR	N	N	3	6.50	7.20	ND	302.4	ND	ND	ND	.75	High level of decomposing organic matter.
Mayfield at Matlock	16-Dec-13	2013-2014	BROWN	CLEAR	N	N	3	7.50	8.60	ND	447.3	ND	ND	ND	1.00	High level of decomposing organic matter.
South Collins at South Fish Creek	17-Dec-13	2013-2014	CLEAR	CLEAR	N	N	3	8.00	6.20	ND	619	ND	ND	ND	1.5	High level of decomposing organic matter.
East Mayfield at South 360 (North Fish Creek), South of Mayfield	18-Dec-13	2013-2014	CLEAR	+ 120 ntu's	N	N	3	8.58	12.02	ND	696.7	ND	.02	ND	0.00	CRP SAMPLING; UNKNOWN CHLORINE SOURCE; FLOW .02 m/s
Fish Creek at Highway 360 S (Green Oaks and 360)	18-Dec-13	2013-2014	CLEAR	+ 120 ntu's	N	N	3	7.94	10.39	ND	118	ND	ND	ND	.5	CRP SAMPLING; DECOMPOSING ORGANIC MATTER; FLOW .18 m/s
Forum Drive at Cottownwood Creek	18-Dec-13	2013-2014	CLEAR	+ 120 ntu's	N	N	3	7.96	8.51	ND	853.5	ND	ND	ND	0.00	CRP SAMPLING: FLOW .02 m/s
Rush Creek at Sublett Road	18-Dec-13	2013-2014	LIGHT BROWN	+80 ntu's	N	N	3	7.89	9.94	ND	588	ND	ND	ND	.25	CRP SAMPLING; DECOMPOSING ORGANIC MATTER; FLOW .01 m/s
W Pioneeer Parkway (303) at Matlock	18-Dec-13	2013-2014	LIGHT BROWN	+ 120 ntu's	N	N	2	7.42	7.30	ND	846.8	ND	ND	ND	.25	CRP SAMPLING; DECOMPOSING ORGANIC MATTER; FLOW .08 m/s
Cottonwood Creek at Timberlake	19-Dec-13	2013-2014	CLEAR	+ 120 ntu's	N	N	2	7.86	7.95	ND	363.3	ND	ND	ND	0.00	CRP SAMPLING; FLOW .01 m/s
Johnson Creek at Highway 360 (East side of 360)	19-Dec-13	2013-2014	LIGHT GREEN	70 ntu's	N	N	4	9.25	9.73	ND	493.8	ND	.8	ND	1.00	CRP SAMPLING; UPSTREAM WATER LINE BREAK; FLOW .30 m/s
Kee Branch at Pleasant Ridge Road (Martin High School)	19-Dec-13	2013-2014	LIGHT BROWN	+ 75 ntu's	N	N	3	6.75	10.69	ND	648.3	ND	ND	ND	0.00	CRP SAMPLING; FLOW .04 m/s
Rush Creek at Division (W Division at Rush Creek, Forest Edge)	19-Dec-13	2013-2014	BROWN	+ 85	N	N	3	7.64	5.61	ND	596.2	ND	ND	ND	0.00	CRP SAMPLING; FLOW .02 m/s
Village Creek at Green Oaks (under Interstate 30)	19-Dec-13	2013-2014	LIGHT BROWN	+ 100 ntu's	N	N	3	7.94	10.98	ND	619.2	ND	.01	ND	0.00	CRP SAMPLING; UNKNOWN CHLORINE SOURCE; FLOW .01 m/s
Rush Creek at Eden Road (by US Hwy 287)	26-Dec-13	2013-2014	NF	NF	N	N	1	0.00	0.00	ND		ND	ND	ND	ND	No flow due to blockage and erosion at box culvert.
South 360 at Bowman Branch	26-Dec-13	2013-2014	CLEAR	CLEAR	N	N	3	7.40	6.20	ND	12.2	ND	ND	ND	1.00	DECOMPOSING ORGANIC MATTER(LEAF LITTER)
South 360 at Lynn Creek	26-Dec-13	2013-2014	LIGHT BROWN	TURBID	N	N	3	7.50	7.90	ND	310.7	ND	ND	ND	1.00	DECOMPOSING ORGANIC MATTER(LEAF LITTER)
Spring Miller Road at Mansfield Webb	26-Dec-13	2013-2014	LIGHT GREEN	TURBID	N	N	3	6.50	2.40	ND	1363	ND	.2	ND	.5	TESTED UPSTREAM CHLORINE NOT DETECTED. LOW DO DUE TO REGULAR LOW FLOW & DECOMP. ORGANIC MATTER.
Fish Creek at Highway 360 S (Green Oaks and 360)	21-Jan-14	2013-2014	CLEAR	CLEAR	N	N	3	7.00	5.40	ND	1477	ND	ND	ND	.5	DECOMPOSING LEAF LITTER AND OTHER ORGANIC MATTER
South Collins at South Fish Creek	21-Jan-14	2013-2014	CLEAR	CLEAR	N	N	3	7.50	7.80	ND	682	ND	ND	ND	1.00	Heavy amount of decomposing leaf litter and organic material
Johnson Creek at Center Street	29-Jan-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.50	12.20	ND	517	ND	ND	ND	0.00	
Spring Miller Road at Mansfield Webb	29-Jan-14	2013-2014	LIGHT GREEN	CLEAR	N	N	3	8.00	5.80	ND	868	ND	ND	ND	.75	Heavy amount of decomposing leaf litter and organic material
Rush Creek at Eden Road (by US Hwy 287)	30-Jan-14	2013-2014	NF	NF	N	N	1	0.00	0.00	ND		ND	ND	ND	ND	NO FLOW DUE TO EROSION AND DEBRIS
E Abram Street at Gay Streeet (Meadowbrook Park)	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.08	ND	702	ND	ND	ND	ND	
Findley Drive at Portifino	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.06	ND	420.8	ND	ND	ND	ND	
Forum Drive at Cottownwood Creek	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.00	ND	827	ND	ND	ND	ND	
Johnson Creek at Highway 360 (East side of 360)	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.70	ND	684	ND	ND	ND	ND	
N Great Southwest at Randol Mill	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.45	ND	1218	ND	ND	ND	ND	

