



MEMORANDUM

DATE: April 10, 2020
TO: The Honorable Mayor Watts and Council Members
FROM: Todd Hileman, City Manager
SUBJECT: Friday Staff Report

I. Council Schedule

A. Meetings

1. **Cancelled** - Public Utilities Board Meeting on **Monday, April 13, 2020** at **9:00 a.m.** in the City Council Work Session Room.
2. **Cancelled** - Historic Landmark Commission on **Monday, April 13, 2020** at **5:30 p.m.** in the City Council Work Session Room.
3. **Cancelled** – Library Board on **Monday, April 13, 2020** at **5:30 p.m.** at the North Branch Library.
4. **Cancelled** - Mobility Committee Meeting on **Tuesday, April 14, 2020** at **9:00 a.m.** in the City Council Work Session Room.
5. **Cancelled** - Work Session of the City Council on **Tuesday, April 14, 2020** at **2:00 p.m.**
6. **Cancelled** - Agenda Committee Meeting **Wednesday, April 15, 2020** at **2:30 p.m.** in the City Manager's Conference Room.
7. **Cancelled** - Health and Building Standards Commission Meeting on **Thursday, April 16, 2020** at **4:00 p.m.** in the City Council Chambers.
8. **Cancelled** - Committee on Persons with Disabilities on **Thursday, April 16, 2020** at **6:00 p.m.** in the City Council Work Session Room.

II. General Information & Status Update

- A. Updated Information from Municipal Courts – During this period of court closure, a person who has received a citation, including for parking, may request a reset until the court reopens by emailing the court at dentonmunicipalcourt@cityofdenton.com. Additionally, if the person does not wish to postpone the case, he or she may contact

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the court and work with the court clerk's office to pay a fine, submit documentation for proof dismissals, sign up for driver's safety or deferred adjudication. However, if a person wishes to plead not guilty or come to court to discuss the case, the person would need to request a reset because those require in court appearances. The Court is processing requests received through the mail for paying a violation, requesting Driving Safety or Deferred Disposition, or submitting any documents for a case. Payment can also be made online. We are also responding to requests to extend due dates or request a reset on a case through email. No warrants, penalties, or late fees attached to cases during this time of closure will be issued. When court reopens, any undisposed cases which were filed during the time of closure will be sent new notices to appear. Staff contact: Tony Puente, DME

- B. Conversation with Lenders – On Friday morning, City staff met with local banks and lenders via a virtual meeting to discuss their experience and understand if there could be an opportunity for bridge financing until resources are received through various programs available. The conversation was very insightful and the following outlines main takeaways.

For small business owners or current customers:

- Generally, the banks shared that they are overwhelmed with handling and processing applications for small businesses, but they are seeing some fairly quick turnaround in some of the programs.
 - For example, in the Paycheck Protection Program (PPP), the average turnaround time is generally 2-10 days from the time of the application to get the PPP loans funded.
 - A major challenge the banks had to overcome was that the SBA has changed the loan application form three times and who qualifies requirements twice.
- There has been a gradual mindset shift in the small business owners as they understand the PPP program, with many who had initially laid off or eliminated jobs, bringing employees back on to receive the full reimbursement. If a small business owner does not rehire all employees, they are eligible for a pro-rated portion of the PPP loan.
- The large majority of the PPP applications (if not all) have been approved by the SBA; however, the one caveat is that those businesses with their paperwork in order with the IRS, payroll, etc. have a distinct underwriting advantage in terms of the time it takes to submit an application.
- Most of the banks were not openly accepting non-customers for the PPP, as they are working around the clock to process their current customers' loan requests to the SBA under the PPP and simply do not have the staff to approve non-customers at this time.
- The banks also reported that they are working with their customers for deferrals and other options in order to provide financial relief for those directly impacted from COVID-19 as well.

For individuals:

- Individuals should not refuse to pay rent, loans, or mortgages; rather, the better course of action is to proactively contact their landlords and mortgage underwriters to establish a plan. In COVID-19 related instances, the landlords

do have the ability to also workout deals with their lenders. It should also be noted that it cannot be assumed that all rent and loans were current before COVID-19 started.

- With the significant and unprecedented workload already on the banks and various regulations regarding individual consumer loans, including consideration of the ability to repay, it would not be feasible to coordinate logistics and offer a broad program to individual consumers. Banks do not have the ability to simply use a forthcoming unemployment benefit notification to provide a bridge or cash flow. The individual circumstances of each consumer's ability to repay still remain.
- As also shared in this Friday's report, City staff has learned that the Texas Workforce Commission (TWC) reports that unemployment benefits should be made to approved applicants within two weeks of an approved application and that payments will be backdated to the effective date of the claim so claimants are not penalized for any delay in processing or application.
 - Getting into the queue is still the main issue, but TWC reports that it continues to take action to increase their capacity to respond to the unprecedented volumes as described in the separate Friday report item.

The ability to assist individuals in being prepared to file for unemployment, to provide guidance and expertise through legal or accounting professionals, or to assist and refer individuals to other available resources in the community was a focus of the conversation and supportive of the program that the City is developing with the United Way (description provided in Friday Report in a separate item). Although extremely difficult, COVID-19 has had unprecedented impacts to many systems, from banks to unemployment agencies, that are struggling to respond and handle the sheer volumes. City staff will continue to seek out ways to improve access for residents and businesses to available resources.

- C. Texas Workforce Commission and Unemployment Claims Filings Updates – The Texas Workforce Commission (TWC) has seen an exponential rise in calls and communications regarding unemployment. They have fielded questions regarding the length of time applicants may expect to wait for payment. They relayed that payments should be made to approved applicants within two weeks of an approved application. Those payments will be backdated to the effective date of the claim so claimants are not penalized for any delay in processing or application.

TWC continues to make improvements pertaining to handling the backlog of claims. Improvements to their system include the following:

- Adding 800 voice recognition phone lines, and planning to add additional 300 lines.
- Quadrupling server capacity for online claims.
- Moving website to a platform that allows for unlimited simultaneous users.
- Adding 3 private call centers; 1 is already operational, 1 will be operational on April 10, and 1 is currently in contract negotiations.
 - This will add an additional 750 people to take calls.
- Transferring 700 employees from other divisions to assist with calls.
- Using Texas House and Senate staffers to provide additional support.

- Increasing chat bot assistance capacity and increasing ability to respond to questions.
- Implementing changes to online systems to process claims under the CARES Act.

There is a new Unemployment Insurance Weekly Claims report, as provided by the US Department of Labor, which was released on April 9. The news release regarding the report is available [here](#). The report includes preliminary state level data, which showed that 313,832 individuals filed an unemployment claim in Texas the week of April 4.

TWC provided official and unofficial data related to the number of claims received over the past few weeks. The **attachment** provides the claims through the week of March 28, 2020 for Denton, Dallas, Collin, and Tarrant Counties. In addition, TWC posted claims filed through different systems (internet, telephone, other) for last 8 weeks (including unofficial data from the current week). That and other data sets are available [here](#). Additional local data, including data specific to the City of Denton, will be released later in April. Staff contact: Jessica Rogers, Economic Development

- D. Public Comments Instructions – At the April 7 City Council meeting, a resident made the statement that the City’s website indicated that written comments would be read at the council meeting. This was not accurate. Instructions on how to comment on agenda items for virtual meetings is currently shared on two web pages, the form itself, and in an April 3 press release. In the press release and on the Public Meetings and Comment area regarding Council Meetings, the language about Virtual White Cards states: “Similar to when a citizen submits a white card to indicate their position on the item, these comment forms will be sent directly to City Council members and recorded by the City Secretary. The Mayor will announce the number of Comment Cards submitted in support or opposition to an item during the public comment period.” On the comment form itself, the instructions at the beginning state: “Comments made through this form will be entered into the record and emailed to each Council member. Comments will not be read during the meeting.” To ensure there is no confusion at future meetings, staff updated the aforementioned web pages to explicitly include the statement on the form that states, “Comments will not be read during the meeting.” Staff contact: Ryan Adams, Public Affairs
- E. Green Tree Estates Update – In anticipation of an April 21 Work Session Discussion regarding Green Tree Estates, staff would like to provide the Council with a brief update on the status of the neighborhood, and progress on direction received from the Council. At the February 4 City Council meeting, the Council extended the declaration of local disaster for Green Tree Estates through May 22, 2020. This extension also included the continuation of the authority for up to \$100,000 in expenditures toward temporary water provision for the residents of Green Tree Estates. Staff continues to deliver non-potable water to the neighborhood three times per week, which is billed to each residence as of February 13.

During the February 4 and February 18 meetings, staff and Council reiterated that property owners would be responsible for securing the means to conduct the construction work to connect to the city water meter, and pay the requisite fees associated with the connection. Additionally, Council reiterated its request that

property owners take advantage of the voluntary courtesy inspections being offered by the City of Denton and continued its direction. Council also requested that staff provide an update no later than one month prior to the expiration of the declaration of disaster (May 23). Subsequent to February 18 Council meeting, staff mailed information (**attached**) to all Green Tree Estates residents (in both English and Spanish) that communicated the status of the emergency declaration, direction from the Council, frequently asked questions, steps to connect to the City system, and other important information. This information was also conveyed to LULAC and Movimiento Cosecha.

After the February 18 meeting, City staff met with representatives of Habitat for Humanity and requested that they assist residents with courtesy inspections for the residents. Habitat conducted courtesy inspections for owner-occupied properties and, at this time, the results of those inspections have not been shared with the City. Additionally, the City issued notices to property owners with dilapidated and abandoned structures located within the neighborhood. Subsequent to those notices, permits were secured by property owners to remove thirteen (13) of those structures. As of this date, all but three (3) structures have been removed.

With the emergency of the COVID-19 pandemic, City Council approved a declaration of disaster that suspended all utility shutoffs for non-payment. While Green Tree Estates residents will still be billed for water, all residents will receive regular delivery of non-potable water regardless of payment status. A March 21 in-person meeting with residents was scheduled to inquire as to the status of the residents' desire to connect to the City's water system. The meeting was subsequently cancelled at the residents' request due to COVID-19 concerns. A scheduled April 18 on site visit will also be cancelled due to the City's Stay at Home order.

As of April 3, 2020, the City has expended \$46,856.37 in personnel costs, equipment, and supplies. To date, no residents have requested courtesy inspections be performed by the City. Staff will prepare an update for the Council at their April 21 Work Session. Staff contact: Ryan Adams, Public Affairs.

- F. Personal Protective Equipment Donations – Since the City's initial plea for PPE and cleaning supplies donations, Fire Department staff received over 50 emails from citizens, dozens of social media replies, countless phone calls, and over 20,000 people reached on social media postings. We have been continually supplied, by citizens, small donations of masks, gloves, gowns, and cleaning supplies at neighborhood fire stations. We also received many large corporate donations, including the following:

- Sally Beauty Supply – 200 surgical masks
- Home Depot – 69 respirator masks
- UNT – 200 surgical masks
- DFW Care & Ram Union – 800 masks (surgical and N95)
- Angel Hospitality – 4000 masks (featured on DTV)
- Sam's Club – large cache of cleaning supplies with promise of more to keep warehouse supplies stocked



The Police Department also received direct donations from businesses and private citizens.

- Solaris Hospice – 50 2-4 oz bottles of hand sanitizer
- Allen Pharmacy – 30 2 oz bottles of hand sanitizer
- Larry White/Legends Athletic Supply – 150 cloth masks
- Private Citizen – 500 cloth masks
- Nature’s Mercantile – 8 1 gallon jugs of hand sanitizer
- Private Citizen – 2 bottles of Clorox and a case of bottled water
- Private Citizen – 100 disposable hospital scrub masks
- Police Employee – 50 disposable hospital scrub masks

City staff are grateful to the community for their contributions during the COVID-19 pandemic. Staff contacts: David Boots, Fire / Sarah Keith, Police

G. COVID-19 Information and Referrals Partnership with United Way – Due to the COVID-19 pandemic, many residents and businesses are facing hardships due to the physical distancing requirements necessary to slow the spread of the disease. During this time, numerous state and federal resources have been made available to assist citizens and business operators, including provisions within the CARES Act of 2020. Understanding and accessing these resources can be daunting for residents and business operators and, as a result, the City is building a program with United Way of Denton County (UWDC) to act as a bridge between those critical resources, such as federal loans, state unemployment services, housing, legal services, and other assistance opportunities, for those in our community who need them. Within this program, UWDC will expand its existing Information and Referrals service, which normally connects residents to social services providers. This includes services that benefit those residents and businesses most impacted by the effects of the pandemic. The beneficiaries of the service would include renters, the recently unemployed, as well as small businesses. Residents or businesses would simply contact UWDC by phone, an online help portal, or email, then provide some initial information on their needs. They would then work with a UWDC representative, receive information on these resources directly, or be connected with a legal, financial, or other professional who will provide assistance. UWDC will administer the program and utilize its existing network of financial and legal professionals and institutions to provide advice and guidance for program participants. The City of Denton will provide financial resources to fund the UWDC staff members assigned to this program and other program costs that may arise. Additionally, City staff can be made available to supplement the UWDC staff if needed. The City and UWDC will evaluate the program on a regular basis and make

modifications to better equip our community members while staying responsive to the changing COVID-19 environment. City and UWDC staff tentatively expect the program to launch prior to the end of next week. Staff contact: Ryan Adams, Public Affairs

- H. Response to Engage Denton Comment Regarding Compost Sales – The **attached** memo is a response from Water & Wastewater Utilities staff regarding a comment made on Engage Denton concerning compost sales. Staff contact: Frank Pugsley, Water & Wastewater Utilities
- I. Department of Energy Webinar – On April 6, Council Member Briggs forwarded information to staff about a U.S. Department of Energy (DOE) Webinar that was to be held on April 8 titled “Better Buildings”: Field Tech Validation Partnerships. Sustainability Staff participated in the webinar that highlighted a potential partnership with state and local governments to field test three experimental technologies. The selected organization would be used as a field experimental site by contributing one or multiple buildings that meet optimal criteria as outlined in the webinar. Staff would need to analyze city-owned buildings to identify over the next two weeks if any of them meet the DOE’s specific criteria. Because of the current conditions with COVID-19 precautions and a very short turnaround time for the application deadline, staff does not believe that there is enough time for building analysis. Staff will continue to look for other partnership and research opportunities to explore experimental technologies. Staff contact: Katherine Barnett, Sustainability
- J. April Citizen Connection Digital Distribution – Due to the COVID-19 pandemic affecting the resources and delivery timetables of our Citizen Connection newsletter printing vendor, staff was notified that the vendor would not be meeting its deadline for the timely distribution of the April Citizen Connection. In an effort to deliver information when residents need it, we are forgoing the print distribution and taking a broad digital delivery approach for the April issue. A digital copy of the Citizen Connection will be emailed to all utility customers that have an email address on file with the City (approximately 12,000 in total). Additionally, staff will distribute the publication through its Facebook, Twitter, and Nextdoor social media accounts. The City will also continue to communicate individual articles and critical information contained within the April edition over the next three to four weeks. Staff will continue to monitor the effect of COVID-19 on our publications and make adjustments where necessary to ensure residents stay informed in a timely manner. Staff contact: Ryan Adams, Public Affairs
- K. Montecito Crosswalk – On February 22, Council Member Briggs requested that staff assess the crosswalk on Montecito Dr. near White Dove. Staff looked at this area soon after and determined that a crosswalk would be appropriate. This crosswalk has now been reinstalled. Staff contact: Brian Jahn, Capital Projects
- L. Good Samaritan Village Stop Sign – On March 3, Council Member Briggs forwarded a resident concern that requested a stop sign be placed on Ryan Road at the entrance to the Good Samaritan Village. Staff reviewed the location and determined that an all-way stop is warranted based on recent crash data and the offset nature of the

intersections. This all-way stop is scheduled to be installed by the end of April. Staff contact: Brian Jahn, Capital Projects

- M. Gleenwood Lane School Zone Signage – On March 6, Mayor Pro Tem Hudspeth staff to assess the current signage that notifies drivers of the school zone area on Glenwood Ln, near the intersection at Windsor Dr. Staff reviewed the location and determined that significant sign changes are required, and will attempt to correct these conditions while school is not in session. Staff contact: Brian Jahn, Capital Projects.
- N. Customer Service Accounts Verification – On April 6, Council Member Meltzer forwarded a question for clarification from Customer Service regarding information collected for accounts changes. Any activity that either makes a monetary impact to account charges or is related to account specific information requires Customer Service staff to validate the caller as authorized to obtain such information. In the case of adding or removing a yard cart, we only require the caller to verify the last four digits of the ID on file.

It should be noted, however, that some accounts were started long before identity theft laws required maintenance of identifying information. In these instances, since there might not be any ID information on file for the account, Customer Service staff are unable to verify the caller. In these situations, staff would require the full social security number in order to validate identity over the phone. They would also ask for a second ID number that could be used to validate the account. If customers do not want to provide this information via phone, they would normally be requested to come to the lobby and provide the information. Since the lobby is closed in response to the COVID-19 crisis, callers are informed that they may mail a copy of their driver's license so the account may be updated.

Identify theft protection laws require Customer Service staff to validate the customer before making changes to the account. In addition to mail, staff can accept a copy of the driver's license in the night drop since the office is closed. Customer Service staff never recommend emailing personal information since email is not a secure form of transmission. Staff contact: Christa Foster, Customer Service

- O. Virtual Rec Center – Although nothing can take the place of a real recreation center bustling with programs, people, and employees, the outreach a recreation center provides is something Parks and Recreation staff felt could be patched with a virtual recreation center. Staff created a virtual recreation center that can provide Denton residents with ways to connect to their favorite Parks and Recreation staff through videos, blogs, and other easy to access opportunities. The virtual center focuses on health and fitness, virtual events, at-home crafting, and learning opportunities for children and families. The virtual rec center can be accessed at www.cityofdenton.com/virtualrecenter. Staff contact: Laura Behrens, Parks and Recreation
- P. Mowing Schedule – Beginning on March 18 through April 5, the Park Maintenance staff worked on a skeleton crew and focused their attention on high priority items and keeping parks and playgrounds safe. When the Parks and Recreation Department was able to bring in more workers on Monday, April 8, safely, staff was able to return their

focus to other tasks, which included mowing. Staff began mowing areas with high visibility, parks, and other public building areas on a regular schedule, but are still catching up during the two weeks without conventional attendance. During that time, there were many rainy days, which also impacted the grass and turf. Contractors are also still mowing. Staff contact: Drew Huffman, Parks and Recreation

Q. Increased Communication Efforts – Parks and Recreation and Keep Denton Beautiful have been working on increasing communications to residents during the last month to maintain an open line of dialogue and transparency during the pandemic. Below are some statistics that show these efforts.

- **Parks and Recreation Email Distribution**
 - 248,306 Emails Sent, 67,410 Emails Opened
 - 28% Open Rate (likely higher given not all email programs report opened emails)
- **Keep Denton Beautiful Email Distribution**
 - 10,518 Emails Sent
 - 3,226 Emails Opened
 - 31% Average Open Rate (likely higher given not all email programs report opened emails)
- **Facebook Reaches**
 - 102,495 Impressions, 69,317 Reached
 - 8,596 Post Engagements

Staff contact: Maria Denison, Parks and Recreation

R. Virtual Easter Events – Parks and Recreation staff worked quickly to create virtual Easter events in lieu of the normal Easter Egg 'stravaganza and Teen Twilight Egg Hunt events. This year, staff took pictures of the Easter Bunny in locations around Denton like South Lakes Park and the Bayless Selby House Museum. A Facebook event was created on the Denton Parks page, and the pictures were posted daily with a random winner selected to receive a basket of eggs and other goodies previously gathered for the Teen Twilight Egg Hunt.

Staff also organized Zoom chats with the Easter Bunny and its handler. The Zoom chats were on Thursday, April 9, and Friday, April 10. After the initial 28 spots filled up within 30 minutes of posting, an additional 11 spots were offered. The calls were free, and staff stated the children enjoyed the calls. Staff contact: Maria Denison, Parks and Recreation

S. COVID-19 Videos – In addition to launching a videoconferencing platform for the City Council meetings and a Planning and Zoning Commission meeting, staff collaborated on and released several videos relating to the City's and community's response to the COVID-19 pandemic. Staff will continue to adapt what we do and how we do it to tell these impactful Denton stories during this unprecedented time. Staff contact: Billy Matthews, Public Affairs/DTV

Mayor Watts:

- [First Address](#)
- [Second Address](#)

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- [United](#)
- [Delivering](#)
- [Together... Apart](#)
- [Human Resources](#)

Denton Strong:

- [Medical Donations](#)
- [Our Daily Bread](#)
- [DME Lineman](#)
- [Inspiring Firefighter](#)

We Are Working for You:

- [City Staff](#)

United Way of Denton County:

- [Gary Henderson](#)

III. Upcoming Community Events and Meetings

A. Events

All City-sponsored events and programs are suspended through Monday, May 4, or until further notice. Certain areas of Parks and Recreation facilities will also be closed through Monday, May 4, or until further notice, such as gymnasiums, fitness areas, meeting rooms, and the walking track at the Denton Civic Center. Signs will be posted at these facilities. As conditions change, these periods may be extended, and additional announcements may be made.

B. Community Meetings

All City-sponsored meetings are also suspended through Monday, May 4, or until further notice. As conditions change, these periods may be extended, and additional announcements may be made.

IV. Attachments

A. Texas Workforce Commission Data	12
B. Green Tree Estates Communication.....	13
C. Water & Wastewater Utilities Memo	47

V. Informal Staff Reports

A. 2020-031 PPE Status and Mitigation Strategies.....	50
B. 2020-032 DEC February 2020 Dashboard.....	55

C. 2020-033 Windhaven Transmission Pole.....	57
D. 2020-034 Urban Forest Master Plan	59
E. 2020-035 Tree Protection During Construction.....	139
F. 2020-036 Landmark Tree Criteria.....	142

VI. Council Information

A. Council Requests for Information	146
B. Council Calendar	147
C. Draft Agenda for April 21	150
D. Future Work Session Items	157
E. Street Construction Report	158

2020, Claims for Week Ending				
County	3/28/2020	3/21/2020	3/14/2020	3/7/2020
Denton	9,520	5,657	659	572
Collin	9,371	6,082	543	554
Dallas	26,031	17,025	1,442	1,350
Tarrant	24,694	13,638	1,286	1,321

2019, Claims for Week Ending				
	3/28/2019	3/21/2019	3/14/2019	3/7/2019
	293	404	760	392
	368	446	686	439
	1103	1172	1455	1215
	829	1119	1624	920

Texas UI Claims for week ending 3/28/2020

Industry	Claims
Accommodation and Food Services	60,621
Administrative and Support and Waste Management and Remediation Services	21,976
Agriculture, Forestry, Fishing and Hunting	138
Arts, Entertainment, and Recreation	7,838
Construction	12,956
Educational Services	6,404
Finance and Insurance	1,824
Health Care and Social Assistance	36,901
Information	3,507
Management of Companies and Enterprises	1,448
Manufacturing	16,610
Mining	4,306
Other Services	18,520
Professional, Scientific, and Technical Services	9,669
Public Administration	669
Real Estate Rental and Leasing	4,757
Retail Trade	27,087
Transportation and Warehousing	5,560
Utilities	109
Wholesale Trade	6,852
#N/A	10,855
Grand Total	258,607



March 3, 2020

NOTICE TO GREEN TREE ESTATES

Dear Green Tree Estates Resident or Property Owner:

On Feb. 4 and Feb 18, 2020, the Denton City Council discussed the provision of water to the residents of Green Tree Estates.

We have provided the enclosed Frequently Asked Questions list (along with attachments) that we hope provides greater detail regarding the ongoing provision of temporary water service and permanent connection to the City of Denton water system

The City Council encouraged Green Tree Estates property owners to take advantage of the voluntary courtesy inspections offered by the City of Denton and to notify City staff if they intend to connect to the City of Denton water system **prior to April 21, 2020.**

Neighborhood Outreach

City of Denton staff will be on-site at Green Tree Estates to answer resident and property owner questions regarding temporary water provision and connection to the City of Denton water system. A Spanish language translator will accompany City staff.

**Saturday, March 21, 2020
Beginning at 10:00 a.m.**

**Saturday, April 18, 2020
Beginning at 10:00 a.m.**

City staff will visit each residence, answer any questions that residents and property owners have, and ask general questions to better understand the needs of each property.

If you are unavailable on either of these dates, please call or email using the contact information below and staff will meet you at a time of your convenience. You may also request a separate meeting time through LULAC, Movimiento Cosecha, or another group.

Please direct questions via email to Ryan Adams, Deputy Director of Public Affairs, at Ryan.Adams@cityofdenton.com or call (940) 349-8565. Questions in Spanish may be directed to Deborah Viera at Deborah.Viera@cityofdenton.com or (940) 349-7162.

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3 de marzo de 2020

AVISO A GREEN TREE ESTATES

Estimado residente o propietario de Green Tree Estates:

El 4 y el 18 de febrero de 2020, el Consejo Municipal de la Ciudad de Denton discutió el suministro de agua a los residentes de Green Tree Estates.

Hemos proporcionado la lista adjunta de preguntas frecuentes (junto con los anexos) que esperamos proporcione mayores detalles sobre la prestación continua del servicio de agua de la Ciudad de Denton.

