



AGENDA

TOWN OF FLOWER MOUND ENVIRONMENTAL CONSERVATION COMMISSION

REGULAR MEETING

November 5, 2019

**FLOWER MOUND TOWN HALL
2121 CROSS TIMBERS ROAD
FLOWER MOUND, TEXAS**

6:30 P.M.

AN AGENDA INFORMATION PACKET IS AVAILABLE ONLINE AT
[HTTPS://TX-FLOWER MOUND.CIVICPLUS.COM/AGENDACENTER](https://tx-flowermound.civicplus.com/agendacenter)

A. CALL REGULAR MEETING TO ORDER – 6:30 PM

B. INVOCATION AND PLEDGE OF ALLEGIANCE

C. PUBLIC COMMENT

Please fill out an "Appearance Before Environmental Conservation Commission" form in order to address the Environmental Conservation Commission, and turn the form in prior to Citizens and Visitors Comments, or by 6:40 p.m. to the Town staff. Speakers are normally limited to three minutes. Time limits can be adjusted by the Chair as to accommodate more or fewer speakers.

D. STAFF REPORT

Update and status report related to environmental issues and events, regulatory activities, and projects.

E. CONSENT AGENDA - CONSENT ITEMS

This agenda consists of non-controversial or "housekeeping" items and may be approved with a single motion. A member of the Environmental Conservation Commission may request an item(s) be withdrawn from the consent agenda and moved to regular agenda for discussion by making such request prior to a motion and vote on the Consent Agenda.

Environmental Conservation Commission Meeting Agenda

November 5, 2019

Page 2

1. Consider approval of minutes from the regular meeting of the Environmental Conservation Commission held on October 1, 2019.

F. ADJOURNMENT - REGULAR SESSION

G. CALL WORK SESSION TO ORDER

H. WORK SESSION ITEMS

2. Review the Town of Flower Mound's Stormwater Program and 2019 Annual Report.
3. Discuss the Town's Urban Forestry Program, associated regulations, and program initiatives.

I. SUBCOMMITTEE REPORT

Receive updates and status reports related to subcommittee tasks, activities, and projects.

J. COORDINATION OF FUTURE AGENDAS/MEETINGS

K. ADJOURNMENT- WORK SESSION



Matthew Woods
Director of Environmental Services

I do hereby certify that the Notice of Meeting was posted on the bulletin board in Town Hall of the Town of Flower Mound, Texas, a place convenient and readily accessible to the general public at all times and said Notice was posted on the following date and time: November 1, 2019, by 5:00 p.m., at least 72 hours prior to the schedule time of said meeting.



Emily Chapman
Administrative Assistant



ENVIRONMENTAL CONSERVATION COMMISSION AGENDA ITEM NO. 1

CONSENT ITEM

DATE: November 5, 2019

FROM: Emily Chapman, Administrative Assistant

ITEM: Consider approval of minutes from the regular meeting of the Environmental Conservation Commission held on October 1, 2019.

BACKGROUND INFORMATION: This agenda item is to consider approval of the minutes from the October 1, 2019, regular meeting of the Environmental Conservation Commission.

CITIZEN FEEDBACK: N/A

ALTERNATIVES/OPTIONS: N/A

FISCAL IMPACT: N/A

LEGAL REVIEW: N/A

ATTACHMENTS:

1. A copy of the draft minutes from the October 1, 2019, regular meeting of the Environmental Conservation Commission.

RECOMMENDATION: Move to approve the minutes from the October 1, 2019, regular meeting of the Environmental Conservation Commission.

FLOWER MOUND ENVIRONMENTAL CONSERVATION COMMISSION MEETING OF OCTOBER 1, 2019

THE FLOWER MOUND ENVIRONMENTAL CONSERVATION COMMISSION MEETING HELD ON THE 1ST DAY OF OCTOBER 2019, IN THE FLOWER MOUND TOWN HALL, LOCATED AT 2121 CROSS TIMBERS ROAD IN THE TOWN OF FLOWER MOUND, COUNTY OF DENTON, TEXAS, AT 6:30 PM.

The Environmental Conservation Commission met in regular session, with the following members present constituting a quorum:

James Seastrom	Chair
James Naylor	Vice Chair
Russell McNamer	Commission Member, Place 3
Alton Bowman	Commission Member, Place 5
Marilyn Lawson	Commission Member, Place 4
Deanna Soper	Commission Member, Place 7
Anna Athappan	Commission Member, Place 9
Kathryn Wells	Commission Member, Place 10

Places 8, 9, and 10 of the Commission do not vote on items unless they sit in place of one of the regular members, Places 1-7.)

Constituting a quorum with the following members absent:

Thomas Bailey	Commission Member, Place 6
Elaine Takacs	Commission Member, Place 8

And the following members of Town staff present:

Matthew Woods	Director of Environmental Services
Emily Chapman	Administrative Assistant
James Hoefert	Environmental Review Analyst
Matthew Green	Environmental Review Analyst
Tyler Leverenz	Environmental Programs Coordinator

A. CALL TO ORDER - REGULAR SESSION: 6:30 PM

B. ELECTION OF CHAIR AND VICE CHAIR

James Seastrom was elected Chair and James Naylor was elected Vice Chair. The vote for both positions was unanimous.

C. INVOCATION AND PLEDGE OF ALLEGIANCE

D. PUBLIC COMMENT

None.

E. STAFF REPORT

Update and status report related to environmental issues and events, regulatory activities, and projects.

FLOWER MOUND ENVIRONMENTAL CONSERVATION COMMISSION MEETING OF OCTOBER 1, 2019

F. CONSENT AGENDA

1. Consider approval of minutes from the special meeting of the Environmental Conservation Commission held on September 12, 2019.

Commission Deliberation

Commission Member McNamer made a motion to approve the September 12, 2019, minutes as presented. Vice Chair Naylor seconded the motion.

VOTE ON THE MOTION

AYES: Naylor, McNamer, Bowman, Soper, Athappan, Wells
NAYS: None
ABSTAIN: None

The motion passed with a vote of 6-0-0

G. REGULAR ITEMS

2. Consider an application for a tree removal permit for eight (8) specimen trees on property proposed for development as Silveron Park. The property is generally located south of Long Prairie Road and east of Lakeside Village Boulevard.

Staff Presenter

James Hoefert, Environmental Review Analyst, gave a presentation with the following items included:

- Project Information Overview
- General Location
- Detailed Location
- Specimen Tree Survey
- Specimen Trees Requested for Removal Overview

Applicant Presenter

Xochilyn Davis, G&A McAdams (201 Country View Drive, Roanoke, TX 76262) answered questions and gave a presentation with the following items included:

- Site Plan
- Letter of Intent
- Tree Removal Signs
- Tree's Requested for Removal
- Specimen Tree Survey

Commission Deliberation

Vice Chair Naylor made a motion to approve application for eight (8) specimen trees on property proposed for development as Silveron Park. The property is generally located south of

FLOWER MOUND ENVIRONMENTAL CONSERVATION COMMISSION MEETING OF OCTOBER 1, 2019

Long Prairie Road and east of Lakeside Village Boulevard. Commission Member McNamer seconded the motion.

VOTE ON THE MOTION

AYES: Naylor, McNamer, Bowman, Soper, Athappan, Wells
NAYS: None
ABSTAIN: None

The motion passed with a vote of 6-0-0

3. Consider an application for a tree removal permit for one (1) specimen tree on property proposed for development as Trailwood Phase 2. The property is generally located south of Cross Timbers Road and west of U.S. 377.

Staff Presenter

James Hoefert, Environmental Review Analyst, gave a presentation with the following items included:

- Project Information Overview
- General Location
- Detailed Location
- Specimen Tree Survey
- Specimen Trees Requested for Removal Overview
- Proposed Land Use Plan

Applicant Presenter

Lara Hall, G&A McAdams (201 Country View Drive, Roanoke, TX 76262) answered questions and gave a presentation with the following items included:

- Site Plan
- Letter of Intent
- Tree Removal Sign
- Tree's Requested for Removal
- Tree Survey

Commission Deliberation

Commission Member McNamer made a motion to approve application for one (1) specimen tree on property proposed for development as Trailwood Phase 2. The property is generally located south of Cross Timbers Road and west of U.S. 377. Vice Chair Naylor seconded the motion.

VOTE ON THE MOTION

AYES: Naylor, McNamer, Bowman, Soper, Athappan, Wells
NAYS: None
ABSTAIN: None

The motion passed with a vote of 6-0-0

FLOWER MOUND ENVIRONMENTAL CONSERVATION COMMISSION MEETING OF OCTOBER 1, 2019

4. Review the trees nominated for the Town's Tree Recognition Program and select the tree(s) for recognition for 2019.

Staff Presenter

James Hoefert, Environmental Review Analyst, gave a presentation with the following items included:

- Program Information
- Tree # 1: O'Neil Family Honey Mesquite (19" diameter)
- Tree # 2: Blau Family Live Oak (29" diameter)
- Tree # 3: Anderson Residence Water Oak (41" diameter)
- Tree # 4: Lacasse Residence Post Oak (30" diameter)
- Tree # 5: McDaniel Residence Post Oak (27" diameter)
- Tree # 6: Engle Residence Post Oak (41" diameter)

Commission Deliberation

Commission Member Wells made a motion to recognize Tree #1 as the 2019 Largest Honey Mesquite; Tree #6 as the 2019 Largest Post Oak; and Tree #3 as the 2019 Tree of the Year. Vice Chair Naylor seconded the motion.

VOTE ON THE MOTION

AYES: Naylor, McNamer, Bowman, Soper, Athappan, Wells
NAYS: None
ABSTAIN: None

The motion passed with a vote of 6-0-0

H. SUBCOMMITTEE REPORT

Receive updates and status reports related to subcommittee activities and establish subcommittees as necessary.

I. COORDINATION OF FUTURE AGENDAS/MEETINGS

J. ADJOURNMENT- REGULAR SESSION – 7:58 PM

TOWN OF FLOWER MOUND, TEXAS

JAMES SEASTROM, CHAIR

ATTEST:

EMILY CHAPMAN, ADMINISTRATIVE ASSISTANT



ENVIRONMENTAL CONSERVATION COMMISSION AGENDA ITEM NO. 2

WORK SESSION ITEM

DATE: November 5, 2019

FROM: Matthew Green, Environmental Review Analyst

ITEM: Review the Town of Flower Mound's Stormwater Program and 2019 Annual Report.

BACKGROUND INFORMATION: This work session item provides ECC the opportunity to discuss the Town's stormwater program.

The Town is covered by the Texas Pollutant Discharge Elimination System (TPDES) MS4 General Permit which covers all large and small municipal separate storm sewer systems (MS4). The permit provides guidelines to MS4s on how to properly regulate and control stormwater runoff for municipal construction activities and also provides a framework for the Town's Stormwater Management Program.

ALTERNATIVES/OPTIONS:

N/A

ATTACHMENTS:

1. 2019 TCEQ Annual Report
2. Town Stormwater Management Program

RECOMMENDATION: This item is for discussion purposes; therefore, no formal action is required.

Phase II (Small) MS4 Annual Report Form

TPDES General Permit Number TXR040000

A. General Information

Authorization Number: TXR040542

Reporting Year (year will be either 1, 2, 3, 4, or 5): 5

Annual Reporting Year Option Selected by MS4:

Calendar Year: X

Permit Year: _____

Fiscal Year: _____ Last day of fiscal year: (____)

Reporting period beginning date: (month/date/year) 01/01/2018

Reporting period end date: (month/date/year) 12/31/2018

MS4 Operator Level: 3 Name of MS4: Town of Flower Mound

Contact Name: Matthew Green Telephone Number: 972-874-6354

Mailing Address: 2121 Cross Timbers Road, Flower Mound, TX 75028

E-mail Address: matthew.green@flower-mound.com

A copy of the annual report was submitted to the TCEQ Region: YES X NO _____

Region the annual report was submitted to: TCEQ Region 4

B. Status of Compliance with the MS4 GP and SWMP

- Provide information on the status of complying with permit conditions:
(TXR040000 Part IV.B.2)

	Yes	No	Explain
Permittee is currently in compliance with the SWMP as submitted to and approved by the TCEQ.	X		No changes have been made to the SWMP other than some layout changes and updating the document to the most recent version of

			Microsoft Word. The SWMP will be fully reviewed and a new SWMP will be submitted during the MS4 permit renewal process.
Permittee is currently in compliance with recordkeeping and reporting requirements.	X		Town Staff maintains records for all datasets referenced within the annual report.
Permittee meets the eligibility requirements of the permit (e.g., TMDL requirements, Edwards Aquifer limitations, compliance history, etc.).	X		The Town has met all eligibility requirements.

2. Provide a general assessment of the appropriateness of the selected BMPs. You may use the table below to meet this requirement (**see Example 1 in instructions**):

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (Answer Yes or No and explain)
1: Public Education, Outreach and Involvement	Municipal Channel Stormwater Quality Messages	Yes, the feedback we receive from residents indicates that the FMTV municipal channel BMP is still an effective education and outreach tool.
1: Public Education, Outreach and Involvement	Municipal website and stormwater quality information	Yes, the feedback we receive from residents indicates the BMP is still effective.
1: Public Education, Outreach and Involvement	Anti-Littering/Dumping Brochure	Yes, the feedback we receive from residents indicates the BMP is effective. Brochures continue to be periodically disseminated at events and with notices of violation and/or citations.

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (Answer Yes or No and explain)
1: Public Education, Outreach and Involvement	Watershed Address Program	Yes, areas where watershed signs are located are effective at reducing illegal dumping and illicit discharges.
1: Public Education, Outreach and Involvement	Storm Drain Labeling	Yes, the BMP serves as an effective public education tool. New storm drain labels are added as new inlets are constructed.
1: Public Education, Outreach and Involvement	Comply with State and Local Public Notice Requirements	Yes, the Town of Flower Mound continues to comply with State and Local Public Notice Requirements.
1: Public Education, Outreach and Involvement	Community Source Water Protection Program	Yes, the BMP provides valuable and quantifiable water quality data. This data is a tool used by Texas State University and the Town to evaluate the overall health of the surface water in the state of Texas. Staff continues to run the program for sampling locations within city limits.
2: Illicit Discharge Detection and Elimination	Storm Sewer System Map	Yes, the map continues to be updated as new outfalls and inlets are built. It is a useful tool to identify and eliminate illicit discharges.
2: Illicit Discharge Detection and Elimination	Develop an Illicit Discharge Detection and Elimination (IDDE) Program	A dry-weather sampling program has been created to establish baseline water quality parameters. Locations throughout the watershed are being sampled periodically.
2: Illicit Discharge Detection and Elimination	Develop and Maintain an Illicit Discharge Document	Yes, illicit discharges and other stormwater related violations are tracked and documented through our internal TRAKiT database. TRAKiT is also being used to generate documents for our stormwater reports.

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (Answer Yes or No and explain)
3: Construction Site Stormwater Runoff Control	Evaluate and Update Regulatory Authority and Procedures	Yes, our process has allowed for the evaluation of procedures and provides staff with the regulatory authority to enforce stormwater ordinances. The Town has recently divided stormwater oversight between our Environmental Services, Construction/Building Inspections, and Public Works Departments. Environmental Services and Construction/Building Inspections oversee new private development and Public Works is responsible for the oversight of Capital Improvements (CIP).
3: Construction Site Stormwater Runoff Control	Construction Site Reporting Hotline	Yes, the construction site reporting hotline continues to receive calls about stormwater non-compliance items at construction sites.
3: Construction Site Stormwater Runoff Control	Develop and Maintain a Construction Site Inventory Document	Yes, Town staff currently has a construction site inventory document that is updated as developments are permitted and/or completed. Our TRAKiT database has had a custom report created that will automatically compile all ground disturbing activity within the Town.
4: Post-Construction Stormwater Management in New Development and Redevelopment	Comprehensive Stormwater Ordinance	Yes, since the adoption of the Stormwater Ordinance staff has used it to enforce stormwater violations through notices and citations. Cases are created and filed using our TRAKiT system.
4: Post-Construction Stormwater Management in New Development and Redevelopment	Evaluate and Update Stormwater Inspections Programs	As previously mentioned, we have also delegated stormwater oversight for CIP to our Public Works Department. Our Environmental Services Department and Construction/Building Inspections Division will continue to have oversight of private development. Having Public Works regulate CIP will increase the effectiveness of stormwater inspection program.

MCM(s)	BMP	BMP is appropriate for reducing the discharge of pollutants in stormwater (Answer Yes or No and explain)
5: Pollution Prevention/Good Housekeeping for Municipal Operations	Facility Specific Standard Operating Procedures (SOPs)	Currently, we have SOPs created for our Fleet Services and Operations and Maintenance facilities. Standard operating procedures for additional facilities and their related activities are currently in progress.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Facility and Stormwater Controls Map	Yes, the Town currently has a layer in ArcReader dedicated to Town facilities and their associated stormwater controls. The previously mentioned map is updated as new facilities and controls are constructed.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Operations and Maintenance (O&M) Program	Yes, Town staff undergoes training to recognize pollutants of concern from O&M activities.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Facility Inventory	Yes, Town staff has an inventory of all Town facilities. Updates to the facility inventory are made as needed.

3. Describe progress towards reducing the discharge of pollutants to the maximum extent practicable. Summarize any information used (such as visual observation, amount of materials removed or prevented from entering the MS4, or, if required, monitoring data, etc.) to evaluate reductions in the discharge of pollutants. You may use the table below to meet this requirement (**see Example 2 in instructions**):

MCM	BMP	Information Used	Quantity	Units	Does the BMP Demonstrate a Direct Reduction in Pollutants? (Answer Yes or No and explain)
1: Public Education, Outreach and Involvement	Municipal Channel Stormwater Quality Messages	Stormwater messages through FMTV	There were four stormwater related messages in 2018	Number of messages	Yes, FMTV allows residents to educate themselves about stormwater quality and water conservation.
1: Public Education, Outreach and Involvement	Municipal Website and Stormwater Quality Information	Stormwater education and information through municipal website	Flower Mound's Stormwater webpage was viewed 544 times in 2018	Webpage views	Yes, the website allows residents to educate themselves about stormwater quality and water conservation.