LOCATION	DATE	FISCAL YEAR	COLOR	CLARITY	HYDROCARBON SHEEN	ODOR	FLOW	pH	DO	SURFACTANTS	SPEC COND	COPPER	CHLORINE FREE	PHENOL	AMMONIA	SPECIAL CONDITIONS
NE Green Oaks at Forestwood	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.58	ND	1332	ND	ND	ND	ND	
NE Green Oaks At Legacy Park	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.60	ND	1036	ND	ND	ND	ND	
Parkhill at Mossy Oak (N Randol Mill Park)	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.70	ND	595	ND	ND	ND	ND	
Village Creek at Green Oaks (under Interstate 30)	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.74	ND	816	ND	ND	ND	ND	
W Pioneeer Parkway (303) at Matlock	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	1	0.00	0.00	ND		ND	ND	ND	ND	NO FLOW
West Randol Mill at Park (adjacent to National Guard)	26-Feb-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.00	ND	413	ND	ND	ND	ND	
Forum Drive at Cottownwood Creek	25-Mar-14	2013-2014	CLEAR	120 NTU	N	N	3	7.83	8.41	ND	621.7	ND	ND	ND	0.00	CRP SAMPLING; FLOW RATE .01 FT/SEC
East Mayfield at South 360 (North Fish Creek), South of Mayfield	27-Mar-14	2013-2014	LIGHT BROWN	120 NTU	N	N	4	8.27	10.59	ND	772.5	ND	ND	ND	.25	CRP SAMPLING; -.97 FT/SEC
Rush Creek at Division (W Division at Rush Creek, Forest Edge)	27-Mar-14	2013-2014	LIGHT BROWN	100 NTU	N	N	3	7.37	4.36	.1 PPM	595.4	ND	1.5 PPM	ND	.25 PPM	CRP SAMPLING; -1.3 FT/SEC
Village Creek at Green Oaks (under Interstate 30)	27-Mar-14	2013-2014	BROWN	55 NTU	N	N	3	7.42	7.05	ND	782.4	ND	ND	ND	0.00	CRP SAMPLING ; FLOW RATE -.08 FT/SEC
W Pioneeer Parkway (303) at Matlock	27-Mar-14	2013-2014	LIGHT BROWN	45 NTU	N	N	2	7.54	5.46	ND	805.01	ND	ND	ND	0.00	CRP SAMPLING; -.16 FT/SEC ; FLOW IS BLOCKED DOWSTREAM FROM SITE BY CONCRETE
Cottonwood Creek at Timberlake	31-Mar-14	2013-2014	LIGHT BROWN	120	N	N	3	8.25	12.27	ND	812.4	ND	.4 PPM	ND	1.5 PPM	CRP SAMPLING; FLOW RATE -.03 FT/SEC
Fish Creek at Highway 360 S (Green Oaks and 360)	31-Mar-14	2013-2014	LIGHT BROWN	110 NTU	N	N	3	7.77	8.56	ND	1030	ND	ND	ND	.25	CRP SAMPLING ; FLOW RATE .02 FT/SEC
Kee Branch at Pleasant Ridge Road (Martin High School)	31-Mar-14	2013-2014	BROWN	120 NTU	N	N	3	7.75	7.45	ND	1454	ND	ND	ND	0.00	CRP SAMPLING; FLOW RATE -.70 FT/SEC
Rush Creek at Sublett Road	31-Mar-14	2013-2014	CLEAR	120 NTU	N	N	3	7.65	7.10	ND	1260	ND	ND	ND	0.00	CRP SAMPLING; FLOW RATE .03 FT/SEC
Forum Drive at Cottownwood Creek	22-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.01	ND	259.3	ND	ND	ND	ND	
W Pioneeer Parkway (303) at Matlock	22-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	7.14	ND	197.9	ND	ND	ND	ND	
Findley Drive at Portifino	23-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	6.24	ND	412.6	ND	ND	ND	ND	
Parkhill at Mossy Oak (N Randol Mill Park)	23-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.14	ND	708	ND	ND	ND	ND	
West Randol Mill at Park (adjacent to National Guard)	23-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	1.75	ND	360.5	ND	ND	ND	ND	LOW D O.
N Great Southwest at Randol Mill	24-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.04	ND	861	ND	ND	ND	ND	
NE Green Oaks at Forestwood	24-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	8.05	ND	1302	ND	ND	ND	ND	
NE Green Oaks At Legacy Park	24-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	6.09	ND	609	ND	ND	ND	ND	
Village Creek at Green Oaks (under Interstate 30)	24-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	3.07	ND	578	ND	ND	ND	ND	
E Abram Street at Gay Streeet (Meadowbrook Park)	25-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.60	ND	523	ND	ND	ND	ND	
Johnson Creek at Highway 360 (East side of 360)	25-Apr-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	4.17	ND	429	ND	ND	ND	ND	
Johnson Creek at Highway 360 (East side of 360)	27-Aug-14	2013-2014	LIGHT GREEN	120 NTU	N	N	3	7.54	7.07	ND	536.1	ND	.2 PPM	ND	.25 PPM	CRP SAMPLING; FLOW RATE -.20 FT/SEC
Mayfield at Matlock	29-Sep-14	2013-2014	CLEAR	CLEAR	N	N	2	7.50	5.27	ND	376.7	ND	ND	ND	ND	
Rush Creek at Division (W Division at Rush Creek, Forest Edge)	29-Sep-14	2013-2014	CLEAR	CLEAR	N	N	2	7.50	14.00	ND	379.8	ND	ND	ND	ND	
Rush Creek at Twincreek	29-Sep-14	2013-2014	CLEAR	CLEAR	N	N	1	8.50	16.29	ND	351.5	ND	ND	ND	ND	
South Collins at South Fish Creek	29-Sep-14	2013-2014	CLEAR	CLEAR	N	N	3	7.00	5.80	ND	326.1	ND	ND	ND	ND	
Spring Miller Road at Mansfield Webb	29-Sep-14	2013-2014	LIGHT BROWN	CLEAR	N	N	0	0.00	0.00	ND		ND	ND	ND	ND	
Village Creek at Green Oaks (under Interstate 30)	29-Sep-14	2013-2014	LIGHT BROWN	CLEAR	N	N	2	7.00	8.99	ND	299.4	ND	ND	ND	ND	
Village Creek at I-20 (Service Road)	29-Sep-14	2013-2014	LIGHT BROWN	CLEAR	N	N	3	7.00	5.25	ND	376.8	ND	ND	ND	ND	
South Bowen at Lynnwood	30-Sep-14	2013-2014	CLEAR	CLEAR	N	N	2	7.00	6.75	ND	499	ND	ND	ND	ND	

LOCATION	DATE	FISCAL YEAR	COLOR	CLARITY	HYDROCARBON SHEEN	ODOR	FLOW	pH	DO	SURFACTANTS	SPEC COND	COPPER	CHLORINE FREE	PHENOL	AMMONIA	SPECIAL CONDITIONS
W Pioneer Parkway (303) at Rush Creek	30-Sep-14	2013-2014	LIGHT BROWN	CLEAR	N	N	2	7.20	8.80	ND	473.8	ND	ND	ND	ND	

Appendix E: NCTCOG Public Education Task Force (PETF) Summary Report

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North Central Texas Council of Governments

Public Education
Activity Report
October 1, 2013, to September 30, 2014

The purpose of this activity report is to document the public education-related initiatives conducted by the Stormwater Public Education Task Force (PETF) under the direction of the Regional Stormwater Management Coordinating Council (RSWMCC) that took place from October 1, 2013, to September 30, 2014. The PETF's mission is to promote Municipal Stormwater Public Education in North Central Texas through the exchange of professional experience and to explore, develop, and implement opportunities for mutual cooperation. Participation in the PETF and education campaigns is a volunteer effort to help meet stormwater public educational requirements.

During this reporting period, the PETF focused primarily on five educational campaigns to address lawn and garden care, general stormwater issues, and the proper management of pet waste, fallen tree leaves/yard waste, and fats, oils, and grease (FOG). Other cooperative efforts were also conducted during the October 1, 2013, to September 30, 2014, time period (identified in the "Other" section). See the sections below for specifics.

Lawn and Garden Care

The purpose of the lawn and garden care campaign, known as "March Is Texas SmartScape® Month," is to encourage the public (specifically homeowners and/or landscape companies) to use native and adapted plants in the landscape and adopt proper design, care, and maintenance techniques. Texas SmartScape plants need less water, pesticides, and fertilizers to thrive, thus reducing these pollutants from landscape runoff.

"March Is Texas SmartScape Month" has been identified as a Regionally Developed Initiative (RDI) and provides local governments with the opportunity to join others in a common goal to educate citizens on stormwater pollution prevention. The campaign was primarily promoted during the month of March; however, activities occurring outside this month falling in the October 1, 2013, to September 30, 2014, time period are included.

1. Bookmarks

The Texas SmartScape bookmarks were developed in 2003. The bookmarks were updated in 2013 with new photographs and a new layout. Each bookmark has a photo of a SmartScape plant on the front with the Texas SmartScape website address. On the back of the bookmarks, there is a description about the environmental benefits of Texas SmartScape plants.

A total of 10,650 bookmarks were cooperatively purchased in April 2014 for the purpose of distributing by the following 15 organizations: City of Azle, City of Bedford, City of Burleson, City of Dallas, City of Duncanville, City of Frisco, City of Fort Worth, City of Garland, City of Grapevine, Town of Highland Park, City of Hurst, City of Mansfield, City of McKinney, City of North Richland Hills, and City of Rockwall.

2. Website

The Texas SmartScape website (www.txsmartscape.com) was developed for the North Central Texas region in 2003 and for the West Texas region in 2005 through the sponsorship of several organizations. It is an interactive how-to guide that teaches concepts of landscaping with native and adapted plants; it also offers proper design, care, and maintenance techniques that are

environmentally friendly. The most popular feature of this website is the plant search database, which helps the public select SmartScape plants that are appropriate for their yards/projects.

The website was completely updated in 2013 to include a new layout and photographs. The information remains the same, but the website is now more user-friendly and has a more modern feel.

Table 1: User statistics for the Texas SmartScape website (www.txsmartscape.com) by month.

Month	Users	Sessions	Page Views	Avg. Session Duration
October 2013	4,110	5,229	30,914	4:32
November 2013	3,279	2,085	64,553	9:45
December 2013	1,702	1,569	12,854	4:28
January 2014	2,897	3,620	26,884	4:57
February 2014	4,875	6,204	50,606	5:16
March 2014	11,557	15,064	125,456	5:40
April 2014	13,984	18,208	132,879	4:55
May 2014	12,564	16,211	107,089	4:29
June 2014	8,974	11,116	60,209	3:51
July 2014	7,646	9,378	45,226	3:33
August 2014	7,000	8,710	40,378	3:33
September 2014	7,091	8,625	41,438	3:31
Total	85,679	106,019	738,486	Avg: 4:45

Table 2: User statistics for the Texas SmartScape website (www.txsmartscape.com) based on location (only stormwater program participants and/or organizations located in the North Central Texas region are listed).