El Consejo Municipal invitó a los propietarios de Green Tree Estates a aprovechar las inspecciones de cortesía voluntarias ofrecidas por la Ciudad de Denton y a notificar al personal de la Ciudad si tienen la intención de conectarse al sistema de agua de la Ciudad de Denton **antes del 21 de abril de 2020**.

Extensión del vecindario

El personal de la Ciudad de Denton estará en Green Tree Estates para responder a las preguntas de los residentes y propietarios sobre el suministro temporal de agua y la conexión al sistema de agua de la Ciudad de Denton. Un traductor del idioma español acompañará al personal de la Ciudad.

**sábado, 21 de marzo de 2020
a partir de las 10:00 a.m.**

**sábado, 18 de abril de 2020
a partir de las 10:00 a.m.**

El personal de la Ciudad visitará cada residencia, responderá a cualquier pregunta que tengan los residentes y los propietarios, y hará preguntas generales para entender mejor las necesidades de cada propiedad.

Si usted no está disponible en alguna de estas fechas, llame o envíe un correo electrónico utilizando la información de contacto que aparece a continuación y el personal se reunirá con usted en el momento que le resulte más conveniente. También puede solicitar una cita separada a través de LULAC, Movimiento Cosecha, u otro grupo.

Dirija sus preguntas por correo electrónico a Ryan Adams, Subdirector de Asuntos Públicos, a Ryan.Adams@cityofdenton.com o llame al (940) 349-8565. Las preguntas en español pueden dirigirse a Deborah Viera a Deborah.Viera@cityofdenton.com o al (940) 349-7162.

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Green Tree Estates

March 3, 2020

Frequently Asked Questions

Relating to Feb. 3 Small Meeting and Feb 4. Council Meeting

1. How long will the City continue provide temporary water to the residents of Green Tree Estates?

On Feb. 4, 2019, the Denton City Council formally extended the Declaration of Disaster for Green Tree Estates. This extension allows the City of Denton to continue fill the City-provided water containers, as a billed service, at Green Tree Estates residences with non-drinkable three times per week through May 22, 2020. The City will also keep drinkable water available for pick up at the City's warehouse (**see attached flyer**).

2. What information does the City request from residents and property owners?

At the Dec. 10, 2019 City Council meeting, the Denton City Council requested the residents and property owners provide additional information regarding the properties at Green Tree Estates. Going forward City staff requests resident and property owner assistance in confirming, among other information:

- Which Green Tree Estates properties are rented, and which are owner-occupied;
- Confirmation of the owner of each occupied Green Tree Estates property; and
- Confirmation of which property owners intend to connect to the City of Denton water system (see **attachment** for the Steps to Connect to the City Water system).

This information will assist the City in planning for and managing future connections to the City water system. The City of Denton will reach out to residents directly, through both the mail and onsite visits, to help confirm this information. Residents are asked to open and carefully read any mail from the City of Denton.

3. What are the costs to connect to the City of Denton water system?

There are three categories of costs to connect to the City water system:

- Main Line, Tap, and Valve Charge. The water line that would serve Green Tree Estates residents does not currently extend to the Green Tree Estates neighborhood boundary. The main line, tap, and valve costs would cover all work to extend the water line from its current location to the boundary. By ordinance, these costs must be paid for by the Green Tree Estates residents who connect to the city system. The specific cost depends on the number of connections to properties (please see **attached** chart). For instance, if a few properties connect, the cost per property would be higher than if 14 properties connected. Costs are paid to the City of Denton.
- Tap, Meter, and Impact Fee. These fees allow the meter (the device that measures the amount of water used by a customer) to be placed on the Green Tree Estates neighborhood boundary. Each customer will receive one meter. The fees are standard City fees that would be paid by any person wishing to connect to the City of Denton anywhere in the City. Fees are paid to the City of Denton (please see **attached** chart).
- Private Connection to the Meter. Once a meter is placed at the neighborhood boundary by the City, the property owner must connect it to the residence. The City does not perform or manage this process; however, this work will be required to be permitted and inspected. Typically, this work is performed by a licensed plumber hired by the property owner, though a licensed plumber is not required for all the work and property owners may find various ways to reduce costs.

Cost Estimates:

Main Line, Tap, and Valve Charge:	See attached chart.
Tap, meter and Impact Fees:	\$6,938 per meter
Private Connection:	Variable.

In addition to the cost chart, staff has **attached** a graphic to help illustrate the different costs to connect to the City water system.

4. Will the city accept a payment plan for the cost of the meter, impact fee, etc.?

No. The Code of Ordinances requires meter, impact, etc. fees to be paid prior to the installation of the meter.

5. Who can conduct the trenching and make the plumbing connections?

Any plumbing work must be permitted and inspected by the City. A person who owns the property that they reside on may perform the plumbing work on that property, though any owner-occupied work must be permitted and inspected prior to concealment or connection. Any work done on rental property, must be permitted, performed by a licensed plumber, and inspected by the City.

Trench digging is not addressed in the plumbing code and does not have to be performed by a licensed plumber, so long as it conforms with the City code requirements.

The City requests that residents and property owners consult the City regarding what work may or may not need to be performed by a licensed plumber.

6. Does the City have a list of licensed plumbers that can be contacted for plumbing work?

The City can provide residents and property owners a list of all licensed plumbers who are registered with the City.

7. What inspections should property owners or residents expect if they choose to connect to the City of Denton water system?

In accordance with State law, the City's Building Safety department will conduct a Customer Service Inspection (CSI). A CSI is an examination of the private water distribution facility for the purpose of providing or denying water service. The inspection is limited to the identification and prevention of cross-connections, potential contaminant hazards, and illegal lead materials. Customer service inspections are completed before providing continuous water service to new construction, on any existing service where there is reason to believe that cross-connections or other potential contaminant hazards exist, or after any material improvement, correction, or addition to private water distribution facilities. A CSI inspection is required to be performed by a licensed inspector. The City of Denton inspection staff is licensed in accordance with State law and is the inspection is included as portion of the plumbing inspection processes.

As part of the Customer Service Inspection, property owners must also prove that the property has a functioning sewage disposal system. The City does not perform on-site inspections; this function is performed by an independent TCEQ licensed On-Site Sewage Facilities (OSSF) Professional.

The City's Building Safety department will verify if any life safety concerns exist;

- a. Exposed electrical connections
- b. Propane or natural gas connections
- c. Venting of propane or natural gas appliances
- d. General overview of potential hazards which may result in serious injury or death

8. What happens if a residence does not make a connection to the City of Denton water system?

Residential dwellings are required to have basic elements; water, sewage, electrical and a means to condition the space being occupied (heat). Residential structures which do not include these basic elements can be considered unsafe and uninhabitable.

9. Do I need to be concerned with my septic system?

All properties that are connected to the City of Denton water system must have a way to dispose of waste water. This is required to protect the public from pollutants. While most properties in the City of Denton are connected to the City's sewer system, others have on-site sewage facilities – mostly through a septic system.

Conventional septic systems, also called anaerobic systems, are wholly underground and operate by gravity, so electricity is rarely required. Aerobic systems actively treat and pump the treated wastewater to the drain field, which requires electricity. Both systems (whether anaerobic or aerobic) should be maintained regularly by a state-licensed professional. Without appropriate maintenance, a system can malfunction causing possible exposure of untreated waste water to drinking water sources. It is the owner's responsibility to keep a septic effectively operating and to prevent any malfunction.

If a residence is not currently served by a septic system, the City of Denton may issue a permit for a new system, provided all requirements are met. Permits are also required when a malfunctioning system needs repair, alteration, or extension. Small lot sizes present challenges that may preclude a planned system from meeting all state rule requirements. If a permit application for a septic system does not meet all technical requirements, the City will not be able to issue a permit for construction. Permit fees are only paid for new permits; there are no ongoing fees. Inspections are also only conducted when a septic system is constructed, altered, repaired, or extended, or when a complaint is filed. There are no other inspections conducted by City staff on a continuing basis.

NOTE: All water lines, whether public or private lines, must be set back a certain distance from septic systems. With the smaller lot sizes within Green Tree Estates, these requirements may present a challenge for property owners. Owners are encouraged to consult with a licensed plumber or licensed OSSF professional (see question below) to determine where lines must be placed to meet all septic system setback requirements. Any property that cannot meet setback requirements cannot connect to the City of Denton water system.

10. What if my septic system is not functioning?

It is important to note both State law and the City's Municipal Code require residential properties to have an approved sewage disposal system. An independent TCEQ licensed On-Site Sewage Facilities (OSSF) Professional can inspect the septic system and work with the property owner to coordinate a repair. Generally, when an OSSF is found to be malfunctioning, state law requires that the owner has 30 days to return to compliance and repair the malfunction. Please see **attached** list of Denton County licensed OSSF Professionals from the TCEQ website <https://www.tceq.texas.gov/permitting/ossf/ossfhomeowners.html>.

Temporary Water Service Billing (Feb. 13 – May 22)

1. What is the cost of the water per month?

The City charges \$0.0052 per gallon of water. Each customer will be charged for the amount of water to fill each 275-gallon tank and 55-gallon barrel three times per week. This equates to a monthly water charge of \$20.59 for customers with one (1) 275-gallon tank and \$37.75 for customers with two (2) 275-gallon tanks. **Attached** is a chart that shows the cost for each Green Tree Estates residence.

2. How and what is the process for establishing payment by GTE residents?

Each property currently receiving temporary water will receive a bill through the mail for each billing period. Billing will be on a pre-pay basis and will be issued by mail. Payment may be submitted in person, by mail, or electronically.

If a property does not pay their bill, they will not receive temporary water service. If a property pays their bill late, they will receive water on the next scheduled delivery day.

3. What community partners might be able to offer financial or other assistance?

The City of Denton provides financial assistance information for water customers experiencing short-term financial emergencies which might prevent them from paying for utility service. This information is **attached**. Additionally, Habitat For Humanity and Serve Denton, two local nonprofit organizations, have expressed an interest in assisting the residents and property owners of Green Tree Estates. These organizations will contact Green Tree Estates property owners and residents directly or through LULAC or Movimiento Cosecha.

Other Frequently Asked Questions

11. Will the city allow for the property owners to hire their own inspectors to conduct the inspections at the homes?

No. While the property owners may request any qualified individual inspect their property at any time, independent inspectors do not represent the City and may not accurately represent City code requirements and life safety concerns. The City recommends property owners request voluntary courtesy inspections from the City of Denton to best understand deficiencies with a property. See **attached** information on courtesy inspections.

12. Does the City need a written plan to correct any life, safety, and health violations found through the courtesy inspections?

No. The City does not require a written plan to bring a residence into compliance. The City requests that residents work with the Development Services Department in setting a plan.

13. Does a backflow prevention device prevent the need for a Customer Service Inspection prior to connection to the City water system?

No. Under state law, even with the presence of a backflow device the City is still required to perform a Customer Service Inspection prior to connecting to the City system.

14. Will the City waive permit fees for the residents of Green Tree Estates?

No, the City does not waive permit fees without the consent of the City Council.

Green Tree Estates

3 de marzo de 2020

Preguntas frecuentes

Relativo a la pequeña reunión del 3 de febrero y a la reunión del consejo del 4 de febrero

1. ¿Cuánto tiempo continuará la Ciudad proveyendo agua temporal a los residentes de Green Tree Estates?

El 4 de febrero de 2019, el Consejo Municipal de Denton extendió formalmente la Declaración de Desastre para Green Tree Estates. Esta extensión permite a la Ciudad de Denton continuar llenando los contenedores de agua suministrados por la Ciudad, como un servicio facturado, en las residencias de Green Tree Estates con agua no potable tres veces por semana hasta el 22 de mayo de 2020. La Ciudad también mantendrá agua potable disponible para su entrega en el almacén de la Ciudad (**consulte el folleto adjunto**).

2. ¿Qué información pide la Ciudad a los residentes y propietarios?

En la reunión del Consejo Municipal del 10 de diciembre de 2019, el Consejo Municipal de Denton pidió a los residentes y propietarios que proporcionaran información adicional sobre las propiedades de Green Tree Estates. A partir de ahora, el personal de la Ciudad solicitará ayuda a los residentes y a los propietarios para confirmar, entre otras cosas:

- Qué propiedades de Green Tree Estates se rentan y cuáles están ocupadas por sus propietarios;
- Confirmación del propietario de cada propiedad ocupada de Green Tree Estates; y
- Confirmación de qué propietarios tienen la intención de conectarse al sistema de agua de la Ciudad de Denton (consulte el **anexo** para ver los pasos para conectarse al sistema de agua de la ciudad).

Esta información ayudará a la Ciudad en la planificación y gestión de futuras conexiones al sistema de agua de la ciudad. La Ciudad de Denton se comunicará directamente con los residentes, tanto por correo postal como por visitas in situ, para ayudar a confirmar esta información. Se pide a los residentes que abran y lean cuidadosamente cualquier correo de la Ciudad de Denton.

3. ¿Cuáles son los costos de conectar al sistema de agua de la Ciudad de Denton?

Hay tres categorías de costos para conectarse al sistema de agua de la ciudad:

- Cargo de línea principal, grifo y válvula. La línea de agua que serviría a los residentes de Green Tree Estates no se extiende actualmente hasta el límite del vecindario de Green Tree Estates. Los costos de la línea principal, el grifo y la válvula cubrirían todo el trabajo para extender la línea de agua desde su ubicación actual hasta el límite. Por ordenanza, estos costos deben ser pagados por los residentes de Green Tree Estates que se conectan al sistema de la ciudad. El costo específico depende del número de conexiones a las propiedades (consulte el cuadro **adjunto**). Por ejemplo, si solo algunas propiedades se conectan, el costo por propiedad sería más alto que si 14 propiedades se conectan. Los costos se pagan a la Ciudad de Denton.
- Tarifa de grifo, medidor e impacto. Estas tarifas permiten que el medidor (el dispositivo que mide la cantidad de agua utilizada por un cliente) se coloque en el límite del vecindario de Green Tree Estates. Cada cliente recibirá un medidor. Las tarifas son las tarifas estándar de la Ciudad que serían pagadas por cualquier persona que desee conectarse a la Ciudad de Denton en cualquier lugar de la Ciudad. Las tarifas se pagan a la Ciudad de Denton (consulte el cuadro **adjunto**).

- Conexión privada al medidor. Una vez que la Ciudad coloca un medidor en el límite del vecindario, el dueño de la propiedad debe conectarlo a la residencia. La Ciudad no realiza ni gestiona este proceso; sin embargo, se deberá permitir e inspeccionar este trabajo. Por lo general, este trabajo lo realiza un plomero con licencia contratado por el propietario, aunque no se requiere un plomero con licencia para todo el trabajo y los propietarios pueden encontrar varias maneras de reducir los costos.

Cálculos de costes:

Cargo de línea principal, grifo y válvula: Consulte el cuadro adjunto.

Tarifas de grifo, medidor e impacto: \$6,938 por metro

Conexión privada: Variable.

Además del cuadro de costos, el personal tiene **adjunto** un cuadro para ayudar a ilustrar los diferentes costos de conexión al sistema de agua de la ciudad.

4. **¿Aceptaré la Ciudad un plan de pago para el costo del medidor, la tarifa de impacto, etc.?**

No. El Código de Ordenanzas exige que se paguen las tarifas de medidor, impacto, etc. antes de la instalación del medidor.

5. **¿Quién puede hacer las zanjas y las conexiones de plomería?**

Cualquier trabajo de plomería debe ser permitido e inspeccionado por la Ciudad. Una persona que sea propietaria de la propiedad en la que también reside puede realizar el trabajo de plomería en esa propiedad, aunque cualquier trabajo en propiedades ocupadas por el propietario debe ser permitido e inspeccionado antes de su ocultación o conexión. Cualquier trabajo realizado en una propiedad de renta debe ser permitido, realizado por un plomero con licencia, e inspeccionado por la Ciudad.

La excavación de zanjas no está contemplada en el código de plomería y no tiene que ser realizada por un plomero con licencia, siempre y cuando cumpla con los requisitos del código de la Ciudad.

La Ciudad solicita que los residentes y los propietarios consulten a la Ciudad con respecto a qué trabajo puede o no tener que ser realizado por un plomero con licencia.

6. **¿Tiene la ciudad una lista de plomeros con licencia que pueden ser contactados para trabajos de plomería?**

La Ciudad puede proporcionar a los residentes y a los propietarios una lista de todos los plomeros con licencia que están registrados en la Ciudad.

7. **¿Qué inspecciones deben esperar los propietarios o residentes si deciden conectarse al sistema de agua de la Ciudad de Denton?**

De acuerdo con la ley estatal, el departamento de seguridad de edificios de la Ciudad llevará a cabo una inspección de servicio al cliente (CSI). Una CSI es un examen de la instalación privada de distribución de agua con el fin de proporcionar o negar el servicio de agua. La inspección se limita a la identificación y prevención de las conexiones cruzadas, los posibles riesgos de contaminación y los materiales de plomo ilegales. Las inspecciones de servicio al cliente se realizan antes de proporcionar un servicio continuo de agua a las nuevas construcciones, en cualquier servicio existente donde haya razones para creer que existen conexiones cruzadas u otros posibles peligros de contaminación, o después de cualquier mejora, corrección o adición material a las instalaciones privadas de distribución de agua. La inspección de la CSI la debe realizar un inspector con licencia. El personal de inspección de la Ciudad de Denton está autorizado de acuerdo con la ley estatal y la inspección se incluye como parte de los procesos de inspección de la plomería.

Como parte de la inspección de servicio al cliente, los propietarios también deben comprobar que la propiedad tiene un sistema de eliminación de aguas residuales en funcionamiento. La Ciudad no realiza inspecciones in

situ, esta función la realiza un profesional independiente con licencia de la TCEQ para instalaciones de alcantarillado in situ (OSSF).

El departamento de seguridad de edificios de la ciudad verificará si existe alguna preocupación por la seguridad de la vida;

- a. Conexiones eléctricas expuestas
- b. Conexiones de propano o gas natural
- c. Ventilación de los aparatos de propano o gas natural
- d. Descripción general de los posibles peligros que pueden provocar lesiones graves o la muerte

8. ¿Qué pasa si una residencia no hace una conexión al sistema de agua de la Ciudad de Denton?

Se requiere que las viviendas residenciales tengan los elementos básicos: agua, alcantarillado, electricidad y un medio para acondicionar el espacio que se ocupa (calor). Las estructuras residenciales que no incluyen estos elementos básicos pueden considerarse como inseguras e inhabitables.

9. ¿Necesito preocuparme por mi sistema séptico?

Todas las propiedades que están conectadas al sistema de agua de la Ciudad de Denton deben tener una forma de eliminar las aguas residuales. Esto es necesario para proteger al público de los contaminantes. Mientras que la mayoría de las propiedades en la Ciudad de Denton están conectadas al sistema de alcantarillado de la Ciudad, otras tienen instalaciones de alcantarillado in situ, en su mayoría a través de un sistema séptico.

Los sistemas sépticos convencionales, también llamados sistemas anaeróbicos, son totalmente subterráneos y funcionan por gravedad, por lo que rara vez se requiere electricidad. Los sistemas anaeróbicos tratan activamente y bombean las aguas residuales tratadas al campo de drenaje, lo que requiere electricidad. Ambos sistemas (ya sea anaeróbico o aeróbico) deben ser mantenidos regularmente por un profesional con licencia del Estado. Sin el mantenimiento adecuado, un sistema puede funcionar mal causando una posible exposición de aguas residuales no tratadas a las fuentes de agua potable. Es responsabilidad del propietario mantener un sistema séptico funcionando eficazmente y prevenir cualquier mal funcionamiento.

Si una residencia no está actualmente abastecida por un sistema séptico, la Ciudad de Denton puede expedir un permiso para un nuevo sistema, siempre que se cumplan todos los requisitos. También se requieren permisos cuando un sistema en mal funcionamiento necesita reparación, ajustes o ampliación. Los lotes de tamaño pequeño presentan desafíos que pueden impedir que un sistema planificado cumpla con todos los requisitos de las normas estatales. Si una solicitud de permiso para un sistema séptico no cumple todos los requisitos técnicos, la Ciudad no podrá expedir un permiso para la construcción. Las tasas de los permisos sólo se pagan para los nuevos permisos; no hay cuotas continuas. Asimismo, las inspecciones se realizan únicamente cuando se construye, se ajusta, se repara o se amplía un sistema séptico, o cuando se presenta una denuncia. No hay otras inspecciones realizadas por el personal de la Ciudad de manera continua.

NOTA: Todas las líneas de agua, ya sean públicas o privadas, deben ser separadas por cierta distancia de los sistemas sépticos. Con los tamaños de lote más pequeños dentro de Green Tree Estates, estos requisitos pueden presentar una dificultad para los propietarios. Se invita a los propietarios a que consulten con un plomero con licencia o un profesional del OSSF con licencia (consulte la pregunta que figura más adelante) para determinar dónde deben colocarse las líneas para cumplir todos los requisitos de posicionamiento de sistemas sépticos. Cualquier propiedad que no pueda cumplir con los requisitos de posicionamiento no puede conectarse al sistema de agua de la Ciudad de Denton.

10. ¿Qué pasa si mi sistema séptico no funciona?

Es importante señalar que tanto la ley estatal como el código municipal de la Ciudad exigen que las propiedades residenciales tengan un sistema de eliminación de aguas residuales aprobado. Un profesional independiente con licencia de la TCEQ para instalaciones de alcantarillado in situ (OSSF) puede inspeccionar el sistema séptico y trabajar con el dueño de la propiedad para coordinar una reparación. Por lo general, cuando se descubre que una OSSF funciona mal, la ley estatal requiere que el propietario tenga 30 días para volver a cumplir y reparar el mal funcionamiento. Consulte la lista **adjunta** de profesionales con licencia para OSSF del condado de Denton del sitio web de la TCEQ <https://www.tceq.texas.gov/permitting/ossf/ossfhomeowners.html>.

Facturación temporal del servicio de agua (13 de febrero al 22 de mayo)

1. ¿Cuál es el costo del agua por mes?

La Ciudad cobra \$0.0052 por galón de agua. A cada cliente se le cobrará la cantidad de agua para llenar cada tanque de 275 galones y cada barril de 55 galones tres veces por semana. Esto equivale a un cargo mensual de agua de \$20.59 para los clientes con un (1) tanque de 275 galones y \$3775 para los clientes con dos (2) tanques de 275 galones. **Adjunto** se encuentra un cuadro que muestra el costo para cada residencia de Green Tree Estates.

2. ¿Cómo y cuál es el proceso para establecer el pago de los residentes de GTE?

Cada propiedad que actualmente recibe agua temporal recibirá una factura por correo para cada período de facturación. La facturación se hará por adelantado y se emitirá por correo. El pago puede efectuarse en persona, por correo o electrónicamente.

Si una propiedad no paga su factura, no recibirá el servicio de agua temporal. Si una propiedad paga su factura de manera extemporánea, recibirá el agua el siguiente día de entrega programado.

3. ¿Qué socios de la comunidad podrían ofrecer ayuda financiera o de otro tipo?

La Ciudad de Denton proporciona información de asistencia financiera para los clientes de agua que tienen emergencias financieras a corto plazo que podrían impedirles pagar el servicio público. Se **adjunta** esta información. Además, Habitat For Humanity y Serve Denton, dos organizaciones locales sin fines de lucro, han expresado su interés en ayudar a los residentes y propietarios de Green Tree Estates. Estas organizaciones se pondrán en contacto con los propietarios y residentes de Green Tree Estates directamente o a través de LULAC o Movimiento Cosecha.

Otras preguntas frecuentes

11. ¿Permitirá la Ciudad que los propietarios contraten a sus propios inspectores para llevar a cabo las inspecciones en las casas?

No. Aunque los propietarios pueden solicitar que cualquier persona calificada inspeccione su propiedad en cualquier momento, los inspectores independientes no representan a la Ciudad y pueden no representar con exactitud los requisitos del código de la Ciudad y las preocupaciones de seguridad de la vida. La Ciudad recomienda a los propietarios que soliciten inspecciones de cortesía voluntarias de la Ciudad de Denton para entender mejor las deficiencias de una propiedad. Consulte la información **adjunta** sobre las inspecciones de cortesía.

12. ¿Necesita la Ciudad un plan escrito para corregir cualquier violación de vida, seguridad y salud encontrada a través de las inspecciones de cortesía?

No. La Ciudad no requiere un plan escrito para poner una residencia en conformidad. La Ciudad pide que los residentes trabajen con el Departamento de Servicios de Desarrollo en el establecimiento de un plan.

13. ¿Un dispositivo de prevención de reflujo evita la necesidad de una inspección de servicio al cliente antes de la conexión al sistema de agua de la Ciudad?

No. Según la ley estatal, incluso con la presencia de un dispositivo de reflujo, la Ciudad sigue estando obligada a realizar una inspección de servicio al cliente antes de conectarse al sistema de la Ciudad.

14. ¿La Ciudad renunciará a las tarifas de permiso para los residentes de Green Tree Estates?

No, la Ciudad no renuncia a las tasas de permiso sin el consentimiento del Consejo Municipal.



November 18, 2019

**NOTICE TO GREEN TREE ESTATES RESIDENTS:
DRINKING WATER**

Dear Green Tree Estates Resident:

In addition to the 55-gallon and 275-gallon containers that have been provided for non-drinking water use, **the City of Denton has also secured 1-gallon drinking water containers for the residents of Green Tree Estates.**

These containers are located at the City's warehouse at 901 Texas Street (see reverse side for map). From Mingo Road:

- Turn south on Frame Street
- Left on Paisley Street
- Left on Rose Street
- Right on Texas Street
- Continue through the roundabout
- Turn left into warehouse parking lot

Signs will direct you to the main entrance once you are on site.