MCM	BMP	Information Used	Quantity	Units	Does the BMP Demonstrate a Direct Reduction in Pollutants? (Answer Yes or No and explain)
1: Public Education, Outreach and Involvement	Anti-Littering/ Dumping Brochure	Brochure distribution through education events and enforcement	We conducted (10) 2 nd grade events reaching 901 students and (5) 7 th grade events reaching 1,313 students. Two (2) environmental fairs were also conducted	Number of education events	Yes, staff hands out brochures and educates the public about stormwater quality and watershed protection during education events and through the public education process.
1: Public Education, Outreach and Involvement	Watershed Address Program	Placement of watershed signs	Ten (10) signs were added in 2018	Illegal dumping; Illicit discharges	Yes, signs help make public cognizant of local watersheds.
1: Public Education, Outreach and Involvement	Storm Drain Labeling	Storm Drain labeling as new inlets are added	Inlets were inspected and 235 new labels were added	Illegal dumping; Illicit discharges	Yes, storm drain labels make public cognizant of local creeks.
1: Public Education, Outreach and Involvement	Community Source Water Protection Program	Continued monthly sampling	6 active volunteers.	pH; DO; conductivity; temperature	Yes however, a numerical value cannot be assigned. Samples are taken once a

MCM	BMP	Information Used	Quantity	Units	Does the BMP Demonstrate a Direct Reduction in Pollutants? (Answer Yes or No and explain)
					month at the same time and date. To date, all samples have returned indicating healthy water bodies.
2: Illicit Discharge Detection and Elimination	Storm Sewer System Map	Updating map, if necessary	In 2018, 4.6 miles of gravity mains, 67 storm manholes and 142 storm inlets were added	Inlets; outfalls;	Yes, this allows staff to recognize potential areas for illegal dumping and illicit discharges.
2: Illicit Discharge Detection and Elimination	Develop an Illicit Discharge Detection and Elimination Program	Periodic dry weather sampling	Locations throughout the Town are sampled periodically	pH; DO; conductivity; temperature ; turbidity, odor, color, floatables	Yes, our dry weather sampling program allows us to establish baseline water quality parameters for locations throughout the Town of Flower Mound.
2: Illicit Discharge Detection and Elimination	Develop and Maintain an Illicit Discharge Document	Create cases and add to document, when needed.	16 cases related to Stormwater – Illicit Discharges.	Number of cases	Yes, this document allows staff to track illicit discharges.

MCM	BMP	Information Used	Quantity	Units	Does the BMP Demonstrate a Direct Reduction in Pollutants? (Answer Yes or No and explain)
			13 were residential/commercial and 3 were construction.		
3: Construction Site Stormwater Runoff Control	Evaluate and Update Regulatory Authority and Procedures	Update stormwater policy & procedures, if necessary	Updated process for handling BMP deficiencies at construction sites	Updates	Yes, staff continues to evaluate internal policies to reduce discharges.
3: Construction Site Stormwater Runoff Control	Construction Site Reporting Hotline	Continue monitoring hotline	3 calls in 2018	Number of calls from the hotline	Yes, staff continues to use the hotline to monitor illegal dumping/illicit discharge calls.
3: Construction Site Stormwater Runoff Control	Develop and Maintain a Construction Site Inventory Document	Continue to update the construction site inventory document, when needed.	A custom database report is used to quickly view all active sites.	Updates to the document	Yes, this inventory allows for a more efficient inspection process.
4: Post-Construction Stormwater Management in New Development	Comprehensive Stormwater Ordinance	Continue enforcement of stormwater ordinance through	2 citations and 4 notices of violation were issued relating to stormwater –	Number of citations and notices of violation	Yes, staff continued enforcement of the ordinance in 2018.

MCM	BMP	Information Used	Quantity	Units	Does the BMP Demonstrate a Direct Reduction in Pollutants? (Answer Yes or No and explain)
and Redevelopment		notices and citations.	illicit discharge in 2018		
4: Post-Construction Stormwater Management in New Development and Redevelopment	Evaluate and Update Stormwater Inspections Programs	Continued evaluation of the program through meetings and update, if needed.	Two meetings were held in 2018.	Number of meetings	Yes, meetings were held periodically throughout the year.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	Facility Specific Standard Operating Procedures (SOPs)	Continue to create Standard Operating Procedures	One (1) new SOP was created in 2018	Number of SOP's completed for a facility	Yes, staff has developed an SOP template for town facilities.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Facility and Stormwater Controls Map	Create a map of town facilities with associated stormwater controls for each facility.	Stormwater control inventory was added to map.	Facilities and stormwater controls added to the map	No, this BMP does not directly relate to activities taken in the field or training of staff.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Operations and Maintenance Program	Develop an O&M program through training materials and procedures.	13 training sessions.	Training sessions	Yes, there were 13 training sessions in 2018 with 136 participants.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Facility Inventory	Develop a spreadsheet	1 new facility was added to	Facilities added to	Yes, this allows staff to

MCM	BMP	Information Used	Quantity	Units	Does the BMP Demonstrate a Direct Reduction in Pollutants? (Answer Yes or No and explain)
d Housekeeping for Municipal Operations		document an inventory of all Town of Flower Mound facilities.	the spreadsheet: The old Town Hall was demolished and a new Town Hall was constructed	the inventory	document potential stormwater impacts from town facilities.

4. Provide the measurable goals for each of the MCMs, and an evaluation of the success of the implementation of the measurable goals (**see Example 3 in instructions**):

MCM(s)	Measurable Goal(s)	Explain progress toward goal or how goal was achieved. If goal was not accomplished, please explain.
1	Post 3 stormwater quality messages.	Met goal- 4 stormwater quality messages
1	Update and maintain the stormwater website.	Met goal - The stormwater webpage was updated as needed.
1	Anti-littering/dumping brochure.	Met goal- Town Staff conducted education and outreach events in 2018
1	Continue sign placement.	Met goal- 10 signs were placed.

MCM(s)	Measurable Goal(s)	Explain progress toward goal or how goal was achieved. If goal was not accomplished, please explain.
1	Continue the storm drain labeling program.	235 new storm drain labels were placed. 253 inlets, 29 manholes, and 27 outfalls were inspected.
1	Comply with state & local rules.	Met goal- Town continues to comply with state and local rules.
1	Continue program, training and providing technical services.	Met goal- Town staff has continued conducting education and outreach events
2	Periodically update map.	Met goal- Updates continue to be made.
2	Research and develop an Illicit Discharge Program.	Met goal- Dry-weather sampling locations have been identified around the Town which are currently being sampled periodically.
2	Develop and maintain an Illicit Discharges document.	Met goal- TRAKiT is currently used to track all stormwater non-compliance cases in Flower Mound.
3	Update inspection program and ordinance, if necessary.	Met goal- Updates are added to our inspection program when issues arise in the current process.
3	Monitor hotline.	Met goal- Calls continue to be received by residents that have observed stormwater violations within Town limits.
3	Maintain and update stormwater inventory document.	Met goal- A custom TRAKiT report was created to enable staff to easily obtain data on current stormwater activity.
4	Enforce all provisions of the stormwater ordinance. Update, if necessary.	Met goal- Ordinance is continuously reviewed and amendments will be made when deemed necessary.

MCM(s)	Measurable Goal(s)	Explain progress toward goal or how goal was achieved. If goal was not accomplished, please explain.
4	Provide for periodic inspections for targeted locations.	Met goal- Sites are continuously inspected by Town staff. Non-compliance items are often caught during inspections and corrective measures are enacted.
5	Develop SOP(s) annually for dedicated facilities.	Met goal- One (1) new SOP was developed in 2018 and additional SOPs will be created and updated when necessary.
5	Collect data and start developing map.	Met goal- Map has been created. Updates are made when new controls are constructed within the Town
5	Develop Operations and Maintenance Program training materials.	Met goal- Town staff was trained to increase general stormwater awareness.
5	Develop a MS4 Facility Inventory.	Met goal- Facility Inventory has been developed. Updates are made when new facilities are added.

C. Stormwater Data Summary

Provide a summary of all information used, including any lab results (if sampling was conducted) to assess the success of the SWMP at reducing the discharge of pollutants to the MEP. For example, did the MS4 conduct visual inspections, clean the inlets, look for illicit discharge, clean streets, look for flow during dry weather, etc.?

Sampling was conducted by the Town of Flower Mound in 2018 as part of the implementation of a dry weather screening program. In addition, Citizen Scientists from our Texas Stream Team program provide our Stormwater Department with water quality data.

During 2018 the Town inspected 253 inlets, 27 outfalls, and 29 manholes. No items of concern were noted during infrastructure inspections. Staff also responded to several reports from citizens of illicit discharges in local waterways from residential and construction-related sources. Biological processes, such as a bio-sheens and algae growth, are often mistaken by our residents as water pollution.

D. Impaired Waterbodies

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

The Town of Flower Mound directly discharges stormwater into an impaired segment known as 0826 – Grapevine Lake. The Pollutant of Concern (POC) for the impaired segment is pH and the segment has been listed since the 2012 Texas Integrated Report Index of Water Quality Impairments.

The segment is categorized as 5c which states that additional data or information will be collected and/or evaluated for one or more parameters before a management strategy is selected.

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

In 2018 the Town continued its dry weather sampling program. Our dry weather sampling program consists of strategically chosen sampling locations throughout the Town that will monitor seven (7) water quality parameters. The dry weather sampling will allow us to determine baseline values for each location, as well as providing continuous monitoring of pH levels for streams which discharge into Grapevine Lake.

In addition, Citizen Scientists from our Texas Stream Team program provide our Stormwater Department with water quality data, including pH data.

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

Not applicable

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

Benchmark Parameter <i>(Ex: Total Suspended Solids)</i>	Benchmark Value	Description of additional sampling or other assessment activities	Year(s) conducted
pH level	<9	According to the 2016 Texas Integrated Report Index of Water Quality Impairments, Grapevine Lake has been listed as impaired due to the pH level since 2012. Streams discharging into Grapevine Lake will continually be monitored at predetermined sampling sites under our Dry Weather Sampling Program to ensure that the Town is not contributing to the pH impairment.	4

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

Benchmark Parameter	Selected BMP	Contribution to achieving Benchmark
pH level	Sampling/monitoring and public education.	Water quality information will continue to be disseminated by multiple methods and will allow for the determination of baseline levels of pH in the streams discharging into Grapevine Lake. If any streams are found to have consistently high pH this will help us to determine

Benchmark Parameter	Selected BMP	Contribution to achieving Benchmark
		potential sources of pollution.

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

Description of bacteria-focused BMP	Comments/Discussion
N/A	

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

For example, the MS4 may use the following benchmark indicators:

- number of sources identified or eliminated;
- number of illegal dumpings;
- increase in illegal dumping reported;
- number of educational opportunities conducted;
- reductions in sanitary sewer flows (SSOs); /or
- increase in illegal discharge detection through dry screening.

Benchmark Indicator	Description/Comments
Number of educational opportunities conducted	The Town conducted (10) 2nd grade events reaching 901 students and (5) 7th grade events reaching 1,313 students. Two (2) environmental fairs were also conducted
Illegal discharge detection through dry screening	253 inlets, 29 manholes, and 27 outfalls were inspected. Dry weather sampling

Benchmark Indicator	Description/Comments
	program was conducted again in 2018 with 38 locations around the Town.

E. Stormwater Activities

Describe activities planned for the next reporting year:

MCM(s)	BMP	Stormwater Activity	Description/Comments
1: Public Education, Outreach and Involvement	Municipal Channel Stormwater Quality Messages	Stormwater messages through FMTV	The Town plans to continue disseminating information about stormwater quality through the FMTV platform
1: Public Education, Outreach and Involvement	Municipal Website and Stormwater Quality Information	Stormwater education and information through municipal website	The Town plans to continue updating our website as necessary
1: Public Education, Outreach and Involvement	Anti-Littering/ Dumping Brochure	Brochure distribution through education events and enforcement	The Town plans to continue handing out brochures during education events and when discharges are identified
1: Public Education, Outreach and Involvement	Watershed Address Program	Placement of watershed signs	The Town plans to continue adding signs to areas of the watershed which don't have signs

MCM(s)	BMP	Stormwater Activity	Description/Comments
1: Public Education, Outreach and Involvement	Storm Drain Labeling	Storm Drain labeling as new inlets are added	The Town plans to continue the labeling program
1: Public Education, Outreach and Involvement	Community Source Water Protection Program	Continue monthly sampling	The Town plans to continue supporting the Community Source Water Protection Program
2: Illicit Discharge Detection and Elimination	Storm Sewer System Map	Update map as new storm sewer is constructed	The Town plans to continue updating our storm sewer system map annually
2: Illicit Discharge Detection and Elimination	Develop an Illicit Discharge Detection and Elimination Program	Periodic dry weather sampling	The Town plans to continue our dry weather screening program
2: Illicit Discharge Detection and Elimination	Develop and Maintain an Illicit Discharge Document	Create cases and add to document, when needed.	The Town plans to continue using an Illicit Discharge Document
3: Construction Site Stormwater Runoff Control	Construction Site Reporting Hotline	Continue monitoring hotline	The Town plans to continue monitoring the construction site reporting hotline
3: Construction Site Stormwater Runoff Control	Develop and Maintain a Construction Site Inventory Document	Continue to update the construction site inventory	The Town plans to continue updating the construction site inventory document

MCM(s)	BMP	Stormwater Activity	Description/Comments
		document, when needed.	
4: Post-Construction Stormwater Management in New Development and Redevelopment	Comprehensive Stormwater Ordinance	Continue enforcement of stormwater ordinance through notices and citations.	The Town plans to continue enforcing the stormwater ordinance through notices and citations
4: Post-Construction Stormwater Management in New Development and Redevelopment	Evaluate and Update Stormwater Inspections Programs	Continued evaluation of the program through meetings and update, if needed.	The Town plans to continue evaluating and updating the stormwater inspection program
5: Pollution Prevention/Good Housekeeping for Municipal Operations	Facility Specific Standard Operating Procedures (SOPs)	Continue to create Standard Operating Procedures	The Town plans to continue creating SOPs.
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Facility and Stormwater Controls Map	Update map of town facilities with associated stormwater controls for each facility.	The Town plans to update the facility stormwater control map to document newly added stormwater controls
5: Pollution Prevention/Good Housekeeping for Municipal Operations	MS4 Facility Inventory	Update spreadsheet document an inventory of all Town of Flower Mound facilities.	The Town plans to update the facility inventory.

F. SWMP Modifications

1. The SWMP and MCM implementation procedures are reviewed each year.

☒ Yes ☐ No

2. Changes have been made or are proposed to the SWMP since the NOI or the last annual report, including changes in response to TCEQ's review.

☐ Yes ☒ No

If "Yes," report on changes made to measurable goals and BMPs:

MCM(s)	Measurable Goal(s) or BMP(s)	Implemented or Proposed Changes (Submit NOC as needed)
N/A	N/A	N/A

Note: If changes include additions or substitutions of BMPs, include a written analysis explaining why the original BMP is ineffective or not feasible, and why the replacement BMP is expected to achieve the goals of the original BMP.

3. Explain additional changes or proposed changes not previously mentioned (i.e. dates, contacts, procedures, annexation of land, etc.).

N/A

G. Additional BMPs for TMDLs and I-Plans

Provide a description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable TMDLs and implementation plans.

BMP	Description	Implementation Schedule (start date, etc.)	Status/Completion Date (completed, in progress, not started)
Stream Monitoring/ Testing	The town will continue to periodically sample tributaries that discharge into Grapevine Lake through our IDDE program. If at any point, we determine that we are contributing to segment 0826's pH impairment then we will implement additional BMP's.	2015-2019	In progress

H. Additional Information

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

☐ Yes ☒ No

2.a. Is the permittee part of a group sharing a SWMP with other entities?

☐ Yes ☒ No

I. Construction Activities

1. The number of construction activities that occurred in the jurisdictional area of the MS4 (Large and Small Site Notices submitted by construction site operators):

58

2a. Does the permittee utilize the optional seventh MCM related to construction?

☐ Yes ☒ No

2b. If "yes," then provide the following information for this permit year:

The number of municipal construction activities authorized under this general permit	N/A
--	-----

The total number of acres disturbed for municipal construction projects	N/A
---	-----

Note: Though the seventh MCM is optional, implementation must be requested on the NOI or on a NOC and approved by the TCEQ.

J. Certification

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

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

Name (printed): _____ Title: _____

Signature: _____ Date: _____

Name of MS4 _____

Name (printed): _____ Title: _____

Signature: _____ Date: _____

Name of MS4 _____

Name (printed): _____ Title: _____

Signature: _____ Date: _____

Name of MS4 _____

Name (printed): _____ Title: _____

Signature: _____ Date: _____

Name of MS4 _____

Name (printed): _____ Title: _____

Signature: _____ Date: _____

Name of MS4 _____

If you have questions on how to fill out this form or about the Stormwater Permitting program, please contact us at 512-239-4671.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512-239-3282.