Organization	Sessions	Pages per Session	Avg. Session Duration	New Sessions (%)	Bounce Rate (%)
Addison	89	7	4:10	72	44
Aledo	110	8	5:08	73	46
Allen	1,160	8	5:44	73	41
Alvarado	17	5	5:53	76	41
Anna	92	5	4:30	64	54
Argyle	118	14	7:50	69	39
Arlington	4,001	8	5:51	64	40
Athens	29	5	3:32	86	45
Aubrey	12	4	2:39	92	42
Azle	190	7	5:02	75	48
Bedford	570	9	5:49	65	39
Blue Ridge	10	2	1:28	100	70
Bonham	37	5	5:59	81	38
Bowie	13	6	5:59	100	38
Bridgeport	38	11	9:51	76	39
Brownsboro	1	1	0:00	100	100
Burleson	603	7	5:15	54	48

Organization	Sessions	Pages per Session	Avg. Session Duration	New Sessions (%)	Bounce Rate (%)
Caddo Mills	25	3	2:06	84	60
Campbell	3	3	1:20	100	67
Canton	27	13	9:39	85	30
Carrollton	1,358	9	5:27	70	40
Cedar Hill	171	6	4:18	68	41
Celeste	7	14	8:26	29	43
Celina	28	3	1:07	82	54
Chandler	3	5	0:59	100	67
Cleburne	190	9	6:04	59	33
Clifton	6	2	0:36	67	50
Colleyville	174	4	3:09	55	69
Comanche	7	26	8:22	43	29
Commerce	88	2	1:40	26	85
Cooper	2	5	8:16	100	50
Coppell	668	8	5:19	59	38
Corsicana	38	4	6:21	79	37
Crandall	16	2	2:53	63	50
Crowley	138	9	6:13	57	46
Cumby	1	1	0:00	100	100
Dallas	9,028	7	5:02	70	43
De Leon	16	6	6:53	44	44
Decatur	122	5	4:54	62	44
Denton	1,295	8	5:50	70	41
DeSoto	162	7	5:17	69	45
Duncanville	146	7	5:14	77	44
Emory	9	11	11:43	67	44
Ennis	49	18	0:13	59	37
Euless	297	7	5:00	67	42
Fairfield	25	10	3:57	88	56
Farmersville	10	3	0:28	100	50
Ferris	13	4	2:51	85	54
Flower Mound	860	7	4:29	69	42
Forney	302	8	5:46	79	49
Fort Worth	10,383	11	8:17	58	31
Frisco	2,378	8	5:22	66	45
Gainesville	188	14	8:58	62	48
Garland	2,130	10	7:09	65	38
Glen Rose	43	7	4:35	67	47
Granbury	332	8	5:25	70	45

Organization	Sessions	Pages per Session	Avg. Session Duration	New Sessions (%)	Bounce Rate (%)
Grand Prairie	492	9	5:51	74	42
Grapevine	1,876	6	6:03	57	39
Greenville	97	9	4:41	66	43
Haltom City	84	9	6:02	76	29
Hamilton	7	2	1:02	100	71
Hico	3	14	19:30	100	33
Hillsboro	13	2	1:42	85	77
Honey Grove	4	5	1:53	100	50
Hubbard	1	1	0:00	100	100
Hurst	334	9	7:51	53	38
Hutchins	3	5	1:06	100	67
Irving	1,316	8	4:38	70	45
Italy	4	9	4:57	75	75
Itasca	5	6	2:03	80	20
Jacksboro	15	2	0:38	40	53
Joshua	6	5	7:49	83	33
Justin	124	10	8:19	47	48
Kaufman	15	9	4:08	73	33
Keene	11	7	3:49	82	45
Keller	795	7	5:28	66	45
Kemp	1	1	0:00	100	100
Kennedale	16	3	2:16	88	56
Krum	9	12	15:04	67	22
Lake Dallas	20	7	6:24	90	50
Lancaster	21	3	1:31	86	57
Leonard	11	9	5:33	91	18
Lewisville	863	7	4:48	62	47
Lipan	21	5	3:55	71	38
Little Elm	336	9	6:32	72	42
Lone Oak	3	6	6:25	100	33
Mabank	19	12	8:30	79	47
Mansfield	811	8	6:07	70	37
Maypearl	5	9	6:10	100	60
McKinney	2,168	7	4:26	66	46
Melissa	24	14	5:51	96	25
Mesquite	457	9	5:29	69	47
Midlothian	261	6	4:22	61	44
Milford	14	4	3:05	29	71
Mineral Wells	78	8	5:28	67	49

Organization	Sessions	Pages per Session	Avg. Session Duration	New Sessions (%)	Bounce Rate (%)
Montague	1	2	0:36	100	0
Muenster	24	5	3:06	88	75
Nevada	24	16	7:33	50	58
Newark	12	7	5:56	83	42
North Richland Hills	1,149	8	5:50	61	42
Palestine	26	6	4:27	85	42
Palmer	2	4	8:52	100	50
Palo Pinto	2	1	0:00	100	100
Paris	74	5	3:37	73	57
Parker County	1	1	0:00	100	100
Pilot Point	78	4	4:46	69	54
Plano	5,401	8	5:17	65	44
Ponder	11	7	3:58	91	18
Princeton	12	8	13:48	42	17
Prosper	373	7	4:55	70	43
Quinlan	19	4	2:16	84	53
Red Oak	84	5	3:15	71	40
Richardson	1,874	8	5:30	69	43
Roanoke	155	6	3:37	67	50
Rockwall	526	7	5:33	62	44
Rowlett	441	7	5:45	61	42
Royse City	45	10	7:09	82	36
Sachse	15	6	2:40	93	40
Scurry	1	2	0:26	100	0
Seagoville	19	4	5:44	84	53
Southlake	691	9	5:36	72	38
Springtown	112	7	5:19	59	33
Stephenville	144	6	3:06	69	53
Sulphur Springs	24	8	7:04	96	38
Sunnyvale	10	3	1:32	80	60
Terrell	47	8	7:43	68	45
The Colony	192	9	5:09	61	39
Trenton	10	9	3:24	80	50
Valley View	36	8	7:09	58	31
Waxahachie	289	8	5:09	71	51
Weatherford	441	6	4:17	64	47
Weston	1	1	0:00	0	100
Whitney	99	6	4:24	75	51
Wills Point	2	1	0:00	100	100

Organization	Sessions	Pages per Session	Avg. Session Duration	New Sessions (%)	Bounce Rate (%)
Wolfe City	2	5	2:29	100	0
Wylie	604	7	4:27	74	47

3. Planning Tools

A number of planning tools were made available to help local governments and other organizations promote Texas SmartScape in their communities. The theme for the 13th Annual March Is Texas SmartScape Month, "Give Water the Boot, Plant Texas SmartScape Roots!", was chosen by PETF participants. Materials prepared to align with this theme included a press release template and graphics for public service announcements (used in water bill inserts, flyers, and other marketing materials).

Materials that were prepared for past Texas SmartScape Months continued to be made available and included public service announcements for radio, sample resolution/proclamation (to assist in officially designating March as Texas SmartScape Month), brochures and posters, press release templates, and public service announcements for print. The materials listed above were made available through the web (www.nctcog.org/envir/SEEclean/txsmartscape/index.asp) for local governments to customize and distribute as desired.

4. Nursery/Landscape Company Partnership Program

NCTCOG, in cooperation with local communities, initiated a partnership effort with North Central Texas nurseries and landscape design/maintenance companies in August 2009. Nurseries that wished to partner with Texas SmartScape were encouraged to use specially designed and recognized stickers to identify these plants at the nursery as Texas SmartScape-approved. Landscape design/maintenance companies that wished to partner with Texas SmartScape were encouraged to notify NCTCOG if they use Texas SmartScape ideas and techniques in their landscape design and maintenance. NCTCOG would then post information about these companies to a page ("Texas SmartScape-friendly companies") on the Texas SmartScape website.

Information about 8 Texas SmartScape-friendly nurseries has been posted to the Texas SmartScape site.

5. Texas SmartScape-Related Events

The purpose of the Stormwater Education Events Calendar (www.nctcog.org/envir/SEEclean/stormwater/meetings/calendar/index.asp) and the Texas SmartScape Calendar (www.txsmartscape.com/events/index.asp) is to provide a common location for organizations to post information about upcoming stormwater-related events going on across the region. More than 100 Texas SmartScape-related events were posted to these calendars. The following 17 organizations hosted these events: City of Allen, City of Arlington, City of Bedford, City of Coppell, Dallas Water Utilities, City of Denton, City of Fort Worth, City of Frisco, City of Grand Prairie, City of Irving, City of Lewisville, City of Mansfield, City of McKinney, City of Plano, City of Richardson, City of Southlake, and Texas A&M AgriLife.