Containers will be distributed from 7 a.m. to 4 p.m., Monday through Friday. **Residents who are unable to pick up water during that time or are unable to transport water are asked to call the City of Denton at the numbers below.**

Residents will not be asked to show identification, but they will be asked to provide their name, address, and the number of people at their residence.

Please direct questions via email to Ryan Adams, Deputy Director of Public Affairs, at Ryan.Adams@cityofdenton.com or call (940) 349-8565. Questions in Spanish may be directed to Deborah Viera at Deborah.Viera@cityofdenton.com or (940) 349-7162.

OUR CORE VALUES

Integrity • Fiscal Responsibility • Transparency • Outstanding Customer Service





18 de noviembre, 2019

**NOTIFICACION A RESIDENTES DE GREEN TREE ESTATES:
AGUA PARA BEBER**

Estimado Residente de Green Tree Estates:

En adición a los tambores de 55 galones y los tanques de 275 galones que se les a proveído para almacenar agua no potable, **la Ciudad de Denton tiene disponible agua para beber en contenedores de un (1) galón para los residentes de Green Tree Estates.**

Estos galones de agua están localizados en el almacén de la Ciudad que se encuentra en 901 Texas Street (vea el mapa al reverso de esta página). De Mingo Road:

- De vuelta hacia el sur en Frame Street
- De vuelta hacia la izquierda en Paisley Street
- De vuelta hacia la izquierda en Rose Street
- De vuelta hacia la derecha en Texas Street
- Continúe a través de la rotonda
- De vuelta hacia la izquierda a el estacionamiento del almacén

Habrá señales que los dirigirán a la entrada cuando este en el almacén.

Los contenedores serán distribuidos de 7 a.m. a 4 p.m., lunes a viernes. **Residentes que no pueden recoger agua durante las horas designadas o no tienen transportación favor de llamar a la Ciudad de Denton a los siguientes números.**

Residentes no tendrán que presentar identificación, pero sera necesario que presenten su nombre, domicilio, y numero de habitantes en su residencia.

Por favor dirija sus preguntas por correo electrónico a Ryan Adams, Director Adjunto de Asuntos Públicos, en Ryan.Adams@cityofdenton.com o llame al (940) 349-8565. Las preguntas en español pueden ser dirigidas a Deborah Viera en Deborah.Viera@cityofdenton.com o llame al (940) 349-7162.

OUR CORE VALUES

Integrity • Fiscal Responsibility • Transparency • Outstanding Customer Service



Green Tree Estates

Steps to Connect to City Water

Step 1:

- Provide to City of Denton Development Services documentation from a Texas licensed On-Site Sewage Facilities (OSSF) professional that the system is function as installed.

Step 2:

- Prepare a site plan with the location of the septic system and proposed water line (from meter location to residence).

Step 3:

- Licensed plumber is to apply for a permit to install the water service line with the connections, including any other licensed plumbing work needed for installation. Site plan will be submitted with the permit application.

Step 4:

- Pay to City all permit, service, meter, impact and tap fees to the City of Denton.

Step 5:

- Licensed Plumber to perform all work where a plumbing license is required. With an additional permit, owner-occupiers may perform work on their own property.

Step 6:

- Licensed Plumber to call for plumbing inspections which will include a Customer Service Inspection.

Step 7:

- Apply for water service with the City of Denton Utilities Customer Service and request meter install. Provide valid identification to City to facilitate credit check. (Water service is billed in arrears)

Green Tree Estates

Pasos para conectarse al agua de la Ciudad

Paso 1:

- Proporcionar a los Servicios de Desarrollo de la Ciudad de Denton la documentación de un profesional de Instalaciones de Alcantarillado in Situ (OSSF) con licencia de Texas, de que el sistema funciona tal como está instalado.

Paso 2:

- Proporcionar a los Servicios de Desarrollo de la Ciudad de Denton la ubicación del sistema séptico y la línea de agua propuesta (desde la ubicación del medidor hasta la residencia) en un plano del sitio.

Paso 3:

- El plomero con licencia debe solicitar un permiso para instalar la línea de servicio de agua con las conexiones, incluyendo cualquier otro trabajo de plomería con licencia necesario para la instalación.

Paso 4:

- Pagar a la Ciudad todos los gastos de permisos, servicios, medidores, impactos y grifos a la Ciudad de Denton.

Paso 5:

- Plomero con licencia para realizar todos los trabajos en los que se requiera una licencia de plomería. Con un permiso adicional, los propietarios que viven en las propiedades pueden realizar el trabajo en su propia propiedad.

Paso 6:

- Plomero con licencia para llamar a inspecciones de plomería que incluirán una inspección de servicio al cliente.

Paso 7:

- Solicitar el servicio de agua con el Servicio de Atención al Cliente de la Ciudad de Denton y solicitar la instalación del medidor. Proporcionar una identificación válida a la Ciudad para facilitar la verificación de crédito. (El servicio de agua se factura en mora.)

Green Tree Estates

Fees to City (Est.) Based on Participation

Cobros a la Ciudad (Est.) Basados en Participacion

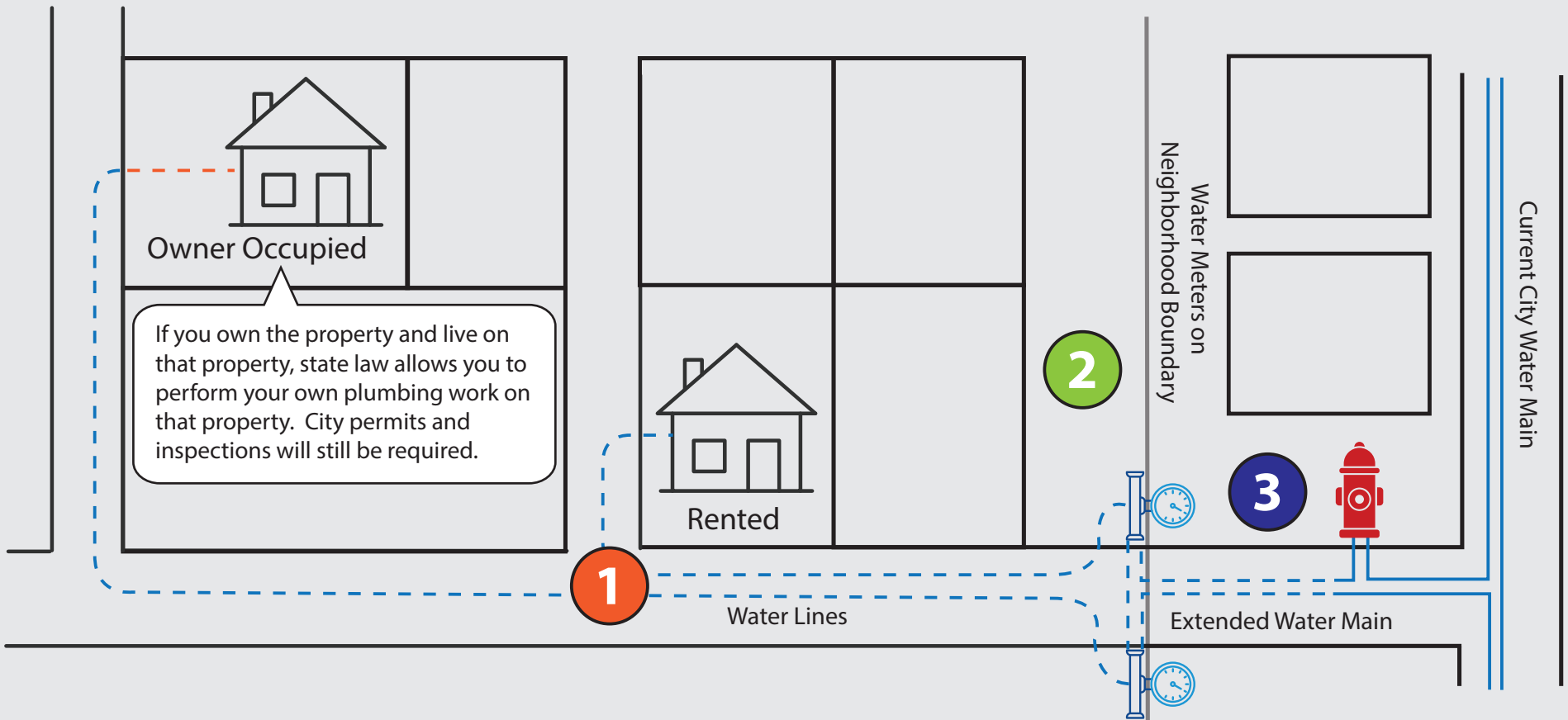
Number of Meters	Tap, Meter, Impact Fee	Line Tap, Valve, Main Line	Total per Dwelling
14	\$6,938	\$657	\$7,596
13	\$6,938	\$708	\$7,646
12	\$6,938	\$767	\$7,705
11	\$6,938	\$837	\$7,775
10	\$6,938	\$920	\$7,859
9	\$6,938	\$1,023	\$7,961
8	\$6,938	\$1,151	\$8,089

Number of Meters	Tap, Meter, Impact Fee	Line Tap, Valve, Main Line	Total per Dwelling
7	\$6,938	\$1,315	\$8,253
6	\$6,938	\$1,534	\$8,472
5	\$6,938	\$1,841	\$8,779
4	\$6,938	\$2,301	\$9,239
3	\$6,938	\$3,068	\$10,006
2	\$6,938	\$4,602	\$11,540
1	\$6,938	\$9,204	\$16,143

Numero de Medidores	Grifo, Medidor, Tarifa de Impacto	Linea de grifo, valvula, linea directa	Total por residencia	Numero de Medidores	Grifo, Medidor, Tarifa de Impacto	Linea de grifo, valvula, linea directa	Total por residencia
14	\$6,938	\$657	\$7,596	7	\$6,938	\$1,315	\$8,253
13	\$6,938	\$708	\$7,646	6	\$6,938	\$1,534	\$8,472
12	\$6,938	\$767	\$7,705	5	\$6,938	\$1,841	\$8,779
11	\$6,938	\$837	\$7,775	4	\$6,938	\$2,301	\$9,239
10	\$6,938	\$920	\$7,859	3	\$6,938	\$3,068	\$10,006
9	\$6,938	\$1,023	\$7,961	2	\$6,938	\$4,602	\$11,540
8	\$6,938	\$1,151	\$8,089	1	\$6,938	\$9,204	\$16,143



Green Tree Estates Connections to Denton Water System



If you own the property and live on that property, state law allows you to perform your own plumbing work on that property. City permits and inspections will still be required.

1

From the Meter to the Residents
Property owners are responsible for connecting the meter to the residents. Work must be permitted and inspected by the City. Costs are not paid to City.

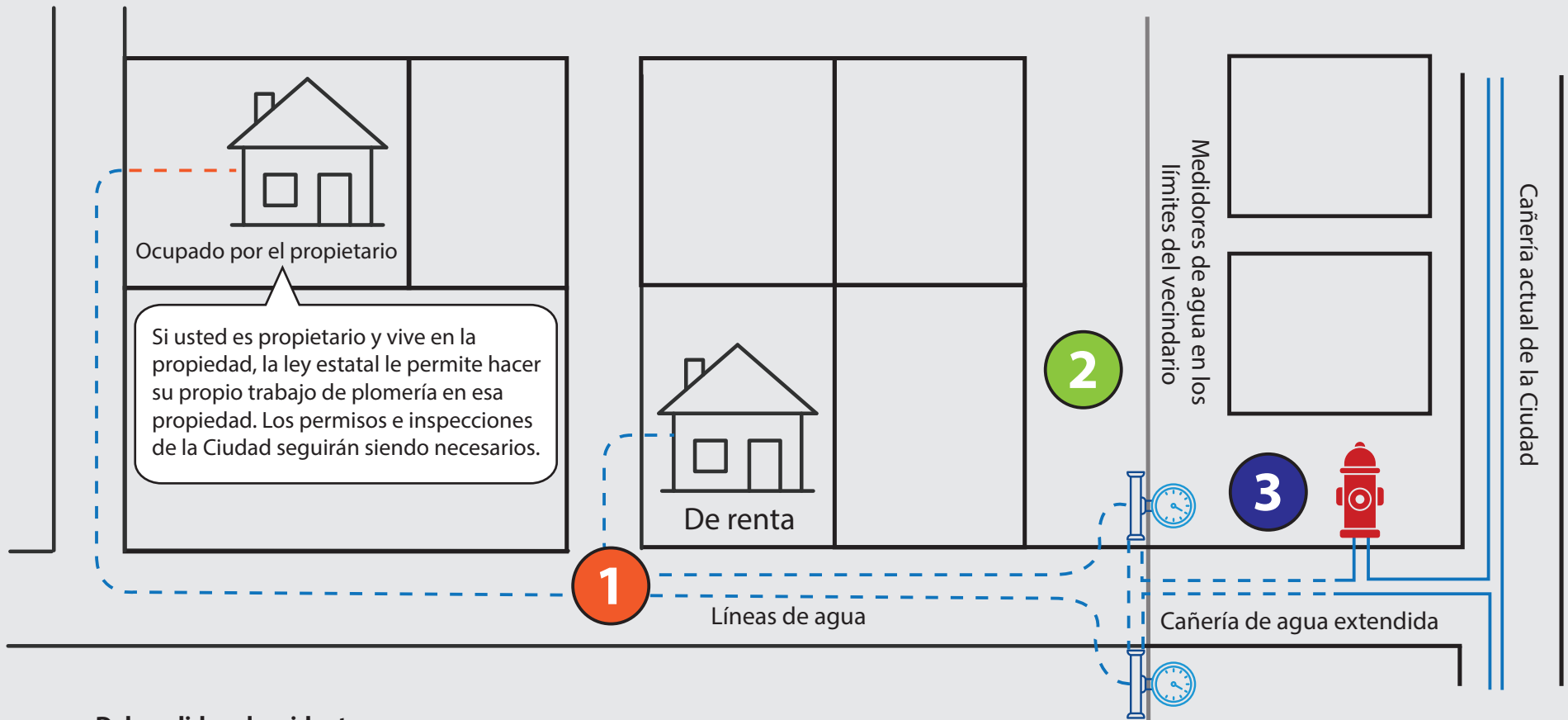
2

Meters
Meters will be set at the neighborhood boundary. Property owners will pay standard City of Denton tap, meter, and impact fees. Fees totaling \$6,938 are paid to the City.

3

Water Main Extension
To provide water to the neighborhood, an existing water line must be extended to the neighborhood boundary. Property owners must pay for this cost, with each of the 14 property owners in green tree paying an equal share. Costs vary depending on the number of connections.

On-Site Sewage Facilities (Septic Systems):
Prior to connection, the City must verify that a property has an on-site sewer system (septic system) in sufficient working order to treat the property's wastewater. All water lines, whether public or private lines, must be set back a certain distance from septic systems. Any property that cannot meet setback requirements cannot connect to the City of Denton water system.



1

Del medidor al residente

Los propietarios son responsables de conectar el medidor a los residentes. El trabajo debe ser permitido e inspeccionado por la Ciudad. Los costos no se pagan a la Ciudad.

2

Medidores

Los medidores se fijarán en el límite del vecindario. Los propietarios pagarán las tarifas estándar de la Ciudad de Denton de grifo, medidor e impacto. Las tarifas por un total de \$6,938 se pagan a la Ciudad.

3

Extensión de la cañería de agua

Para abastecer agua al vecindario, una línea de agua existente debe extenderse hasta el límite del vecindario. Los propietarios deben pagar por este costo, y cada uno de los 14 propietarios en Green Tree pagará una parte igual. Los costos varían según el número de conexiones.

Instalaciones de alcantarillado in situ (sistemas sépticos):

Antes de la conexión, la ciudad debe verificar que la propiedad tiene un sistema de alcantarillado (sistema séptico) en funcionamiento suficiente para tratar las aguas residuales de la propiedad. Todas las líneas de agua, ya sean públicas o privadas, deben ser separadas por cierta distancia de los sistemas sépticos. Cualquier propiedad que no pueda cumplir con los requisitos de posicionamiento no puede conectarse al sistema de agua de la Ciudad de Denton.

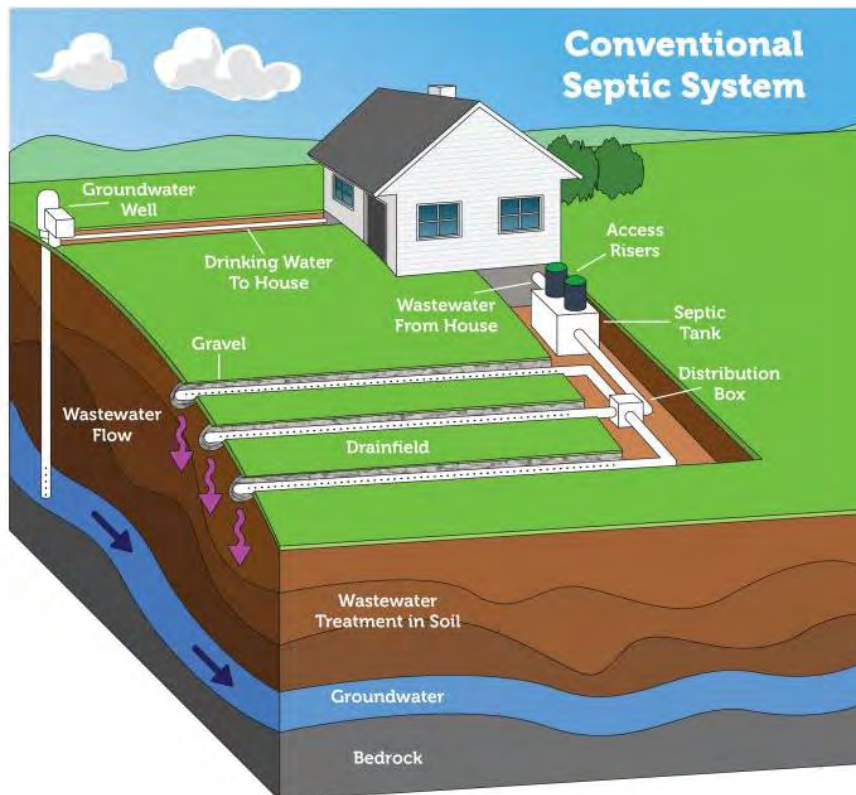
On-Site Sewage Facility (OSSF)

Technical Requirements Summary

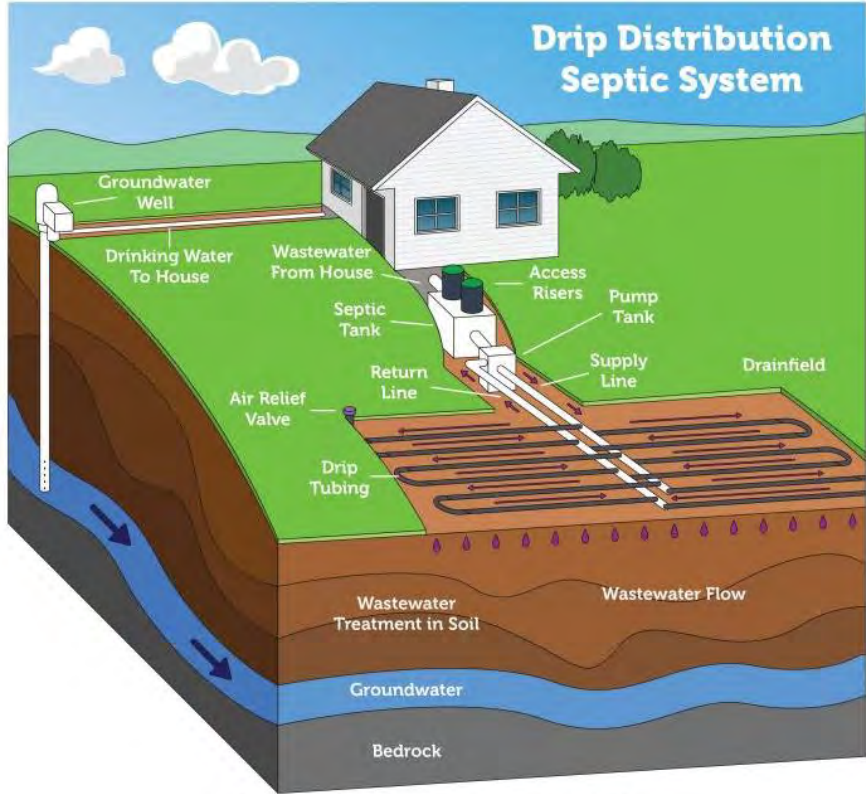
State rules allow that any system installed prior to Sept. 1, 1989 can continue operation without a permit as long as it has not been altered and is not creating a nuisance or in need of repair. An OSSF is creating a nuisance when sewage is discharged in a manner that may allow for the transmission of disease, or the septic tank is overflowing or otherwise blatantly discharging. In other words, if wastewater is ponding, pooling, discharging onto adjacent property, or being discharged without proper treatment, then the OSSF is malfunctioning. When that occurs, the system must be altered, repaired, extended, or replaced to correct the malfunction.

In order to repair, alter, extend, or replace a system, the property owner must first apply for a permit with the City. A Professional Engineer or Registered Sanitarian must prepare the OSSF plan that is submitted for permit. City staff will review the permit application and planning materials for compliance with State rules and City code. If the application meets all requirements, the City issues a construction permit, and a licensed installation company can begin the work. After the construction is complete, the City must inspect the system before it is covered up or in operation. The City will issue an operation permit to the owner after the system passes inspection. The system can then be put into operation.

Texas allows for many different types of systems to be installed to achieve proper wastewater treatment based on site conditions. Below are illustrations by the Environmental Protection Agency of two types of OSSFs.



Please note: Septic systems vary. Diagram is not to scale.



Please note: Septic systems vary. Diagram is not to scale.

Each type of system has specific design requirements for things like sizing, location, soils, and electricity. The Professional Engineer or Registered Sanitarian that designs the system will be familiar with these requirements and what type of system will work best on a specific site. For example, here are excerpts from the table that outlines when a conventional drain field system is appropriate and when it is not.

Figure: 30 TAC §285.91(5)		
Table V. Criteria for Standard Subsurface Absorption Systems.		
FACTORS	SUITABLE (S)	UNSUITABLE (U)
Topography	Slopes 0-30%	Slopes greater than 30% Complex slopes
Groundwater	No indication of seasonal groundwater anywhere within 24 inches of the bottom of the proposed excavation.	Indications of seasonal groundwater or drainage mottles anywhere within 24 inches of the bottom of the proposed excavation (Except for lined ET)
Flood Hazard	No flooding potential.	Areas located in the floodplain and regulatory floodway unless system designed according to §285.31(c)(2) Depressional areas without adequate drainage

https://texreg.sos.state.tx.us/fids/30_0285_0091-15.html

Another set of technical requirements that must be met are minimum separation distances, or setbacks. Setbacks are specific to different types of systems. For example, these are the required setback distances to private and public water supply lines:

	TO					
FROM	Tanks	Soil Absorption Systems, & Unlined ET Beds	Lined Evapotranspiration Beds	Sewer Pipe With Watertight Joints	Surface Application (Edge of Spray Area)	Drip Irrigation
Public Water Supply Lines 2	10	10	10	10	10	10
Private Water Line	10	10	5	10s except at connection to structure	No separation distances	10

2. For additional information or revisions to these separation distances, see Chapter 290 of this title (relating to Public Drinking Water).

5. Private water line/wastewater line crossings should be treated as public water line crossings, see Chapter 290 of this title.

<https://texreg.sos.state.tx.us/fids/201206290-3.pdf>

Each type of disposal system listed in the table above has its own set of design criteria, such as the amount of area needed for disposal. With the various types of systems each having specific requirements, it would be impracticable to list them all here. Although not impossible, it is challenging to design a system to operate on a small lot and meet all the technical requirements. For that reason, City code stipulates that new lots utilizing an OSSF must be on at least one acre if it is serviced by a public water system or on two acres if it is serviced by a private water well. If you have specific questions regarding OSSFs, please contact Heather Goins at (940) 349-8610 or Heather.Goins@cityofdenton.com.