Town of Flower Mound
Stormwater Management Program

AS REQUIRED PURSUANT TO:

**TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT FOR STORMWATER FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) [TXR040000]**

Table of Contents

PART I	PREFACE.....	4
	Stormwater Management Plan Overview.....	4
	Regulatory Requirement	4
	Minimum Control Measures.....	4
	Recordkeeping and Reporting Requirements.....	6
	Definitions.....	7
	Commonly Used Acronyms.....	12
	Allowable Non-Stormwater Discharges	12
	Document Organization	13
PART II	MINIMUM CONTROL MEASURES	15
1.	Public Education, Outreach and Involvement	15
	Selected BMPs for Public Education, Outreach and Involvement.....	15
1.1	Stormwater Media Outreach	15
1.2	Municipal Website Stormwater Page	16
1.3	Stormwater Informational Brochures	17
1.4	Watershed Address Program	17
1.5	Storm Drain Labeling.....	18
1.6	State and Local Public Notice Requirements.....	18
1.7	Community Source Water Protection Program.....	19
1.8	Water Quality Education Events	20
2.	Illicit Discharge Detection and Elimination.....	21
	Selected BMPs for Illicit Discharge Detection and Elimination.....	21
2.1	Storm Sewer System Map	21
2.2	Illicit Discharge Detection and Elimination Program	22
2.3	Illicit Discharge Database.....	23
3.	Construction Site Stormwater Runoff Control	24
	Selected BMPs for Construction Site Stormwater Runoff Controls	24
3.1	Construction Site Compliance and Enforcement.....	24
3.2	Construction Site Reporting Hotline and Online Violation Reports.....	25
3.3	Construction Site Inventory Database	25
4.	Post-Construction Stormwater Management in New Development and Redevelopment.....	27
	Selected BMPs for Post Construction Stormwater Management for New Developments and Redevelopment.....	27
4.1	Comprehensive Stormwater Ordinance.....	27
4.2	Stormwater Structural Control Program	28
4.3	Engineering Design Standards.....	28
5.	Pollution Prevention/Good Housekeeping for Municipal Operations.....	30
	Selected BMPs for Pollution Prevention/Good Housekeeping for Municipal Operations	30
5.1	Facility Specific Standard Operating Procedures (SOPs)	30
5.2	MS4 Facility and Stormwater Controls Inventory.....	31
5.3	MS4 Facility Inspections.....	32
5.4	MS4 Operations and Maintenance Training	32
7.	Authorization for Municipal Construction Activities.....	34
	Selected BMPs for Pollution Prevention/Good Housekeeping for Municipal Operations	34

7.1 Erosion Control Plan Review.....	34
7.2 Municipal Construction Site Inspections	35
7.3 Stormwater Pollution Prevention Plans.....	35
PART III IMPAIRED WATER BODIES AND TOTAL MAXIMUM DAILY LOAD (TMDL)	
REQUIREMENTS.....	37
STORMWATER CONTACTS	38

PART I PREFACE

Stormwater Management Plan Overview

Regulatory Requirement

Phase I of the U.S. Environmental Protection Agency's (EPA) Stormwater program was promulgated in 1990 under the Clean Water Act (CWA). Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address Stormwater runoff from: (1) "medium" and "large" municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater, (2) construction activity disturbing 5 acres of land or greater, and (3) ten categories of industrial activity.

The Stormwater Phase II Final Rule is the next step in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted Stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted Stormwater runoff.

Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of Stormwater discharges that have the greatest likelihood of causing continued environmental degradation.

On September 14, 1998, EPA authorized Texas to develop and implement the Texas Pollutant Discharge Elimination System (TPDES) permit. Under the terms of this authority, the Texas Commission on Environmental Quality (TCEQ) assumes the role of Stormwater permitting authority for industrial activities, small and large construction activities, and all regulated MS4s.

On January 16, 2019, the TCEQ issued the new TPDES General Permit TXR040000 authorizing the discharge of Stormwater to surface water in the state from small municipal separate storm sewer systems (MS4s). Small MS4 operators that are required to obtain authorization under this general permit must submit a Stormwater management program (SWMP) and a completed notice of intent (NOI) form to the TCEQ by July 23, 2019.

Minimum Control Measures

To meet the requirements for the TPDES general permit, the Town's Stormwater Management Program (SWMP) must provide minimum control measures (MCMs) for the following subject areas:

- Public Education, Outreach and Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management in New Development and Redevelopment
- Pollution Prevention and Good Housekeeping for Municipal Operations

The Town is also electing to utilize the optional MCM 7, Authorization for Construction Activities where the Small MS4 is the Site Operator. After extensive research and review, Town staff has selected the following specific BMPs for implementation during the five (5) year permit period.

Stormwater Program Best Management Practices	
1.1	Municipal Channel Stormwater Messages
1.2	Municipal Website with Stormwater Quality Information
1.3	Anti-Littering/Dumping Brochure
1.4	Watershed Address Program
1.5	Storm Drain Labeling
1.6	State and Local Public Notice Requirements
1.7	Community Source Water Protection Program
1.8	Water Quality Education Events
2.1	Storm Sewer System Map
2.2	Spill Response Program
2.3	Maintain an Illicit Discharge Database
2.4	Illicit Discharge Detection & Elimination Training
2.5	Dry Weather Screening Program
2.6	On-Site Sewage Facility Program
3.1	Construction Site Compliance and Enforcement
3.2	Construction SWPPP Review
3.3	Construction Site Reporting Hotline
3.4	Construction Site Database
4.1	Comprehensive Stormwater Ordinance
4.2	Stormwater Structural Control Program
4.3	Engineering Design Standards
5.1	Facility Specific Standard Operating Procedures
5.2	MS4 Facility Map
5.3	MS4 Operations and Maintenance Training
5.4	MS4 Facility Stormwater Control Inventory
7.1	Municipal Construction SWPPP Review
7.2	Municipal Construction Site Inspections
7.3	Stormwater Pollution Prevention Plans

Recordkeeping and Reporting Requirements

A primary component of the MS4 general permit is recordkeeping that allows for periodic evaluation of the management plan and for annual reporting to the TCEQ on the status of the plan. Specifically, Phase II MS4s are required to:

- Retain all records, a copy of the TCEQ general permit, and records of all data used to complete the NOI for a period of three years or for the term of the TCEQ permit, whichever is longer.
- Retain a copy of the SWMP at a location accessible to the TCEQ.
- Make the records, including the NOI and SWMP, available to the public if requested to do so, in writing. The SWMP must be made available within ten (10) working days from the receipt of a written request. Other records must be provided in accordance with the Texas Public Information Act. Reasonable charges, in accordance with Texas law, may be levied by the permittee for researching and preparing any requested materials.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

The general reporting requirements for MS4s include:

Noncompliance Notification – Any noncompliance which may endanger human health or safety, or the environment, in accordance with 30 TAC Chapter 305.125(9), must be reported by the MS4 to the TCEQ. Oral and/or facsimile notification of the noncompliance must be made within 24 hours of becoming aware of the issue. A written report must be provided to the TCEQ within five (5) working days. Additionally, the MS4 must promptly submit to TCEQ any facts or information relevant to an NOI, Notice of Termination (NOT), Notice of Change (NOC), or any other report.

Annual Report – MS4s must submit a concise annual report to the TCEQ Executive Director within 90 days of the end of the reporting period. **The Town of Flower Mound has chosen to submit annual reports on the calendar-year schedule.** Each reporting period will end on December 31st, and an annual report will be submitted 90 days thereafter. A copy of the annual report must be readily available for review by authorized TCEQ personnel. The report generally includes the status of compliance with permit conditions, assessment of the BMPs defined in the SWMP and their relative effectiveness, progress towards reducing the discharge of pollutants into the MS4, and an evaluation of the success of the implementation of the measurable goals for each of the MCMs. The annual report should also include a summary of proposed changes to the SWMP planned for the next reporting cycle.

A copy of the TPDES General Permit No. TXR040000 is included in Appendix A of this document.

Definitions

Arid Areas - Areas with an average annual rainfall of less than ten (10) inches.

Best Management Practices (BMPs) - Schedules of activities, prohibitions of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants. BMPs also include treatment requirements, operating procedures, and practices to control runoff, spills or leaks, waste disposal, or drainage from raw material storage areas.

Classified Segment - refers to a water body that is listed and described in Appendix A or Appendix C of the Texas Surface Water Quality Standards, at 30 TAC § 307.10.

Clean Water Act (CWA) - The Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972, Pub.L. 92-500, as amended Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483 and Pub. L. 97-117, 33 U.S.C. 1251 et.seq.

Common Plan of Development or Sale - A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development or sale is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities.

Construction Site Operator - The person or persons associated with a small or large construction project that meets either of the following two criteria:

- (a) The person or persons that have operational control over construction plans and specifications (including approval of revisions) to the extent necessary to meet the requirements and conditions of this general permit; or
- (b) The person or persons that have day-to-day operational control of those activities at a construction site that are necessary to ensure compliance with a Stormwater pollution prevention plan for the site or other permit conditions (e.g. they are authorized to direct workers at a site to carry out activities required by the Stormwater Pollution Prevention Plan or comply with other permit conditions).

Control Measure - Any BMP or other method used to prevent or reduce the discharge of pollutants to water in the state.

Conveyance - Curbs, gutters, man-made channels and ditches, drains, pipes, and other constructed features designed or used for flood control or to otherwise transport Stormwater runoff.

Daily Maximum - For the purposes of compliance with the numeric effluent limitations contained in this permit, this is the maximum concentration measured on a single day, by grab sample, within a period of one calendar year.

Discharge - When used without a qualifier, refers to the discharge of Stormwater runoff or certain non-Stormwater discharges as allowed under the authorization of this general permit.

Final Stabilization - A construction site where either of the following conditions are met:

- (a) All soil disturbing activities at the site have been completed and a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed.

- (b) For individual lots in a residential construction site by either:
 - (1) The homebuilder completing final stabilization as specified in condition (a) above;
 - or
 - (2) The homebuilder establishing temporary stabilization for an individual lot prior to the time of transfer of the ownership of the home to the buyer and after informing the homeowner of the need for, and benefits of, final stabilization.
- (c) For construction activities on land used for agricultural purposes (e.g. pipelines across crop or range land), final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to a surface water and areas which are not being returned to their preconstruction agricultural use must meet the final stabilization conditions of condition (a) above.
- (d) In arid, semi-arid, and drought-stricken areas only, all soil disturbing activities at the site have been completed and both of the following criteria have been met:
 - (1) Temporary erosion control measures (e.g., degradable rolled erosion control product) are selected, designed, and installed along with an appropriate seed base to provide erosion control for at least three years without active maintenance by the operator, and
 - (2) The temporary erosion control measures are selected, designed, and installed to achieve 70 percent vegetative coverage within three years.

Ground Water Infiltration - For the purposes of this permit, groundwater that enters a municipal separate storm sewer system (including sewer service connections and foundation drains) through such means as defective pipes, pipe joints, connections, or manholes.

Illicit Connection - Any man-made conveyance connecting an illicit discharge directly to a municipal separate storm sewer.

Illicit Discharge - Any discharge to a municipal separate storm sewer that is not entirely composed of Stormwater, except discharges authorized under this general permit or a separate authorization and discharges resulting from firefighting activities.

Indian Country - Defined in 18 USC Section 1151, means (a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation; (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same. This definition includes all land held in trust for an Indian tribe.

Industrial Activities - Manufacturing, processing, material storage, and waste material disposal areas (and similar areas where Stormwater can contact industrial pollutants related to the industrial activity) at an industrial facility described by the TPDES Multi Sector General Permit, TXR050000, or by another TCEQ or TPDES permit.

Large Construction Activity - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than five (5) acres of land. Large construction activity also includes the disturbance of less than five (5) acres of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine

maintenance that is performed to maintain the original line and grade, hydraulic capacity, and original purpose of a ditch, channel, or other similar Stormwater conveyance. Large construction activity does not include the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.

Maximum Extent Practicable (MEP) - The technology-based discharge standard for municipal separate storm sewer systems to reduce pollutants in Stormwater discharges that was established by CWA §402(p). A discussion of MEP as it applies to small MS4s is found at 40 CFR 122.34.

MS4 Operator - For the purpose of this permit, the public entity, and/ or the entity contracted by the public entity, responsible for management and operation of the small municipal separate storm sewer system that is subject to the terms of this general permit.

Municipal Separate Storm Sewer System (MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (a) Owned or operated by the U.S., a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over the disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under the CWA §208 that discharges to the surface water in the state;
- (b) That is designed or used for collecting or conveying stormwater;
- (c) That is not a combined sewer; and
- (d) That is not part of a publicly owned treatment works (POTW) as defined in 40 CFR §122.2.

Notice of Change (NOC) - Written notification from the permittee to the executive director providing changes to information that was previously provided to the agency in a notice of intent.

Notice of Intent (NOI) - A written submission to the executive director from an applicant requesting coverage under this general permit.

Notice of Termination (NOT) - A written submission to the executive director from a permittee authorized under a general permit requesting termination of coverage under this general permit.

Outfall - For the purpose of this permit, a point source at the point where a municipal separate storm sewer discharges to waters of the United States (U.S.) and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other waters of the U.S. and are used to convey waters of the U.S.

Permittee - The MS4 operator authorized under this general permit.

Permitting Authority - For the purposes of this general permit, the TCEQ.

Point Source - (from 40 CFR § 122.22) Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural Stormwater runoff.

Pollutant(s) of Concern - Include biochemical oxygen demand (BOD), sediment or a parameter that addresses sediment (such as total suspended solids, turbidity or siltation), pathogens, oil and grease,

and any pollutant that has been identified as a cause of impairment of any water body that will receive a discharge from an MS4. (Definition from 40 CFR Section 122.32(e)(3)).

Redevelopment - alterations of a property that changes the “footprint” of a site or building in such a way that there is a disturbance of equal to or greater than 1 acre of land. This term does not include such activities as exterior remodeling.

Semiarid Areas - Areas with an average annual rainfall of at least ten (10) inches, but less than 20 inches.

Small Construction Activity - Construction activities including clearing, grading, and excavating that result in land disturbance of equal to or greater than one (1) acre and less than five (5) acres of land. Small construction activity also includes the disturbance of less than one (1) acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1) and less than five (5) acres of land. Small construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, and original purpose of a ditch, channel, or other similar Stormwater conveyance. Small construction activity does not include the routine grading of existing dirt roads, asphalt overlays of existing roads, the routine clearing of existing right-of-ways, and similar maintenance activities.

Small Municipal Separate Storm Sewer System (MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (a) Owned or operated by the United States, a state, city, town, borough, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, Stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under § 208 of the CWA;
- (b) Designed or used for collecting or conveying Stormwater;
- (c) Which is not a combined sewer;
- (d) Which is not part of a publicly owned treatment works (POTW) as defined at 40 CFR § 122.2; and
- (e) Which was not previously authorized under a NPDES or TPDES individual permit as a medium or large municipal separate storm sewer system, as defined at 40 CFR §122.26(b)(4) and (b)(7).

This term includes systems similar to separate storm sewer systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. This term does not include separate storm sewers in very discrete areas, such as individual buildings. For the purpose of this permit, a very discrete system also includes storm drains associated with certain municipal offices and education facilities serving a nonresidential population, where those storm drains do not function as a system, and where the buildings are not physically interconnected to an MS4 that is also operated by that public entity.

Stormwater and Stormwater Runoff - Rainfall runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Associated with Construction Activity - Stormwater runoff from an area where there is either a large construction activity or a small construction activity.

Stormwater Management Program (SWMP) - A comprehensive program to manage the quality of Stormwater discharged from the municipal separate storm sewer system.

Structural Control (or Practice) - A pollution prevention practice that requires the construction of a device, or the use of a device, to capture or prevent pollution in Stormwater runoff. Structural controls and practices may include but are not limited to: wet ponds, bioretention, infiltration basins, Stormwater wetlands, silt fences, earthen dikes, drainage swales, vegetative lined ditches, vegetative filter strips, sediment traps, check dams, subsurface drains, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins.

Surface Water in the State - Lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state (from the mean high water mark (MHWM) out 10.36 miles into the Gulf), and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all water-courses and bodies of surface water, that are wholly or partially inside or bordering the state or subject to the jurisdiction of the state; except that waters in treatment systems which are authorized by state or federal law, regulation, or permit, and which are created for the purpose of waste treatment are not considered to be water in the state.

Total Maximum Daily Load (TMDL) - The total amount of a substance that a water body can assimilate and still meet the Texas Surface Water Quality Standards.

Traditional Small MS4 - A small MS4 that can pass ordinances and have the enforcement authority to enforce the stormwater management program. An example of traditional MS4s includes cities.

Urbanized Area (UA) - An area of high population density that may include multiple MS4s as defined and used by the U.S. Census Bureau in the 2000 decennial census.

Waters of the United States - (from 40 CFR Section 122.2) Waters of the United States or waters of the U.S. means:

- (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (b) All interstate waters, including interstate wetlands;
- (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds that the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
 - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
 - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
 - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
- (d) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;
- (f) The territorial sea; and

- (g) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition.
- (h) Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR § 423.11(m) which also meet the criteria of this definition) are not waters of the United States. This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

Commonly Used Acronyms

BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit, TXR150000
CWA	Clean Water Act
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency
FR	Federal Register
IP	Implementation Procedures
MCM	Minimum Control Measure
MSGP	Multi-Sector General Permit, TXR050000
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Change
NOD	Notice of Deficiency
NOI	Notice of Intent
NOT	Notice of Termination (to terminate coverage under a general permit)
NPDES	National Pollutant Discharge Elimination System
SWMP	Stormwater Management Program
SWP3,	Stormwater Pollution Prevention Plan
SWPPP	
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TWC	Texas Water Code

Allowable Non-Stormwater Discharges

The following non-Stormwater sources may be discharged from the small MS4 and are not required to be addressed in the small MS4's Illicit Discharge and Detection or other minimum control measures, unless they are determined by the permittee or the TCEQ to be significant contributors of pollutants to the small MS4:

- a) Water line flushing (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life);
- b) Runoff or return flow from landscape irrigation, lawn irrigation, and other irrigation utilizing potable water, groundwater, or surface water sources;
- c) Discharges from potable water sources;
- d) Diverted stream flows;
- e) Rising ground waters and springs;
- f) Uncontaminated ground water infiltration;
- g) Uncontaminated pumped ground water;
- h) Foundation and footing drains;
- i) Air conditioning condensation;
- j) Water from crawl space pumps;
- k) Individual residential vehicle washing;
- l) Flows from wetlands and riparian habitats;
- m) Dechlorinated swimming pool discharges;
- n) Street wash water;
- o) Discharges or flows from firefighting activities (firefighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, and similar activities);
- p) Other allowable non-Stormwater discharges listed in 40 CFR § 122.26(d)(2)(iv)(B)(1);
- q) Non-Stormwater discharges that are specifically listed in the TPDES Multi Sector General Permit (MSGP) or the TPDES Construction General permit (CGP); and
- (r) Other similar occasional incidental non-Stormwater discharges, unless the TCEQ develops permits or regulations addressing these discharges.