This year also marked the first annual Texas SmartScape plant sales. Several cities in the region partnered with Home Depot and Weston Gardens to offer consumers special deals on select varieties of Texas SmartScape plants. Consumers were given the opportunity to talk with master gardeners, plant experts, and irrigation specialists. Ten plant fairs were hosted in spring 2014 by the following 9 cities: Arlington, Carrollton, Frisco, Fort Worth (2), Irving, Mansfield, Mesquite, Plano, and Southlake.

6. Texas SmartScape Plant List Update

The Texas SmartScape plant list was created in 2001. As environments, plants, and plant availability change over time, the PETF decided it was time to update the current Texas SmartScape plant list. The update was kicked off by NCTCOG staff in July 2014 with a team of plant experts from Berry Nurseries (a Home Depot grower), the City of Plano, Tarrant Regional Water District, Texas A&M AgriLife, Texas Trees Foundation, Tree Town USA (a Home Depot grower), and Weston Gardens, with preliminary assistance from the City of Fort Worth. The project is still in progress.

7. DART Message Boards

Public service announcements (PSAs) with Texas SmartScape images and water conservation messaging were placed on the Dallas Area Rapid Transit (DART) bus message boards during 2014. The PSAs were placed on a few buses starting in March 2014; by June, 479 buses were broadcasting the messages. (This PSA was terminated in November 2014.)

Pet Waste

The purpose of the pet waste management campaign, known as “DOO the Right Thing!”, is to educate dog owners about the importance of picking up dog waste and disposing of it properly, and to help persuade dog owners to adopt these practices. The campaign was primarily promoted during the months of April, May, June, and July; however, activities occurring outside these months falling in the October 1, 2013, to September 30, 2014, time period are included.

1. Bookmarks

The dog waste bookmarks were developed in 2006, and updated in 2012. Each bookmark has a photo of a dog on the front with the slogan “For the love of your pet, please DOO the right thing!” On the back of the bookmarks, there is a description about how pet waste left on the ground can be carried away by stormwater runoff, and that pet waste can contain bacteria and parasites that can harm humans and other pets. The bookmarks also offer tips for dealing with pet waste.

A total of 9,060 bookmarks were cooperatively purchased in April 2014 for the purpose of distribution by the following 11 cities: Azle, Bedford, Burleson, Carrollton, Dallas, Duncanville, Fort Worth, Frisco, Mansfield, North Richland Hills, and Rockwall.

2. Dog-Waste-Bag Dispensers

A total of 7,000 dog-waste-bag dispensers were cooperatively purchased in April 2014 for the purpose of distributing by the following 9 cities: Azle, Bedford, Burleson, Dallas, Fort Worth, Garland, Mansfield, Richardson, and Wylie. Those organizations that participated in this order customized their artwork to include their logo and/or website. The bag dispensers are intended to be attached to the dog’s leash so that owners always have a supply of bags to pick up after their dog(s) while on a walk.

3. Web Page

A web page (www.dfwstormwater.com/petwaste) was created in 2006 to provide additional information to dog owners about the importance of picking up their dog’s waste and disposing of it properly. The health risks and water quality issues associated with leaving dog waste on the ground is discussed on this web page. Tips for dealing with dog waste and sources for additional information are also provided. Updates to the web page were made in July 2013.

Table 3: User statistics for the pet waste web page (www.dfwstormwater.com/petwaste) by month.

Month	Users	Page Views	Average Time on Page
October 2013	35	43	1:58
November 2013	26	35	2:14
December 2013	16	18	0:46
January 2014	42	48	3:07
February 2014	45	60	5:07
March 2014	39	44	1:43
April 2014	41	44	4:01
May 2014	94	126	3:35
June 2014	76	103	3:11
July 2014	54	60	3:28
August 2014	95	114	4:29
September 2014	41	47	3:37
Total	604	742	Avg.: 3:33

Google Analytics captures the user's city in a report that uses statistical sampling. That report shows the following user numbers for stormwater program participants during the October 1, 2013, to September 30, 2014, time period: Allen (6), Arlington (27), Azle (31), Bedford (10), Carrollton (37), Cleburne (15), Colleyville (6), Coppell (2), Dallas (19), Denton (6), Euless (27), Flower Mound (2), Fort Worth (116), Frisco (46), Garland (2), Grand Prairie (2), Grapevine (8), Hurst (141), Irving (39), Lewisville (4), Mansfield (2), McKinney (10), North Richland Hills (6), Plano (21), Rockwall (4), Sherman (2), Southlake (15), Trophy Club (2), and University Park (2).

4. Online Pledges

Dog owners were encouraged to take an online pledge (posted to www.dfwstormwater.com/petwaste) promising to pick up after their dog(s) and dispose of the waste properly. Only pledges received during the October 1, 2013, to September 30, 2014, reporting period are recorded here. This was promoted mostly during the months of May to July 2014.

A total of 48 pledges were collected through NCTCOG's online system.

5. Photos/Doo the Right Thing Calendar

Dog owners who took the pledge were invited to submit a photo of their dog to be entered in the "cutest dog photo contest" on the project website (www.dfwstormwater.com/petwaste). Photos were only accepted during the months of May, June, and July 2014.

A total of 48 photos were collected during the reporting period via the recommendations of the website and/or by local governments or other organizations. The Task Force voted for 12 finalists and a calendar was made with the winning contestants. This was made available to stormwater program participants and the public as a digital file, posted on www.dfwstormwater.com/petwaste and www.nctcog.org/envir/SEEclean/stormwater/pubs/index.asp. Organizations could print this file and distribute the calendar.

6. Planning Tools

A press release template was made available to the Task Force in May 2014 to customize and distribute as desired.

Yard Waste

The purpose of the leaf/yard waste management campaign is to educate the public about the importance of properly disposing of fallen tree leaves and other yard waste (e.g., grass clippings) and for the public to adopt environmentally friendly practices (not to blow or sweep yard waste in the streets, sidewalks, driveways, or down the storm drain, but to instead leave it on the lawn or compost).

1. Brochures

Yard waste brochures were developed in September 2007 to target landscape maintenance companies and in September 2008 to target homeowners. These brochures seek to show landscape maintenance companies and homeowners how to save time and money and still have a beautiful yard. The reasons mentioned in the brochures for keeping fallen tree leaves, grass clippings, and other yard waste off the street, sidewalk, driveway, and out of the storm drain are to: do less work, save money, avoid a ticket, and be environmentally friendly. Homeowners and landscape maintenance companies are instead encouraged to leave the yard waste on the lawn or compost it. These brochures were developed in English and Spanish.

A total of 5,050 brochures, 200 targeting landscape maintenance companies (100 in English and 100 in Spanish) and 4,850 targeting homeowners (4,800 in English and 50 in Spanish) were purchased as part of the annual cooperative purchase in April 2014 by the following 4 cities: Azle, Bedford, Frisco, and Watauga.

2. Web Page

A web page (www.dfwstormwater.com/yardwaste) was created in September 2008 to provide additional information to both homeowners and landscape maintenance companies about the importance of properly disposing of fallen tree leaves and other yard waste. This web address is also included on the back of the yard waste brochures.

Table 4: User statistics for the yard waste web page (www.dfwstormwater.com/yardwaste) by month.

Month	Users	Page Views	Average Time on Page
October 2013	8	8	5:58
November 2013	4	5	1:57
December 2013	2	2	0:13
January 2014	0	0	0:00
February 2014	6	7	1:12
March 2014	3	3	3:14
April 2014	7	7	1:15
May 2014	5	6	3:02
June 2014	2	2	0:32
July 2014	4	4	0:48
August 2014	7	8	2:57
September 2014	5	6	1:02
Total	53	58	Avg.: 1:51

Google Analytics captures the user's city in a report that uses statistical sampling. That report shows the following user numbers for stormwater program participant cities for the October 1, 2013, to September 30, 2014, time period: Arlington (2), Bedford (2), Colleyville (2), Coppell (2), Dallas (2), Duncanville (2), Hurst (2), Irving (4), Fort Worth (4), and North Richland Hills (2).

3. Public Service Announcement

NCTCOG continued to make available a 30-second yard waste ("leave it on the lawn") public service announcement (PSA) developed by the City of Dallas and WFAA for interested organizations. This PSA encourages viewers to keep grass clippings out of the storm drain by sweeping them off of streets, sidewalks, and driveways and back onto the lawn. It also informs viewers that when it rains, grass clippings and other pollutants can be washed down the storm drain, eventually ending up in lakes, rivers, and creeks. Some of the issues related to water quality (e.g., leading to an overgrowth of algae) and flooding (e.g., clogging inlets and pipes) are mentioned.