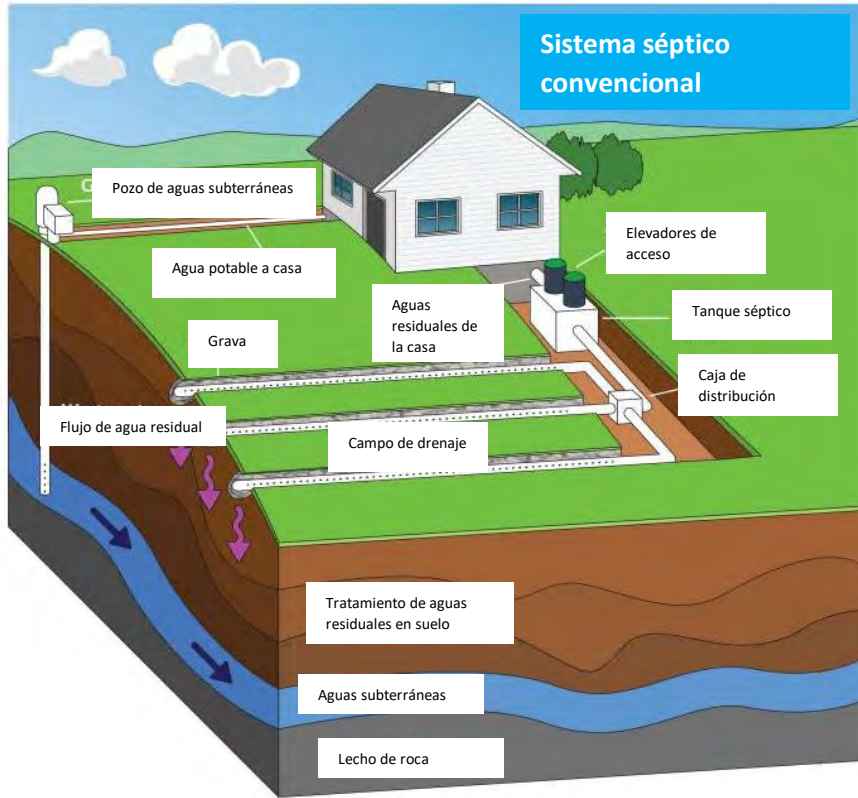
Instalación de alcantarillado in situ (OSSF)

Resumen de los requisitos técnicos

Las normas estatales permiten que cualquier sistema instalado antes del 1 de septiembre de 1989 pueda seguir funcionando sin permiso, siempre que no haya sido ajustado y no esté creando una molestia o necesite reparaciones. Una OSSF crea una molestia cuando las aguas residuales se descargan de una manera que puede permitir la transmisión de enfermedades, o el tanque séptico se desborda o se descarga descaradamente de otra manera. En otras palabras, si las aguas residuales se estancan, se acumulan, se descargan en una propiedad adyacente o se descargan sin el tratamiento adecuado, entonces la OSSF está funcionando mal. Cuando eso ocurre, el sistema debe ser ajustado, reparado, ampliado o reemplazado para corregir el mal funcionamiento.

Para reparar, ajustar, ampliar o reemplazar un sistema, el propietario debe solicitar primero un permiso a la Ciudad. Un ingeniero profesional o un sanitario registrado debe preparar el plan de OSSF que se presenta para el permiso. El personal de la Ciudad revisará la solicitud de permiso y los materiales de planificación para cumplir con las normas estatales y el código de la Ciudad. Si la solicitud cumple con todos los requisitos, la Ciudad emite un permiso de construcción, y una empresa de instalación con licencia puede comenzar la obra. Después de la conclusión de la construcción, la Ciudad debe inspeccionar el sistema antes de que se cubra o se ponga en funcionamiento. La Ciudad emitirá un permiso de operación al propietario después de que el sistema pase la inspección. El sistema puede entonces ponerse en funcionamiento.

Texas permite la instalación de muchos tipos diferentes de sistemas para lograr un tratamiento adecuado de las aguas residuales en función de las condiciones del lugar. A continuación figuran ilustraciones de la Agencia de Protección del Medio Ambiente de dos tipos de OSSF.



Nota: los sistemas sépticos varían. El diagrama no es a escala.



Nota: los sistemas sépticos varían. El diagrama no es a escala.

Cada tipo de sistema tiene requisitos de diseño específicos para cosas como el tamaño, la ubicación, los suelos y la electricidad. El ingeniero profesional o sanitario registrado que diseñe el sistema estará familiarizado con estos requisitos y con el tipo de sistema que funcionará mejor en un sitio específico. Por ejemplo, a continuación se presentan extractos del cuadro que indica cuándo un sistema de campo de drenaje convencional es apropiado y cuándo no.

Figura: 30 TAC §285.91(5)		
Cuadro V. Criterios para los sistemas de absorción subterránea estándar.		
FACTORES		NO ADECUADO (N)
	ADECUADO (A)	
Topografía	Pendientes 0 a 30%	Pendientes superiores al 30% Pendientes complejas
Agua subterránea	No hay indicación de agua subterránea estacional en ningún lugar dentro de las 24 pulgadas del fondo de la excavación propuesta.	Indicaciones de agua subterránea estacional o manchas de drenaje en cualquier lugar dentro de las 24 pulgadas del fondo de la excavación propuesta (excepto para ET con recubrimiento)
Peligro de inundación	No hay potencial de inundación.	Áreas localizadas en la llanura de inundación y en la vía de inundación reglamentaria a menos que el sistema diseñado de acuerdo con §285.31(c)(2) Áreas de depresión sin drenaje adecuado

https://texreg.sos.state.tx.us/fids/30_0285_0091-15.html

Otro conjunto de requisitos técnicos que deben cumplirse son las distancias mínimas de separación, o retrocesos. Los retrocesos son específicos de los diferentes tipos de sistemas. Por ejemplo, estas son las distancias de retroceso necesarias para las líneas de suministro de agua privadas y públicas:

DESDE	HACIA					
	Tanques	Sistemas de Absorción del Suelo y camas de ET sin recubrimiento	Camas de evapotranspiración con recubrimiento	Tubo de alcantarilla con juntas de estanqueidad	Aplicación en superficie (borde del área de rociado)	Irrigación por goteo
Líneas de suministro de agua pública 2	10	10	10	10	10	10
Línea de agua privada	10	10	5	10s excepto en la conexión con la estructura	Sin distancias de separación	10

2. Para información adicional o revisiones de estas distancias de separación, consulte el capítulo 290 de este título (relativo al agua potable pública).

5. Los cruces de líneas de agua privadas/líneas de aguas residuales deben ser tratados como cruces de líneas de agua públicas; consulte el capítulo 290 de este título.

<https://texreg.sos.state.tx.us/fids/201206290-3.pdf>

Cada tipo de sistema de eliminación mencionado en el cuadro anterior tiene su propio conjunto de criterios de diseño, como la cantidad de superficie necesaria para la eliminación. Dado que los diversos tipos de sistemas tienen requisitos específicos, sería impracticable enumerarlos todos aquí. Aunque no es imposible, es difícil diseñar un sistema para que funcione en un lote pequeño y cumpla todos los requisitos técnicos. Por lo tanto, el código de la Ciudad estipula que los nuevos lotes que utilicen una OSSF deben estar sobre al menos un acre si es abastecida por un sistema público de agua o sobre dos acres si es abastecida por un pozo de agua privado. Si tiene preguntas específicas sobre las OSSF, contacte a Heather Goins al (940) 349-8610 o Heather.Goins@cityofdenton.com.

Green Tree Estates

Monthly Water Consumption per Address							
Address	Number of 55 Gallon Barrels	Number of 275 Gallon Totes	Total Gallons	Cost per Gallon*	Total Cost per Fill	Number of Fills	Monthly Cost
4010 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4003 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4011 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4015 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4002 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
4008 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
4016 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
4009 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
6502 Willow	1	1	330	\$0.0052	\$1.72	12	\$20.59
6414 Willow	1	1	330	\$0.0052	\$1.72	12	\$20.59
6509 Willow - A	1	2	605	\$0.0052	\$3.15	12	\$37.75
6509 Willow - B	1	2	605	\$0.0052	\$3.15	12	\$37.75
4007 Meadow	1	2	605	\$0.0052	\$3.15	12	\$37.75
4055 Ash	1	1	330	\$0.0052	\$1.72	12	\$20.59

* Cost only includes water based on a fire hydrant rate of \$5.20 per 1,000 gallons without a facility charge.

Consumo Mensual de Agua por Dirección							
Dirección	Cantidad de Barriles de 55 Galones	Cantidad de Contenedores de 275 Galones	Total de Galones	Costo por Galón*	Costo Total por Llenado	Numero de Rellenos	Costo Mensual
4010 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4003 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4011 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4015 Hilltop	1	2	605	\$0.0052	\$3.15	12	\$37.75
4002 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
4008 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
4016 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
4009 Hickory	1	1	330	\$0.0052	\$1.72	12	\$20.59
6502 Willow	1	1	330	\$0.0052	\$1.72	12	\$20.59
6414 Willow	1	1	330	\$0.0052	\$1.72	12	\$20.59
6509 Willow - A	1	2	605	\$0.0052	\$3.15	12	\$37.75
6509 Willow - B	1	2	605	\$0.0052	\$3.15	12	\$37.75
4007 Meadow	1	2	605	\$0.0052	\$3.15	12	\$37.75
4055 Ash	1	1	330	\$0.0052	\$1.72	12	\$20.59

* El costo solo incluye agua basada en un hidrante de incendio de \$5.20 por cada 1,000 galones sin cargo de instalación.

Sometimes citizens experience short-term financial emergencies, which prevent them from paying for vital utility service. The P-L-U-S One program – Prevent Loss of Utility Service – helps families keep cool in the summer and warm in the winter. Customers donate to the program and funds are provided to Interfaith Ministries of Denton for distribution to residents.

The link to contact Interfaith Ministries to start the screening process for assistance is:

<http://www.ifmdenton.org/i-need-help>

After consideration of provided information, **you will be contacted** regarding eligibility of appointment. Please make sure the phone number you provide is correct as Interfaith will make two (2) phone call attempts. If unable to reach you, it is your choice to complete another initial screening form.

You **MUST** bring all required documents to your scheduled appointment. If you do not bring **all the required documents** (listed at the bottom of this email), you will **not** be seen by a caseworker.

An appointment does not guarantee assistance. Assistance is determined by availability of funds, your circumstances, and proper documentation.

Once the screening form is submitted, your case will be reviewed, and **you will be contacted** by the phone number you have provided within **1 to 2 business days**. If you have **not** received notification within **3 business days**, please call Interfaith’s client line: 940-565-5479 (Monday-Friday 8am-11:30am & 1:00pm-3:30pm)

In order to qualify for assistance, you will need to provide documentation proving loss of income in your name that has created this short-term crisis. Financial Assistance cannot be provided over the telephone. Assistance will require an office appointment.

Please note: Priority will be given to residential households whose circumstances are as follows:

- Gross family income is 65% or less of the Area Median Income (AMI)
- Electricity powered life-support systems are in use
- Serious illness exists with a member of the household
- Disabled, homebound, or elderly residents age 65 years or above, existing on a fixed income reside there
- Small children of that household reside at the dwelling
- Recent emergencies (such as a home fire, layoffs from work, excessive medical expenses, etc.) have occurred and are beyond the applicant’s control
- Families that meet the income guidelines and who have not received utility assistance within twelve (12) months of the current application
- DMU customers are eligible for assistance a maximum of three (3) times in a calendar year

Documents Required by Interfaith Ministries:

- **Identification**
 - Head of Household must provide Driver’s License or Texas State Issued Id
 - Social Security number for all household members

- **Income**
 - Example: Pay stubs, Food Stamp award letter, SSI or SSDI Award Letter, Verification of Housing Assistance, Veteran Benefits, Verification of Retirement Income, child support summary.
- **Expenses**
 - Example: Phone, cable, electric, and water bills, car insurance, car payment, outstanding loans, rent, mortgage, etc.
- **Crisis**
 - Example: Notice of layoff or termination from employer, auto repair bill, medical receipts, etc.
- **6 month payment and billing history** from the City of Denton’s Municipal Utilities

While Interfaith Ministries is the organization which distributes PLUS One utility assistance donated funds, they are not the only source for assistance. The following organizations also assist with Denton utilities.

Additional Resources:

- **TCOG (Texoma Council on Governments):** 866-904-8647
 - Apply at: www.tcog.com/energy/apply
 - Denton Office located at Serve Denton: 306 N. Loop 288
 - Hours of Operation: Monday – Thursday 7:30am – 5:30pm; Friday 7:30am – 11:30am
 - Assists with electric, gas, and propane bills to income qualified households in Denton County.
- **Giving Hope, Inc:** 940-382-0609
 - Office located at Serve Denton: 306 N. Loop 288
 - Program Details: <https://hopeindenton.com/need-assistance/>
 - Monday – Thursday 9:30am -11:30am and 1:30pm – 3:30pm (Friday by appointment only)
- **First Baptist Church:** 940-382-2577
- **Cross Timbers Church:** 940-240-5100
- **Singing Oaks Church of Christ:** 940-387-4355
- **Community Services:** 800-831-9929
- **Additional resources can be found by calling 211 or visiting** www.unitedwaydenton.org/FindHelp

A veces los ciudadanos sufren emergencias financieras de corto plazo que les impiden pagar por servicios públicos vitales. El programa *P-L-U-S One – Prevent Loss of Utility Service*– ayuda a las familias a mantenerse frescas durante el verano y no pasar frío durante el invierno. Los clientes hacen sus donaciones al programa y los fondos se entregan a *Interfaith Ministries* de Denton para ser distribuidos a los residentes.

El enlace para contactar a *Interfaith Ministries* e comenzar el proceso de selección para obtener ayuda es: <http://www.ifmdenton.org/i-need-help>

Después de considerar la información provista, **alguien se pondrá en contacto con usted** para informarle sobre su elegibilidad para programar una cita. Asegúrese de que el número telefónico que proporciona sea el correcto ya que *Interfaith* realizará dos (2) intentos de comunicarse telefónicamente con usted. Si no logra ponerse en contacto con usted, usted tendrá la opción de llenar otro formulario de selección inicial.

Usted **DEBE** traer todos los documentos requeridos a su cita programada. Si no lleva **todos los documentos requeridos** (enumerados al final de este correo electrónico) usted **no** será recibido por un trabajador social.

La cita no garantiza asistencia. La asistencia está determinada por la disponibilidad de fondos, sus circunstancias y la presentación de la documentación adecuada.

Una vez que se envié el formulario de evaluación, se revisará su caso y **se pondrán en contacto con usted** a través del número de teléfono que usted ha proporcionado en un período de **1 o 2 días hábiles**. Si **no** ha recibido notificación dentro de los **3 días hábiles**, llame a la línea de clientes de *Interfaith*: 940-565-5479 (de lunes a viernes de 8 am a 11:30 am y 1:00 pm a 3:30 pm).

Para calificar para recibir asistencia, usted necesitará proporcionar documentación que pruebe la pérdida de ingresos en su nombre que haya provocado esta crisis de corto plazo. La asistencia financiera no se puede proporcionar por telefónica. La asistencia requerirá una cita en la oficina.

Por favor tenga en cuenta: Se dará prioridad a las familias de residentes cuyas circunstancias son las siguientes:

- El ingreso familiar bruto es 65% o menos de Ingreso Media del Área (AMI).
- Se utilizan sistemas de soporte vital accionados por con electricidad.
- Existe una enfermedad grave con un miembro del hogar.
- Los residentes discapacitados, confinados en el hogar o ancianos de 65 años o más, que tienen un ingreso fijo residen allí
- Los niños pequeños de ese hogar residan en la vivienda.
- Se han producido emergencias recientes (tales como incendios en el hogar, despidos del trabajo, gastos médicos excesivos, etc.) que están fuera del control del solicitante.
- Familias que cumplen con las pautas de ingresos y que no han recibido asistencia de servicios públicos dentro de los doce (12) meses anteriores de la solicitud actual.
- Los clientes de Servicios Públicos Municipales de Denton (DMU) pueden recibir asistencia un máximo de tres (3) veces en un año calendario.

Documentos requeridos por *Interfaith Ministries*:

- **Identificación**
 - La persona a cargo del hogar debe presentar su licencia de conducir o documento de identidad emitido por el estado de Texas.
 - Número de seguro social de todos los miembros del hogar.
- **Ingresos**
 - Ejemplos: Talones de pagos, nota de otorgamiento de estampillas de alimentos, nota de otorgamiento de SSI o SSDI, verificación de asistencia para viviendas, beneficios para veteranos, verificación de ingresos por jubilación, resumen de manutención de niños.
- **Gastos**
 - Ejemplos: Facturas de teléfono, cable, electricidad y agua, seguro del automotor, pago de automotor, préstamos, alquileres e hipotecas adeudadas, etc.
- **Crisis**
 - Ejemplos: Notificación de despido o finalización del contrato laboral de parte del empleador, factura de reparación del automóvil, recibos médicos, etc.
- **Historial de pagos y facturas de los últimos 6 meses** de los Servicios Públicos Municipales de Denton.

Si bien *Interfaith Ministries* es la organización que distribuye los fondos donados para asistencia en el pago a servicios públicos de PLUS One, no son la única fuente de ayuda. Las siguientes organizaciones también proporcionan asistencia para el pago de servicios públicos de Denton.

Recursos adicionales:

- **TCOG (Texoma Council on Governments):** 866-904-8647
 - Solicite en: www.tcog.com/energy/apply
 - Oficina de Denton ubicada en Serve Denton: 306 N. Loop 288
 - Horario de atención: lunes a jueves, de 7:30am a 5:30pm; viernes de 7:30am a 11:30am
 - Ayuda con las facturas de electricidad, gas y propano a hogares con ingresos calificados dentro del condado de Denton.
- **Giving Hope, Inc.:** 940-382-0609
 - Oficina ubicada en Serve Denton: 306 N. Loop 288
 - Detalles del programa: <https://hopeindenton.com/need-assistance/>
 - De lunes a jueves, de 9:30am a 11:30am y de 1:30pm a 3:30pm (los viernes, solo concita previa)
- **Primera Iglesia Bautista:** 940-382-2577
- **Cross Timbers Church:** 940-240-5100
- **Singing Oaks Church of Christ:** 940-387-4355
- **Servicios Comunitarios (Community Services):** 800-831-9929
- **Se pueden encontrar recursos adicionales llamando al 211 o visitando al sitio web www.unitedwaydenton.org/FindHelp**



The City of Denton Building Safety division provides courtesy inspections as a service to the citizens of Denton. This type of inspection is not intended for enforcement, rather it is intended to assist homeowners with understanding safety concerns and helping to offer options to correct.

Courtesy Inspection

- To verify if any life safety concerns exist;
 - Exposed electrical connections
 - Fuel gas connections
 - Venting of fuel fired appliances
 - General overview of potential hazards which may result in serious injury or death

EXAMPLE: Water heater installation; manufactured housing requires a specific type of water heater, these units cost two to three times as much as a conventional water heater. Homeowners may not know manufactured housing requires a specific water heater, coupled with cost factors many times result in an incorrect water heater being installed. These factors raise concern of whether there are proper water connections, proper ventilation of gas (fuel fired) appliances, and approved electrical connections. Additionally, there may be problems associated with size and clearance of the water heater installation, ensuring proper clearances from combustible materials.

EXAMPLE: If an addition/alteration to add plumbing (bathroom, kitchen, laundry, etc.) water, sewer, gas, electric and other potential safety concerns.

Customer Service Inspection

Prior to continuous water service being established, Texas law requires an inspection of the private water-distribution system as a way to ensure that the water is safe to drink. This type of customer service inspection is required in Title 30 of the Texas Administrative Code (TAC), Subsection 290.46(j). All the rules in 30 TAC 290, Subchapter D, are administered by the Texas Commission on Environmental Quality (TCEQ). As a component of the law, the City of Denton is required to ensure a *Customer Service Inspection (CSI)* is conducted;

A Customer Service Inspection is an examination of the private water distribution system for the purpose of providing or denying water service. The inspection is limited to the identification and prevention of cross-connections, potential contaminant hazards, and illegal lead materials. Customer service inspections are completed before providing continuous water service on any existing service where there is reason to believe that cross-connections or other potential contaminant hazards exist, or after any material improvement, correction, or addition to private water distribution facilities.

- Verify no cross-connections exist;
 - inspection of water service,
 - checking toilet flush valves,
 - checking hose bib(s),
 - pressure relief valve on water heater.

Offering to provide both a courtesy inspection including a Customer Service Inspection is designed to provide homeowners a greater understanding of the items which may require corrections prior to any other investment.

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Departamento de Seguridad de Edificios - Departamento de Servicios de Desarrollo

215 E. Hickory St., Denton, TX 76201 • (940) 349-8360

La División de Seguridad de Edificios de la Ciudad de Denton proporciona inspecciones de cortesía como un servicio a los ciudadanos de Denton. Este tipo de inspección no es realizado para exigir o implementar regulaciones, sino que está destinado a ayudar a los propietarios de viviendas a comprender los problemas de seguridad y ayudar a ofrecer opciones adicionales o requeridas para mejorar las viviendas.

Inspección de cortesía

- Los siguientes se verificarán para determinar si existen problemas que afectarían su salud/vida;
 - Conexiones eléctricas expuestas
 - Conexiones de gas combustible
 - Ventilación de los aparatos de combustible
 - Visión general de los peligros potenciales que pueden resultar en lesiones graves o la muerte

EJEMPLO: Instalación de calentador de agua; la carcasa fabricada requiere un tipo específico de calentador de agua, estas unidades cuestan de dos a tres veces más que un calentador de agua convencional. Los propietarios pueden no saber que la vivienda fabricada requiere un calentador de agua específico, junto con los factores de costo muchas veces resultan en un calentador de agua que no esté apropiadamente instalado. Estos factores plantean la preocupación, como por ejemplo las conexiones de agua adecuadas, ventilación adecuada de los aparatos de gas (combustible) y conexiones eléctricas aprobadas. Además, puede haber problemas asociados con el tamaño y el espacio libre de la instalación del calentador de agua, asegurando una holgura adecuada de los materiales combustibles.

EJEMPLO: Si se añade/altera plomería (baño, cocina, lavandería, etc.) agua, alcantarillado, gas, electricidad y otros posibles problemas de seguridad.

Inspección de Servicio al Cliente

Antes de que se establezca el servicio continuo de agua, la ley de Texas requiere una inspección del sistema privado de distribución de agua como una manera de garantizar que el agua es segura para beber. Este tipo de inspección de servicio al cliente se requiere en el Título 30 del Código Administrativo de Texas (TAC), Subsección 290.46(j). Todas las reglas en 30 TAC 290, Subcapítulo D, son administradas por la Comisión de Calidad Ambiental de Texas (TCEQ). Como componente de la ley, la Ciudad de Denton está obligada a garantizar que se lleve a cabo una *Inspección de Servicio al Cliente (CSI)*;

Una Inspección de Servicio al Cliente es un examen del sistema privado de distribución de agua con el propósito de proporcionar o denegar el servicio de agua. La inspección se limita a la identificación y prevención de conexiones cruzadas, posibles peligros contaminantes y materiales de plomo ilegales. Las inspecciones de servicio al cliente se completan antes de proporcionar un servicio continuo de agua en cualquier servicio existente donde haya razones para creer que existen conexiones cruzadas u otros peligros potenciales de contaminantes, o después de cualquier mejora material, corrección, o además de instalaciones privadas de distribución de agua.

- Verificar que no existan conexiones cruzadas;
 - inspección del servicio de agua,
 - comprobar las válvulas de descarga del inodoro,
 - babero(s) de manguera de control,
 - válvula de alivio de presión en el calentador de agua.

La oferta de proporcionar una inspección de cortesía, incluyendo una inspección de servicio al cliente, está diseñada para proporcionar a los propietarios una mayor comprensión de los artículos que pueden requerir correcciones antes de cualquier otra inversión.



Memo

From: Frank Pugsley, Director of Water and Wastewater Utilities
Date: April 9, 2020
Re: Response to Citizen Comment from Engage Denton RE: Compost Sales

Response to Citizen Comment from Engage Denton

Name: Michael

Phone: 940-898-9000

E-mail: goob30@gmail.com

Business Name: DyNO Dirt

Business Address: City of Denton

Description: Solid Waste Compost selling & staffed - Mayor noted this place as non-essential and is in direct violation of the governors executive order

The Water Reclamation Department elected to reopen the compost sales office, with an emphasis on employee safety, due to its role in the biosolids disposal process, to reduce the amount of material stockpiled on site, to restore a revenue stream for the Department, and high product demand from essential industries. This decision was made with an effort to balance public safety, health and safety of our workforce, as well as the continued delivery of essential services and functions on which our citizens and customers depend. Customers including landscape contractors, residential construction contractors, who are considered essential service providers, as well as homeowners completing home maintenance projects utilize our Dynodirt products in the course of their business to add nutrients to the soil and prevent erosion.

In accordance with CISA guidance, "(1) When continuous remote work is not possible, businesses should enlist strategies to reduce the likelihood of spreading the disease. This includes, but is not necessarily limited to, separating staff by off-setting shift hours or days and/or social distancing. These steps can preserve the workforce and allow operations to continue, and (2) When government and businesses engage in discussions about essential critical infrastructure workers, they need to consider the implications of business operations beyond the jurisdiction where the asset or facility is located. Businesses can have sizeable economic and societal impacts as well as supply chain dependencies that are geographically distributed."

The staff operating the sales office currently have no interaction with the public, as we have moved to a credit/debit card only payment model for this reason. The sales personnel have been provided

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with necessary personal protective equipment (PPE) including masks, gloves, hand sanitizer, and disinfection supplies for use during the work day. Operating procedures for interacting with customers through the window have been implemented to eliminate direct contact.

The compost operation is currently the City's only means of disposing of its wastewater biosolids (sludge). 100% of the wastewater biosolids is incorporated into the compost operation, and mixed with green waste/brush delivered to the landfill. The Department has no contracts in place for hauling and disposal of wastewater biosolids.

The WW Reclamation management team elected to close the public facing sales office upon closure of City facilities to the public until other arrangements could be made. During this period of closure, staff received many calls daily from small lawn/landscape/construction businesses inquiring as to when the sales office would reopen so they could obtain product to complete their work and remain gainfully employed.

The following photos of the compost sales area demonstrate the physical separation of staff and the public.



If you have any questions or need further assistance, please feel free to contact me by telephone at (940) 349-8086 or by email at Frank.Pugsley@cityofdenton.com.

Sincerely,

A handwritten signature in blue ink that reads "F. E. Pugsley".