Document Organization

The Town of Flower Mound's Stormwater Management Program is organized to aid development and implementation of the programs required by the TPDES MS4 Phase II general permit, and to aid in completion of permit notification documents (NOI) and tracking progress for annual reports.

Part II of the SWMP addresses the six (6) minimum control measures required under the TPDES permit. For each minimum control measures, the following are discussed:

- **Current Programming**

A description of current programming, regulations, procedures, and/or documents that already meet the minimum control measure requirements is provided.

- **Selected BMPs**

A description of the best management practices the Town will implement to address the regulatory requirement.

- **Measurable Goal(s)**

The Town must designate measurable goal(s) for each BMP.

- **Schedule**

The implementation schedule for each BMP is described.

- **Responsible Divisions**

The division(s) responsible for implementation of each BMP is provided.

The appendices provide additional information and copies of documents, regulations, procedures, training materials, and samples of public education/outreach communication items.

PART II MINIMUM CONTROL MEASURES

1. Public Education, Outreach and Involvement

Public Education, Outreach and Involvement

Current Programs

The Town of Flower Mound provides general public education, outreach and involvement by several means of communication through the Town's Community Affairs, Keep Flower Mound Beautiful, Public Works, and Environmental Services divisions. Specifically, the Town has and will continue to provide education to the public about the impacts of stormwater run-off on water quality, proper disposal of waste, and changes they can implement to reduce pollutants in stormwater runoff. This education is offered through the following programs:

- Spring and Fall Waterway Cleanup Events
- Bi-annual Environmental Fair
- Social media outreach
- Household Hazardous Waste Curbside pickup
- Second Grade and Seventh Grade Education Events
- Arbor Day Event
- Implementation of a Water Conservation and Education Program
- Utility Billing Inserts
- Encouragement of Conservation Developments
- Operation of the Town's Tree Farm and Outdoor Learning Area

The Town of Flower Mound has a public Environmental Conservation Commission, which, in part, receives periodic updates on various environmental and stormwater quality related activities conducted by Town staff. This process provides all members of the public an initial opportunity to participate in the SWMP development through public comment. Public involvement/participation opportunities are also associated with the following current Town sponsored programs:

- Neighborhood Cleanup Events
- Adopt-a-Spot/Adopt-a-Stream Program

Selected BMPs for Public Education, Outreach and Involvement

1.1 Stormwater Media Outreach

The Town of Flower Mound will use the municipal television channel and other communication services to post messages about the stormwater management program that are of interest to all stakeholders within the Town's jurisdictional authority. The Town will relay important information related to stormwater quality and upcoming events, training seminars, and other resources related to the Town's SWMP.

Measurable Goals

The measurable goal for implementation of this BMP is to post three (3) stormwater quality related messages per year during the permit term. Description of development and final product of each stormwater quality message will be provided in the annual report. The number of inquiries related to the educational or event information provided through the municipal channel will be documented and provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Municipal Stormwater Quality Messages	Post 3 stormwater quality messages.	Year 1-5

Responsible Division(s)

The Community Affairs and Environmental Services Divisions have responsibility for implementation of this BMP to meet Measurable Goal 1.1.

1.2 Municipal Website Stormwater Page

The Town of Flower Mound will use the municipal website (www.flower-mound.com) to inform the public and other interested stakeholders about the SWMP and the annual report. It will include general stormwater quality information as well as topics of interest to the general public such as litter control, pet waste management, water conservation, and proper management of pesticides, fertilizer, used oil and household hazardous waste. Information will also be included to educate businesses and construction site personnel about the impacts of stormwater run-off on water quality and steps they can use to reduce their contribution to stormwater pollution.

Measurable Goals

The measurable goal for implementation of this BMP is to provide continuous updates as needed throughout the duration of the permit. Description of updates to the website will be provided in the annual report. The number of inquiries related to the educational information provided through the municipal website will be documented and provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Municipal website with stormwater quality information	Update and maintain the Stormwater website.	Year 1-5

Responsible Division(s)

The Environmental Services, Public Works, and Community Affairs Divisions have responsibility for implementation of this BMP to meet Measurable Goal 1.2.

1.3 Stormwater Informational Brochures

The Town of Flower Mound Environmental Services Department is responsible for providing information regarding illegal dumping and related environmental crimes to the general public, local businesses, commercial and industrial facilities, and construction site operators. In cooperation with the Environmental Services Department, the Town's SWMP will include the development and distribution of an Anti-Littering/Dumping handout, which will be made available through various Town Departments.

Measurable Goals

The measurable goal for implementation of this BMP is to print and ensuring continuous availability of the handouts throughout the remainder of the permit. Description of the distribution of the brochure will be provided in the annual report. The number of brochures distributed to the public will also be documented and provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Anti-Littering/Dumping Brochure	Print and distribute, as needed	Year 1-5

Responsible Division(s)

The Environmental Services Division has responsibility for developing and implementing this BMP to meet Measurable Goal 1.3.

1.4 Watershed Address Program

The Town of Flower Mound has delineated all sub-watershed basins within the Town's jurisdictional authority and, to the maximum extent practical, will place "watershed address" signs within public road and street right-of-ways. The sign will include identification of a watershed as well as a short water quality related social marketing message that is directed to the general public.

Measurable Goal

The Town of Flower Mound will continue to assess and determine the best locations for the "watershed address" signs this permit cycle. The signs will be installed throughout the remainder

of the permit. Description of research and development along with the number of signs installed will be documented and provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Watershed Address Program	Continue sign placement.	Year 1-5

Responsible Division(s)

The Environmental Services, Public Works, and Streets Divisions are responsible for developing and implementing this BMP to meet Measurable Goal 1.4.

1.5 Storm Drain Labeling

The Town of Flower Mound will continue the program for all new residential and commercial developments to provide storm drain labels for storm sewer inlets. Additionally, the Town will provide storm drain labeling kits for use by volunteers on existing storm sewer inlets.

Measurable Goal

The Town will also label existing storm sewer inlets during permit years one through five to promote the proper disposal of waste. Labels will identify the local stream or lake destination of each inlet requiring all new residential and commercial development to provide storm drain markers on all storm sewer inlets and related structures. Description of research and development of the labels will be provided in the annual report. The number of labels installed will also be documented and provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Storm Drain Labeling	Continue the storm drain labeling program.	Year 1-5

Responsible Division(s)

The Environmental Services and Public Works Divisions are responsible for developing and implementing this BMP to meet Measurable Goal 1.5.

1.6 State and Local Public Notice Requirements

The Town of Flower Mound will comply with all applicable state and local public notice requirements when implementing a public involvement/participation program.

Measurable Goals

The measurable goal for implementation of this BMP is to provide state and local required public notice in the process of implementing a public involvement/participation program. Implementation will be according to the schedule below and will be provided in an open forum in order for citizens to participate in the public process.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Public Notice	Comply with state and local rules.	Year 1-5

Responsible Division(s)

The Community Affairs and Environmental Services Divisions have responsibility for this BMP to meet Measurable Goal 1.6.

1.7 Community Source Water Protection Program

The Town of Flower Mound has initiated a community-wide water quality public education and participation program designed to involve local residents, businesses, neighborhood associations, and students in the implementation of the Town's SWMP. Utilizing the Texas Stream Team program, the Town will continue to develop, train, and manage a network of volunteer water quality monitors, who will take monthly water quality samples at designated monitoring stations. The data will be submitted online by Town staff and collected in the Texas Stream Team Data Viewer database. Town staff will have the ability to monitor volunteer progress by having admin rights to the Stream Team Data Viewer.

Measurable Goals

The Town will determine appropriate sampling locations, provide training to volunteer monitors, and provide general support services to the monitors. Implementation will follow the schedule below. Description of research and development of the program will be provided in the annual report. The number of volunteers trained and/or participating will also be documented and provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Community Source Water Protection Program	Continue program, training and providing technical services.	Year 1-5

Responsible Division(s)

The Environmental Services Division is responsible for developing and implementing this BMP to meet Measurable Goal 1.7.

1.8 Water Quality Education Events

The Town of Flower Mound provides information regarding watersheds, stormwater, and water quality to students in Lewisville ISD to 2nd and 7th grade classes on an annual basis. The Town also routinely visits with groups of Boy and/or Girl Scouts regarding water quality and provides water quality education at other events as requested.

Measurable Goals

The number of events that the Town participates in will be documented and provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Public Education, Outreach and Involvement	Water Quality Education Events	Continue program, visit elementary and middle schools in Town. Visit with other groups as requested.	Year 1-5

Responsible Division(s)

The Environmental Services and Public Works Division is responsible for developing and implementing this BMP to meet Measurable Goal 1.8.

2. Illicit Discharge Detection and Elimination

Current Programs

Currently, the Town of Flower Mound utilizes a GIS database system to track the Town's MS4 infrastructure and jurisdictional waters. Mapping of future additions to the infrastructure, which includes the stormwater drainage system, will be included in this project. The Town's Environmental Services Division, Public Works Division, and Fire Chief's Office investigate reported or discovered illicit discharges and spills and work with the responsible party to resolve all situations. All responsible divisions have the authority to investigate and enforce against any hazardous and non-hazardous illegal dumping activities. Additional programs currently implemented that are related to illicit discharge detection and elimination include:

- Neighborhood Cleanup Events in conjunction with the bi-annual Environmental Fair
- Household Hazardous Waste Curbside Pickup
- Town Code of Ordinances provisions:
 - Authority to control and regulate waste discharge and require pretreatment
 - Enforcement by authority to disconnect service or access penalties for violations
 - Reporting requirements by industrial waste pretreatment permittees
 - Prohibit persons to dump, or permit to be dumped, knowingly or intentionally, upon any sidewalk, alley, street, into or adjacent to water, or any other public or private property, any unwholesome water, refuse, rubbish, trash, debris, filth, carrion, junk, garbage, impure or unwholesome matter of any kind or other objectionable or unsightly matter of whatever kind
 - Enforcement by accessing penalties for illegal dumping violations

Selected BMPs for Illicit Discharge Detection and Elimination

2.1 Storm Sewer System Map

The Town of Flower Mound has developed a GIS-based storm sewer system map, showing the location of all outfalls and the names and locations of all water of the U.S. that receive discharges from those outfalls. Additionally, the storm sewer map identifies the location of storm sewer pipes, ditches, and other conveyances owned by the Town.

Measurable Goals

The measurable goal for implementation of this BMP is to periodically update the map throughout the remainder of the permit. Description of the annual updates to the Storm Sewer System Map will be provided in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Illicit Discharge Detection and Elimination	Storm Sewer System Map	Periodically update map.	Year 1-5

Responsible Division(s)

Public Works, Environmental Services, and Information Technology Divisions are responsible for implementation of the storm sewer system map to meet Measurable Goal 2.1.

2.2 Illicit Discharge Detection and Elimination Program

The Town of Flower Mound has implemented an Illicit Discharge Detection and Elimination Program that incorporates important components including IDDE training, mapping, inspection, and procedures for locating, tracing and eliminating illicit discharges.

Upon being notified that the discharge has been eliminated, Flower Mound staff will conduct a follow-up investigation or field screening, consistent with the TPDES General Permit, to verify that the discharge has been eliminated.

Flower Mound currently utilizes an On-Site Sewage Disposal Ordinance to prevent and correct leaking on-site sewage disposal systems.

Measurable Goals

The measurable goal for this BMP is to maintain and audit the Illicit Discharge Detection and Elimination (IDDE) Program annually. If, as a result of annual audits of the program, it is found that the program needs to be updated, changes will be made to the program and documented in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Illicit Discharge Detection and Elimination Program	Program to Detect and Address Illicit Discharges	Maintain and audit IDDE Program.	Years 1-5

Responsible Division(s)

The Environmental Services and Public Works Division is responsible for developing and maintaining this BMP to meet Measurable Goal 2.2.

2.3 Illicit Discharge Database

The Town of Flower Mound currently utilizes a database to track all illicit discharges resulting from municipal and commercial operations. The database includes project name and records of inspection and enforcement (if applicable).

Measurable Goals

The measurable goal for this BMP is to maintain an Illicit Discharge database. The number and description of illicit discharges will be provided in the permit year annual reports.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Illicit Discharge Detection and Elimination	Develop and Maintain an Illicit Discharge Document	Maintain and update an Illicit Discharge document.	Years 1-5

Responsible Division(s)

The Environmental Services, Engineering Services and Public Works Divisions are responsible for developing and maintaining this BMP to meet Measurable Goal 2.3.

3. Construction Site Stormwater Runoff Control

Current Programs

Currently, the Town of Flower Mound requires construction sites comply with all federal and/or state stormwater permits. Additionally, the Town currently has existing rules and regulations related to erosion control and stormwater quality requirements related to new residential and/or commercial developments. Stormwater and erosion controls are included in Town ordinances, engineering standards, and enforced through inspections by various departments during all phases of construction related activities. Noncompliance can be grounds for the Town to stop inspections and issue citations. The Town also has staff and procedures for site plan review that incorporates consideration of potential water quality impacts as well as procedures to receive and consider information submitted by the public during the development review process.

Selected BMPs for Construction Site Stormwater Runoff Controls

3.1 Construction Site Compliance and Enforcement

The Town of Flower Mound has a comprehensive stormwater ordinance which has requirements for erosion and sediment controls and proper waste management at construction sites, and sanctions to ensure compliance with the requirements. If necessary, additional ordinances or other regulatory mechanisms will be updated to ensure that construction sites are in compliance with state requirements.

Measurable Goals

The measurable goal for implementation of this BMP is continued enforcement of erosion and sediment control procedures and compliance for construction sites for years one through five. Updates to ordinances will be made, if necessary and included in the annual report. The number of violations and enforcement actions taken per year will also be included in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Construction Site Stormwater Controls	Evaluate and Enforce Regulatory Authority and Procedures	Update inspection program and ordinance, if necessary.	Year 1-5

Responsible Division(s)

The Environmental Services, Public Works, Building Inspections and Engineering Services Divisions are responsible for developing and implementing this BMP to meet Measurable Goal 3.1.

3.2 Construction Site Reporting Hotline and Online Violation Reports

The Town of Flower Mound maintains a construction site reporting hotline and online violation reporting option for the public to report construction site problems and/or potential violations. This hotline and violation reports online are utilized along with a general illegal dumping and environmental crimes hotline and reports managed by members of the Town's Environmental Services department. This will facilitate the ability of the public to provide information that will assist in detection of problem discharges.

Measurable Goals

The measurable goal will be to continue the use of the hotline and respond as violations are reported. The number of calls to the hotline and complaints submitted online will be included in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Construction Site Stormwater Controls	Construction Site Reporting Hotline	Monitor hotline and online violation complaints	Year 1-5

Responsible Division(s)

The Environmental Services Division is responsible for implementation of this BMP to meet Measurable Goal 3.2.

3.3 Construction Site Inventory Database

Town staff maintains a database of all permitted active public and private construction sites. The database includes an individual permit number, general permit authorization number (if applicable), project identification, acceptance date, acreage disturbed, and records of inspection and enforcement (if applicable).

Measurable Goals

The measurable goal for this BMP is to maintain a Construction Site Inventory Database from permit year one through permit year five. The implementation of this BMP follows the schedule below. The total number of construction sites maintained in the inventory per year will be reported in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Pollution Prevention/Good Housekeeping	Maintain a Construction Site Inventory Database	Maintain and update database as new sites are added throughout the Town	Year 1-5

Responsible Division(s)

The Environmental Services, Engineering Services and Public Works Divisions are responsible for developing and maintaining this BMP to meet Measurable Goal 3.3.

4. Post-Construction Stormwater Management in New Development and Redevelopment

Current Programs

Currently, the Town of Flower Mound has several ordinances and regulatory requirements to protect water quality by requiring the use of best management practices on all new residential and commercial development projects. Under the Town's SMARTGrowth Program, all new developments are required to address water quality protection measures using structural and/or non-structural BMPs. Additional guidance and ordinances currently implemented that are related to post-construction stormwater management in new development and redevelopments include:

- Adoption of the Town's SMARTGrowth Management Plan that includes an environmental quality category related to the: "preservation of open space, farmland, natural beauty, and sensitive environmental areas is achieved by criteria pertaining to watershed protection, wetlands, water body protection, topographical slope protection, environmental surveys, environmental protection plans, conservation development, rural development, visual impact, and agricultural resource protection easements."
- Town of Flower Mound Engineering Services Design Criteria and Construction Standards manual, which provides a list of potential BMPs for watershed protection.

Selected BMPs for Post Construction Stormwater Management for New Developments and Redevelopment

4.1 Comprehensive Stormwater Ordinance

The Town will continue to enforce the existing Stormwater Ordinance. The Town will continue to require all new residential and commercial developments to utilize BMPs to ensure proper long-term operation and maintenance of structures and activities to protect stormwater quality.

The Town will continue to document and maintain records of enforcement utilizing our TRAKiT database system. Reports referencing all records of enforcement will be made to evaluate effectiveness and efficiency.