4. Yard Waste Videos

Two yard waste videos, "Water Conservation and Sprinkler Maintenance" and "Yard Waste Management" were added to the website. These videos are roughly 1 minute 30 seconds in duration. The Water Conservation video provides information about how residents should water their lawn to conserve water while suggesting useful tips on sprinkler maintenance. The Yard Waste Management video educates residents on the importance of properly handling yard waste. It encourages viewers to refrain from sweeping or blowing grass clippings and leaves into the storm drain. Both videos are available in English or Spanish.

Fats, Oils, and Grease

The PETF has an interest in educating the public about the importance of properly disposing of fats, oils, and grease (FOG) and to adopt these methods, and has partnered up with the North Texas Grease Abatement Council (NTGAC) on FOG-related educational efforts. NTGAC's mission is to educate North Texans about the effects of pouring FOG down the drain. The NTGAC is an educational partnership between municipalities and water utilities in North Texas and is supported through a different program area.

The NTGAC continued to make several educational materials and tools available to PETF participants. The NTGAC has developed three videos that the PETF can use. The videos target apartment dwellers, restaurant staff, and residential homeowners. The NTGAC also completely updated its website in 2013 and PETF members are encouraged to refer to it. Several FOG-related items were also available for purchase in the annual cooperative purchase as described below.

1. Fat Trapper Bags

A total of 7,200 fat trapper bags were cooperatively purchased in April 2014 for the purpose of distributing by the following 8 cities: Bedford, Duncanville, Garland, Hurst, Mansfield, Plano, Richardson, and Rockwall.

2. FOG Funnels

A total of 793 FOG funnels were cooperatively purchased in April 2014 for the purpose of distributing by the following 3 cities: Hurst, McKinney, and Wylie.

3. FOG Door Hangers

A total of 1,725 FOG door hangers were cooperatively purchased in April 2014 for the purpose of distributing by the following 4 cities: Grapevine, Hurst, Mansfield, and North Richland Hills.

4. Grease Lids

A total of 3,480 grease lids were cooperatively purchased in April 2014 for the purpose of distributing by the following 6 cities: Bedford, Duncanville, Hurst, Plano, Richardson, and Rockwall.

Educator's Toolbox

The educator's toolbox was developed by the PETF as a FY2013 project. Members of the PETF are often asked to give presentations to schools about stormwater, and this gives them options of learning activities to choose from instead of re-inventing the wheel. The Stormwater Quiz Show Game and Game Editor are available online at www.nctcog.org/envir/SEEclean/stormwater/program-areas/public_education/stormwatergame.asp.

Educational Videos for Children

The PETF decided to develop two educational videos, each 3-5 minutes in length, for its FY2014 project.

The first is geared toward elementary-age kids, teaching them about stormwater runoff and informing them that only rainwater should go down the storm drain. The video also aims to make children aware that their actions, and those of their friends and parents, can affect water quality. To capture the children's attention, the video features a cartoon fish character, Freddy, as the host. This complements the "Freddy the Fish" lessons presented by some city educators. This video has been finalized and is ready to be distributed once approved by the Regional Stormwater Management Coordinating Council.

The second video is geared toward high-school students with a similar goal as the first. The main takeaway is that the sanitary sewer and storm drain systems are different, that small actions can pollute our water bodies, and that we are all responsible for keeping our waters clean. The work on this video is still in progress.

Other

1. PETF Meetings

Stormwater program participants and other interested organizations were invited to attend 4 meetings to discuss the above campaigns as well as other opportunities for regional cooperation. Each meeting concluded with a municipal roundtable in which representatives had the opportunity to discuss initiatives going on in their communities and/or ask for assistance on specific issues.

- The first meeting was held December 4, 2013. This meeting was attended by 6 people representing the following 6 organizations: City of Allen, City of Arlington, City of Burleson, City of Carrollton, City of Fort Worth, and City of Richardson.
- The second meeting was held February 5, 2014. This meeting was attended by 13 people representing the following 13 organizations: City of Bedford, Collin County, City of Dallas, Dallas Fort-Worth (DFW) Airport, City of Euless, City of Fort Worth, City of Garland, City of Grand Prairie, City of Irving, City of Mansfield, City of North Richland Hills, North Texas Tollway Authority, and City of Richardson.
- The third meeting was held May 1, 2014. This meeting was attended by 9 people representing the following 8 organizations: City of Allen, City of Burleson, Collin County, City of Dallas, City of Grapevine, Town of Highland Park, City of Irving, and City of Plano (2).

- The fourth meeting was held August 13, 2014. This meeting was attended by 18 people representing the following 16 organizations: City of Arlington, City of Bedford, City of Burleson, City of Dallas (2), City of Fort Worth, City of Frisco (2), City of Garland, City of Grand Prairie, City of Grapevine, City of Irving, City of Mansfield, North Texas Tollway Authority, City of Plano, City of Richardson, Tarrant Regional Water District, and Texas A&M Extension.

2. Stormwater Education Events Calendar

The purpose of the Stormwater Education Events Calendar (www.nctcog.org/envir/SEEclean/stormwater/meetings/calendar/index.asp) is to provide a common location for organizations to post information about upcoming stormwater-related events going on across the region. A total of 7 stormwater-related events were posted to this calendar. The following 3 organizations hosted these events: Dallas Water Utilities (1), City of Fort Worth (2), and City of Mansfield (4).

See item 5 under "Lawn and Garden Care" for Texas SmartScape-related events.

3. Annual Cooperative Purchase

To maximize group savings for program participants, the Regional Stormwater Management Program conducts one purchase annually of several education and outreach-related items. The goal is to combine as many orders as possible to achieve the lowest unit cost. The items cooperatively purchased in April 2014 for the purpose of distributing, displaying, and/or installing are listed in the following table.

Table 5: Items purchased in the Fiscal Year 2014 cooperative purchase and those organizations that purchased them.

Item	Qty.	Purchased By
Texas SmartScape bookmarks (see item 1 under the "Lawn and Garden Care" section)		
Dog waste bookmarks (see item 1 under the "Pet Waste" section)		
Dog-waste-bag dispensers (see item 2 under the "Pet Waste" section)		
Yard waste brochures (see item 1 under the "Yard Waste" section)		
Fat trapper bags (see item 1 under the "Fats, Oils, and Grease" section)		
FOG funnels (see item 2 under the "Fats, Oils, and Grease" section)		
FOG door hangers (see item 3 under the "Fats, Oils, and Grease" section)		
Grease lids (see item 4 under the "Fats, Oils, and Grease" section)		
Zip-its	624	City of Bedford, City of Duncanville, City of Hurst, and City of Richardson
Plastic curb markers	7,470	City of Allen, City of Azle, City of Frisco, City of Grand Prairie, Town of Highland Park, City of Hurst, City of North Richland Hills, City of Watauga, and City of Wylie
Aluminum curb markers	1,000	City of McKinney
Pollution prevention municipal training posters	18	Town of Highland Park and City of Hurst
Captain Crud activity books	450	City of Duncanville and City of Mansfield
USB car chargers	158	City of North Richland Hills
Ammonia nitrogen kit	1	City of Grand Prairie

Appendix F: COA Public Education & Outreach Supplemental Materials

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Utility Inserts/Newspaper Advertisements

What is Stormwater? – Water Bill Insert July 2014

What is STORMWATER?

Stormwater runoff is generated when precipitation from rain or snowmelt events flows over land or impervious surfaces and does not soak into the ground.

Stormwater carries pollutants from out streets to our Creeks, Streams, and Rivers. These pollutants can effect the health of our community and the wildlife that live in these areas.

Adopting Good Housekeeping Practices can help protect the quality of water in our creeks, streams and rivers.

These things DON'T belong in our STORMWATER: Grass Clippings and Yard Waste | Paint | Household Chemicals | Swimming Pool water | Detergents | Pet Waste | Automotive Fluids

More information about Stormwater Pollution Prevention, Contact: City of Arlington Public Works and Transportation Dept. / Stormwater Management: 817-459-6550 or e-mail Stormwatereducation@arlingtontx.gov

ARLINGTON
THE AMERICAN DREAM CITY

Got Drugs?

Turn in your unused or expired medication for anonymous, safe disposal

Saturday, September 27, 2014
10 a.m. - 2 p.m.

Collection sites near you:

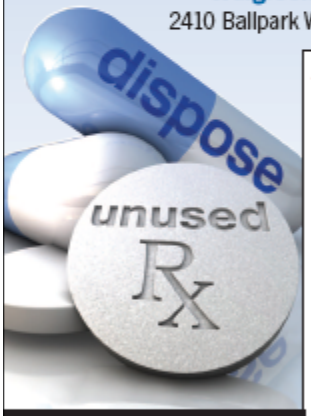
North Police District
620 W. Division Street
817.459.5600

Walgreen's Pharmacy
4400 W. Green Oaks Blvd
817.563.0142

East Police District
2001 New York Ave.
817.459.5803

South Police District
1030 S.W. Green Oaks Blvd.
817.459.6640

Walgreen's Pharmacy
2410 Ballpark Way 817.861.7661



ACCEPTED:
- Controlled, non-controlled, and over the counter medications
- All solid dosage pharmaceutical product and liquids in consumer containers; liquid products, such as cough syrup (please keep sealed in original container.)