Frank E. Pugsley, P.E.
Director, Water and Wastewater Utilities

**INFORMAL STAFF REPORT
TO MAYOR AND CITY COUNCIL**

SUBJECT:

Personal protective equipment (PPE) status and steps taken to reduce the spread of COVID-19 among City field workers

BACKGROUND:

There have been recent inquiries from members of the public and City Council regarding various departments' strategies and precautions for preventing the spread of COVID-19 among city employees who may work in the field and in the community at large. The safety of City staff remains the highest priority. A coordinated effort by those departments who have field workers performing essential functions includes the implementation of new strategies and procedures to help maintain safety levels among varying crews. The main focus of the PPE Working Group (led by Battalion Chief Skipper, under the direction of the Fire Department's medical director) is to determine each City department's PPE needs and develop recommendations and minimum requirements based on CDC guidelines.

DISCUSSION:

The PPE Working Group will educate staff on the CDC guidelines for social distancing, the appropriate protective gear to wear, how to properly use and dispose of gear, and when it should be applied in a department's working environment. Currently, there is a limited supply of PPE within the City's centralized warehouse, and the PPE has been prioritized to first responders. As the additional supply arrives, the PPE will be issued to the departments for wider use. In the meantime, employees in the field are being educated and required to maintain social distancing and enhance sanitizing of vehicle cabs and work spaces as recommended by health officials.

The following is a summary of general guidelines provided by the Fire Department on the recommended type of PPE to be used by our employees:

Knowing when and what Personal Protective Equipment (PPE) must be used is key to the continued protection of all our City employees. The key to staying healthy is practicing social distancing, greater than six (6) feet at all times and using the right level of PPE at the right time. An N95 respirator is not required for every employee to go about their daily responsibilities. Due to PPE shortages, the overall intent is to prevent contamination of PPE, thereby preserving the life of each piece.

The main components of a full PPE ensemble are goggles, gloves, respirators, and gowns; there are various types of each and they are detailed below.

Goggles

Make sure they seal the eyes completely. Vents or glasses are not considered full protection. However, if nothing else is available, safety glasses are better than nothing.

- *Who should wear them?*
 - For a non-healthcare provider, safety glasses and social distancing are sufficient for daily wear.

Gloves

There are different types of gloves. Some are approved for handling food and some are medical grade.

- *Who should wear them?*
 - If an employee is handling money, food, or coming into close contact with people (<6ft.), they should wear medical grade gloves. Boxes of gloves usually read “for medical use” on them. Otherwise, any kind of glove is a better option than no glove.

Gowns

Mainly used for healthcare providers who are in close proximity to known, or suspected, infectious patients.

- *Who should wear them?*
 - With the current shortage, there should be no reason for someone outside of the healthcare field to be wearing a disposable gown.

Respirators

The majority of respirators being used right now are N95, or an international equivalent. N95s, in relation to the current pandemic, are mainly used by healthcare providers who are within six (6) feet of a person known or suspected to have COVID-19.

- *Who should wear them?*
 - Healthcare providers, police, and other employees who cannot practice social distance around known, or suspected, COVID patients should wear N95 respirators.
 - Note: You may see KN95s. These are Chinese equivalents to N95 masks. There are a wide variety of models and manufacturers. If you see either N95, or KN95, then the mask provides the same level of protection.

Surgical masks

Surgical masks are not respirators and are used for daily wear by the general population. The main difference is that N95s protect the wearer. Surgical masks provide minimal protection, but they do help stop the spread of the virus to others.

- *Who should wear them?*
 - Currently, the CDC is recommending everyone wear a cloth or surgical mask and practice social distancing. This is the best way to fight the current pandemic. Employees who are not directly treating patients who are known or suspected COVID-19 positive should wear cloth or surgical masks.

The following is a summary of various departments' strategies for mitigation and social distancing as it relates to the City's COVID-19 response.

Denton Municipal Electric (DME)

Beginning March 18, only essential personnel were allowed to remain onsite in response to the COVID-19 pandemic. All non-essential personnel are working remotely and remain available. Operational field crews were limited to a single crew to concentrate on maintenance only, but additional crews may be dispatched directly from home as the need arises. Similar to public safety protocols, all DME buildings have been locked down with a single point of entry and accessible only to essential personnel assigned to that building. Additionally, essential personnel coming on shift must respond to three (3) general health questions and are also required to have a temperature screening or attest that they have completed a temperature check at home. DME management are still trying to secure enough thermometers to place at each building. To that end, DME has assigned a safety specialist to serve on a PPE working group assembled by public safety. That staff member is tasked with ensuring DME has any recommended PPE and to also advise senior management on any changes to safety protocols and measures.

In response to increases in service requests and the possibility of a full return to work for essential operational field crews in the near future, DME has recently implemented additional measures to be observed by staff. These measures include staggered shifts, limiting number of staff in a single vehicle, increased cleaning in common areas and restrooms, and ensuring adequate PPE is made available. The required use of masks has not been implemented at this time, but DME will respond accordingly as the public safety PPE working group makes those recommendations. It should be noted that due to the nature of some operations by DME crews, social distancing may be a challenge, but they are committed to ensuring their staff are protected and provided necessary PPE to complete their tasks.

Water Utilities

The Water Utilities Departments have implemented social distancing guidelines for staff including having only one (1) person per vehicle, sanitizing vehicles, equipment and shared workspaces at the beginning and end of each shift or when the operator changes. Workers are being called in from "at home" shifts on an as-needed basis. As the departments are unable to procure thermometers to check employee temperatures at work, those who own personal thermometers are asked to check and report their temperature to their supervisor upon arriving to work. These departments do not have frequent interaction with the public.

The public compost (Dyno Dirt) sales office has more interaction with the public, it has moved to a credit card only payment system where staff have no physical contact with the public, as it is now separated by a closed window. There is one employee handling transactions at the sales office; the employee has been provided with gloves, masks, hand sanitizer, and disinfectant as an added precaution. All employees across the departments have access to a limited supply of gloves, hand sanitizer (when available) and disinfectant solution.

Parks Maintenance

Parks Maintenance employees are being provided gloves, masks, and safety glasses. They are also requested to wear long pants and long sleeve shirts as they report for duty. Additionally, staff are being asked to change clothes before and after each work shift. Staff are requested to take and report their temperature before arriving for each shift. Each employee has been assigned to their own vehicle so that there is only one employee per vehicle and social distancing may be maintained. Employees are also reporting to work in alternate locations to reduce the number of employees gathered at any given time. Currently, they report to the Service Center, Denia Park, North Lakes Park, Storage Building, Green House, and Civic Center Pool.

Streets and Drainage

While major construction projects have been put on hold, Streets staff are completing the work to a passable and safe state before a project is completely suspended. Both Streets and Drainage staff are currently divided into two groups who alternate weeks working on site. They practice and keep social distancing guidelines while working and commuting to and from job sites by having only one employee per vehicle. Staff has been supplied with cleaning wipes and disinfectant spray for each vehicle and are directed to wipe and spray down vehicles at the beginning and end of each day. Daily temperature screening of employees is under implementation as of this week.

Community Development and Community Improvement Services

Community Improvement Services staff have been divided into two working groups who report to the office every other day and/or as needed in order to reduce the number of staff coming in and out every day. It is understood that staff at home may be deployed from home for field inspection as needed. A change in procedure was also implemented in their routine to comply with social distancing guidelines as well. CIS Officers no longer leave notices on doors or knock on doors to speak with residents directly. Enforcement communication has been routed to email or phone communication only.

All but two (2) Community Development staff are working remotely. One staff member does field work and works in the office. The other staff member is on an A/B schedule in the office and other times, as needed. The Residential Construction Specialist (RCS) completes visual inspections of projects when workers are not present or from a distance. The RCS does not enter any occupied home for projects, repair needs assessment, or inspections. Programmatic changes include Partner agencies/Clients return documents electronically, and only emergency repairs are being addressed at this time. Health self-assessments and social distancing strategies are being utilized in attempts to maintain the safety of the teams.

Solid Waste and Recycling

Solid Waste and Recycling is using its equipment to distance and protect its employees in response to COVID-19 protocols. Drivers and operators are limited to one person per vehicle. Employees who are assigned routes drive the same vehicle daily while drivers who work shifts and trade out equipment disinfect the cab at the start and end of their shifts. Staff maintain at least a six-foot distance between themselves and the general public.

Morning huddles among crews have shifted to an electronic format. Staff are now dismissed upon completion of their shifts so that they do not gather en masse awaiting scan-out time.

The Landfill Scale House has switched to an account or credit/debit only-based payment to further separate customers from staff and to maintain social distancing standards.

Building Safety

Building Safety staff's PPE currently consists of gloves and hand sanitizer. They are utilizing self-acquired or self-made face masks at this point. Staff found other types for purchase on April 9 along with safety goggles. As with most departments, Building and Health Inspectors are now working A/B shifts in weekly cycles. The on-duty shift employees are working from their work vehicles.

One new programmatic adjustment recently implemented is virtual inspections. They are currently only available on limited types of inspections at this time.

Staff have received PPE training from Captain Skipper in the Fire Department and subsequently conducted training for all Building Safety staff via Teams Meeting.

CONCLUSION:

Staff will continue to monitor reports and data on the COVID-19 response at federal, state, and local levels. Information regarding the City's response changes rapidly, and as changes are made to policy and procedure, they will be relayed to staff.

STAFF CONTACT:

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Assistant to the City Manager
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(940) 349-8420

**INFORMAL STAFF REPORT
TO MAYOR AND CITY COUNCIL**

SUBJECT:

FY 2019-20 Denton Energy Center (DEC) YTD February 2020 Dashboard

BACKGROUND:

Attached is the February 2020 FY 2019-20 Dashboard for the Denton Energy Center. The dashboard is intended to give a snapshot of relevant DEC metrics. The dashboard highlights the following:

- The Emission Chart (based on calendar year) displays the February engine runtime hours, starts, stops, monthly and annual emissions totals and limits.
- DEC MWh Generation and Gross Revenue for FY 2019-20 through February 2020.
 - The DEC ran 21,499 MWh less through February of FY 2019-20 compared to FY 2018-19. This resulted in \$1.1 Million less in DEC Revenue.
- A DEC financial summary showing February FY 2018-19 Actuals, FY 2019-20 Budget, Actuals as of February 2020 and the FY2019-20 end of year projections.
 - The FY 2019-20 year-end projections have been updated to show a 13% increase in MWh generation and \$/MWh, resulting in a \$7 Million increase in DEC Revenue. Projected fuel cost are \$510,000 lower than budgeted.
- The Plant Monthly Run Hour Comparison Graph illustrates the monthly plant run times.
- The Key Trends section explains variances in revenues and expenses.
 - Due to running fewer hours through February, fuel cost was approximately \$1.2 Million lower.
 - The DEC Net Income was (\$5.08) which is expected for the first five months of the fiscal year.
 - The DEC Gross Margin was \$3 Million which is \$2.1 Million higher than budgeted due to higher DEC Revenue in October and November. (The Gross Margin = DEC Revenue – Fuel cost – Variable Operating & Maintenance cost.) Gross Margin represents the component of revenue available to pay fixed cost including debt.

ATTACHMENT(S):

Denton Energy Center (DEC) Dashboard

STAFF CONTACTS:

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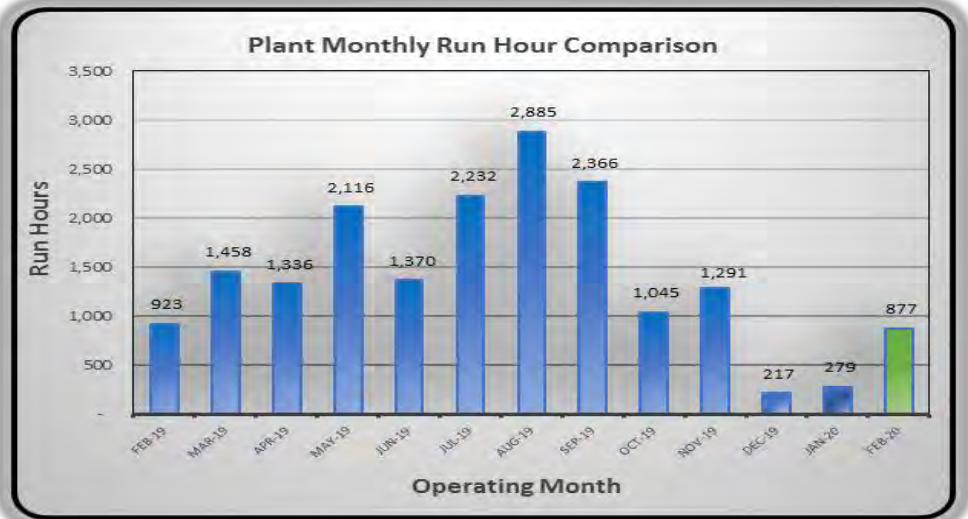
City of Denton, Texas

FY 2019-20 Denton Energy Center YTD February 2020 Dashboard

Emissions														
Description	February 2020					Description	Nitrogen Oxides (NOx)	Carbon Monoxide (CO)	Volatile Organic Compound (VOC)	Particulate Matter<10 microns (PM ₁₀)	Particulate Matter<2.5 microns (PM _{2.5})	Sulphur Dioxide (SO ₂)	Ammonia (NH ₃)	Carbon Dioxide Equivalents (CO _{2e})
	Engine Runtime (hours)	Hot Starts	Warm Starts	Cold Starts	Stops									
Engines (1-12)	877	211	61	192	464	DEC Monthly Emissions Total (tons)	1.83	1.81	1.36	0.79	0.79	0.02	0.13	4,696.00
						DEC Annual Permit Limit Operations (tons)*	29.78	93.52	48.16	69.72	69.72	1.45	60.90	
						Monthly Plant Emissions per DEC Permit Limit	6.15%	1.94%	2.83%	1.14%	1.14%	1.15%	0.21%	
						Annual to Date Plant Emissions per DEC Permit Limit	10.20%	3.20%	4.30%	1.60%	1.60%	1.70%	0.30%	

*Operations Annual Limit accounts for Balance of Plant standard emissions

Generation & Gross Revenues			
Month	Revenue	MWh	\$/MWh
Oct-19	\$2,043,727	16,344	\$125.04
Nov-19	\$1,152,356	16,168	\$71.27
Dec-19	\$126,950	2,159	\$58.80
Jan-20	\$239,366	2,671	\$89.62
Feb-20	\$676,548	9,466	\$71.47
Total FY 2019-20	\$4,238,947	46,808	\$90.56



	FY 2018-19	FY 2019-20	FY 2019-20	FY 2019-20
	YTD ACTUALS **	BUDGET	YTD	PROJECTION
DEC REVENUE*	\$ 5.36	\$ 25.07	\$ 4.24	\$ 32.09
EXPENDITURE SUMMARY				
Energy Expense - Fuel	\$ 2.32	\$ 12.48	\$ 1.14	\$ 11.97
Personal Services	0.63	2.22	0.72	2.22
Materials & Supplies	0.10	0.44	0.13	0.44
Maintenance & Repair	0.04	0.56	0.01	0.56
Insurance	0.01	0.50	0.01	0.50
Miscellaneous	-	-	-	-
Operations	0.09	0.48	0.09	0.48
Debt Service - Principal	1.79	7.47	3.08	7.47
Debt Service - Interest	1.68	9.80	4.12	9.80
Interfund Transfers	-	0.05	0.02	0.05
Transfer to Capital Projects	-	0.02	-	0.02
DEC EXPENDITURES	\$ 6.66	\$ 34.02	\$ 9.32	\$ 33.51
	\$ -	\$ -	\$ -	\$ -
DEC NET INCOME	\$ (1.30)	\$ (8.95)	\$ (5.08)	\$ (1.42)

*Preliminary, Unaudited Figures

** Represents same period (5 months) as FY 2019-20 YTD for comparison purposes.

Total Net Income for FY 2018-19 was \$14.22 M.

Key Trends

For the first five months of FY 2019-20, the DEC produced 21,499 MWh less than the same period of FY 2018-19. This resulted in approximately \$1.1 Million less in revenues and \$2.6 Million more in total expenses for the same time period. This increase was due to the annual debt service payment increasing from \$10 M to \$18 M in FY 19-20. As of February 29, 2020, expenditures exceed revenues by \$5.1 Million which is expected for this period of the fiscal year.

Through February 2020 the DEC Gross Margin was \$3 Million which is \$2.1 Million higher than budgeted for the same period (Gross Margin = DEC Revenue – Fuel Cost – Variable Operating & Maintenance Cost). This is due to higher revenue in October and November than anticipated.

Updates in the DEC Revenue and Energy Expenses improved the FY 2019-20 year-end projections to show a \$(1.4) Million Net Income compared to the \$(8.95) Million Net Income shown in the FY 2019-20 budget..

Note: All dollar figures presented are in million of dollars.

INFORMAL STAFF REPORT TO MAYOR AND CITY COUNCIL

SUBJECT:

Windhaven (Split Rock Drive) Transmission Pole

BACKGROUND:

A potential violation of the National Electric Safety Code (NESC) for clearance has been documented along the 138 kV transmission line through the Windhaven subdivision in Southeast Denton. On February 18, 2020 the Denton City Council received a work session presentation from Denton Municipal Electric (DME) on the situation and provided staff with direction to proceed with the installation of a single transmission pole to abate the violation. However, Council also requested additional clarification on certain survey discrepancies before installing the new transmission pole. Staff provided the requested survey information to Council on March 3, 2020. Council's direction was unchanged. Subsequent to the March 3, 2020 work session, the home owner corresponded with Council suggesting that DME pursue an alternative to installation

DISCUSSION:

Homeowners of the affected residence on Split Rock Drive provided an email to Council members suggesting that DME perform more accurate survey data and consider removal of part of the awning of their home in order to achieve the required NESC clearances. DME did a preliminary assessment of this potential option and has rejected it for the following reasons:

1. The prior work to determine the distances from the line to home was done by our surveyors using very accurate measurement techniques that limit error to within two inches. Thus, no need for further surveying work.
2. The corner of the second floor of the home would need to be modified by at least 3 feet which is more than the dimension of the eave of the house. This would require structural engineering of the load bearing walls that would require modification, architectural work, permitting, contracting, etc. Costs would be a minimum \$30,000 and more likely in the \$50,000 range.
3. The reduction in square footage and visual impairment to the home would likely reduce the homes' value, despite the investment to make the changes and thus the homeowner would be trading off perceived reduced value from the new pole (alleged reduction in home value) with reduced home value due to the modifications necessary.
4. The NESC minimum clearance requirements are just that, MINIMUM. The standards state that the operator of the transmission system shall "determine any additional required safety buffer". If the home were modified to address the minimum clearance standard, it leaves no safety buffer. Raising the line provides what DME considers an acceptable safety buffer.
 - a. The aluminum gutters on the home are seamless and in the event they are ever removed from the home, it is not unrealistic to be concerned that the 30-foot

aluminum gutter could be caught by the wind or inadvertently moved in contact with the 138,000 volt line. The single pole option raises the line sufficiently high enough to mitigate this potential.

- b. Even if the home were modified to achieve the clearance requirements, erecting a ladder to access the roof of the front porch or the second floor would place the ladder and the person on the ladder inside the minimum clearance requirement and poses risk of personal injury should the ladder fail or if the individual on the ladder is carrying anything that is conductive.

The pole construction must be completed and the circuit re-energized prior to May 15th to comply with ERCOT restriction on transmission outage during high demand periods. The outage must be pre-scheduled with ERCOT to ensure that other scheduled system outages don't impact the reliability of the grid. DME does not have the equipment to erect the new pole and must contract the work. The work must be scheduled as soon as possible to ensure that the foundations, pole erection, line transfer and outage can be concluded by May 15, 2020.

Additionally, the recently passed HB 4150 requires owners of transmission and distribution lines to certify compliance with the NESC clearance standards on May 1, 2020. As the owner of the line, TMPA will have to report the non-compliance and the mitigation plan to the Public Utility Commission of Texas (PUCT) by May 1. If the work can be completed by that time, the certification can be made without contingency or exception.

Discussion with the homeowner indicates that the proposed location of the new transmission pole will not interfere with the existing gate that opens onto the easement.

DME ACTIONS:

DME will immediately begin scheduling the work with our contractor and once a schedule has been finalized with both the contractor and ERCOT, we will inform the homeowner of when the work will begin.

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**INFORMAL STAFF REPORT
TO MAYOR AND CITY COUNCIL**

SUBJECT:

Urban Forest Master Plan Update.

BACKGROUND:

The Denton Plan 2030, recommends the development of an Urban Forest Master Plan (UFMP) to identify important tree canopy resources and include specific strategies for protection and provisions of a more robust tree canopy. The UFMP will build on the broad goals and policies in the Denton Plan 2030 to use an integrative approach to environmental management to create local land conservation strategies tailored to protect Denton’s water, air, ecosystems, and natural character.

The UFMP provides a shared vision for the future of the urban forest to inspire and engage stakeholders, both internally and externally, in the care, management, and protection of Denton’s urban forest. The UFMP serves as a guide for managing, enhancing, and growing Denton’s urban forest and the community tree resource over the next 20 years. While the primary focus of the UFMP is on the stewardship of the community tree resource, it also considers private trees as they contribute significantly to Denton’s livability and environmental quality.

While the City has completed urban tree canopy assessments and an i-Tree Eco assessment in the past, the UFMP is a first for Denton and complements the Denton 2030 Plan, the Parks, Recreation Master Plan, and the Sustainable Denton Plan. The plan is the second in the DFW Metroplex behind Plano, although Dallas is currently also developing a plan. Other cities that have Urban Forrester Master Plans are Austin, TX; Charlotte, NC; Minneapolis, MN; Portland, OR; Sacramento, CA; Seattle, WA, and Washington DC. American Forest recognizes all of these cities as one of the ten best U.S. cities for urban forests.

CONCLUSION:

The Urban Forest Master plan lays the groundwork for a more holistic approach to managing Denton’s urban forest. The Parks, Recreation and Beautification Board approved the plan after seeing the presentation on February 2, 2020. A draft of the UFMP is provided and will be presented to City Council for consideration on a date to be determined.

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Staff Initiated

PARTICIPATING DEPARTMENTS:

Parks and Recreation Department

STAFF TIME TO COMPLETE REPORT:

Parks and Recreation Department 3 hours



THE CITY OF **Denton** TEXAS



URBAN FOREST MASTER PLAN

2020

“

The planting of a tree, especially one of the long-living hardwood trees, is a gift which you can make to posterity at almost no cost and with almost no trouble, and if the tree takes root it will far outlive the visible effect of any of your other actions, good or evil.

★ **GEORGE ORWELL**





PREPARED FOR:

City of Denton

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denton
TEXAS



Keep Denton Beautiful, Inc.

Photo Credits:
City of Denton



Davey Resource Group, Inc.

Special thanks to
Community Participants

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Special Thanks to Community Participants

★ Scope & Purpose

The Urban Forest Master Plan (UFMP) serves as a guide for managing, enhancing, and growing Denton's urban forest and the community tree resource over the next 20 years. Whereas the urban forest includes all of the trees and woody shrubs in Denton, the community tree resource is comprised of publicly managed trees along streets, in parks, and at City facilities. While the Plan is primarily focused on the stewardship of the community tree resource, the Plan also considers private trees because they contribute significantly to Denton's livability and environmental quality.

In summary, the Plan aims to:

- Recognize best management practices that promote tree health, maximum benefits, and community safety
- Promote community outreach, engagement, and advocacy for the urban forest

- Develop a more cohesive organizational structure to facilitate collaboration among all departments and staff who impact or affect the urban forest
- Nurture an ethic of stewardship for the urban forest among City staff, community organizations, businesses, and residents
- Increase health and resiliency in the urban forest by improving species diversity and by managing pests and invasive species
- Establish baseline metrics and clear goals for urban forest managers

The Plan includes short-term actions and long-range planning goals to promote sustainability, species diversity, and greater canopy cover. The Plan suggests reasonable time frames for achieving goals, based on available resources and community support.