Measurable Goals

The measurable goal for this BMP of the comprehensive Stormwater Ordinance is to continue to enforce all provisions of the ordinance. Cases created resulting from possible violations of the Stormwater Ordinance will be documented in our TRAKiT database system and included in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Post-Construction Controls for New Development and Redevelopment	Comprehensive Stormwater Ordinance	Enforce all provisions of the Stormwater ordinance. Update, if necessary.	Year 1-5

Responsible Division(s)

The Environmental Services, Public Works, Engineering Services, and Building Inspections Divisions are responsible for implementing this BMP to meet Measurable Goal 4.1.

4.2 Stormwater Structural Control Program

The Town of Flower Mound will integrate inspections of post-construction stormwater quality controls into existing inspections conducted by various divisions. The Town will evaluate existing procedures and identify needed changes and implement the revised program.

Town staff, when necessary, will require developers to maintain and/or repair stormwater controls measures installed on site. In addition, Town staff will perform regular maintenance of all municipally owned stormwater controls.

Measurable Goals

The measurable goal for implementation of this BMP is to provide for periodic inspections of targeted locations in the Town. Evaluations of the existing requirements will be document when and if changes are necessary. This program is a continuation from the previous permit term and is on-going

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Post-Construction Controls for New Development and Redevelopment	Evaluate and Enforce the Stormwater Inspections Program	Provide for periodic inspections of targeted locations.	Year 1-5

Responsible Division(s)

The Environmental Services, Public Works, Building Inspections and Engineering Services Divisions are responsible for implementing this BMP to meet measurable goal 4.2.

4.3 Engineering Design Standards

The Town of Flower Mound has developed design criteria and constructions standards documents which address drainage at new developments and redevelopments throughout the Town. The Engineering Services Division reviews all site plans as part of the Town's development

process to ensure that appropriate controls are included in all site development. An Environmental Services or Public Works Division representative attends preconstruction meetings and gathers information about construction and post-construction BMPs.

Measurable Goals

The Environmental Services and Public Works Division will work with the Engineering Services Division to ensure that the proper BMPs are put in place at developments to ensure that stormwater quality throughout the Town is not negatively impacted by developments. The town will measure this goal by documenting the number of projects reviewed for post-construction control measures, when necessary. Current procedures will be evaluated throughout the permit term, and, if necessary, post-construction stormwater management requirements will be developed or modified.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Post-Construction Controls for New Development and Redevelopment	Engineering Design Standards	Review and update post-construction stormwater management requirements as needed	Year 1-5

Responsible Division(s)

The Environmental Services, Public Works, Building Inspections and Engineering Services Divisions are responsible for implementing this BMP to meet measurable goal 4.3.

5. Pollution Prevention/Good Housekeeping for Municipal Operations

Current Programs

Currently the Town of Flower Mound's individual divisions ensure that applicable pollution prevention controls are in place and effectively maintained. The Environmental Services Division provides technical services to other divisions, as needed. Current pollution prevention/good housekeeping programs include:

- Fleet vehicle maintenance/washing
- Parking lot and street cleaning
- Storm drain system cleaning/maintenance
- Water materials management
- Road salt/sand application and storage practices
- Used oil recycling
- Best management practices
- Roadway and bridge maintenance policies
- Park maintenance provisions

Selected BMPs for Pollution Prevention/Good Housekeeping for Municipal Operations

5.1 Facility Specific Standard Operating Procedures (SOPs)

The Town of Flower Mound will develop, implement, and maintain internal standard operating procedures (SOPs) for each Town facility, which will identify potential stormwater quality impairments resulting from municipal operations and activities. The internal SOPs will function similar to an Environmental Management System and will provide structural and non-structural pollution prevention options through a series of best management practices that are specific to each Town facility.

Each facility specific SOP will contain at a minimum the following procedures:

- Proper removal and disposal methods for waste from the MS4
- Contractor oversight procedures
- Pollution prevention inspection procedures for all MS4 facilities
- Structural BMPs will be maintained where applicable
- Staff assessments for each facility to determine the potential to discharge pollutants into stormwater
- Documenting the results of the staff assessments
- Identification of "high profile" facilities. Implement stormwater controls for high profile facilities that address the following:

- De-icing and anti-icing storage
- Fueling operations and vehicle maintenance
- Equipment and vehicle washing

Measurable Goals

The measurable goal for implementation of the SOPs will be to develop a set of SOPs for designated Town facilities annually. A complete description of the Town's Facility Specific SOPs will be documented and provided in the annual report. Any progress achieved and/or necessary updates will be provided in subsequent annual reports.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Pollution Prevention/Good Housekeeping	Facility Specific Standard Operating Procedures	Review existing SOP(s) annually and develop SOP(s) for dedicated facilities, if needed.	Year 1-5

Responsible Division(s)

All applicable divisions are responsible for implementing the SOP program to meet Measurable Goal 5.1.

5.2 MS4 Facility and Stormwater Controls Inventory

The Town of Flower Mound will update and maintain the inventory of facilities and stormwater controls that it owns and operates within the regulated area of the small MS4. If feasible, the inventory may include all applicable permit numbers, registration numbers, and authorizations for each facility or controls.

Measurable Goals

The measurable goal for this BMP will be to maintain and update the inventory of facilities and stormwater controls and the Facility map throughout the permit term. Updates to the inventory will be completed as necessary. Details of the map and updates will be provided in the annual reports.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Pollution Prevention/Good Housekeeping	MS4 Facility and Stormwater Controls Inventory	Maintain the Facility Inventory and Facility Map. Update, if necessary.	Year 1-5

Responsible Division(s)

All applicable divisions are responsible for implementing and maintaining the Town's inventory of facilities and stormwater controls to meet Measurable Goal 5.2.

5.3 MS4 Facility Inspections

In the previous permit term, the Town of Flower Mound developed a MS4 Facility and Stormwater Controls map that identified areas of municipal operations that may be contributing to stormwater runoff to the MS4. This permit term, the Town will use the map to identify high priority areas by establishing a facility inspection program.

Measurable Goals

The measurable goal for this BMP will be to collect the necessary data and begin to develop the framework and a checklist for facility inspection for permit year one. In permit year two, the goal will be to finalize and complete the facility inspection checklist. Permit years three through five will be used to conduct facility inspections and identify high priority areas within MS4 facility.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Pollution Prevention/Good Housekeeping	MS4 Facility Inspections	Develop a plan and checklist for facility inspections	Year 1
		Finalize and complete the facility inspections checklist	Year 2
		Conduct facility inspections and use the result to identify high priority areas.	Year 3-5

Responsible Division(s)

The Environmental Services, Public Works, Engineering and GIS divisions are responsible for developing and maintaining this BMP to meet Measurable Goal 5.3.

5.4 MS4 Operations and Maintenance Training

The Town of Flower Mound has developed a training program for all employees responsible for municipal operations that potentially pose an impact to stormwater quality, including discharges into the MS4. The training program includes training materials directed at preventing and reducing stormwater pollution from municipal operations. A list of training completed by Town staff will be provided in the annual report.

The O&M Program will contain at a minimum the following procedures:

- Evaluation of potential stormwater impacts from O&M activities

- Identification of pollutants of concern that may be discharged from O&M activities
- Development and implantation of pollution prevention measures that will reduce discharge of pollutants from O&M activities
- Development of a list of potential problem areas for increased inspection frequency

Measurable Goals

The measurable goal for this BMP will be to develop the training materials for operations and maintenance employees. All designated employees will undergo annual training throughout the permit term. The total number of employees trained per year will be documented and provided in the annual reports.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Pollution Prevention/ Good Housekeeping	MS4 Operations and Maintenance Training	Develop Operations and Maintenance Program training materials annually. Ensure all designated employees receive the annual training.	Year 1-5

Responsible Division(s)

All applicable divisions are responsible for implementing the training program to meet Measurable Goal 5.4.

7. Authorization for Municipal Construction Activities

The development of this MCM for construction activities, where the small MS4 is the site operator, is optional and provides an alternative to the MS4 operator seeking coverage under TPDES CGP, TXR150000 for each construction activity. Permittees that choose to develop this measure will be authorized to discharge stormwater and certain non-stormwater from construction activities where the MS4 operator meets the definition of a construction site operator in Part I of this general permit.

When developing this measure, permittees are required to meet all requirements of, and be consistent with, applicable effluent limitation guidelines for the Construction and Development industry (40 CFR Part 450), TPDES CGP TXR150000, and Part III.B.3 of this permit.

Utilization of this MCM does not preclude a small MS4 from obtaining coverage under the TPDES CGP, TXR150000, or under an individual TPDES permit. This MCM is only available for projects where the small MS4 is a construction site operator or owner, and the MCM does not provide any authorization for other construction site operators at a municipal project.

Controls required under this MCM must be implemented prior to discharge from a municipal construction site into surface water in the state.

The Town of Flower Mound will be incorporating this optional MCM into its SWMP starting this permit term.

Current Programs

The overall goal of the Municipal Construction Activities program for the Town of Flower Mound is to reduce the risk of water pollution using proper construction best management practices, review of construction document erosion control plans, and developing contractual controls for work performed by outside parties. The Town has been requiring all construction projects, including Town facility and capital improvement projects, to submit an erosion control plan for review by Town staff. Additionally, the Town does require the use of best management practices to control construction wastes through the contracts the Town enters for work performed by outside parties. The purpose of this program is to identify those activities explicitly and streamline the Town's permit submission process. The Town is implementing the SWMP for the entire limits, to include this minimum control measure.

Selected BMPs for Pollution Prevention/Good Housekeeping for Municipal Operations

7.1 Erosion Control Plan Review

Town staff requires erosion control plans to be submitted for all capital improvement and other Town construction. These plans are reviewed by staff knowledgeable about erosion and sediment control devices and with experience of how these devices perform in the field. Site topography, layout of storm sewer system, adjacent open water bodies, and other pertinent site information is taken into consideration in the review process as well as indicated control measures. Control measures may be required to be changed by Town staff. The erosion control plan generally becomes the site map used by outside parties in the Stormwater Pollution Prevention Plan. It is the responsibility of the project manager to make the plans available for

review. The Town only reviews the plans as submitted by the Town's contractor for the project. It is the contractor's responsibility to prepare the plans.

Measurable Goals

The Town will document comments related to review of erosion control plans and will include the number of plans reviewed in annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Municipal Construction Activities	Erosion Control Plan Review	Review and comment on erosion control plans	Years 1-5

Responsible Division(s)

The Environmental Services, Public Works, and Engineering Services divisions are responsible for implementing the program to meet Measurable Goal 7.1.

7.2 Municipal Construction Site Inspections

Town staff trained in performing stormwater inspections at construction sites will inspect construction activities related to municipal construction projects at the same frequency other construction projects are inspected. Additionally, other inspectors that will present at various times during construction have been provided information on stormwater inspections.

Measurable Goals

The Town will use inspection checklists for conducting stormwater inspections of municipal construction projects and report the number of inspections performed at municipal construction activities.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Municipal Construction Activities	Municipal Construction site inspection	Use inspection checklist for stormwater inspections	Years 1-5

Responsible Division(s)

The Environmental Services, Public Works, and Engineering Services divisions are responsible for developing and maintaining the program to meet Measurable Goal 7.2.

7.3 Stormwater Pollution Prevention Plans

Town staff requires Stormwater Pollution Prevention Plans (SWPPPs) to be developed for all municipal construction activities that disturb one acre of land area or more. Prior to construction projects beginning, the SWPPP is reviewed for completeness by Town staff, and

comments may be made to address any identified deficiencies. After project approval, SWPPPs may be reviewed by Town inspectors to ensure they have been updated as needed and site conditions are reflected appropriately. Generally, the Town is not the operator with day to day operational control of the construction project site, and certification statements to that effect are included in the SWPPP signed and dated by both the Town's and Contractor's representatives. Therefore, the Town relies heavily upon its selected contractor to perform the updating tasks of SWPPPs related to municipal construction projects. Signed copies of the Contractor's NOI, or other evidence of State authorization for the Contractor for the appropriate project, will be included with the SWPPP for Town review. Approval of the SWPPP is required prior to start of construction.

Measurable Goals

The Town will document the number of approved SWPPPs for each year in the annual report.

Schedule

<i>PROGRAM</i>	<i>BMP</i>	<i>ACTIVITY</i>	<i>DATE DUE</i>
Municipal Construction Activities	Municipal Construction site inspection	Review and comment on SWPPP	Years 1-5

Responsible Division(s)

The Environmental Services, Public Works, and Engineering Services Divisions are responsible for implementing the program to meet Measurable Goal 7.3.

PART III IMPAIRED WATER BODIES AND TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS

Impaired Water Body Mitigation Requirements

The Town of Flower Mound directly discharges into an impaired segment known as 0826 – Grapevine Lake. The Pollutant of Concern (POC) for the impaired segment is identified in the *2014 Texas Integrated Report Index of Water Quality Impairments* as pH. The pH level for this segment has been consistently high. The Town of Flower Mound investigated the impaired water body segment during the previous permit term to determine what, if any, contribution the Town was adding to the segment and it does not appear that the Town is contributing to the impairment. During the current permit term more investigation will be conducted and if at any point during the current permit term it is determined that the Town is a source of high pH, appropriate best practices will be evaluated and implemented.

Measurable Goals

The measurable goal for this BMP will be to continue to monitor stormwater flowing towards the impaired segment to ensure that the Town does not contribute to the high pH levels of the impaired segment of Grapevine Lake. If during the permit term it determined by staff that the Town is a source of high pH levels, staff will implement a BMP with specific activities designed to mitigate the impact of the POC. In addition to monitoring, the Town will continue public education and stream monitoring programs to lessen the impacts of the pollutants causing the high pH level.

Schedule

PROGRAM	BMP	ACTIVITY	DATE DUE
Impaired Water Bodies and Total Maximum Daily Load (TMDL) Requirements	Public Education and Stream Monitoring/Testing	The Town will continue stream monitoring to observe pH levels of streams leading to the impaired segment.	Year 1-5
		Print and distribute educational materials, as needed.	Year 1-5

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ENVIRONMENTAL CONSERVATION COMMISSION AGENDA ITEM NO. 3

WORK SESSION ITEM

DATE: November 5, 2019

FROM: James Hoefert, Environmental Review Analyst

ITEM: **Discuss the Town's Urban Forestry Program, associated regulations, and program initiatives.**

BACKGROUND INFORMATION: This item will provide an overview of the Town's Urban Forestry Program. Items to be presented and discussed include an overview of the program objectives, the Town's tree preservation ordinance, proposed tree planting and giveaway initiatives, and applicable regulations from the recent State legislative session.

Current and potential programs include the tree farm and associated planting options, Town-wide tree canopy analysis, tree preservation regulations, tree recognition program, Arbor Day initiatives, new initiatives for re-forestation and/or enhanced tree planting efforts, and other educational programs.

In addition to the items discussed above, this work session will provide Commission members with the opportunity to discuss other Urban Forestry Program initiatives.

ALTERNATIVES/OPTIONS: N/A

ATTACHMENTS:

1. Chapter 94 "Trees"

RECOMMENDATION: This item is for information and discussion purposes only; therefore, no action is required.

Chapter 94 - TREES^[1]

Footnotes:

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Editor's note— Ord. No. 63-08, § 3, adopted Oct. 6, 2008, repealed the former Ch. 94, Art. I, Art. II, Div. 1, Subdiv. I, Subdiv. II, §§ 94-71—94-73, Subdiv. III, §§ 94-91—94-94, Div. 3, §§ 94-121—94-128, Div. 4, Subdiv. I, §§ 94-151—94-156, Subdiv. II, §§ 94-181—94-183, Subdiv. III, §§ 94-201, 94-202, Subdiv. IV, §§ 94-221, 94-222, Subdiv. V, §§ 94-241, 94-242 and enacted a new Ch. 94 as set out herein. The former Ch. 94 pertained to vegetation and derived from Code 1989, ch. 12, § 5.03(e)(1)—(e)(8), ch. 12, §§ 5.08(a)—(d), ch. 12, §§ 5.08(e)(1)—(e)(3), ch. 12, § 5.08(f)(1), (f)(2), ch. 12, §§ 5.08(g)(1), (g)(2), ch. 12, §§ 5.08(h)—(k), ch. 12, § 6.15(a)(1), (2), ch. 12, §§ 6.15(b)(1)—(b)(3), ch. 12, § 6.15(c); Ord. No. 12-00, §§ 2, 6, 2-17-2000; Ord. No. 101-02, § 1, 12-16-2002.

ARTICLE I. - GENERALLY

Sec. 94-1. - Purpose.

The terms and provisions of this chapter are intended to accomplish the following public purposes:

- (1) Establish rules and regulations for the protection and preservation of native and/or established trees within the town.
- (2) Encourage the preservation and replacement of the town's tree canopy by establishing a 35 percent canopy goal for the town as outlined in guidelines established by "American Forests," the nation's oldest nonprofit citizens' conservation organization.
- (3) Encourage the protection of healthy trees and provide for the replacement and/or replanting of trees that are necessarily removed during construction, development or redevelopment.
- (4) Provide for the preservation and protection of larger native and/or established trees, which provide a valuable amenity to the urban environment and which, once destroyed, can only be replaced after generations, if at all.
- (5) Provide for shade, windbreaks and the cooling of air; thereby, reducing the requirements for air conditioning and heating and the utilization of scarce energy sources.
- (6) Provide for open space and more efficient drainage of land; thereby, reducing the effects of soil erosion and the need for additional drainage facilities.
- (7) Reduce the clear-cutting of land.
- (8) Preserve the country atmosphere and natural environment that define the community character of the town and make it a unique and desirable community.
- (9) Mitigate the ill effects of rapid and intense urbanization.

(Ord. No. 63-08, § 3(94-1), 10-6-2008)

Sec. 94-2. - Applicability of chapter provisions.

The terms and provisions of this chapter shall apply to real property within the town's corporate limits and extraterritorial jurisdiction as follows:

- (1) All real property upon which any protected, specimen, or historic tree is located, excluding property that has already been developed for single-family and two-family residential uses.
- (2) All vacant and undeveloped real property.