NOT ACCEPTED:
- Intravenous solutions, injectables, and syringes
- Illicit substances such as marijuana or methamphetamine

TIPS:
- Participants may dispose of medication in its original container or by removing the medication from its container and disposing of it directly into the disposal box.
- All participants must retain possession of their own medication during the surrender process.

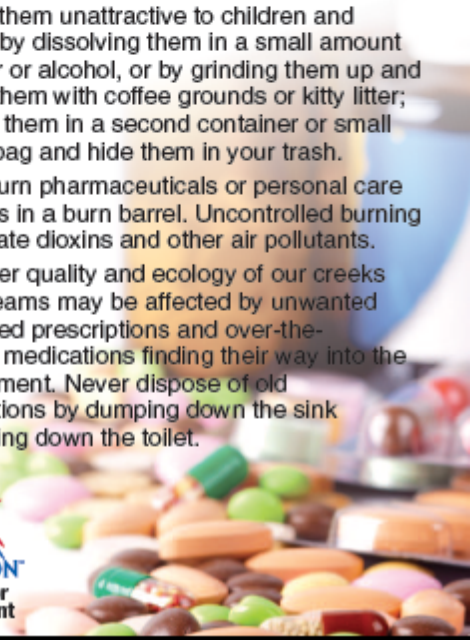
For more information, please visit ArlingtonTX.gov

ARLINGTON
Water Utilities

POLICE ARLINGTON TEXAS

Properly Dispose of Prescription Drugs

- Whenever possible, take your unused pharmaceuticals to a pharmaceutical collection event. **Note:** If you choose to store your waste while you wait for a pharmaceutical collection event to occur, please minimize the risk of accidental poisoning, overdose or diversion (illegal use by someone other than the intended person) by storing medications out of reach of children or in a locked cabinet.
- Dispose of your unused pharmaceuticals in the trash. Especially when there is a risk of accidental poisoning, overdose or diversion, it is better to dispose of household pharmaceuticals than to hang onto them. When placing unused pharmaceuticals in the trash, be sure to do the following:
  - ➤ Remove or mark over all labels that identify the materials as pharmaceuticals or that could provide personal information about you, including prescription information that someone could try to refill.
  - ➤ Render them unattractive to children and thieves by dissolving them in a small amount of water or alcohol, or by grinding them up and mixing them with coffee grounds or kitty litter; and put them in a second container or small plastic bag and hide them in your trash.
  - ➤ Never burn pharmaceuticals or personal care products in a burn barrel. Uncontrolled burning can create dioxins and other air pollutants.
  - ➤ The water quality and ecology of our creeks and streams may be affected by unwanted or expired prescriptions and over-the-counter medications finding their way into the environment. Never dispose of old medications by dumping down the sink or flushing down the toilet.



ARLINGTON
Stormwater Management

Flood Safety and Awareness- Water Bill Insert September 2014

Are you prepared?

Develop a family emergency plan:

- Create an emergency safety kit with drinking water, blanket, first aid, a radio and a flashlight.
- Plan and practice a flood evacuation route with your family. Don't forget your family pets!
- Avoid walking or driving in high water. TURN AROUND, DON'T DROWN®
- Post emergency telephone numbers and teach your children how to dial 911.

Safeguard important documents in a waterproof container or a safe deposit box:

- Copy of all insurance policies, personal identification papers and other important documents.
- Household inventory- written list and pictures of all major household items and valuables.

Prepare your home:

- Keep gutters and downspouts clear of debris.
- Move valuables and important documents to a safe place.
- Raise electrical components in and around your house above projected flood elevations.
- Anchor light objects or fuel cans or tanks.

For more information go to www.floodsmart.gov or www.arlingtontx.gov/stormwater

NATIONAL FLOOD INSURANCE PROGRAM

Get FloodSmart

FloodSmart.gov

Standard homeowners insurance policies do not cover damage from floods; therefore, flood insurance is recommended to protect your property.

The City of Arlington participates in the National Flood Insurance Program which makes federally-backed flood insurance available to residents of the City whether the property is in the floodplain or not. We also participate in the Community Rating System which provides flood insurance discounts to residents based on the City's implementation of floodplain management practices.

There are two types of flood insurance coverage: building and contents. This allows both homeowners and renters to have coverage from losses caused by flooding.

Homes and commercial buildings located in flood hazard areas are required to have flood insurance if they have a federally regulated mortgage.

Twenty-five percent of all flood claims are from outside of the floodplain, so it is important for homeowners to evaluate their risk to determine if a flood insurance policy is necessary.

To find out your flood risk and how to protect your property, contact the City of Arlington's Stormwater Management Division.

Stormwater Management
817-459-6550
www.arlingtontx.gov/stormwater

ACCREDITED AGENCY A·P·W·A

ARLINGTON

Get FloodSmart- Newspaper Advertisement September 2014

nd Hills.

Star-Telegram.com/Bud Kennedy

cities, currently the TRWD.

He said he's concerned about the Fort Worth district's lack of transparency and spending on the Panther Island project.

His stake in the election, he said, is that "I pay a water bill."

Basically, Direct Action Texas tells voters in other cities and school districts how to spend their money.

Bud Kennedy's column appears Sundays, Wednesdays and Fridays. 817-390-7538 Twitter: @BudKennedy Get alerts at RebelMouse.com/budkennedy

stream," Land Commissioner Jerry Patterson said in a statement.

The Permanent School Fund now is valued at more than $34 billion, but only the fund's interest income can be spent.

Interest earned on the fund is distributed by the State Board of Education to school districts in Texas on a per-pupil basis, according to the General Land Office's website.

How much the record amount will help fatten the coffers of all school districts is open to de-

ed until the Legislature comes up with a plan for adequately and fairly funding all Texas schools."

Robison added that "most school funding comes from state tax revenue and local property taxes. The Legislature hasn't fully restored the $5.4 billion it cut from state school aid three years ago," yet school enrollment is growing by

the Texas Constitution.

David Thompson, a lawyer who brought the suit that resulted in Dietz' ruling, said the record amount going to the Permanent School Fund "is great news."

"It's a great comment on the growth of our state and the health of our economy," he said. "But it won't solve all of the issues in our school finance system."

Notice is hereby given that, acting under and pursuant to the Ordinances of the City of Fort Worth, Texas, on or before the 19th day of September , 2014, Devon Energy Production Company, L.P., 940-394-2000, will file with the Gas Inspector of the City of Fort Worth, an application for a Multiple Gas Well Pad Site Permit located greater than 600 feet from a protected use structure to drill, complete and operate multiple wells for gas upon property located at 1502 Avondale Haslet Rd. Mapsco 5T, Tarrant County, Fort Worth, Texas, more particularly described in the document of record in Volume 15317, Page 40, Official Public Records of Tarrant County, Texas, or per Tax Tract Number A1136-4, Tarrant County, Texas. Informational meetings on drilling and permitting are also conducted by City staff monthly. For dates and locations, see www.fortworthgov.org/gaswells or call 817-392-2851.

Arlington Master Composters

Free Backyard Composting Tips

Saturday, September 20, 2014
noon to 6 p.m.

CITY OF ARLINGTON
Master Composters

Enriching the soil naturally since 1997.

At Arlington's 6th Annual Ecofest

Visit ecofestarlington.com for more information about all of the free, family fun going on at Ecofest!

ARLINGTON
THE AMERICAN DREAM CITY

LEAF MANAGEMENT

Leaves only!

Leaf Recycling Drop Off Sites

November 23, 2013 - February 23, 2014

Beginning November 23, Arlington residents may bring bagged leaves to one of the following collection sites for free leaf recycling.

Drop off sites:

- Arlington Landfill - 800 Mosier Valley Rd.
- U.T.A. baseball parking lot on Mitchell Street east of Fielder Rd. - No contractors
- Webb Community Park - 1100 Mansfield Webb Rd. - No contractors
- Bowman Springs Park - 7003 Poly Webb Rd. - No contractors
- S.J. Stovall Park - 2800 W. Sublett Rd. - No contractors

In an effort to improve the environment and our community, this service is provided by the City of Arlington for Arlington residents only.

PLEASE
NO Contractors
NO Trash or Tree Limbs
NO Illegal Dumping

During the dates listed above, **contractors may bring leaves to the Arlington Landfill free of charge**. For information call 817-354-2300. Contractors are not allowed to drop off leaves at the other sites.