★ Table of Contents

6 SCOPE & PURPOSE

8 EXECUTIVE SUMMARY
What Do We Have?
What Do We Want?
How Do We Get There?
How Are We Doing?

10 INTRODUCTION
Community
History of Denton
Tree and Canopy Benefits
Air Quality
Carbon Dioxide Reduction
Stormwater Management & Water Quality
Energy Savings
Health, Aesthetic, & Socioeconomic Benefits
Wildlife
Calculating Tree Benefits

16 WHAT DO WE HAVE?
History of Urban Forestry in Denton
Post Oaks and Development
Wildfire
Urban Forest Resource
Tree Canopy
The Urban Forest Program
Services
Program Funding
Summary of Annual Funding
Tree Fund
Regulations and Policies
Federal and State Law
Denton Municipal Code
2012 Simply Sustainable Denton
Denton Plan 2030
Denton Mobility Plan – 2012 Denton Bike Plan
Denton Parks, Recreation and Trails Master Plan
Denton Municipal Electric Brochure
Conclusion

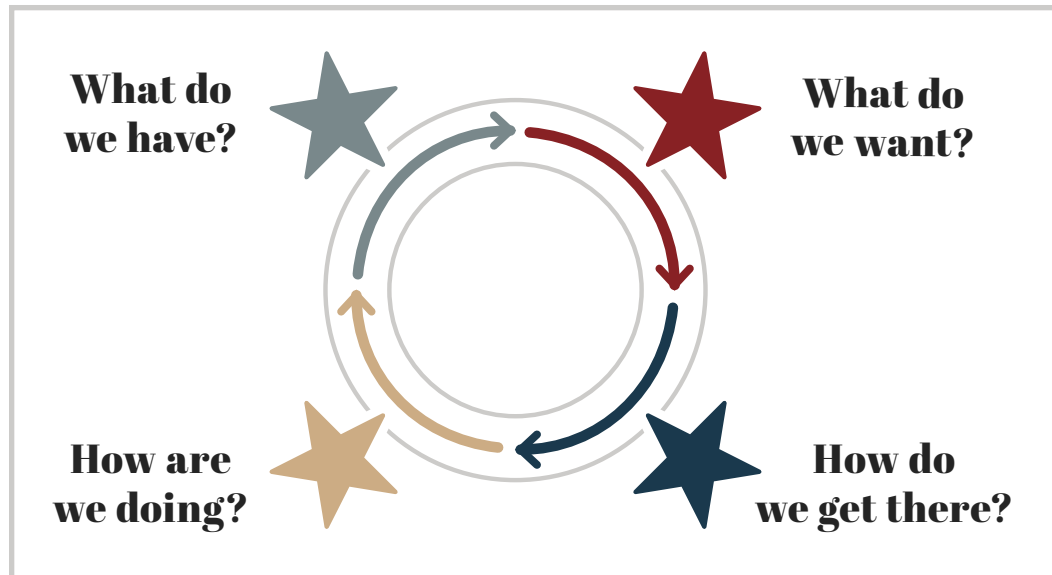
31 WHAT DO WE WANT?
Managing Partners
Community Partners
Community Meeting
Plan, Goals, and Actions
Focus Area: A safe and healthy urban forest
Focus Area: Sustain environmental benefits
Focus Area: Engage the community to ensure the future of the urban forest

36 HOW DO WE GET THERE?
Focus Area: A safe and healthy urban forest
Focus Area: Sustain environmental benefits
Focus Area: Engage the community to ensure the future of the urban forest

60 HOW ARE WE DOING?
Monitoring
Annual Plan Review
Resource Analysis
Canopy Analysis
Community Satisfaction
Reporting
State of the Urban Forest Report

61 APPENDICES
Appendix A: References
Appendix B: Acronyms
Appendix C: Industry Standards
Appendix D: Soil Volume & Tree Stature
Appendix E: Alternative Planter Designs

★ Executive Summary



Denton’s urban forest includes an estimated 3.5 million trees that contribute greatly to the aesthetics of the community. The urban forest also provides valuable and critical services to the community including benefits to air quality, carbon dioxide reductions, water quality, stormwater management, energy savings, health benefits, and wildlife habitat, and socioeconomics. The Urban Forest Master Plan (UFMP) is a road map which provides long-term management goals and a timeline to effectively preserve and enhance the environmental and socioeconomic benefits provided by this critical component of infrastructure.

The Plan’s structure is based on the understanding of what we have, what we want, how we get there, and how we are doing. This structure is known as adaptive management, which is commonly used for resource planning and management (Miller, 1988) and provides a good conceptual framework for the process of improving urban forest management.

What Do We Have?

The plan development process involved a comprehensive review and assessment of the existing urban forest resource, including composition, value, and environmental benefits (Table 1). The process explored community values and vision, including those expressed in guiding documents, including the Denton Plan 2030, Denton Mobility Plan, Simply Sustainable Plan, City Ordinance, state law, and other regulatory and policy documents.

The process evaluated funding for current service levels, including programs coordinated by local nonprofit organization Keep Denton Beautiful, Inc. (KDB). In addition to Park Staff, there are multiple stakeholders, internal and external, who play a role in the planning, design, care, and advocacy of the urban forest. These stakeholders include City departments, utility providers, nonprofit organizations, Denton County, the Texas Trees Foundation, Denton Community Development

Alliance, the Dallas Builders Association, and community members. Each of these stakeholders played a role and provided input for the development of this Plan.

Denton’s Urban Forester works closely with other City departments to protect, preserve, and manage the City’s trees. Trees in parks, around City facilities, and along some arterial roadways are maintained by park staff and contracted crews as needed. Park staff provide clearance, visibility pruning, and emergency response on a reactive basis. Contractors are generally used for larger trees and unique situations. A newly revised and adopted Denton Development Code, promotes the inclusion of trees into new development to encourage the expansion of tree canopy. Tree canopy cover goals are relative to zoning and range from 40% to 50% in residential areas and 15% to 20% in industrial areas. Additionally, the Denton Development Code established the Tree Fund which has contributed to the purchase of land to preserve existing stands of trees and new

tree plantings. The partnership with KDB has kept a long-standing tradition of celebrating Denton as the “Redbud Capital of Texas” and Arbor Day alive through community-wide tree planting events and tree giveaways, which have resulted in the planting of more than 7,000 trees since 2016.

With the support of City Council, KDB, and a dedicated Urban Forester, Denton is poised to develop a comprehensive urban forestry program that ensures community vision for a healthy, aesthetically pleasing, and environmentally beneficial urban forest.

What Do We Want?

The review process identified challenges and opportunities for Denton’s urban forest. One of the biggest threats to trees in Denton is ongoing development and the loss of large, mature trees to make room for new buildings and infrastructure.

In addition to removal of existing trees, the construction process can be detrimental to soil, through compaction and removal or redistribution of topsoil. The loss of organic matter and soil structure can precipitate a decline in existing trees, especially native oak species, and negatively impact new tree establishment and mortality rates. Many of the species that have been historically successful in the region are no longer thriving in urbanized locations. Currently, Denton has an average canopy cover of 27.9% (2016 State of Denton Urban Forest Report). A focus on the preservation of existing mature trees and canopy will help to ensure that the community continues to receive a stable flow of benefits from the urban forest resource.

In neighborhood areas, the City currently does not provide maintenance to public trees in the right-of-way (ROW). The Denton Development Code mandates that property owners adjacent to ROW trees are responsible for their maintenance including pruning for clearance and visibility, irrigating, and removal. Because most homeowners are unaware and/or do not have the resources to employ best management practices for tree care, the result of this policy is that this vital public resource is subjected to various levels of tree care that often lead to poor tree health and structure as well as risk to people and property. The plan development process identified an opportunity to explore the costs and benefits of having the City assume responsibility and maintenance for all public trees.

Trees are living organisms, constantly changing and adapting to their environment and increasing in size over time. Because of this, trees have specific needs at various life stages, including training for proper structure when they are young

and increased monitoring and proactive risk management when they become mature. Deferring maintenance at any stage can have a significant effect on the overall health, structure, value, and lifespan of a tree. In addition, deferred maintenance often results in higher costs and less beneficial results, including increased risk potential. As a result, the Plan identifies goals and actions for optimizing urban forest programming, existing funding, staffing, and urban forest policy.

How Do We Get There?

The Plan identifies three focus areas and nine goals for preserving the health, value, services, and sustainability of Denton’s urban forest. Each of these goals is supported by comprehensive objectives and actions. Recognizing that community engagement is integral to success, the Plan includes firm objectives for engaging the community and encourages partnership and collaboration.

How Are We Doing?

The long-term success of the Plan will be measured through the realization of Plan goals and demonstrated through increased value and environmental services from the urban forest. The Plan identifies methods of measurement, priorities, potential partners, and estimated costs. Since the Plan is intended to be a dynamic tool, it can and should be updated in response to available resources and opportunities. One of the greatest measures of success for the Plan will be its level of success in meeting community expectations for the care and preservation of Denton’s urban forest.



Table 1: Urban Forest Benchmark Values

Denton’s Urban Forest Benchmark Values

URBAN TREE CANOPY COVER (PUBLIC AND PRIVATE, 2016)		
Overall Canopy Cover	28%¹	
Impervious Surfaces	45%	
Canopy Benefits (Public and Private, 2016)		
Carbon Stored to Date	458,000	\$61 MILLION
Annual Canopy Benefits (Public and Private, 2016)		
Annual Carbon Sequestration	23,000 TONS	\$3.1 MILLION
Annual Air Quality	404.9 TONS	\$759,000
Annual Stormwater	151.1 MILLION GALLONS	\$1.3 MILLION
Annual Energy		\$1.6 MILLION
URBAN FOREST RESOURCE (PUBLIC AND PRIVATE, 2016)		
Estimated Total Number of Trees	3.5 MILLION TREES	
Replacement Value	\$344 MILLION	
Unique Species	46	
Prevalence of Top Ten Species	82%	
Number of Species Exceeding 10%	2	

¹ Adjusted by City Staff from the State of the Denton Urban Forest Report, 2016.



A safe and healthy urban forest

- Goal 1: Efficiently manage the community tree resource.
- Goal 2: Promote tree health and good structure.
- Goal 3: Mitigate and reduce risk of wildfire.

Primary Objectives:

- Improve understanding of the structure and composition of Denton's community tree resource.
- Following completion of a tree inventory, develop pruning and maintenance cycles.
- Continue to use planting funds successfully.
- Explore the feasibility of the City taking responsibility for the maintenance of community trees in neighborhoods.
- Revise policies and standards for pruning young trees to promote healthy growth and structure.
- Ensure community trees are maintained according to industry standards to promote tree health, longevity, and also public safety.
- Contribute to a fire safe community.



Sustain environmental benefits

- Goal 4: Recognize trees as green infrastructure.
- Goal 5: Promote tree preservation and protection.
- Goal 6: Develop a City-wide planting plan.
- Goal 7: Adopt Plant Health Care (PHC) policies.

Primary Objectives:

- Minimize the encroachment of other utilities.
- Develop maintenance and design strategies for mitigating conflict with otherwise healthy trees.
- Ensure design standards adequately consider trees.
- Revise and amend the Code of Ordinances to promote the protection of community trees.
- Continue to contribute mitigation fees to the Tree Fund.
- Mitigate the impacts of development on native post oak stands.
- Educate the community about their role in maintaining a safe urban forest.
- Achieve 40% canopy cover by 2040.
- Promote species diversity in the urban forest.
- Encourage equitable distribution of tree canopy across the City.
- Set emphasis on planting the right tree in the right place.
- Encourage the expansion of the urban forest through tree plantings on private property.
- Support stormwater management through the strategic growth of canopy.
- Monitor invasive species.



Engage the community to ensure the future of the urban forest

- Goal 8: Support community engagement and stewardship of the urban forest.
- Goal 9: Celebrate the importance of urban trees.

Primary Objectives:

- Develop and maintain a web page for the Urban Forestry Division on the City website.
- Interact with community members through a variety of outlets.
- Maintain Tree City USA.

★ Introduction

Affectionately called the “Lil’ d”, Denton offers easy accessibility to the amenities of the “Big D” (Dallas). It is often characterized as a college town with the charm of a small town and a historic downtown. Denton has an expansive live music scene with a world-renowned Arts and Jazz Festival and numerous small music venues across the City (Discover Denton).

Denton is a community that values the environment, which is evident through the Clear Creek Natural Heritage Center, Denton Community Market, Shiloh Field Community Garden, as well as involvement in Bee City USA, Monarch City USA, and Tree City USA national programs. Clear Creek Natural Heritage Center is a gateway to more than 2,900 acres of bottomland hardwood forest, upland prairie, and diverse aquatic habitats. Located within Lake Lewisville’s upper floodplain and managed by the City of Denton, it provides residents and visitors with unmatched ecological, educational, and recreational opportunities. The Denton Community Market is a local farmers market that operates during the summer. Shiloh Field Community Garden, the largest community garden in the United States, is operated by Denton Bible Church. It encompasses 14.5 acres with 152 plots with fruit trees, berries, chickens, honeybees, and vineyard. It provides products to fourteen different organizations and ministries throughout Denton (Dallas News, 2014; Shiloh Field Community Garden, 2019). Denton is recognized as a (1) Bee City USA, an initiative of the Xerces Society to raise awareness about pollinator decline and encourage healthy habitat in urban areas (The Xerces Society, Inc., 2018), (2) Monarch City USA, a program lead by a non-profit to promote planting milkweeds and nectar plants that encourage monarch development (Monarch City USA, 2019), and (3) Tree City USA, an initiative of the Arbor Day Foundation to green urban areas through enhanced tree planting and care (Arbor Day Foundation, 2019).

Denton’s humid subtropical climate is characterized by high temperatures and consistent rainfall throughout the year (Denton, Texas, 2019). On average, Denton experiences summer highs of 96°F and average winter lows of 33°F. The average annual precipitation is 38.1 inches (U.S. Climate Data, 2019). Denton is located on the southern edge of “Tornado Alley” and occasionally experiences tornadoes. Other extreme weather events such as hail and flash flooding are more common occurrences.

Community

The Redbud Capital of Texas, Denton is located on the northern edge of the Dallas-Fort Worth Metroplex. Standing prominently on Hickory Street, the Denton County Courthouse reflects the essence that is Denton; balancing the demands of urbanization with preservation of the past.

History of Denton

The Wichita, Comanche, Kiowa, and Caddo tribes are the first known people to call the area that is now Denton “home”. Archaeologists have determined that native peoples have been a part of North Texas for thousands of years prior to the arrival of the Spanish Conquistadors (Cochran, 2013).

1800s

Following the Texas’ declaration of Independence from Mexico in 1836, there were not permanent settlers. The first settlers of present-day Denton settled about a mile southeast of the present-day town center along the Pecan Creek and named the settlement Pinckneyville in honor of Texas’s first governor, James Pinckney Henderson (Cochran, 2013; Adopt a Town: Pinckneyville (Denton)). Historians dispute whether a courthouse was ever

built in Pinckneyville; however, some accounts suggest that court was held under a large oak tree (Cochran, 2013).

In 1857, as a result of the donation of 100 acres of land and requests from county residents for a more centralized location, Denton became the county seat for Denton County (Cochran, 2013). Both the City and the County were named in honor of John B. Denton (a preacher, lawyer and Texas militia captain) among the earliest settlers in the area (Bates, 1918). Additionally, many of the original street names were based on the trees native to the county (Denton Landmark Commission).

Before and after the Civil War, Denton remained a small subsistence agricultural community. In 1881, Denton experienced some growth with the arrival of the Texas and Pacific Railway. Without an east-west connection, there was no further expansion of the town, which kept Denton a small railroad town (Odom, 1991).

1900s

By the beginning of the 20th century, both North Texas Normal College (now the University of North Texas) and the Girl’s Industrial College (now Texas Woman’s University) were established. Both of these colleges greatly contributed to the character of Denton that remains to this day (Odom, 2019). In fact, Denton’s annual Redbud Festival is rooted in the Texas Woman’s University festival which celebrated campus beautification and tree plantings from 1930 to 1984.

Population growth was moderate until the 1960’s. It then majorly increased with the construction of I35-E and I-35W connections to the Dallas-Fort Worth Metroplex. The building of Dallas/

Fort Worth International Airport in 1974 further contributed to the population expansion of Denton. Larger manufacturing companies began establishing themselves through the 1990’s when the population had reached 80,537 (Odom, 1991).

Like many other cities in the 21st century, a renewed interest in urban revitalization began to shape some of the historic downtown by preserving historic and cultural areas including the Oak/Hickory Historical District (which was designated as a historical district in 1985) (History of Denton).

2000s

By 2000, Denton reached a population of 80,537 people according to the “Texas Almanac: City Population History from 1850-2000”. In 2010, Business Insider published an article rating Denton as the Best Small Town in America due to its friendliness, endless entertainment options, food options, and patriotism (Berlinger, 2012). In 2018, the approximate population was 138,541 (an estimated increase of 19% from 2010) (U.S. Census, 2019). This up-and-coming community continues to attract development with numerous economic opportunities, affordable housing, and a state-of-the-art transportation system; making it one of the fastest growing communities in the Dallas-Fort Worth Metroplex (Hill, 2015).

★ Introduction

Tree and Canopy Benefits

Trees in the urban forest work continuously to mitigate the effects of urbanization and development as well as protect and enhance lives within the community. Healthy trees are vigorous, producing more leaf surface and canopy cover area each year. The amount and distribution of leaf surface area are the driving forces behind the urban forest's ability to produce services for the community (Clark et al, 1997). Services (i.e. benefits) include:

- Air quality improvements
- Carbon dioxide reductions
- Water quality improvements
- Energy savings
- Health, aesthetic, and socioeconomic benefits
- Wildlife
- Enhanced soil health



If a post oak were planted near a building, in Denton, and lived for at least 20 years, over its lifetime it will have sequestered 849 lbs of CO₂(make subscript), intercepted 2,575 gallons of rainfall, avoided 289 gallons of stormwater runoff, intercepted 5.9 lbs of air pollutants, conserved 691 kWh of electricity, and reduced heating consumption by 14 therms. -i-Tree Design

★ URBAN FOREST FACT

Air Quality

Trees improve air quality in five (5) fundamental ways:

- Lessening particulate matter (e.g., dust and smoke)
- Absorbing gaseous pollutants
- Providing shade and transpiring
- Reducing power plant emissions by decreasing energy demand among buildings
- Increasing oxygen levels through photosynthesis

Trees protect and improve air quality by intercepting particulate matter (PM₁₀), including dust, pollen, and smoke. The particulates are filtered and held in the tree canopy until precipitation rinses the particulates harmlessly to the ground. Trees absorb harmful gaseous pollutants like ozone (O₃), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂). Shade and transpiration reduce the formation of O₃, which is created at higher temperatures. Scientists are now finding that some trees may absorb more volatile organic compounds (VOCs) than previously thought (Karl, 2010; McPherson and Simpson, 2010). VOCs are carbon-based particles emitted from automobile exhaust, lawnmowers, and other human activities.

Carbon Dioxide Reduction

As environmental awareness increases, governments are paying more attention to the effects of greenhouse gas (GHG) emissions and concerns about climate change. As energy from the sun (sunlight) strikes the Earth's surface, it is reflected into space as infrared radiation (heat). Greenhouse gases absorb some of this infrared radiation and trap this heat in the atmosphere, increasing the temperature of the Earth's surface. Many chemical compounds in the Earth's atmosphere act as GHGs, including methane (CH₄), nitrous oxide (N₂O), carbon dioxide (CO₂), water vapor, and human-made gases/aerosols. As GHGs increase, the amount of energy radiated back into space is reduced and more heat is trapped in the atmosphere. An increase in the average temperature of the earth can result in changes in weather, sea levels, and land use patterns, as well as localized changes that impact the suitability of some trees and other plant species to a specific region. In the last 150 years, since large-scale industrialization began, the levels of some GHGs, including CO₂, have increased by 25% (Greenhouse Gases' Effect on the Climate, 2018).

Trees and forests reduce atmospheric carbon dioxide CO₂ in two ways:

- Directly, by reducing CO₂ in the atmosphere through growth and sequestration of CO₂ in woody and foliar biomass.
- Indirectly, by lowering the demand for energy and reducing CO₂ emissions from the consumption of natural gas and the generation of electric power.

Stormwater Management & Water Quality

Trees and forests improve and protect the quality of surface waters, such as creeks and rivers, by reducing the impacts of stormwater runoff through:

- Interception
- Increased soil capacity and infiltration rate
- Reduction in soil erosion

Trees intercept rainfall in their canopy, which acts as a mini-reservoir (Xiao et al, 1998). During storm events, this interception reduces and slows runoff. In addition to catching stormwater, canopy interception lessens the impact of raindrops on barren soils. Root growth and decomposition increase the capacity and rate of soil infiltration by rainfall and snowmelt (Xiao et al, 1998). Each of these processes greatly reduces the flow and volume of stormwater runoff, avoiding erosion and preventing sediments and other pollutants from entering streams, rivers, and lakes. Urban stormwater runoff is a major source of pollution for surface waters and riparian areas, threatening aquatic and other wildlife as well as human populations. Requirements for stormwater management are becoming more stringent and costly. Reducing runoff and incorporating urban trees in stormwater management planning have the added benefit of reducing the cost of stormwater management, including the expense of constructing new facilities necessary to detain and control stormwater as well as the cost of treatment to remove sediment and other pollutants.



Energy Savings

Urban trees and forests modify climate and conserve energy in three principal ways:

- Producing shade for dwellings and hardscape reduces the energy needed to cool the building with air conditioning (Akbari et al, 1997)
- Tree canopies engage in evapotranspiration, which leads to the release of water vapor from tree canopies and cools the air (Lyle, 1996)
- Trees in dense arrangements may reduce mean wind speed and solar radiation below the top of the tree canopy by up to ~90% compared to open areas (Heisler and DeWalle, 1988)

An urban heat island is an urban area or metropolitan area that is significantly warmer than its surrounding rural areas due to human activities.

Trees reduce energy use in summer by cooling the surrounding areas. Shade from trees reduces the amount of radiant energy absorbed and stored by hardscapes and other impervious surfaces, thereby reducing the heat island effect, a term that describes the increase in urban temperatures in relation to surrounding locations. Transpiration releases water vapor from tree canopies, which cools the surrounding area. Evapotranspiration, alone or in combination with shading, can help reduce peak summer temperatures by 2 to 9°F (1 to 5°C) (Huang et al, 1990). The energy saving potential of trees and other landscape vegetation can mitigate urban heat islands directly by shading heat-absorbing surfaces, and indirectly through evapotranspiration cooling (McPherson, 1994). Individual trees through transpiration have a cooling effect equivalent to two average household

central air-conditioning units per day or 70 kWh for every 200 L of water transpired (Ellison et al, 2017). Studies on the heat island effect show that temperature differences of more than 9°F (5°C) have been observed between city centers without adequate canopy cover and more vegetated suburban areas (Akbari et al, 1997).

Trees also reduce energy use in winter by mitigating heat loss, where they can reduce wind speeds by up to 50% and influence the movement of warm air and pollutants along streets and out of urban canyons. Urban canyons are streets flanked by dense blocks of buildings, affecting local conditions, such as temperature, wind, and air quality. By reducing air movement into buildings and against conductive surfaces (e.g., glass and metal siding), trees reduce conductive heat loss from buildings, translating into potential annual heating savings of 25% (Heisler, 1986).

Three trees properly placed around the home can save \$100–\$250 annually in energy costs. Shade from trees significantly mitigates the urban heat island effect - tree canopies provide surface temperature reductions on wall and roof surfaces of buildings ranging from 20–45°F and temperatures inside parked cars can be reduced by 45°F. Reducing energy use has the added bonus of reducing carbon dioxide (CO₂) emissions from fossil fuel power plants.

★ Introduction

Health, Aesthetic, & Socioeconomic Benefits

Exposure to nature, including trees, has a positive impact on human health and wellness through improvements in mental and physical health, reductions in crime, and academic success.

A study of individuals living in 28 identical high-rise apartment units found residents who live near green spaces had a stronger sense of community and improved mental health, coped better with stress and hardship, and managed problems more effectively than those living away from green space (Kuo, 2001). In a greener environment, people report fewer health complaints (including improved mental health) and more often rate themselves as being in good health (Sherer, 2003). Other research has revealed lower incidence of depressive symptoms in neighborhoods with greater access to green space (Jennings & Gaither, 2015).

Trees shade impervious surfaces and prevent the sun's rays from hitting them, thus reducing heat storage and later release, which contribute to the urban heat island effect. Tall trees that create a large shaded area are more useful than short vegetation. Trees also contribute to cooler temperatures through transpiration, increasing latent heat storage (the sun's energy goes to convert water from its liquid to vapor form) rather than increasing air temperature (sensible heat). According to a study conducted by the Nature Conservancy, it is estimated that trees have the potential to reduce summer maximum air temperatures by 0.9 to 3.6° F. Trees help to address public health concerns for both heat and air quality. Globally, an annual investment of \$100 million in planting and maintenance costs would

give an additional 77 million people a 1° C (1.8° F) reduction in maximum temperatures on hot days (McDonald et al, 2016).

Several studies have examined the relationship between urban forests and crime rates. Park-like surroundings increase neighborhood safety by relieving mental fatigue and feelings of violence and aggression that can occur as an outcome of fatigue (Planning the Urban Forest: Ecology, Economy, and Community Development, 2009). Research shows that the greener a building's surroundings are, the fewer total crimes. This is true for both property crimes and violent crimes. Landscape vegetation around buildings can mitigate irritability, inattentiveness, and decreased control over impulses, all of which are well established psychological precursors to violence.

Residents who live near outdoor greenery tend to be more familiar with nearby neighbors, socialize more with them, and express greater feelings of community and safety than residents lacking nearby green spaces (Planning the Urban Forest: Ecology, Economy, and Community Development, 2003). Public housing residents reported 25% fewer domestic crimes when landscapes and trees were planted near their homes (Kuo, 2001). Two studies (one in New Haven, CT and the other in Baltimore City and County, MD) found a correlation between increased tree coverage and decreased crime rates, even after adjusting for a number of other variables, such as median household income, level of education, and rented versus owner-occupied housing in the neighborhoods that were studied (Gilstad-Hayden et al, 2015; Troy et al, 2012).

A 2010 study investigated the effects of exposure to green space at school on the academic success of students at 101 public high schools in southern Michigan (Matsuoka, 2010). The study found a positive correlation between exposure to nature and student success measured by standardized testing, graduation rate, percentage of student planning to go to college, and the rate of criminal behavior. This trend persisted after controlling for factors such as socioeconomic status and race or ethnicity. Conversely, views of buildings and landscapes that lacked natural features were negatively associated with student performance.