- (3) All real property to be subdivided or re-subdivided, including record plats and replats.
- (4) The yard areas of all developed property, excluding property already developed for single-family and two-family residential uses.

(Ord. No. 63-08, § 3(94-2), 10-6-2008)

Secs. 94-3—94-12. - Reserved.

ARTICLE II. - MEASUREMENT

Sec. 94-13. - Landscape, nursery, or replacement trees.

Unless specified otherwise, tree caliper (diameter) or circumference shall be measured at a height of 12 inches above ground level. The caliper of multi-trunk trees shall be measured by determining the diameter or circumference of the largest trunk at full caliper added to one-half of the diameter or circumference of each remaining trunk, measured at a height of 12 inches above ground level.

(Ord. No. 63-08, § 3(94-3), 10-6-2008)

Sec. 94-14. - Existing, established, and/or native trees.

The caliper or circumference of existing, established, and/or native trees shall be measured in accordance with the measuring rules and procedures as developed and updated by the Texas Forest Service. A copy of these procedures shall be made available for review in the office of the tree preservation and enforcement officer. The current procedure is outlined below.

(1) *Caliper width or circumference.*

General rule: Measure the smallest trunk caliper width or circumference between the diameter at breast height ("DBH") point (4.5 feet) and the ground, but below the lowest fork. Also record the height above the ground, in inches, where the measurement was taken.

(2) *Determining DBH point.*

Tree on slope: Measure up 4.5 feet along the axis of the trunk on both the high and low sides of the trunk; DBH point is midway between these two planes.

Leaning tree: Measure 4.5 feet along both the top and under sides of the trunk; DBH point is midway between these two planes.

Low branches: When determining where on the trunk to measure circumference, ignore portions of the tree that do not form part of the tree's crown, such as dead branches or forks, and epicormic sprouts.

Obstruction at DBH: If there is a bump, burl, branch, or other obstruction at the DBH point, measure the circumference of the trunk above and below the obstruction and record the smaller value. A buttress that forms between the trunk and root system as a natural feature of the species (e.g.—bald cypress, water tupelo) should not be considered an obstruction.

- (3) *Multiple trees.* In practice, it must be determined whether a tree has a single trunk, or whether it represents two or more stems growing very close to one another. Trunks that have clear separation or included bark at or near the ground line should be considered separate trees; trunks of different species should also be considered separate stems, no matter how closely aligned. When following the measurement rules above, if the point below the lowest fork places

the measurement at the ground line, the stems should be considered and measured as separate.

(Ord. No. 63-08, § 3(94-4), 10-6-2008)

Secs. 94-15—94-20. - Reserved.

ARTICLE III. - PRESERVATION

Sec. 94-21. - Tree designations.

Protected, specimen, and historic trees, except as specified in this section, shall possess the following respective characteristics or criteria:

- (1) *Protected trees.* Any tree listed on the small, medium, or large protected tree lists in section 94-22 that measures six inches in caliper width or greater and which is at least ten feet in height and located outside of existing public streets, alleys, rights-of-way, utility easements, drainage easements, fence easements, pedestrian access easements, or other existing public rights-of-way or easements.
- (2) *Specimen tree.* Except as specified in this section, any tree listed on the town's small, medium, or large protected tree lists can be considered a specimen tree if it reaches the designated size for that list. For the small tree list, a specimen tree shall be any tree that measures 13 inches or more in caliper width. For the medium tree list, a specimen tree shall be any tree that measures 19 inches or more in caliper width. For the large tree list, a specimen tree shall be any tree that measures 25 inches or more in caliper width. All measurements shall be taken in accordance with the measuring rules and procedures as outlined and maintained by the Texas Forest Service. These procedures are outlined in section 94-14 of this chapter. In addition to the provisions of this subsection, a specimen tree shall be any other tree that has been designated by the town council, upon recommendation by the environmental conservation commission, after public hearing and due notice to the owner of the tree, to be of high value because of its type, size, age or other relevant criteria. Specimen trees shall not be regulated as protected trees. Specific requirements are set forth in this chapter regarding specimen trees.

Post oak trees shall receive a separate designation and specimen size classification of 22 inches or more in caliper width as listed within section 94-22.

- (3) *Historic tree.* Upon recommendation by the environmental conservation commission, a historic tree shall be any tree that has been designated by the town council, after public hearing and due notice to the owner of the tree, as a tree of notable historical interest and value to the town because of its location or historical association with the community. A listing and map of all designated historic trees shall be maintained and updated by the tree preservation and enforcement officer or authorized designee and made available to the public upon request. Historic trees are not dependant on or determined by diameter or caliper width as are protected and specimen trees. Specific requirements are set forth in this chapter regarding historic trees.

Subject to the review and approval of the tree preservation and enforcement officer or authorized designee, a protected or specimen tree shall not include any living tree that a registered arborist or landscape architect certifies in writing is injured, dying, diseased or infested with harmful insects; that is in danger of falling, interferes with utility service or creates unsafe vision clearance; in any manner creates a hazardous or dangerous condition so as to endanger the public health, welfare or safety. Further, a protected tree shall not include any living tree that is identified on approved subdivision construction plans as necessary to be removed to comply with EPA storm water permitting requirements or FHA lot grading plans.

Subject to review and approval of the tree preservation and enforcement officer or authorized designee, a protected, specimen, or historic tree shall not include any tree that a registered arborist or landscape architect certifies in writing is dead.

(Ord. No. 63-08, § 3(94-5), 10-6-2008; [Ord. No. 62-16](#), § 2, 11-21-2016)

Sec. 94-22. - Protected tree lists.

- (a) *Generally.* The tree species lists contained in this section have been developed and will be periodically updated by the town's environmental conservation commission and shall be maintained and distributed to the public by the tree preservation and enforcement officer or authorized designee as guides for the identification and selection of tree species that meet the various standards and requirements of this chapter. Trees included on this tree species list were selected on the basis of one or more of the following criteria or factors: hardiness, resistance to disease, suitability relative to local climate and soil conditions, adaptability for transplantation, longevity, adaptability to various landscape conditions, resistance to drought, aesthetic qualities, shade provision, windbreak provision, and screening qualities.
- (b) *Lists of trees that are protected.* Unless otherwise specified in this chapter, only those tree species found on the following lists shall be subject to the preservation, protection and replanting requirements of this section.

Small Tree List

Common Name	Scientific Name
Carolina buckthorn	(Rhamnus caroliniana)
Yaupon holly	(Ilex vomitoria)
Possum haw	(Ilex deciduas)
Redbud	(Cercis species)
Texas buckeye	(Aesculus glabra variety arguta)
Chickasaw plum	(Prunus agustifolia)
Mexican plum	(Prunus mexicana)

Medium Tree List

Common Name	Scientific Name
Slippery elm	(Ulmus rubra)

Cedar elm	(Ulmus crassifolia)
Winged elm	(Ulmus alata)
Blackjack oak	(Quercus marilandica)
Persimmon species	(Diospyros species)
Chittamwood	(Bumelia languinosa)
Western soapberry	(Sapindus drummondii)
Sweetgum	(Luquidambar styraciflua)

Large Tree List

Common Name	Scientific Name
Shumard red oak	(Quercus shumardi)
Texas red oak	(Quercus texana)
Southern live oak	(Quercus virginiana)
Water oak	(Quercus nigra)
Bur oak	(Quercus macrocarpa)
Chinquapin oak	(Quercus muehlenbergii)
American elm	(Ulmus americana)
Pecans and hickories	(Cayra species)
Magnolia	(Magnolia grandiflora)
Bald cypress	(Taxodium distichum)

Pine species	(Pinus species)
Ash species	(Fraxinus species)
Sycamore	(Plantanus occidentalis)
Black walnut	(Juglans nigra)

Post Oak — 22" Specimen Size

Common Name	Scientific Name
Post oak	(Quercus stellata)

(Ord. No. 63-08, § 3(94-6), 10-6-2008; [Ord. No. 62-16](#), § 3, 11-21-2016)

Sec. 94-23. - Tree survey; development projects.

Tree surveys are required to accompany an application for a development plan, site plan, record plat, replat, oil and gas well drilling permit, oil and gas pipeline permit, tree removal permit, or tree transplanting permit. A tree survey may be required to accompany a zoning application or a master plan amendment if it is deemed necessary by the town's tree preservation and enforcement officer. Each tree survey shall contain, but not be limited to, the following information/parts:

- (1) The location of all specimen trees and historic trees on the subject site.
- (2) The location of the trunk and the extent of the canopy spread of each specimen tree and historic tree on the subject site.
- (3) A table containing the following information for each specimen tree and historic tree:
 - a. Tree number;
 - b. Common and scientific name of each tree;
 - c. Diameter (DBH) of each tree measured in accordance with section 94-14 of this chapter;
 - d. General health/condition of each tree;
 - e. Average canopy spread;
 - f. Status (specimen or historic) of each tree;
 - g. Whether each identified tree will remain or be removed; and
 - h. Location coordinates (northings and eastings, State Plane - NAD 1983) for each tree.
- (4) Each specimen tree and historic tree shall be affixed with a permanent tag bearing the corresponding number on the tree survey. This tag shall be placed on the trunk of the tree, between five and six feet in height on the south face of the tree's trunk.

- (5) Each tree survey shall contain a count of all protected trees located on the property.
- (6) Each tree survey shall contain a count of all protected trees that will be removed from the buildable area on the property. The phrase "buildable area" is defined in section 94-32 of this chapter.
- (7) Protected trees designated for preservation shall be flagged in a distinguishing manner approved by the town for such purpose. In addition, those trees designated for removal shall be flagged in a different distinguishing manner as approved by the town.
- (8) The tree survey must be signed, and stamped or sealed, by a certified arborist, certified forester, or a registered landscape architect. Each tree survey submitted shall contain one sheet of the tree survey as described above, one sheet with the tree survey data overlain with the site information, and one sheet with the site information overlain on an aerial photo for the site. The tree survey shall be on drawings measuring 24 inches by 36 inches and shall be drawn to a scale of no less than 100 feet to one inch, unless otherwise approved by the tree preservation and enforcement officer. When necessary the tree survey shall be on several sheets accompanied by an index sheet, showing the entire area of the survey. Necessary site information includes:
 - a. The location and dimensions of all existing or proposed public streets, alleys, rights-of-way, utility easements, drainage easements, fence easements, pedestrian access easements or other public rights-of-way or easements;
 - b. The location and dimensions of the designated parking area and designated stockpile area required in this subdivision and of any site proposed or anticipated to be proposed for a temporary batching plant permit; and,
 - c. The location of all existing or proposed property lines, lot lines, building lines, setback and yard requirements, any proposed building footprint or floor plan, and other special relationships or significant features of the proposed development plan, record plat or site plan of the development.
 - d. The location of designated upland, riparian habitat, and FEMA floodplain, if identified through an environmentally sensitive area survey and subsequent environmental protection plan, as defined in the town's SMARTGrowth Program and Analysis Manual.

(Ord. No. 63-08, § 3(94-7), 10-6-2008; [Ord. No. 62-16](#), § 4, 11-21-2016)

Sec. 94-24. - Tree survey; residential lots.

Tree surveys are required to accompany an application for a building permit for the construction of homes on undeveloped residential lots. For lots that are one acre in size or larger, the tree survey shall be completed as described in section 94-23 of this chapter. For lots that are less than one acre in size, the tree survey shall contain, but not be limited to, the following information/parts:

- (1) A site plan showing: The location and configuration of the proposed house/structure, all required setbacks, sidewalks, driveway locations, porches, etc.
- (2) Further, the site plan shall show the location of all specimen or historic trees located on the site.
- (3) The survey shall depict the location of the trunk and the extent of the canopy spread of each specimen or historic tree.
- (4) A table (spreadsheet) shall be supplied containing the common name, caliper width (DBH), and tree number of each specimen tree and historic tree shown on the site plan/tree survey. All measurements shall be in accordance with section 94-14 of this chapter.
- (5) A count of all protected trees on the site and all protected trees proposed for removal shall be included on the tree survey.

(Ord. No. 63-08, § 3(94-8), 10-6-2008)

Secs. 94-25—94-30. - Reserved.

ARTICLE IV. - PERMITS, MITIGATION, PENALTIES, AND INCENTIVES

Sec. 94-31. - Generally.

No person, directly or indirectly, shall cut down, destroy, remove or effectively destroy through damaging any protected, specimen, or historic tree on any real property within the town without first obtaining a tree removal permit as required in the terms and provisions of this article. Further, the replanting of any protected, specimen, or historic tree requires a tree replanting permit in accordance with the terms and provisions of this article.

(Ord. No. 63-08, § 3(94-9), 10-6-2008)

Sec. 94-32. - Trees located in a buildable area.

The phrase "buildable area" shall mean and include all of a commercial or residential building lot, oil and gas pad site, development site or other site, excluding the fully developed FEMA floodplain as defined in section 90-403 and required street/landscaping buffer areas. Trees located within TXDOT rights-of-way are exempt from the terms and provisions of this chapter.

(Ord. No. 63-08, § 3(94-10), 10-6-2008; [Ord. No. 62-16](#), § 5, 11-21-2016)

Sec. 94-33. - Tree transplanting permit.

An application for a tree transplanting permit for protected trees located on undeveloped property or developed nonresidential property within the town may be submitted at any time and need not be submitted in conjunction with a development plan or record plat or a building permit. Tree transplanting permits shall be obtained by making application to the town's tree preservation and enforcement officer or authorized designee on forms prescribed by the town when a protected tree is proposed to be transplanted within the town. No fee shall be charged to make application for a tree transplanting permit. The application shall also be accompanied by a written document indicating the reasons for transplanting the protected tree and two copies of a legible tree survey. The tree survey should be prepared in accordance with section 94-24 of this chapter.

Upon receipt of a proper application for a tree transplanting permit, the town's tree preservation and enforcement officer or authorized designee shall review the application and may conduct field inspections of the site or development and/or refer the permit application to other departments for review and recommendations as deemed necessary and appropriate by the town manager or authorized designee. The application for a tree transplanting permit shall be approved unless the town's tree preservation and enforcement officer or authorized designee determines that the proposed transplanting will unnecessarily damage or jeopardize the health of the trees proposed to be transplanted. A denial of an application for a tree transplanting permit by the tree preservation and enforcement officer or authorized designee may be appealed to the environmental conservation commission. The decision of the environmental conservation commission regarding the appeal from the denial of such tree transplanting permit application shall be final.

(Ord. No. 63-08, § 3(94-11), 10-6-2008)

Sec. 94-34. - Tree removal permit.

Tree removal permits are required for the removal of protected trees located outside the buildable area of a lot or site, and for any specimen trees and historic trees that are intended for removal from a lot or site in conjunction with the development, redevelopment, subdivision and/or re-subdivision of real property within the town.

An application for a tree removal permit, when required, shall be submitted at the earliest point in the application process where entitlements and/or buildable area are established. The following outlines the process associated with tree removal permit applications.

- (1) Tree removal permit applications, when required, shall be submitted in conjunction with a zoning planned development (ZPD) or a development plan and shall be considered by the environmental conservation commission prior to the project proceeding to the planning and zoning commission. The application shall be placed on the same town council agenda for action as the ZPD or development plan; or
- (2) Tree removal permit applications, when required, shall be submitted in conjunction with site plans or record plats for the development of subdivisions of four lots or less where the construction of necessary infrastructure necessitates a tree removal permit, and shall be considered by the environmental conservation commission and acted upon by the town council prior to the site plan or record plat proceeding to the planning and zoning commission for approval; or
- (3) Tree removal permit applications, when required, shall be submitted in conjunction with the development of individual residential or nonresidential platted lots and shall be considered by the environmental conservation commission and acted upon by the town council prior to the issuance of a building permit.

No protected trees located outside the buildable area, specimen trees, or historic trees approved for removal in accordance with this chapter shall be removed from any building lot or site until:

- (1) Proper mitigation or replacement requirements have been determined and approved for the lot or site; and
 - (2) A preconstruction meeting has been held with proper town staff authorizing grading and construction activities to begin on the lot or site; and/or
 - (3) A building permit, where needed, has been issued for the lot or site.
- (a) *Tree removal permits for fewer than ten protected trees or four specimen trees.* A tree removal permit shall be obtained by making application to the town's tree preservation and enforcement officer or authorized designee on forms prescribed by the town. The application shall include the following:
- (1) A written document indicating the reasons for removal of the protected, specimen, or historic trees on the lot or site.
 - (2) Photographs of each tree requested for removal.
 - (3) Photographs of required signage on the site as described below.
 - (4) Two copies of a tree survey for the lot or site prepared as described in section 94-23 of this chapter.
- (b) *Tree removal permits for greater than ten protected trees or four specimen trees.* Applicants requesting to remove greater than ten protected trees or greater than four specimen trees, shall have the option of requesting a comprehensive tree removal permit. The fee for this permit will be \$1,000.00. All other requirements and incentives remain unchanged.
- (c) A sign shall be placed on each separate lot or tract for which a tree removal permit is requested to inform the general public that an application for a tree removal permit has been filed relative to a protected, specimen, or historic tree.
- (1) The size of the signs shall be three feet by four feet.

- (2) The signs shall be made out of aluminum or corrugated plastic material.
- (3) The signs shall be mounted on stakes/poles.
- (4) The signs shall be visible from the street.
- (5) There shall be one sign for each street frontage.
- (6) The signs shall have a white background, with letters and borders being green in color. The signs shall state the following:

TOWN		OF		FLOWER		MOUND,		TX
A		TREE		REMOVAL				REQUEST
IS	BEING	MADE	ON	THIS				PROPERTY
FOR			INFORMATION					CALL

(Ord. No. 63-08, § 3(94-12), 10-6-2008)

Sec. 94-35. - Tree removal permit on property zoned agricultural district (A) uses.