ARLINGTON
Public Works
817-459-6778

Did you know

Composting your leaves and grass clippings creates rich garden soil and helps reduce landfill waste.

Be a part of the solution... Join the Arlington Master Composters

Master Composter Workshop

- Class graduates receive books, workshop materials, and a compost thermometer.
- Attendance required on both days.
- FREE for Arlington residents; $20 for all others.

Friday, March 7
6 - 9 p.m.

Saturday, March 8
9 a.m. - 4 p.m.

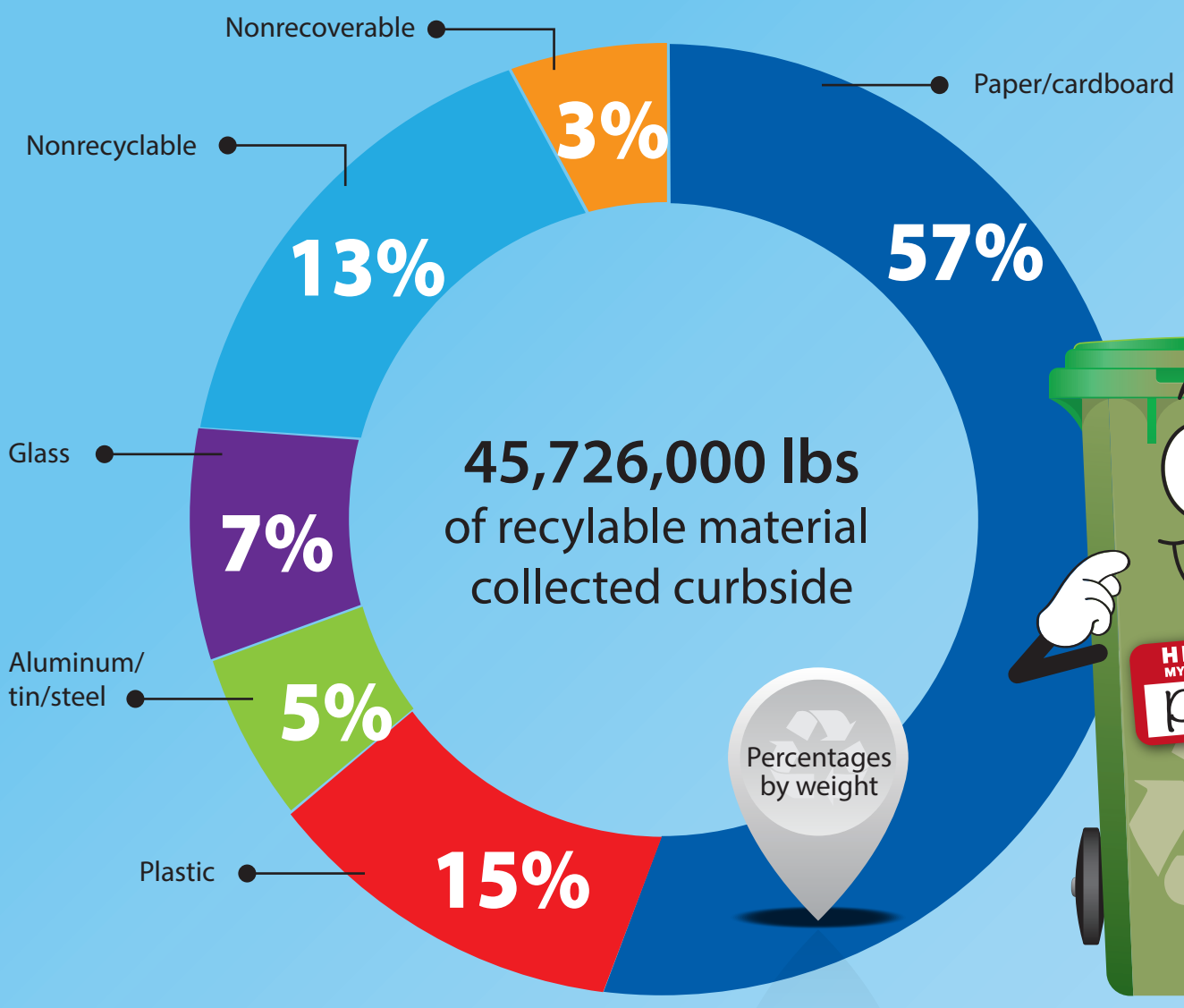
Learn how to make great compost in your own backyard and help us spread the word about the many benefits of composting!

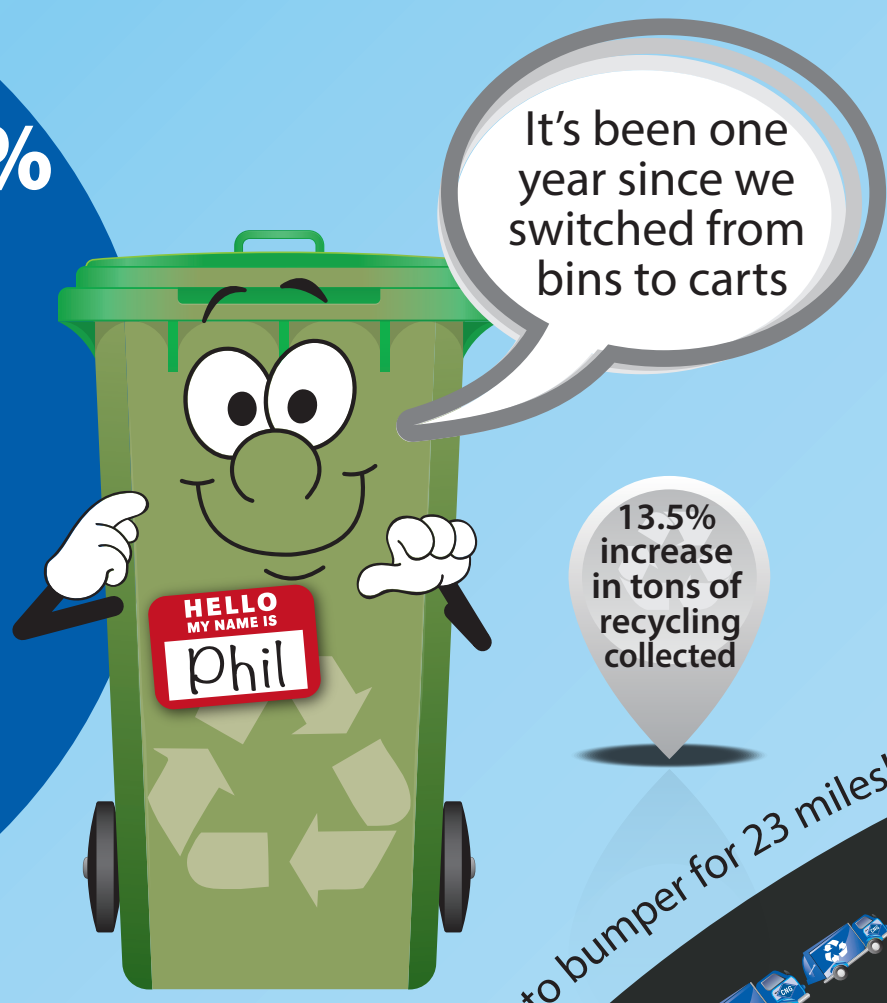
ARLINGTON®

For more information or to register online, visit www.arlingtontx.gov/environment or call 817-459-6778

CITY OF ARLINGTON
Master Composters

Arlington Curbside Recycling Update





Zero worker injuries as a result of automated collection

95,000 carts delivered to Arlington residents

Want to recycle?
Need a free cart?
Call 817-459-6777.