If a bald cypress were planted near a building and lived for at least 20 years, it would have sequestered 544 lbs of CO₂(subscript).
- i-Tree Planting

★ URBAN FOREST FACT



Wildlife

Trees provide important habitat for birds, insects (including bees), and other animal species. Their greatest contributions include:

- Preservation and optimization of wildlife habitat
- Natural corridors for increased movement and dispersal

Furthermore, trees and forest lands provide critical habitat (for foraging, nesting, spawning, etc.) for mammals, birds, fish, and other aquatic species. Trees can offer pollinators a valuable source of flowering plants. With an array of flowering trees that provide pollen and nectar in the urban forest, bees are provided with additional food sources. Increasing tree species diversity and richness contributes to greater numbers of bird species among urban bird communities (Pena et al, 2017). Wooded streets potentially function as movement corridors, allowing certain species—particularly those feeding on the ground and breeding in trees or tree holes—to fare well by supporting alternative habitat for feeding and nesting (Fernandez-Juricic E. 2001). Greater tree density also contributes to bat activity in urban environments and improves outcomes for both birds and bats (Threlfall et al, 2016).

Restoration of urban riparian corridors and their linkages to surrounding natural areas has facilitated the movement of wildlife and dispersal of flora (Dwyer et al, 1992). Usually habitat creation and enhancement increase biodiversity and complement other beneficial functions of the urban forest. These findings indicate an urgent need for conservation and restoration measures to improve landscape connectivity, which will reduce extinction rates and help maintain ecosystem services (Haddad et al, 2015).

Soil Health

Urban soils are typically altered with man-made building materials. Although tree establishment may be difficult in highly compacted, significantly altered, or poor soils, establishing urban trees improves soil quality in numerous ways, including:

- Increased available carbon for microorganisms
- Increased soil microbial biomass
- Reduced erosion and greater water holding capacity
- Enhanced soil nutrients and organic matter
- Decreased soil compaction and soil bulk density

Trees shed leaves, branches, and root materials that subsequently decompose and incorporate nutrients and organic matter into the soil (Oldfield et al, 2014). Furthermore, tree root exudates aid in soil aggregation. Not only do these processes increase the available nutrients in the soil, but they also create habitat for beneficial soil microbes (Grayston et al, 1997). Trees also increase water infiltration rates of soil through rainfall interception and altering the physical properties of the soil (Uthappa et al, 2015).

Calculating Tree Benefits

Communities can calculate the benefits of their urban forest by using a complete inventory or sample data in conjunction with the USDA Forest Service i-Tree software tools. This state-of-the-art, peer-reviewed software suite considers regional environmental data and costs to quantify the ecosystem services unique to a given urban forest resource.

Individuals can calculate the benefits of trees to their property by using i-Tree Design. (www.itreetools.org/design)



★ What do we have?

History of Urban Forestry in Denton

Trees have always been integral to the people of Denton. The Native Americans of the region used the native post oak for medicinal purposes. The acorns produced by the trees were used as a food source (Thomas, 2009).

The 73rd Texas State Legislature designated Denton as the “Redbud Capital of Texas” in 1993 (Texas State Library and Archives Commission, 2019). In continuation of the tradition of annual celebrations of beautification and tree plantings set forth by Texas Woman’s University, Keep Denton Beautiful, Inc (KDB) began the annual Redbud Festival. This festival is regularly celebrated on National Arbor Day through events, workshops, and free tree giveaways.

The City’s first Arbor Day was in 1990. In 1991 the City received the designation as a “Tree City USA” city. Denton also received eight Tree City USA Growth Awards for demonstrating progress in its community forestry program, including environmental improvements and achieving higher levels of tree maintenance.

Keep Denton Beautiful, Inc (KDB), a nonprofit organization that engages Dentonites in projects which promote a beautiful and clean Denton, founded in 1987 (State of the Denton Urban Forest Report, 2016). The Denton Tree Initiative is among the organization’s many community improvement campaigns, in partnership with the City, which is geared towards promoting the planting of trees on private property. Since the Initiative began in 2015, KDB has planted 1,743 trees through a partnership with the City and community members. As part of

the Initiative, to engage the community KDB offers trees and educational programming through the Denton Redbud Festival, Trees Mean Business, City of Denton Tree Rebate Program, Children’s Arbor Day, Tree Your Block, and Citizen Forester (a volunteer training program).

The Tree Fund, established in 2004, is funded by developers when trees are removed for development projects, to mitigate the loss of the tree through preservation and planting efforts elsewhere in Denton.

To further support the urban forest, in 2008, the first urban forester was hired for the City.

In 2015, City Council approved \$350,000 for a series of tree plantings. The plantings were so well received by the community that the Council then expanded the funding to allow for an additional 535 trees to be planted along existing trails and City maintained properties (Newsletter of the ISA Texas Chapter, 2016). As a result of these plantings the City has received Community Forestry Awards in 2016 and 2018 from the Texas AM Forest Service and the Texas Chapter of the International Society of Arboriculture. In total, approximately 1,510 trees were planted because of the increase in funding. In 2016, the City, in partnership with Preservation Tree, the Texas Tree Foundation and Plan-It Geo, conducted an i-Tree Eco assessment, which resulted in the publication of the 2016 State of Denton Urban Forest Report.

Post Oaks & Development

Sometimes called the “Royal Oak”, this native species is the predominant species of the Dallas Fort Worth Metropolitan Area. It was noted by early European explorers that the post oak was a major species in the Post Oak Savannah Region of Texas (The Post Oaks, 2019). Post oak (*Quercus stellata*) are a slow-growing oak which produce a dense wood, which historically has been used as fence posts and railroad ties, hence the name (Turner, 2010).

The clay nutrient deficient soils and high heat of North Texas make the region a challenging place for many species of trees to grow. Post oak are uniquely well-adapted to the region with heat tolerance, low water requirements, and resistance to decay (Stransky, n.d.). Post oak trees provide habitat for nesting birds, as well as, provide acorns, which are a valuable food source for wildlife including wild turkey, white-tailed deer, squirrels, and other animals (Stransky, n.d.).

In Denton, post oak trees are a valued part of the urban forest. Around the year 2003, the Tree Preservation Ordinance was established in response to the removal of mature post oak trees after ground was broken on a new development. Following this ordinance, a tree committee was created to be an advisory group to review ordinances.

On the University of North Texas campus there are over 3,000 post oak trees. The campus is actively undergoing tree preservation efforts to preserve the trees (Post Oak Tree Preservation at UNT, 2018).

In recent years, there has been a notable decline of post oak, especially in urban areas, in North Texas (Texas Agriculture Daily, 2016). Symptoms reported to Texas Extension include: rapid chlorosis and necrosis throughout the entire crown, dead tree leaf retention, and groups of dead or dying trees (McBride and Appel, 2019). While, the death of these trees appeared to be rapid decline, Texas Extension believe that symptoms are likely observable months before the collapse of a tree and suggest that numerous environmental factors are contributing to the decline, including the 2011 drought and unseasonal flooding which promotes certain outbreaks of diseases and pests, and problems associated with urban development (McBride, 2019).

Post oak have shallow root systems which make the trees particularly sensitive to soil compaction, drainage changes, and soil disturbance (Gilman and Watson, 1994). Construction can be especially impactful on a root system, through excavation, compaction from heavy equipment, soil grade changes, and drastic changes in soil drainage.

To mitigate the impact of construction activities on post oak, prevention and planning are critical for protecting this sensitive species. For any type of construction (new sidewalks, driveways, remodeling, updates to underground utilities, etc.), a certified arborist should be consulted during the design and planning phases to determine whether the tree may withstand the impacts of the given project or if alterations to design can be made to avoid impacts.

Wildfire

Wildfires in Texas may not garner the same media attention that California or other western states receive, but wildfires are not an uncommon occurrence. As recent as 2018, according to the Texas A&M Forest Service, 894 fires were fought (Dawson, 2018). Drought in 2011, spurred one of Texas's worst years for fire, with 3,312 fires fought by the Texas A&M Forest Service, and the infamous Bastrop County Complex fire, the most destructive wildfire in Texas History (Texas Parks & Wildlife, n.d.). Denton County had a 200-acre fire flare up in Flower Mound in 2018 but was quickly brought under control (Associated Press & Kera News, 2018).

The occurrence of a wildfire is influenced by the current climatic conditions (temperature, humidity, wind) other environmental factors such as the type of surrounding vegetation, fuel structure and moisture content. Much of the Western United States experiences hot, dry summers, and communities are adjacent to forested areas that are adapted to wildfires. The Wildland Urban Interface (WUI) describes a transition zone where homes are located on the edge of fire prone areas. There is an increased risk of personal injury or property damage resulting from a wildfire in the WUI.

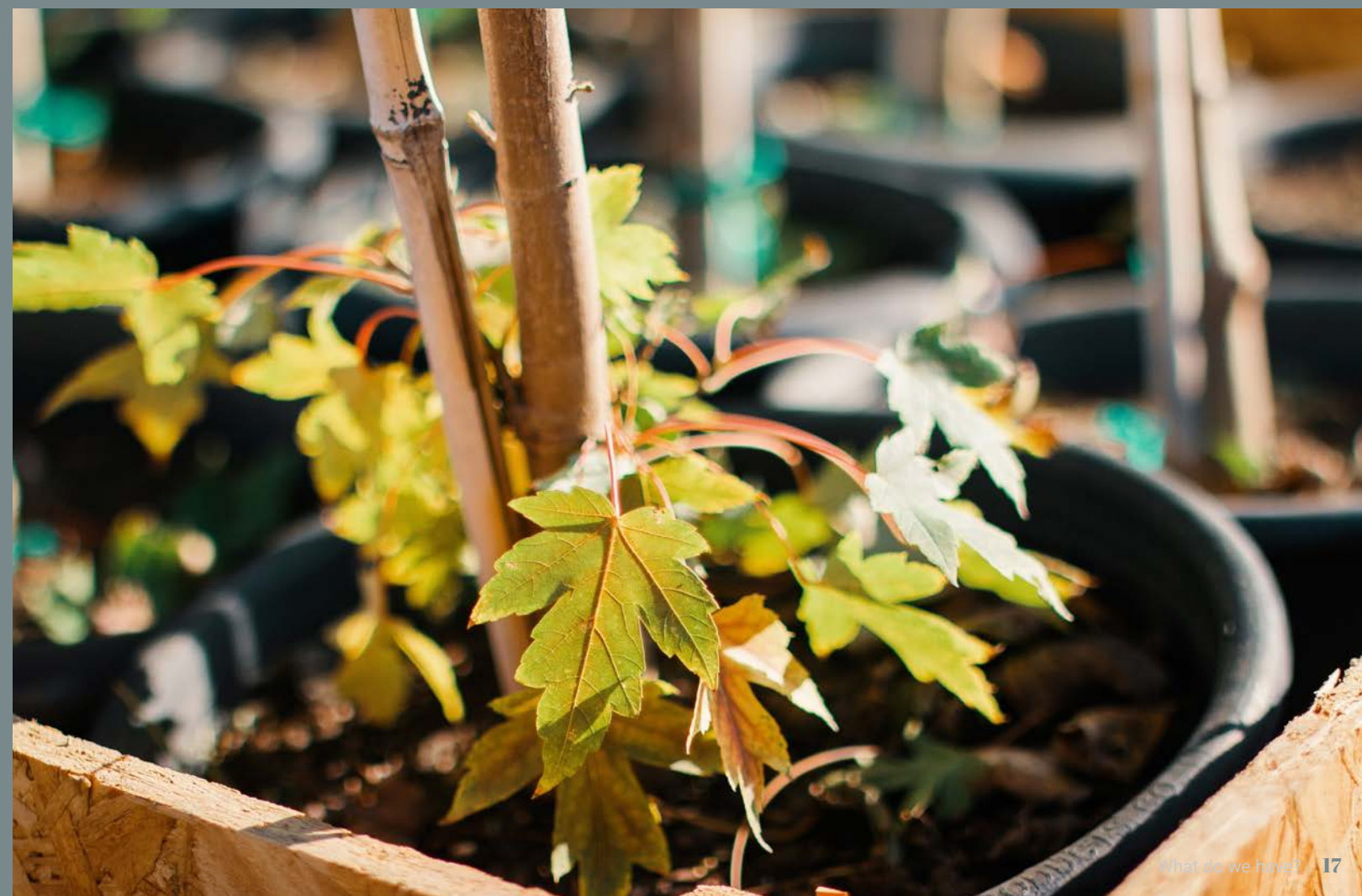
Texas A&M Forest Service has an online Texas Wildfire Risk Assessment Portal, which has interactive mapping, which provides members of the public to review their communities risk of wildfire, the Wildland Urban Interface (WUI) present within their community, Wildfire Ignition Density, and a WUI Response Index. The mapping features indicate that Denton, like many other parts of the state, have areas within the City limits with heightened vulnerabilities to fire.

To have a more fire adapted community, there must be support to locate WUI areas at risk of wildfire and engage in risk reduction activities (Cooke et al, 2016). In 2012, less than 10% of communities at risk of fire had a Community Wildfire Protection Plan (CWPP) in place (Jakes et al, 2012). Whether preparing by creating a CWPP or other community planning, the steps outlined need to be in the context of the community, consider the resources available, and generate a network of support for implementation of best management practices (Jakes et al, 2012).

To better mitigate the risk of wildfire in communities in Texas, Texas A&M Forest Service has mitigation and preparedness programs to educate and assist communities on managing their wildfire risk. Texas A&M Forest service have WUI specialist that work with community leaders to develop detailed Community Wildfire Protection Plans.

Drought

Drought conditions will inevitably occur in Denton. Therefore, soil moisture should be monitored around trees in order to ensure adequate moisture. To support tree health, mature trees should be watered one to two times per week in the summer depending on the soil type (sandy soils require more frequent watering than clay soils). Newly planted trees should be watered more often (Clatterbuck and Tankersley, n.d.). Every time a newly planted tree is watered, it should receive 10-20 gallons of water depending on the size of the root ball.





★ What do we have?

Urban Forest Resource

The development of the Plan included a review of the 2016 State of the Denton Urban Forest Report, which included an urban tree canopy assessment and i-Tree Eco analysis. Both assessments included an assessment of trees on both public and private property, as there is no inventory of publicly managed trees.

Tree Canopy

Tree canopy is the layer of leaves, branches, and stems of trees and other woody plants that cover the ground when viewed from above. Understanding the location and extent of tree canopy is critical to developing and implementing sound management strategies that will promote the smart growth and resiliency of Denton’s urban forest and the invaluable services it provides. A tree canopy assessment provides a bird’s-eye-view of the entire urban forest and includes consideration of tree canopy along with other primary land cover, including impervious surface, bare soils, and water. This information helps managers better understand tree canopy in relation to other geospatial data, including:

- Distribution of tree canopy within the community
- Geopolitical patterns in canopy distribution
- Identification of potential planting areas

The analysis does not distinguish between trees on public and private property since the benefits of trees extend beyond property lines. The information can be used to explore tree canopy in conjunction with other available metrics, including geography, land use, and community demographics. This data also establishes a baseline for assessing future change.

HISTORIC CHANGE

The State of the Denton Urban Forest report (2016) analyzed canopy cover change between 2008 (20.4%) and 2014 (22.6%). During this time canopy cover increased from 20% to 23%. It increased again between 2014 and 2018 from 23% to 28%.

While the change in canopy cover suggests that trees grew significantly over that period, much of the changes in canopy cover are more likely attributed to the annexation of forested land within the City. Development continues to threaten existing trees and has reduced the overall canopy cover in the developed areas of the City. Growth of tree canopy cover will likely be unable to keep up with the rate of development and those land use zones identified as undeveloped land are an area where canopy cover could be heavily impacted.

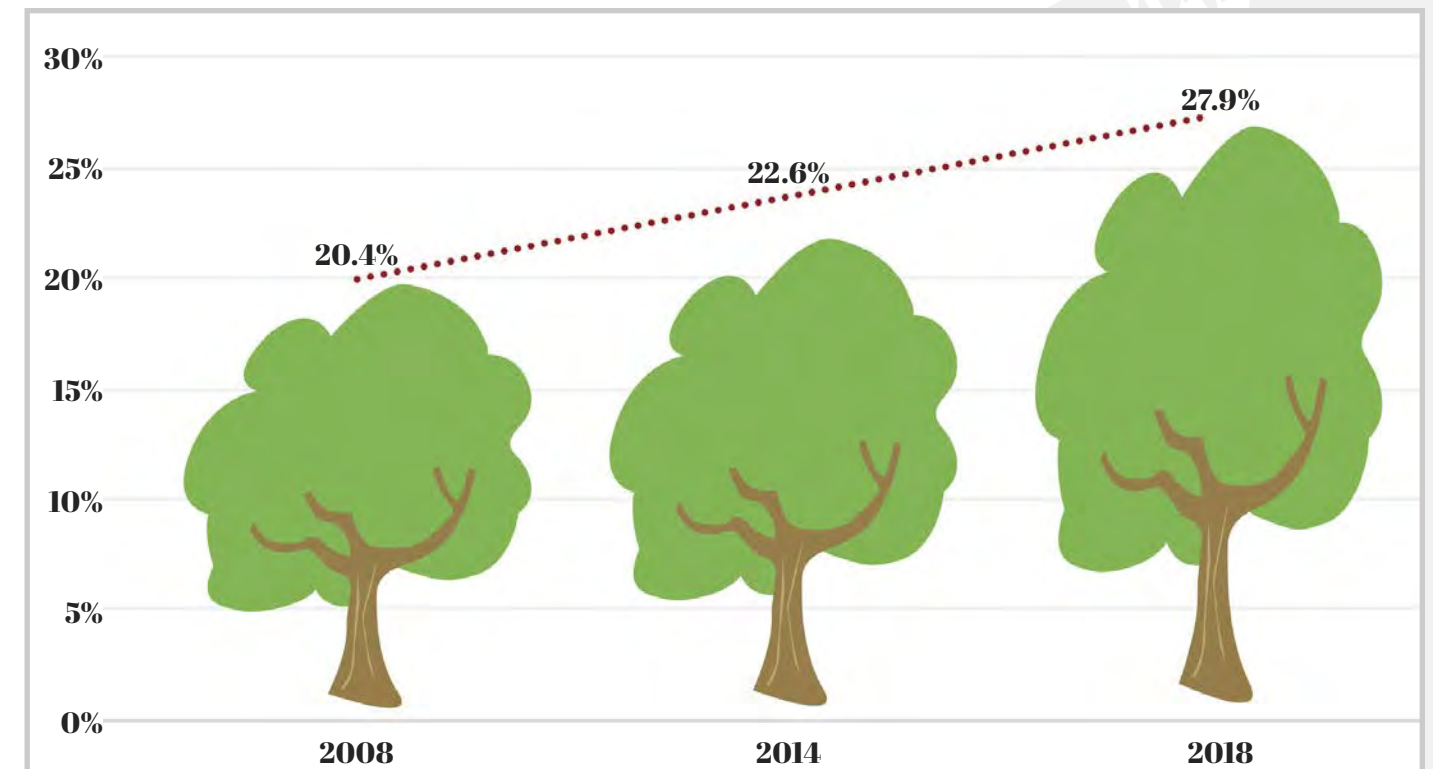


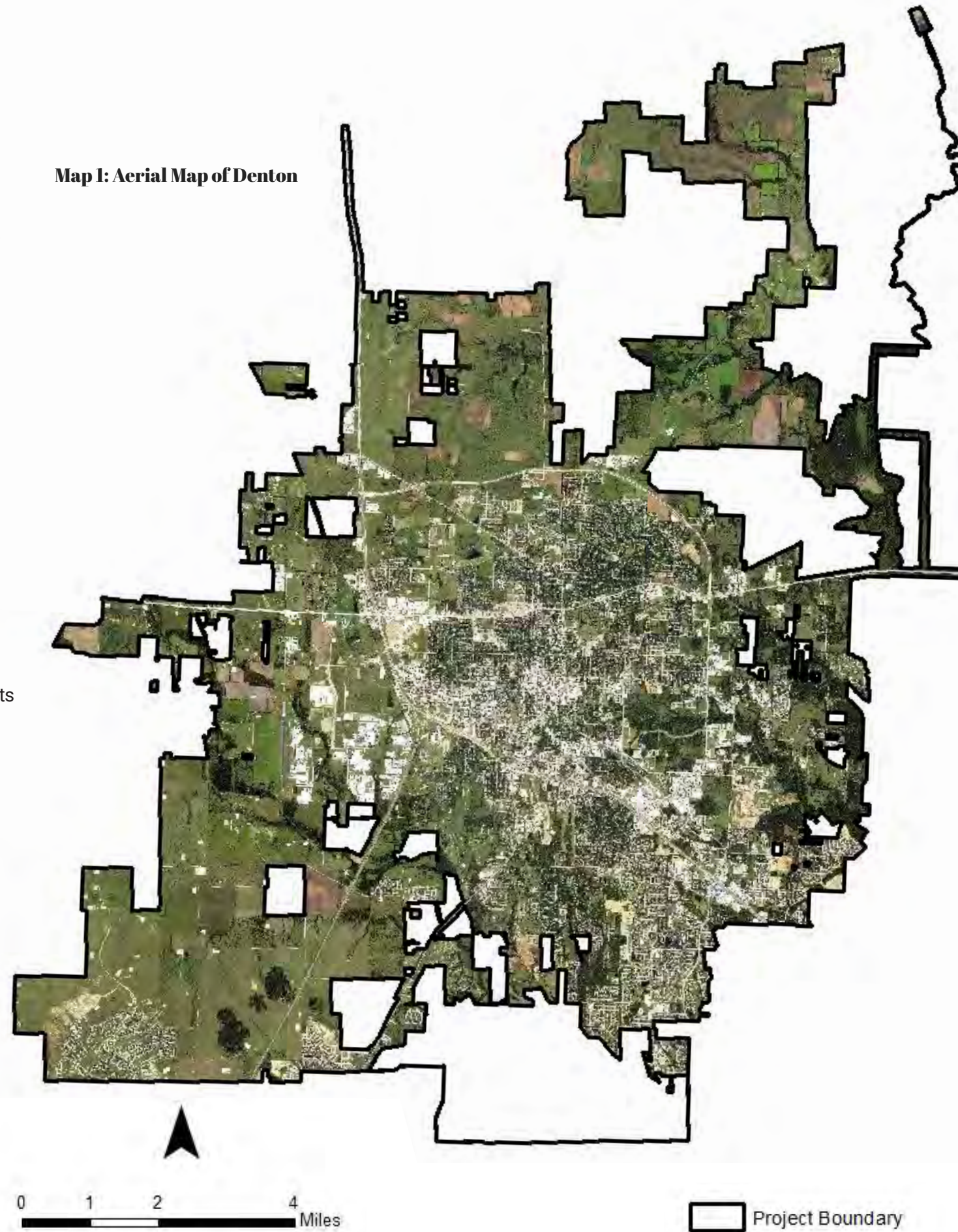
Figure 1: Historic Change in Canopy Cover in Denton from 2008 to 2018

LAND COVER SUMMARY

Denton encompasses over 116 square miles (74,492 acres). According to the 2016 State of the Denton Urban Forest Report, Denton has 22,540 acres of tree canopy or 28% of the overall land cover. The following characterizes land cover in Denton:

- 45% (33,321 acres) low-lying vegetation
- 14% (10,506 acres) impervious surface, including roads, parking lots, and structures
- 17% (7,394 acres) bare soil
- 1% (730 acres) open water
- 38,028 possible planting acres to achieve a maximum of 52% canopy cover
- 458,000 tons of stored carbon in woody and foliar biomass of trees
- \$7.2 million in total annual environmental benefits provided by both public and private trees

Map I: Aerial Map of Denton





★ What do we have?

TREE CANOPY BY LAND USE

Canopy cover can vary widely across different land use. In Denton, single-family residential areas have the highest level of canopy cover among land use designations with 45% canopy cover. Undeveloped land has a canopy cover of 38%, followed by a 35% canopy cover for parks and open space. In contrast, commercial land use designations have a canopy cover of 12%.