No fee shall be charged to make application for a tree removal permit for the removal of protected trees located on real property having an agricultural zoning district classification. However, if within any 12-month period, tree removal permits for the removal of 20 or more protected trees are issued for the same agricultural property or tract, or any of its portions, the agricultural zoning district classification of such property cannot be changed, nor can an application for approval of a development plan, planned development or zoning amendment relative to such property be made, for a period of 60 months following the most recent 12-month period during which 20 or more protected trees were removed from such agricultural zoned property.

(Ord. No. 63-08, § 3(94-13), 10-6-2008)

Sec. 94-36. - Special provisions for agricultural district (A) uses.

Notwithstanding anything contained in this chapter to the contrary, for tracts zoned agricultural district (A) uses, the tree survey requirements contained in this article shall be limited in their application to proposed rights-of-way, easements and an area equal to 20 feet on any side of such rights-of-way and easements, provided that the applicant executes a development agreement with the town that all trees on the tract and outside of such areas, for the purposes of such agreement, are protected trees (regardless of their species or caliper width) and that the unauthorized removal of such trees shall result in the revocation of any previously approved development plan and record plat for a period of 60 months from the date of the most recent unauthorized removal of one or more trees from the subject property.

(Ord. No. 63-08, § 3(94-14), 10-6-2008)

Sec. 94-37. - Review of application.

- (a) An application for a tree removal permit for a protected tree located outside of the buildable area shall be accompanied by an administrative fee per tree proposed for removal in the amount listed in appendix A of this Code, not to exceed a total per permit application in an amount listed in appendix A of this Code. An application for a tree removal permit for a specimen tree, or historic tree shall be accompanied by an administrative fee per tree proposed for removal in the amount listed in appendix A of this Code. Upon receipt of a properly completed application accompanied by the appropriate fee, the tree preservation and enforcement officer or his authorized designee shall review the application and may conduct field inspections of the development and/or refer the permit application

to other departments for review and recommendations as deemed necessary and appropriate by the tree preservation and enforcement officer or his authorized designee.

- (b) The application for a tree removal permit, if required, shall be considered an integral part of the application for development plan or site plan approval, or the application for an oil and gas well permit. No development plan or site plan for any development, or oil and gas well permit, subject to the terms and provisions of this subdivision, shall be approved without approval of such tree removal permit. It is further provided that if a property owner or developer does not submit a tree removal permit application prior to town approval of a development plan covering a particular site, then if a tree removal permit application for the site is submitted later, approval of the development plan may be revoked. In this event, a revised development plan must be submitted for review by the town.
- (c) The tree preservation and enforcement officer may approve, approve with conditions, or deny a request for a tree removal permit for protected trees located outside the buildable area of a lot or site, provided that the requested tree removal permit is for the removal of trees in a development district other than the Cross Timbers Conservation Development District. An appeal of the decision of the tree preservation and enforcement officer may be made to the Environmental Conservation Commission.
- (d) An application for a tree removal permit for specimen, historic, or protected trees located outside the buildable area of a lot or site within the Cross Timbers Conservation Development District or an application for a tree removal permit for specimen, or historic trees within all other districts shall be submitted to the environmental conservation commission for review and recommendation to the town council that the permit application be approved, approved with conditions or denied. The environmental conservation commission shall not recommend an application for a tree removal permit be approved or approved with conditions, unless the commission finds that the subject development, redevelopment, subdivision or re-subdivision cannot reasonably be developed, based on economic and/or practical considerations, without removal of the trees included in the permit application.
- (e) The environmental conservation commission's recommendation concerning an application for tree removal permit shall be reviewed by the town council. The town council may then approve the application, approve it with conditions, or deny the application; however, the town council may overturn the denial of an application for tree removal permit by the environmental conservation commission only upon a finding that the subject development, redevelopment, subdivision or re-subdivision cannot reasonably be developed, based on economic and/or practical considerations, without removal of the trees included in the permit application.
- (f) Approval for removal of a historic tree shall require a three-fourths majority vote of the environmental conservation commission and the town council, respectively.

(Ord. No. 63-08, § 3(94-15), 10-6-2008)

Sec. 94-38. - Per-caliper-inch cash value; replacement trees; mitigation fee credit.

- (a) A per-caliper-inch cash value for replacement trees shall be set, and updated as necessary by the town council after review and recommendation by the environmental conservation commission. The per-caliper-inch cash value shall be used to calculate mitigation costs for authorized and unauthorized removals of protected, specimen, and historic trees. The tree preservation and enforcement officer or his authorized designee shall maintain a record of the current per-caliper-inch cash value of replacement trees.
- (b) Whenever a mitigation fee is imposed in accordance with this chapter, a mitigation fee credit will be given for replacement tree(s), that are at least two inches in diameter at the point on the trunk four and one-half feet above ground, planted on the property for which the tree mitigation fee was assessed or property mutually agreed upon by the town and the person. The calculation for the credit will be done in the same manner as the tree mitigation fee assessed against the person and be:

- (1) Fifty percent of the amount of the tree mitigation fee assessed against the person if:
 - a. The property is a residential structure or pertains to the development, construction, or renovation of a residential structure; and
 - b. The person is developing, constructing, or renovating the property not for use as the person's residence; or
- (2) Forty percent of the amount of the tree mitigation fee assessed against the person if:
 - a. The property is not a residential structure; or
 - b. The person is constructing or intends to construct a structure on the property that is not a residential structure.
- (c) An application for a mitigation fee credit under subsection (b) must be done in conjunction with an application for a tree removal permit as prescribed within this chapter.

(Ord. No. 63-08, § 3(94-16), 10-6-2008; Ord. No. [43-17](#), § 1, 11-20-2017)

Sec. 94-39. - Mitigation requirements for authorized tree removal.

- (a) *Replacement trees required for the removal of protected trees located within the buildable area on a lot or site.* It shall be the responsibility of any person removing a protected tree located within the buildable area of a lot or site to replace each protected tree removed with one, two and one-half to three-inch caliper tree measured in accordance with section 94-13 of this chapter. Replacement trees shall be of a species listed on the town's approved mitigation and replacement tree planting list. Replacement trees shall have a minimum height of at least six feet, and shall be planted in locations approved by the tree preservation and enforcement officer or authorized designee. Acceptable locations shall include reforestation sites designated by the town. At the discretion of the tree preservation and enforcement officer or authorized designee, money in an amount equal to the per-caliper-inch cash value of the removed tree(s) may be paid to the town instead of providing the replacement trees required by this article. Any such payments shall be deposited in a special account or fund and used by the town to provide and/or support supplemental landscape plantings in public areas of the town and/or to support the administration and enforcement of the town's tree preservation regulations. A per-caliper-inch cash value for replacement trees shall be set by the town council in accordance with section 94-38 of this article.
- (b) *Mitigation of loss of habitat .* When any person seeks to develop property, rezone property, or amend the master plan regarding property, so that an application for a development plan, site plan, record plat, re-plat, oil and gas well drilling permit, oil and gas pipeline permit, tree removal permit, or tree transplanting permit is required by this chapter, and such person wishes to remove protected trees from an environmentally sensitive area (ESA), such as upland habitat and/or riparian habitat as defined in the town's SMARTGrowth Program and Analysis Manual, it shall be the responsibility of such person to mitigate the acreage of habitat lost or negatively impacted through either the payment to the town of mitigation fees or the planting of replacement trees included in the required environmental protection plan (EPP) for the development project, or a combination thereof that results in the required mitigation. This required habitat mitigation only applies to impacts to designated upland or riparian habitats. The mitigation for the removal of protected trees located outside of the designated habitats as established in an approved EPP is addressed in section 94-39(a). The monetary value of upland habitat and riparian habitat is set at \$15,000.00 per acre. Preservation incentives for upland and/or riparian habitat preserved within a project are established in section 94-40. At the discretion of the tree preservation and enforcement officer or authorized designee, money in an amount equal to the value of the removed habitat may be paid to the town instead of providing the replacement trees. Any such payments shall be deposited in a special account or fund and used by the town to provide and/or support supplemental landscape plantings in public areas of the town and/or to support the administration and enforcement of the town's tree preservation regulations.

- (c) *Replacement trees required for the removal of protected trees located outside the buildable area on a lot or site.* It shall be the responsibility of any person obtaining a tree removal permit for a protected tree located outside of the buildable area on a lot or site to provide replacement with trees having a total caliper width equivalent to one and one-half times that of the tree(s) to be removed. Total caliper width for replacement trees shall be calculated using measurements taken in accordance with section 94-14 of this chapter. For example, if a ten-inch protected tree is removed, then that tree must be replaced by trees having a total caliper width of 15 inches. This total caliper width could be satisfied by an approved combination of replacement trees to meet the required caliper width replacement. Replacement trees shall be of a species listed on the town's approved mitigation and replacement tree planting list. Such replacement trees shall be container-grown and each replacement tree shall have a minimum caliper width of two and one-half inches to three inches, measured in accordance with section 94-13 of this chapter. Replacement trees shall have a minimum height of at least six feet, and shall be planted in locations approved by the tree preservation and enforcement officer or his authorized designee. Acceptable locations shall include reforestation sites designated by the town. At the discretion of the tree preservation and enforcement officer or authorized designee, money in an amount equal to the per-caliper-inch cash value of the removed tree(s) may be paid to the town instead of providing the replacement trees required by this article. Any such payments shall be deposited in a special account or fund and used by the town to provide and/or support supplemental landscape plantings in public areas of the town and/or to support the administration and enforcement of the town's tree preservation regulations. A per-caliper-inch cash value for replacement trees shall be set by the town council in accordance to section 94-38 of this chapter.
- (d) *Replacement trees required for the authorized removal of specimen trees.* It shall be the responsibility of any person obtaining a tree removal permit for a specimen tree to provide replacement trees having a total caliper width equivalent to two times that of the tree(s) to be removed. Total caliper width for replacement trees shall be calculated using measurements taken in accordance with section 94-14 of this chapter. Replacement trees shall be of a species listed on the town's approved mitigation and replacement tree planting list. Such replacement trees shall be container-grown and have a minimum caliper width of two and one-half inches to three inches, measured in accordance with section 94-13 of this chapter. Replacement trees shall have a minimum height of at least six feet, and shall be planted in a location approved by the tree preservation and enforcement officer or authorized designee. Acceptable locations shall include reforestation sites designated by the town. At the discretion of the tree preservation and enforcement officer or authorized designee, money in an amount equal to the per-caliper-inch cash value of the removed tree(s) may be paid to the town instead of providing the replacement trees required by this article. Any such payments shall be deposited in a special account or fund and used by the town to provide and/or support supplemental landscape plantings in public areas of the town and/or to support the administration and enforcement of the town's tree preservation regulations. A per-caliper-inch cash value for replacement trees shall be set by the town council in accordance to section 94-38 of this chapter.
- (e) *Replacement trees required for the authorized removal of historic trees.* It shall be the responsibility of any person obtaining a tree removal permit for a historic tree to provide replacement trees having a total caliper width equivalent to two and one-half times that of the tree(s) to be removed. Total caliper width for replacement trees shall be calculated using measurements taken in accordance with section 94-14 of this chapter. Replacement trees shall be of a species listed on the town's approved mitigation and replacement tree planting list. Such replacement trees shall be container-grown and have a minimum caliper width of two and one-half inches to three inches, measured in accordance with section 94-13 of this chapter. Replacement trees shall have a minimum height of at least six feet, and shall be planted in locations as approved by the tree preservation and enforcement officer or authorized designee. Acceptable locations shall include reforestation sites designated by the town. At the discretion of the tree preservation and enforcement officer or authorized designee, money in an amount equal to the per-caliper-inch cash value of the removed tree(s) may be paid to the town instead of providing the replacement trees required by this article. Any such payments shall be deposited in a special account or fund and used by the town to provide and/or support supplemental landscape plantings in public areas of the town and/or to support the administration

and enforcement of the town's tree preservation regulations. A per-caliper-inch cash value for replacement trees shall be set by the town council in accordance to section 94-38 of this chapter.

Any fees or payments made to the town to satisfy the mitigation or replacement requirements of this article shall be paid at the time of a preconstruction meeting authorizing grading or construction activities to occur on the lot or site. In cases where a preconstruction meeting is not required, all fees or payments shall be made prior to the issuance of a building permit for the lot or site.

(Ord. No. 63-08, § 3(94-17), 10-6-2008; [Ord. No. 62-16](#), § 6, 11-21-2016)

Sec. 94-40. - Incentives for preservation of protected, specimen, and historic trees.

If any protected, specimen, or historic tree is preserved within an area that would otherwise be considered a buildable area, credit for preservation shall be given that will be counted toward the mitigation requirements for the removal of protected trees within the buildable area on a site or project. Such mitigation credits shall be given only for those trees whose critical root zones are left predominately in their natural state. No cutting, filling, or other construction related activities are allowed within the critical root zones of trees eligible for mitigation credit unless otherwise approved in writing and in advance by the town. Existing trees that are preserved within required street yard landscaping areas shall be counted for credit toward the requirements of section 82-241 of this Code, street yard landscaping, provided that they are located within the street yard and/or parking area. Following is a list of credits available for the preservation of protected and specimen trees on a site or project, and a separate credit schedule for the preservation of protected and specimen post oak trees on a site or project.

- (1) One mitigation tree credit will be given for each protected tree preserved within a buildable area on a site or project.
- (2) The following schedule outlines tree credits that will be given for each specimen tree preserved within a buildable area on a site or project.

*Buildable Area Mitigation Specimen
Tree Credit Schedule*

Caliper Size (Diameter)	Tree Credits
13—18 inches	3
19—24 inches	4
25—30 inches	5
Greater than 30 inches	6

- (3) The following schedule outlines tree credits that will be given for each protected or specimen post oak tree preserved on a site or project and located outside of an ESA.

Post Oak Tree Credit Schedule

Post Oak Caliper Size (Diameter)	Tree Credits
6—12 inches	2
13—21 inches	4
22 inches and greater	6

- (4) Mitigation credits for preservation of protected trees within designated upland and/or riparian habitat will be given for each acre of habitat protected on a site or project.
- (5) For purposes of this section, one mitigation tree credit shall be the equivalent of the person developing the property providing one container-grown tree as provided in section 94-39 of a variety selected from the replacement tree list having a minimum caliper width of two and one-half inches to three inches, measured in accordance with section 94-13 of this chapter. In the event the tree preservation and enforcement officer or authorized designee approves the payment of money in an amount equal to the per-caliper-inch cash value of the removed tree(s) instead of providing the replacement trees required by this article, one mitigation tree credit shall be the equivalent of the per-caliper-inch cash value for a replacement tree having a minimum caliper width of two and one-half inches to three inches. However, no tree credits shall be allowed or permitted for trees that are dead, dying, diseased or infested with harmful insects (as determined by the tree preservation and enforcement officer or authorized designee), or for trees which have not been adequately protected using required tree protection measures, as defined in article V of this chapter, or which are otherwise likely to die (as determined by the tree preservation and enforcement officer or authorized designee); or trees that are not included on the protected tree list.

(Ord. No. 63-08, § 3(94-18), 10-6-2008; [Ord. No. 62-16](#), § 7, 11-21-2016)

Sec. 94-41. - Penalties for unauthorized removal of protected, specimen, and historic trees.

If any protected, specimen, or historic trees are removed from any real property without a tree removal permit, or if a protected, specimen, or historic tree is injured because of failure to follow required tree protection measures such that the tree dies or may reasonably be expected to die, the town shall have the authority to impose one or more of the following administrative and civil penalties on the developer and/or owner of the property:

- (1) A monetary penalty of \$250.00 per-caliper-inch of width of the protected tree(s) removed or damaged, payable to the town. A monetary penalty of \$500.00 per-caliper-inch of width of the specimen tree(s) removed or damaged, payable to the town. A monetary penalty of \$750.00 per-caliper-inch of width of the historic tree(s) removed or damaged, payable to the town. Funds paid to the town as tree removal penalties shall be deposited in a special account or fund and used by the town to provide and/or support supplemental landscape plantings in public areas of the town, and/or to support the administration and enforcement of the town's tree preservation regulations.

- (2) For each protected tree that is removed or damaged, replacement with new trees having a total tree caliper width equivalent to five times that of the removed or damaged tree(s). For each specimen tree that is removed or damaged, replacement with new trees having a total tree caliper width equivalent to ten times that of the removed or damaged tree(s). For each historic tree that is removed or damaged, replacement with new trees having a total tree caliper width equivalent to 15 times that of the removed or damaged tree(s). Replacement trees shall be of a species listed on the town's approved mitigation and replacement tree planting list. Such replacement trees shall be container-grown and have a minimum caliper width of two and one-half inches to three inches, measured in accordance with section 94-13 of this chapter. Replacement trees shall have a minimum height of at least six feet, and shall be planted in locations as approved by the tree preservation and enforcement officer or authorized designee. Acceptable locations shall include reforestation sites designated by the town. At the discretion of the tree preservation and enforcement officer or authorized designee, money in an amount equal to the per-caliper-inch cash value of the removed or damaged tree(s) may be paid to the town instead of providing replacement trees required by this article. Any such payments shall be deposited in a special account or fund and used by the town to provide and/or support supplemental landscape plantings in public areas of the town and/or to support the administration and enforcement of the town's tree preservation regulations. A per-caliper-inch cash value for replacement trees shall be set by the town council in accordance with section 94-38 of this article.

(Ord. No. 63-08, § 3(94-19), 10-6-2008)

Secs. 94-42—94-50. - Reserved.

ARTICLE V. - TREE PROTECTION

Sec. 94-51. - Enumeration.