New CNG trucks significantly reduce air and noise pollution

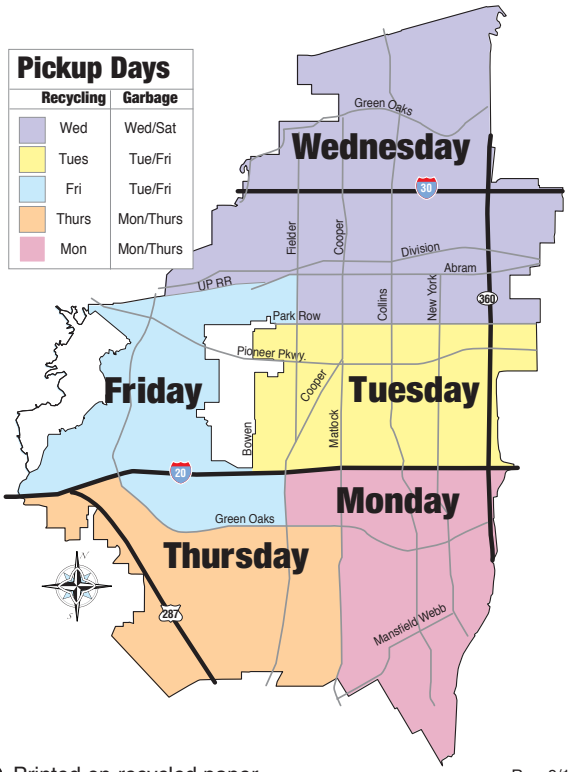
4,000 fewer tons of trash sent to the landfill

Data is for July 2013-June 2014

ARLINGTON
THE AMERICAN DREAM CITY

Garbage Collection

- Garbage, Trash and Brush must be placed curbside no later than 7 a.m. on scheduled day of collection.
- Garbage and Trash must be secured in a plastic bag. Do not place containers on curb that you wish to keep (including plastic or metal trash cans of any kind).
- Maximum weight: 50 lbs. per bag.
- Brush should be cut in 4 foot lengths, trimmed, bundled, and stacked with large ends toward curb. Bundles may not exceed 50 lbs.
- Brush will be collected at the rate of 1 cubic yard per pickup day.
- Grass clippings, dirt, rock, concrete, bricks or other waste building material will not be picked up, nor will paint, oil, chemicals or other flammable or volatile substances.
- To schedule a pick up of furniture, appliances and other large household items, call 817-317-2000.



Printed on recycled paper.

Rev. 9/14

Curbside Garbage and Recycling Collection

The City of Arlington Public Works Department is responsible for the curbside collection of garbage and recycling, including: twice-a-week garbage pickup, weekly recycling pickup and bulky waste pickup. Visit www.arlingtontx.gov/environment or call **817-459-6777** for more information.

Your recycling and garbage are collected by **Republic Services, Inc.** Their holidays are: New Years Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day. Garbage and recycling will not be picked up on these holidays, nor on days where inclement weather prevents the safe operation of equipment. Republic Services may be reached at **817-317-2000**.

You can bring any of the following items to the **Arlington Landfill** for recycling: Computers and other electronics, Brush, Tires, Fence panels, Concrete, Scrap metal, Asphalt. The Arlington Landfill is located at 800 Mosier Valley Road. The landfill is open Mon-Sat. from 7 am-4:30 p.m. Please call **817-354-2300** for rates and information.

Dispose of **Household Hazardous Waste** such as paint, motor oil and pesticides free of charge at the Environmental Collection Center (ECC), 6400 Bridge Street in east Fort Worth. Operating hours are: Thursday & Friday 11 a.m.-7 p.m. and Saturday 9 a.m.-3 p.m. For more information, call the ECC at **817-392-EASY (3279)**. Bring proof of Arlington residency. No voucher required.

Recycling Collection

Recyclables are collected weekly on one of your regular garbage collection days. Please place cart at the curb no later than 7 a.m. on the day of collection. For details call 817-459-6777.

How to Get a Recycling Cart:

Contact Republic Services at 817-317-2000.

Please visit www.ArlingtonTX.gov/environment/pdf/RecycleProgram_yesno.pdf for a comprehensive list of acceptable and unacceptable items.

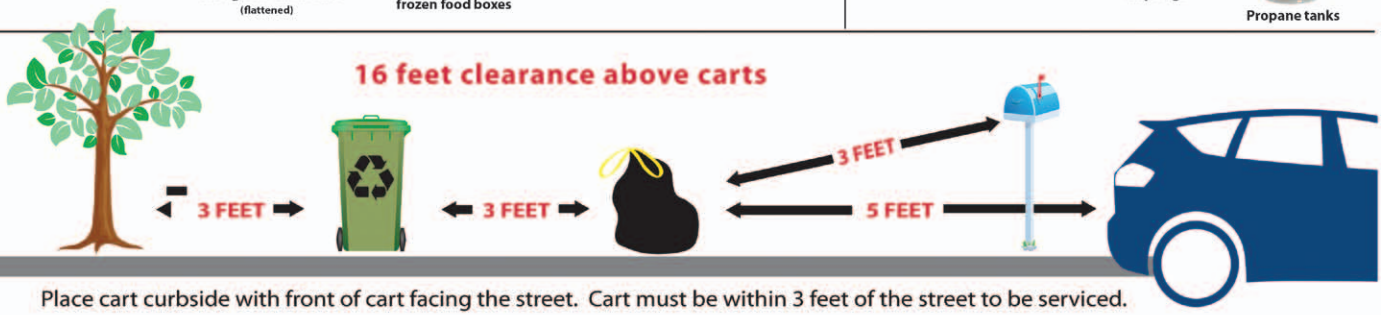
YES RECYCLING ONLY NO

Put these items in your recycling cart.

- Empty plastic jugs
- Empty plastic bottles
- Clean plastic tubs
- Shredded paper
- Empty wax-coated paper containers and juice boxes.
- Phone books
- Magazines
- Mail, mixed paper, and catalogs
- Newspaper & inserts
- Take out pizza boxes
- Empty glass jars & bottles
- Empty aluminum cans
- Clean aluminum foil wrap and pans
- Clean metal food cans
- Aerosol cans
- Plastic bags
- Corrugated cardboard (flattened)
- Boxboard, cereal boxes, frozen food boxes
- Pots & pans

DO NOT put these items in your recycling cart.

- Batteries or electronics
- Hazardous or toxic product containers
- Flower pots, plastic toys
- Frozen food bags
- Plastic and metal hangers
- Ceramic dishes
- Light bulbs, drinking glasses, other glassware
- Food & wet waste, food contaminated paper plates and napkins
- Styrofoam containers, styrofoam peanuts or packing
- Chip bags
- Propane tanks



Place cart curbside with front of cart facing the street. Cart must be within 3 feet of the street to be serviced.

www.arlingtontx.gov/environment **817-459-6777**

Celebrate Texas Recycles Day at Arlington's

COMPUTER ROUNDUP!

It's Free!

Nov. 23, 2013

8 a.m. - 12 noon

Sponsored by:

- City of Arlington Public Works Dept.
- University of Texas at Arlington
- ECS Refining

817-459-6777
www.arlingtontx.gov

ARLINGTON®

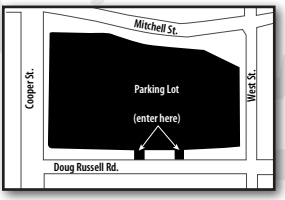
Printed on recycled paper. Rev. 10/13

WANTED

• Computers • Monitors • TVs
• Keyboards • Printers • VCRs
• Radios • Video Cameras
• Cell Phones

Bring your old electronics to the UTA parking lot at the southeast corner of Mitchell and Cooper!

8 a.m. - 12 noon
Saturday, Nov. 23, 2013



Proof of Arlington residency required. This event is for Arlington residents only. Businesses should contact the City of Arlington for information on how to recycle electronics. We will not be accepting large, household appliances such as washers, dryers, refrigerators. Call 817-317-2000 for disposal of these items.

Did You Know? The Arlington Landfill accepts old electronics for recycling year-round. Just drop them off at the landfill for free, where they are stored and then taken to a recycler.

More information: 817-354-2300 (landfill office).

More e-waste recycling opportunities: visit www.arlingtontx.gov/environment/electronicwaste.html.

Got Drugs?

Turn in your unused or expired medication for anonymous, safe disposal

Saturday, September 27, 2014
10 a.m. - 2 p.m.

Collection sites near you:

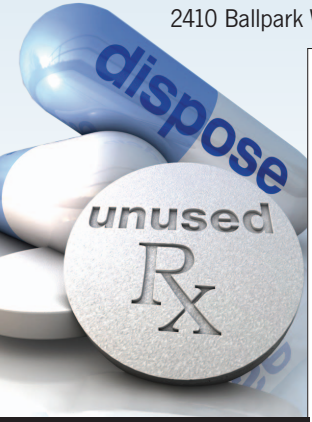
North Police District
620 W. Division Street
817.459.5600

Walgreen's Pharmacy
4400 W. Green Oaks Blvd
817.563.0142

East Police District
2001 New York Ave.
817.459.5803

South Police District
1030 S.W. Green Oaks Blvd.
817.459.6640

Walgreen's Pharmacy
2410 Ballpark Way 817.861.7661



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NOT ACCEPTED:

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TIPS:

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- All participants must retain possession of their own medication during the surrender process.

ARLINGTON
THE AMERICAN DREAM CITY
Water Utilities

POLICE
ARLINGTON
TEXAS

Properly Dispose of Prescription Drugs

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  - ➤ The water quality and ecology of our creeks and streams maybe affected by unwanted or expired prescriptions and over-the-counter medications finding its way into the environment. So Never flush or throw away your unused medications!

ARLINGTON
Stormwater Management