The following tree protection measures shall be required:

- (1) Prior to any and all construction or land development activity, the developer or property owner shall install four-foot-high plastic (or equivalent) safety fencing around the drip line of protected trees and six-foot-high chain-link fencing around the drip line of specimen and historic trees.
- (2) Prior to any and all construction or land development activity, the developer or property owner shall establish designated parking areas for the parking and maintenance of all vehicles, trailers, construction equipment and related items, designated stockpile areas for the storage of construction supplies and materials during construction of the subdivision and designated drive areas for vehicles and equipment. The location and dimensions of such designated areas shall be clearly identified on both subdivision construction and site plans and shall be approved by the tree preservation and enforcement officer or authorized designee prior to any construction or land development activity in, on or about the subdivision. Such designated areas shall be completely fenced with chain-link fencing and gates for safety purposes and to separate protected, specimen, or historic trees from the construction area and related construction activity. With the approval of the tree preservation and enforcement officer or authorized designee, the designated parking and stockpile areas may be combined into one fenced area, provided that the preservation of protected trees is not adversely affected or jeopardized. Supplies and pipe and other items that are customarily unloaded where installed shall not be required to be stored within the designated stockpile areas. Sites approved for temporary batching plant permits shall be fenced and gated in the same manner as designated parking and stockpile areas. Temporary batching plant permits shall also be required for the operation of all batching plants, pursuant to the regulations of this chapter.
- (3) During construction, the developer or property owner shall prohibit the cleaning of equipment or materials and/or the disposal of any waste material, including, but not limited to, paint, oil,

solvents, asphalt, concrete, mortar, etc., under the canopy or drip line of any protected, specimen, or historic tree or group of such trees.

- (4) No attachments or wires of any kind, other than those of a protective nature, shall be attached to any protected tree(s).
- (5) With major grade changes of six inches or greater, a retaining wall or tree well of rock, brick, landscape timbers or other approved materials shall be constructed around the tree no closer than the drip line of the tree. The top of the retaining wall or tree well shall be constructed at the new grade.
- (6) Unless otherwise approved by the town, no construction or construction-related activity shall occur under the canopy or drip line of any protected, specimen, or historic tree or group of such trees.
- (7) Any tree(s) removed during land development, construction or construction-related activities shall be chipped or hauled off site. Burning of removed trees is prohibited unless prior approval is given by the town's fire marshal.
- (8) The tree preservation and enforcement officer or authorized designee may require additional protection measures or best management practices as needed on a case by case basis to adequately protect protected, specimen, historic trees, or trees required as part of an approved landscape plan.

(Ord. No. 63-08, § 3(94-20), 10-6-2008; [Ord. No. 62-16](#), § 8, 11-21-2016)

Secs. 94-52—94-60. - Reserved.

ARTICLE VI. - TREE PLANTING REQUIREMENTS AND PLANTING LISTS

Sec. 94-61. - Street yard trees.

Trees shall be planted or existing trees preserved within the street yard of a nonresidential lot or building tract according to the following provisions:

- (1) For street yards less than 10,000 square feet in area, one tree shall be provided for each 1,000 square feet, or fraction of such amount, of street yard.
- (2) For street yards between 10,000 and 110,000 square feet in area, ten trees shall be required for the first 10,000 square feet plus one additional tree shall be required for each 2,500 square feet, or fraction of such amount, of street yard area in excess of 10,000 square feet.
- (3) For street yards over 110,000 square feet in area, 50 trees shall be required for the first 110,000 square feet plus one additional tree shall be required for each 5,000 square feet, or fraction of such amount, of street yard area in excess of 110,000 square feet.
- (4) Street yard trees shall be a minimum of three-inch caliper.
- (5) Trees required to satisfy other provisions of this article and lying within the street yard may be used to satisfy the requirements of this section.

(Ord. No. 63-08, § 3(94-21), 10-6-2008)

Sec. 94-62. - Street buffer trees.

Trees shall be planted or existing trees preserved within the street buffer landscaping area required by section 82-242 of this Code, street buffer landscaping, according to the following provisions:

- (1) Street buffer trees shall be provided in a ratio of one tree for every 30 feet of lineal frontage, except that a ratio of one tree for every 25 feet of lineal frontage shall be provided along scenic roadways.
- (2) Street buffer trees shall be a minimum of three-inch caliper.

(Ord. No. 63-08, § 3(94-22), 10-6-2008)

Sec. 94-63. - Parking area trees.

Trees shall be planted or existing trees preserved within off-street parking areas according to the following provisions:

- (1) One tree shall be provided for each ten parking spaces provided on the site; provided, however, that churches and/or schools shall be required to provide one tree for each 20 parking spaces provided on the site.
- (2) Parking area trees shall be minimum of three-inch caliper, except as provided in subsection (4) of this section.
- (3) All parking spaces shall be located within 50 feet of a tree that is located within the same parking area, measured from the trunk of the tree; provided, however, that for churches and/or schools, all parking spaces shall be located within 100 feet of a tree that is located within the same parking area, measured from the trunk of the tree.
- (4) A maximum of 30 percent of the trees used to satisfy the requirements of this section may come from subsection 94-66(b), approved median and right-of-way planting list.

(Ord. No. 63-08, § 3(94-23), 10-6-2008)

Sec. 94-64. - Median and right-of-way trees.

Trees may be planted in medians and rights-of-way only with the approval of the town, provided that such trees are selected from subsection 94-66(b), approved median and right-of-way planting list.

(Ord. No. 63-08, § 3(94-24), 10-6-2008)

Sec. 94-65. - Residential lots.

The following tree planting requirements shall be satisfied prior to the issuance of a certificate of occupancy for a single-family, duplex or multi-family use:

- (1) A minimum of three trees, with a minimum caliper width of two and one-half inches to three inches, and at least six feet in height, shall be provided on each 10,000 square foot and greater single-family and duplex lot prior to the issuance of a certificate of occupancy. A minimum of two trees, with a minimum caliper width of two and one-half inches to three inches, and at least six feet in height, shall be provided on each single-family and duplex lot between 5,000 and 10,000 square feet prior to the issuance of a certificate of occupancy. At least one of the required trees shall be located within the front yard area of the lot.
- (2) A minimum of one tree, with a minimum caliper width of two and one-half inches to three inches, shall be provided for each 3,000 square feet of gross lot area on each multi-family lot prior to the issuance of a certificate of occupancy. At least 50 percent of the required trees shall be located within either the front or side yard area of the lot.

- (3) From July 1 until September 1 of each year, only container grown trees shall be used to satisfy the requirements of this section; and, the builder/developer shall certify that any such trees are container grown.
- (4) Homeowners desiring to plant trees of a caliper width in excess of two times the requirements of this article may, from July 1 until September 1 of each year, file a town-approved affidavit with the town manager to this effect. Such trees shall be planted by March 1 of the following year in which the affidavit was filed. Failure to comply with the requirements of this article shall be considered a misdemeanor, punishable as such by a fine in accordance with section 1-13 of this Code.
- (5) There shall be no more than 50 percent of any tree species, and no more than 75 percent of any tree genus permitted to satisfy the planting requirements.

(Ord. No. 63-08, § 3(94-25), 10-6-2008; [Ord. No. 62-16](#), § 9, 11-21-2016)

Sec. 94-66. - Approved tree planting lists.

Unless otherwise specified in this chapter, only those tree species included in this section shall satisfy the tree planting requirements of this article.

Generally. The tree species lists contained in this section have been developed and will be periodically updated by the town's environmental conservation commission and shall be maintained and distributed to the public by the tree preservation and enforcement officer or authorized designee as guides for the identification and selection of tree species that meet the various standards and requirements of this article. Trees included on these tree species lists were selected on the basis of one or more of the following criteria or factors: hardiness, resistance to disease, suitability relative to local climate and soil conditions, adaptability for transplantation, longevity, adaptability to various landscape conditions, resistance to drought, aesthetic qualities, shade provision, windbreak provision, and screening qualities. To promote biodiversity, there shall be no more than 20 percent of a tree species, and no more than 50 percent of any tree genus permitted to satisfy the planting requirements on all new developments.

- (1) *Approved tree planting list.* Only those tree species found on the following approved tree planting list shall satisfy the tree planting standards and requirements of this article.

Approved Tree Planting List

Common Name	Scientific Name
Southern live oak	(Quercus virginiana)
Escarpment live oak	(Quercus fusiformis)
Shumard oak	(Quercus shumardi)
Chinkapin oak	(Quercus muehlenbergii)
Monterrey oak	(Quercus polymorpha)
Bur oak	(Quercus macrocarpa)

Texas red oak	(Quercus texana)
Water oak	(Quercus nigra)
American elm	(Ulmus americana)
Cedar elm	(Ulmus crassifolia)
Winged elm	(Ulmus alata)
Lacebark elm	(Ulmus parvifolia)
Bald cypress	(Taxodium distichum)
Pecans and hickories	(Carya species)
Juniper tree	(Juniperus species)
White ash	(Fraxinus americana)
Green ash	(Fraxinus pennsylvanica)
Texas ash	(Fraxinus texensis)
Western soapberry	(Sapindus drummondii)
Sweet gum	(Liquidambar styraciflua)
Eastern red cedar	(Juniperus virginiana)
Pines	(Pinus species)
Leyland cypress	(Cypressocyparis leylandi)
Black walnut	(Juglans nigra)
Magnolia	(Magnolia grandiflora)

- (2) *Approved median and right-of-way tree planting list.* The following tree species shall be allowed to be planted in medians and rights-of-way when approved by the town. Additional tree species with non-aggressive root systems/deep root systems maybe authorized for planting in such areas by the director of recreational services.

*Approved Median and ROW Tree
Planting List*

Common Name	Scientific Name
Sweet gum	(Liquidambar styraciflua)
Crepe myrtle	(Lagerstroemia indica)
Wax myrtle	(Myrica cerifera)
Plum	(Prunus species)
Holly	(Ilex species)
Possum haw	(Ilex decidua)
Native pecan	(Carya species)
Redbuds/whitebuds	(Cercis species)
Fruitless crabapples	(Malus species)
Southern live oak	(Quercus virginiana)
Escarpment live oak	(Quercus fusiformis)
Texas red oak	(Quercus texana)
Shumard oak	(Quercus shumardi)
Chinkapin oak	(Quercus muehlenbergii)
Bur oak	(Quercus macrocarpa)
Water oak	(Quercus nigra)

Winged elm	(Ulmus alata)
Cedar elm	(Ulmus crassifolia)
Lacebark elm	(Ulmus parvifolia)
Slippery elm	(Ulmus rubra)
Bald cypress	(Taxodium distichum)
Hickories	(Carya species)
Pines	(Pinus species)
Chinese pistache	(Pistachia chinensis)
Juniper tree	(Juniperus species)
Texas buckeye	(Aesculus glabra variety arguta)
Common persimmon	(Diospyros virginiana)
Texas ash	(Fraxinus texensis)
White ash	(Fraxinus Americana)
Green ash	(Fraxinus pennsylvanica)
Western soapberry	(Sapindus drummondii)
Black walnut	(Juglans nigra)
Magnolia	(Magnolia grandiflora)
Yaupon holly	(Ilex vomitoria)
Carolina buckthorn	(Rhamnus caroliniana)
Thornless honey locust	(Gleditsia triacanthos variety inermis)

- (3) *Approved mitigation and replacement tree planting list.* The following list of tree species shall be allowed to be planted to satisfy mitigation and replacement standards for trees removed from the buildable area on sites, trees removed with approved tree removal permits, and/or trees removed without authorization.

*Approved Mitigation and Replacement
Tree Planting List*

Common Name	Scientific Name
Native pecan	(Carya species)
Texas red oak	(Quercus texana)
Shumard oak	(Quercus shumardi)
Bur oak	(Quercus macrocarpa)
Water oak	(Quercus nigra)
Winged elm	(Ulmus alata)
Slippery elm	(Ulmus rubra)
Post oak	(Quercus stellata)
Cedar elm	(Ulmus crassifolia)

- (4) *Approved overhead utility easement tree planting list.* The following list of tree species shall be allowed to be planted in overhead utility easements where required. These species were selected due to their relatively small mature size and growth characteristics. Trees planted in these areas shall be planted at a ratio of three trees for every one tree required.

Common Name	Scientific Name
Yaupon holly	(Ilex vomitoria)
Carolina buckthorn	(Rhamnus caroliniana)

Possum haw	(Ilex decidua)
Plum	(Prunus species)
Redbuds/whitebuds	(Cercis species)
Wax myrtle	(Myrica cerifera)
Crepe myrtle	(Lagerstroemia indica)

(Ord. No. 63-08, § 3(94-26), 10-6-2008; [Ord. No. 62-16](#), § 10, 11-21-2016)

Sec. 94-67. - Limits on credit for preservation of existing or established trees.

Existing protected trees, which are not being applied toward compliance with landscaping requirements, may be applied as a credit against required buildable area mitigation. Similarly, existing specimen trees, which are not being applied toward compliance with landscaping requirements, may be applied as credit toward required buildable area mitigation. In order for trees to qualify for credit, all standards described in article V of this chapter, shall be met completely. Further, all requirements set forth in section 94-40 shall also be met for credit to apply toward required buildable area mitigation for such trees. If the trees are compromised in any way, credit will not be given. Eligibility for credit will be determined by the tree preservation and enforcement officer or authorized designee. In no event shall any tree be counted for credit against both the landscaping requirements and the buildable area mitigation requirements.

(Ord. No. 63-08, § 3(94-28), 10-6-2008; [Ord. No. 62-16](#), § 11, 11-21-2016)

Editor's note— [Ord. No. 62-16](#), § 11, adopted Nov. 21, 2016, repealed § 94-67, and renumbered former § 94-68 as new § 94-67 as set out herein. The former § 94-67 pertained to landscape credit for large trees and derived from Ord. No. 63-08, § 3(94-27), 10-6-2008.

Secs. 94-68—94-80. - Reserved.

ARTICLE VII. - MISCELLANEOUS

Sec. 94-81. - Exceptions.

The following exceptions from the terms and provisions of this chapter are hereby authorized and granted:

- (1) If any protected, specimen, or historic tree shall be determined to be in a hazardous or dangerous condition so as to endanger the public health, welfare or safety, and require immediate removal without delay, authorization for removal may be given by the town manager, upon recommendation of the tree preservation and enforcement officer or authorized designee, and such protected, specimen, or historic tree may then be removed without obtaining a written permit as required in this article.

- (2) During the period of an emergency, such as a tornado, storm, flood or other act of God, the requirements of this article may be waived as may be deemed necessary by the town council.
- (3) All licensed plant or tree nurseries shall be exempt from the terms and provisions of this article only in relation to those trees planted and growing on the premises of such licensee that are so planted and growing for the sale or intended sale to the general public in the ordinary course of such licensed business.
- (4) Utility companies, franchised or otherwise, that are authorized to provide utility service within the town may remove protected, specimen, or historic trees that endanger public safety and welfare by interfering with utility service, except that where such trees are on owner-occupied properties developed for single-family or duplex use, removal of such trees shall be at the option of the property owners and require the property owners' consent and approval.
- (5) For recreational property or uses, such as golf courses and baseball, soccer, football or similar athletic facilities, and public works projects such as water or wastewater treatment plants, pump stations, storage tanks, and public streets and drainage improvements, the buildable area of the property shall include that portion of the property necessary for the construction of such recreational and public works improvements, including sufficient adjacent area, to allow the normal operation of construction equipment.
- (6) The terms and provisions of this article shall not apply to any development, subdivision or re-subdivision for which a record plat has been approved by the town council and filed in the plat records of the county prior to October 6, 2008.
- (7) All easements and rights-of-way included on a record plat approved by the town and filed in the plat records of the county.

(Ord. No. 63-08, § 3(94-29), 10-6-2008; [Ord. No. 43-15](#), § 2, 7-20-2015; [Ord. No. 62-16](#), § 12, 11-21-2016)

Sec. 94-82. - Penalty upon failure to comply with chapter provisions.

- (a) Any person violating or failing to comply with any provision or requirement of this chapter shall be deemed guilty of a misdemeanor and, upon conviction, shall, without exception, be fined the maximum amount provided in section 1-13 of this Code. A separate offense shall be deemed committed upon each day or portion of a day during or on which each separate violation or failure to comply occurs or continues to occur and shall be punishable as such.
- (b) Notwithstanding the foregoing, any violation by any person of any provision of this chapter that constitutes an immediate danger or threat to any protected, specimen, or historic tree shall be subject to the administrative penalties set forth in this chapter.
- (c) Notwithstanding the foregoing, any violation by any person of any provision of this chapter that constitutes an immediate danger or threat to the health, safety and welfare of the public may be enjoined in a suit brought by the town for such purpose.
- (d) In addition to any other remedies or penalties contained in this section, the town may enforce the provisions of this chapter pursuant to the applicable provisions of V.T.C.A., Local Government Code ch. 54, which chapter provides for the enforcement of municipal ordinances.
- (e) Allegation and evidence of a culpable mental state is not required for the proof of an offense defined by this chapter.

(Ord. No. 63-08, § 3(94-30), 10-6-2008)

Sec. 94-83. - Informational assistance.

- (a) In furtherance of the purposes and provisions of this article, the town's tree preservation and enforcement officer or authorized designee shall develop and distribute to persons making application for either tree removal permits or tree replanting permits and make available to the general public an informational pamphlet identifying appropriate and useful facts, guidelines and how-to information relative to the preservation, protection and replanting of trees.
- (b) The tree preservation and enforcement officer or authorized designee shall also develop, maintain and make available to applicants for tree removal permits or tree replanting permits and to the general public a tree species reference book to provide more detailed information concerning tree care in general and the characteristics, soil and growth requirements and other traits of specific tree species identified on the town's protected tree list and approved tree planting and replacement list.
- (c) A current edition of the Texas Association of Nurserymen Grades and Standards, as applicable to the tree species on the town's protected tree list and approved tree planting and replacement list, shall be maintained by the tree preservation and enforcement officer or his authorized designee and made available to applicants for building permits, tree removal permits or tree replanting permits and to the general public, as only those trees meeting and planted or replanted in accordance with the applicable Texas Association of Nurserymen Grades and Standards shall satisfy the tree planting, replanting and/or replacement standards and requirements contained in this chapter.

(Ord. No. 63-08, § 3(94-31), 10-6-2008)