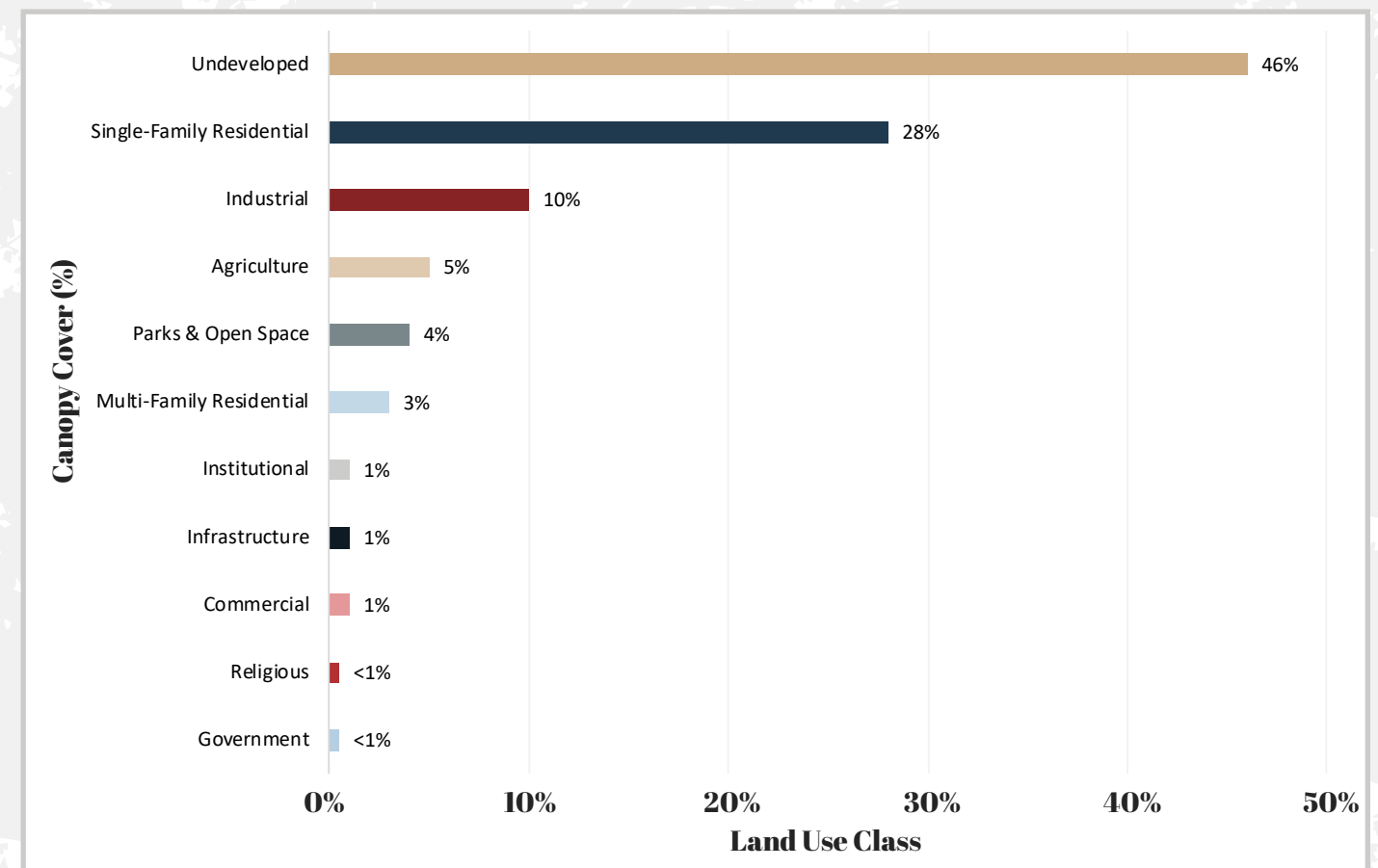


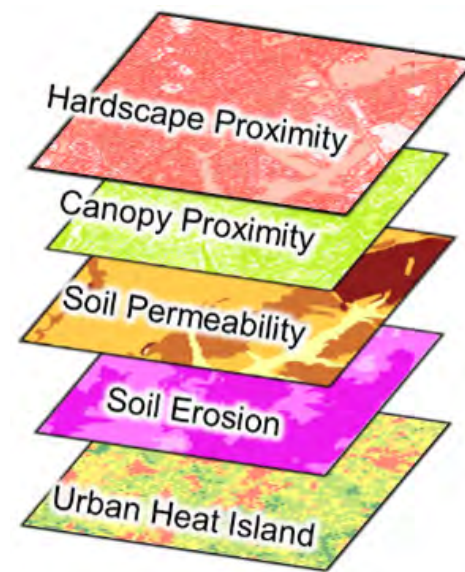
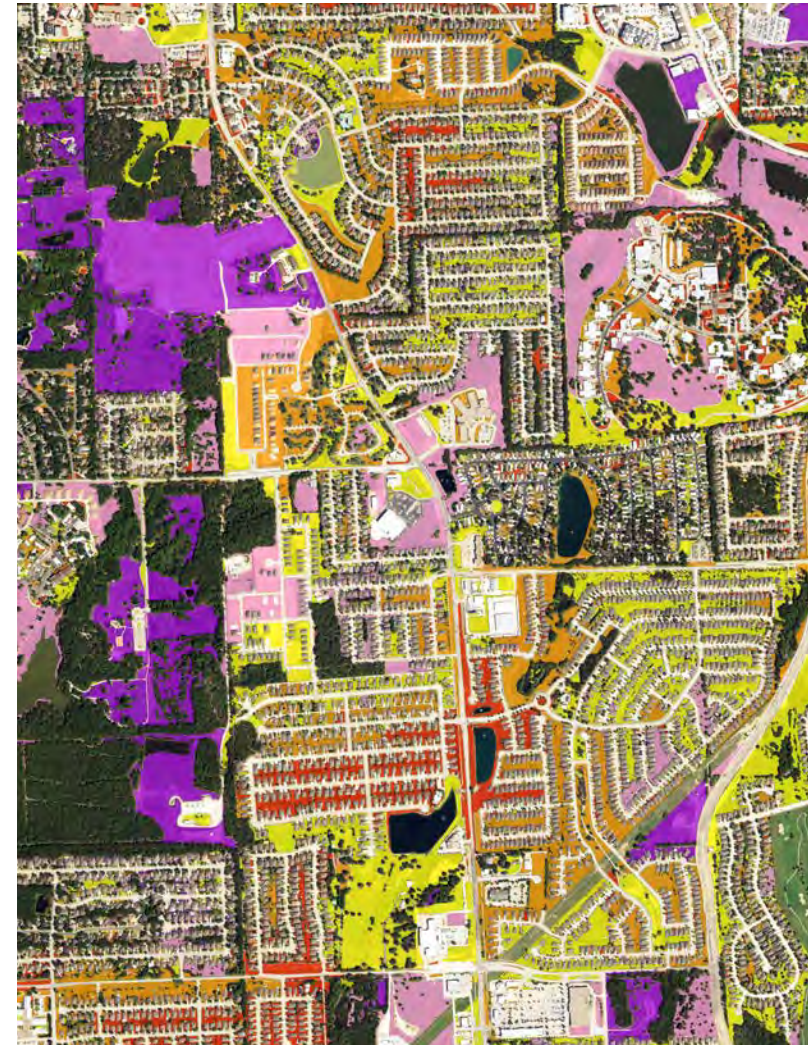
Figure 2: Difference in Canopy Cover by Land Use

PLANTING PRIORITY

The planting priority analysis considered site design and environmental factors, including proximity to hardscape, canopy fragmentation, soil permeability, slope, and soil erosion factors to prioritize planting sites on both public and private property for the greatest potential return on investment. Potential plantable areas can be determined by excluding pervious areas that are unsuitable for planting (e.g., agricultural fields and sports fields) and including impervious areas where trees could feasibly be added (parking lot islands, along sidewalks, and near road edges). The analysis identified an estimated 32,009 acres on public and private land where additional trees could be planted in Denton, where 1,796 acres are high or very high priority planting areas. Site visits are necessary to determine suitability as well as the actual number of planting sites.

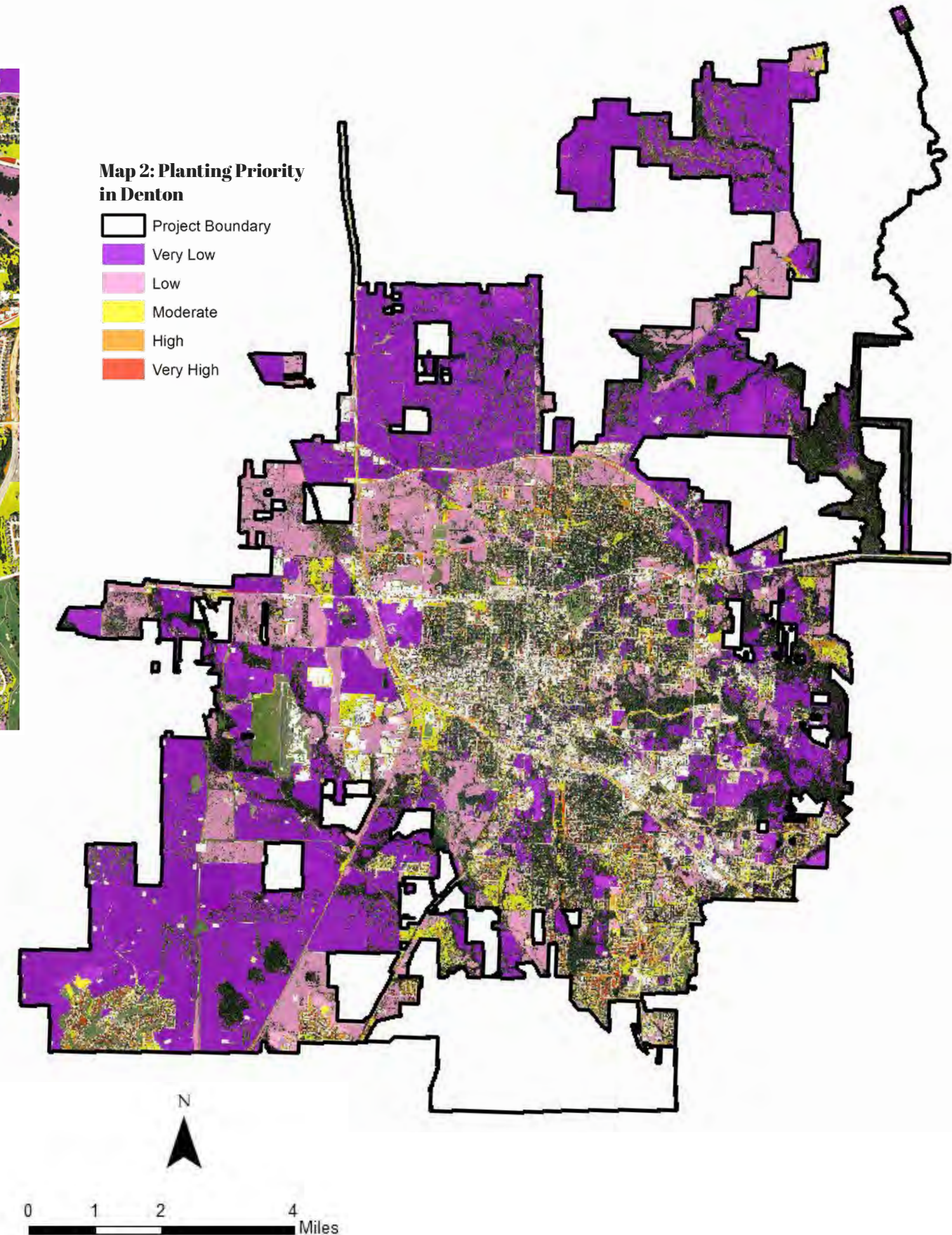
This analysis provides a snapshot of current conditions. Current canopy cover in Denton is approximately 28%. If all available planting sites were planted, the potential canopy cover could be as high as 87%. However, it is important to note that this estimate for a potential canopy cover does not account for planned development. Therefore, the actual potential canopy cover is likely much lower. Furthermore, the current canopy cover, combined with the estimated potential, can assist in establishing a realistic canopy cover goal.

While available planting sites may ultimately be planted over the next several decades, the trees that are planted should be planned for areas of greatest need and where they will provide the most benefits and return on investment. Further analysis could identify areas where trees and other vegetation could help reduce the effects of urban heat islands, reduce stormwater runoff, and increase equitable distribution of canopy across the City and provide benefits to currently underserved areas.



Map 2: Planting Priority in Denton

-  Project Boundary
-  Very Low
-  Low
-  Moderate
-  High
-  Very High



★ What do we have?

SPECIES DIVERSITY

Maintaining species diversity in an urban forest is essential. Dominance of any single species or genus can have detrimental consequences in the event of storms, drought, disease, pests, or other stressors that can severely affect a public tree resource and the flow of benefits and costs over time. Catastrophic pathogens, such as Dutch elm disease (*Ophiostoma ulmi*), emerald ash borer (*Agrilus planipennis*), Asian long-horned beetle (*Anoplophora glabripennis*), invasive shot hole borer (*Euwallacea sp.*), and sudden oak death (*Phytophthora ramorum*) are some examples of unexpected, devastating, and costly pests and pathogens that highlight the importance of diversity and the balanced distribution of species and genera.

In light of significant pests and diseases, many cities are opting to increase diversity to improve resilience. The widely used 10-20-30 rule of thumb states that an urban tree population should consist of no more than 10% of any one species, 20% of any one genus, and 30% of any one family (Clark et al, 1997). While this rule does ensure a minimum level of diversity, it may not encourage enough genetic diversity to adequately support resilience. Therefore the 10-20-30 rule should be considered a minimum goal. Managers should always strive to increase the range of representation among species and genera within an urban forest.

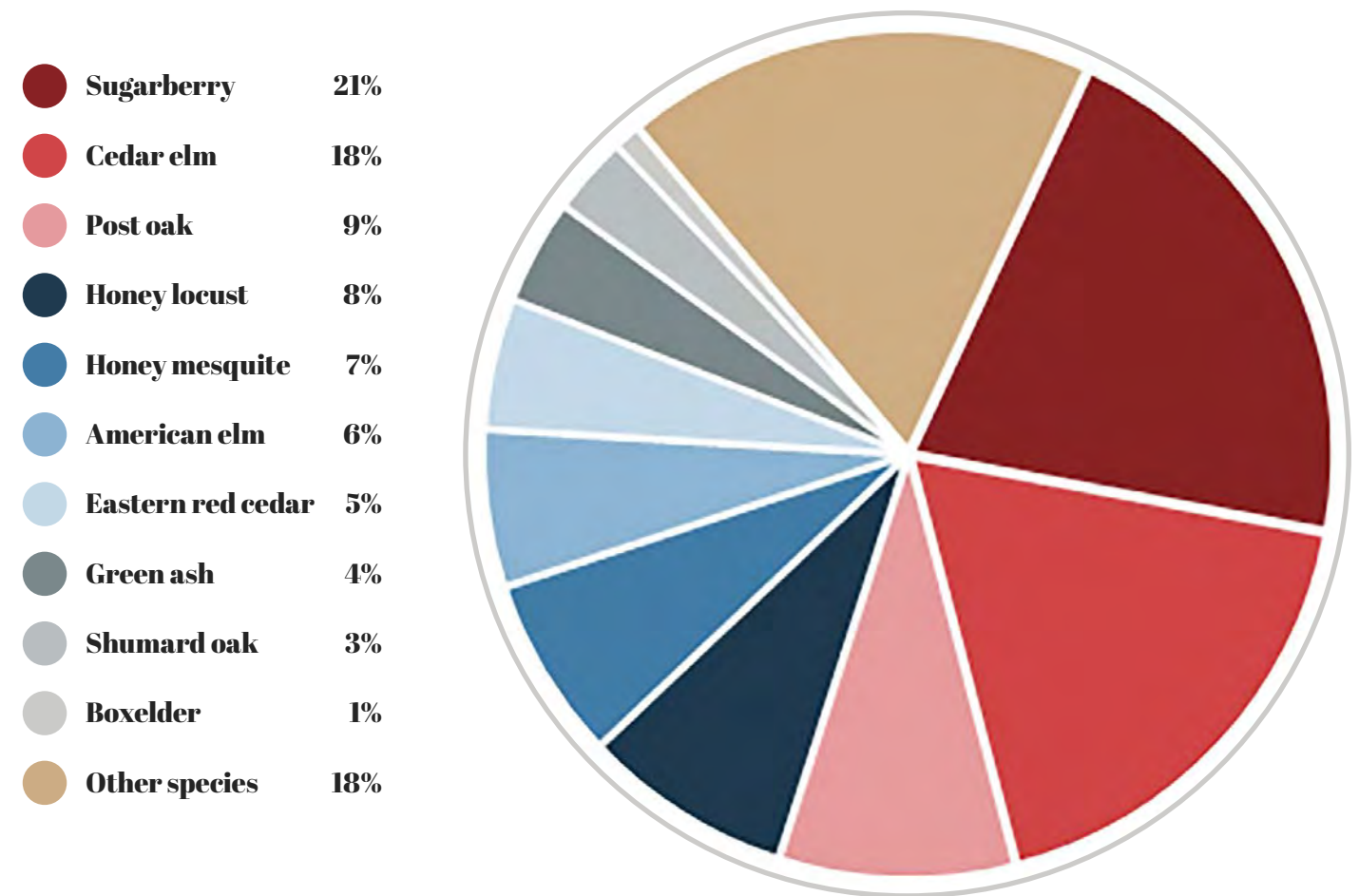
An i-Tree *Eco* assessment was conducted as part of the 2016 study, which estimated that the most prevalent species in Denton, for both private and public property, is sugarberry (*Celtis laevigata*, 21%) followed by cedar elm (*Ulmus crassifolia*, 18%). Both species exceed the general rule that no single species should represent 10% of the urban forest resource (Figure 2).

Although cedar elms exhibit some resistance to Dutch elm disease (DED) compared with American elm (*Ulmus americana*), cedar elm is still susceptible to this devastating disease (Sallee, 2011). In the event of infestation of DED, Denton could potentially lose 24% of the urban forest (cedar elm and American elm).

While the exact species distribution of Denton’s urban forest is unclear, oak species are well represented in the community and may be an overrepresented genus in the overall community, possibly in excess of 20% of the overall population. Oak wilt, an infectious vascular disease caused by the fungus *Ceratocystis fagacearum*, is one of the most destructive tree diseases in the United States and is considered an epidemic in central Texas (Texas A&M Forest Service, 2019a). Both red and white oak species are susceptible to this disease (Denton has both types) and could potentially impact a significant portion of Denton’s community trees.

The i-Tree *Eco* assessment estimates that of the 46 species observed in the 250 plot samples, only two species (less than 1% of the overall population) were noted as being invasive to Texas, including: chinaberry (*Melia azedarach*), and Chinese tallow tree (*Sapium sebiferum*) (Texas Department of Agriculture, 2013). In contrast, most of Denton’s tree species, an estimated 96%, are native to the State of Texas.

Figure 2: Estimated Species Distribution



RELATIVE AGE DISTRIBUTION

Age distribution can be approximated by considering the DBH range of the overall inventory and individual species. Trees with smaller diameters tend to be younger and those with larger DBH are usually more mature. Age distribution can be a key indicator of the needs of an urban forest. If a forest is dominated by more mature trees, these trees tend to need more maintenance to preserve and may be at risk from aging out of the canopy. Though these trees tend to provide the most benefits in terms of canopy coverage, it is important to have sufficient trees in younger age categories to replace aging trees. Having a properly distributed forest by age is essential to preserving the future of Denton's canopy.

The urban forest's age distribution is a key indicator and driver of maintenance needs. With Denton's public tree resource, the age distribution reveals that 88% of trees are 12-inches or less DBH and almost 2% of trees are larger than 24-inches DBH (Figure 3).

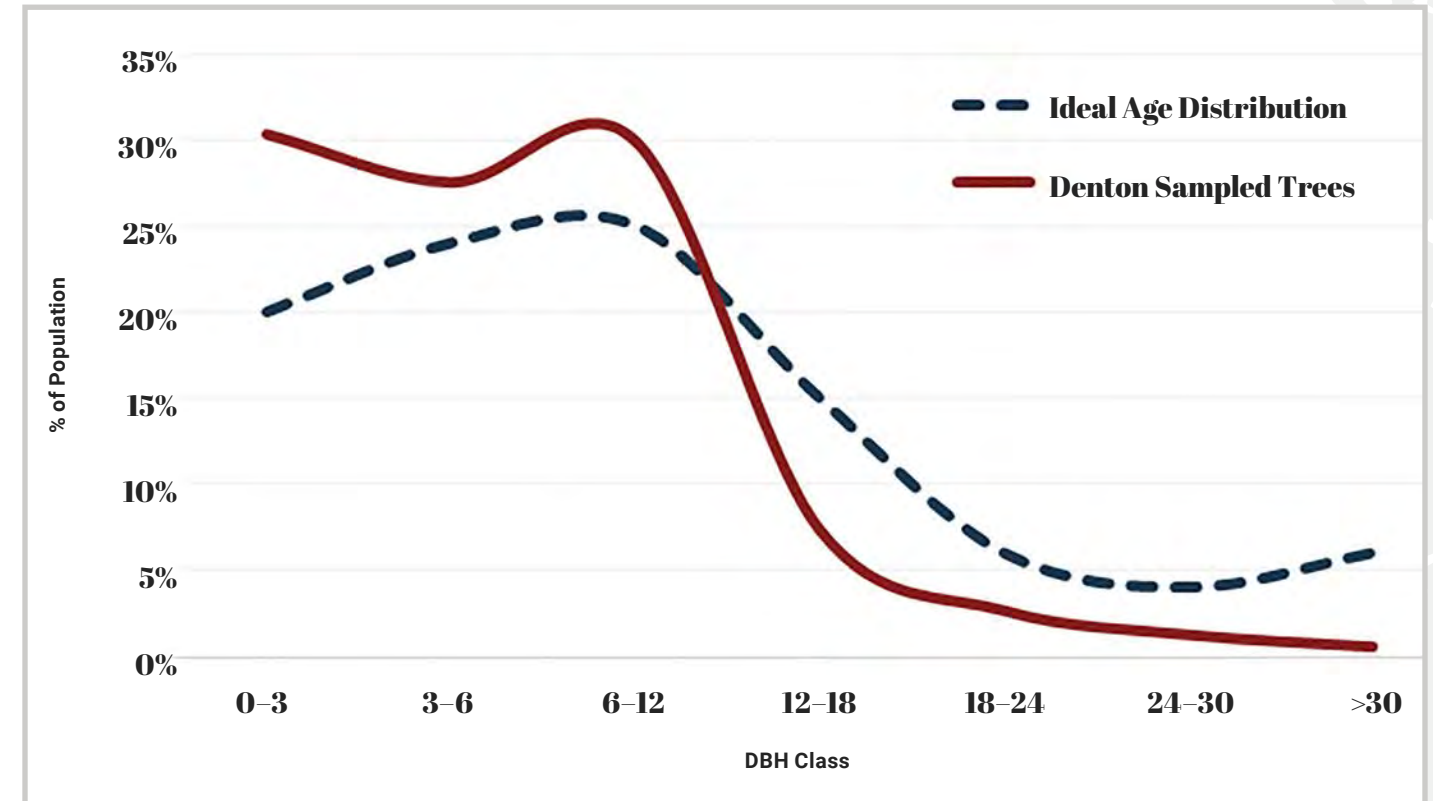
Young trees are an essential component of the longevity of Denton's urban forest, as 58% of sampled trees were measured at less than 6-inches DBH. Some of these trees young trees may be medium or large-stature tree species which is a positive indicator for future benefits from the urban forest, since large shade trees typically provide more shade, pollutant uptake, carbon sequestration, and rainfall interception than small trees.

Additionally, young trees have an opportunity to benefit from structural training, the selective pruning of small branches to influence the future shape and structure of a young tree, which can prevent costly structural issues and branch failures as these young trees mature into their final size in the landscape.

Over 40% of trees in the sample were of intermediate age with a DBH between six to 24-inches. Similarly, these trees would also benefit from structural pruning. With proper care, these trees may turn into mature trees and provide significant environmental and community benefits for the City.

The sample indicates that almost 2% of the overall sampled population is comprised of trees greater than 24-inches DBH. In other words, there are fewer large mature trees in Denton when compared to younger trees. Managers have an opportunity to regularly inspect and provide routine maintenance to preserve mature trees as long as possible; allowing younger trees time to grow, so that when larger trees begin to decline the benefits provided by younger trees are optimized.

Figure 3: Age Distribution of Sampled Trees in Denton



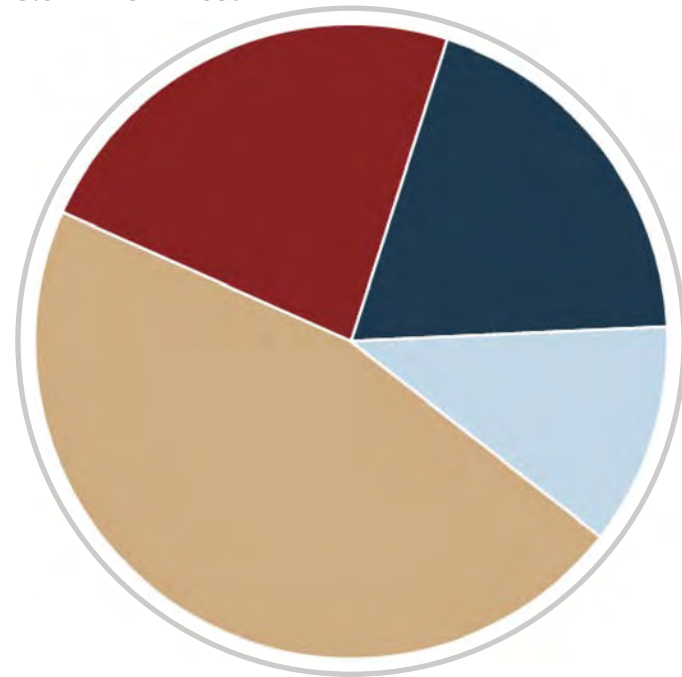
★ What do we have?





BENEFITS

The benefits provided by the urban forest are dependent upon the species, age (size), and condition of the tree population. The urban forest is the one component of urban infrastructure that has the potential to increase in value over time and with proper care.

In Denton, the estimated 3.5 million trees within the community are providing \$7.2 million in annual benefits (Figure 4). A real potential exists for urban forest benefits to substantially increase over time as Denton's young population of trees mature. Currently, this resource provides the following benefits:

Figure 4: Annual Benefits of Denton's Estimated 3.5 Million Trees



	Carbon Sequestered and Avoided	\$3,511,837	48.90%
	Energy Savings	\$1,561,304	21.74%
	Stormwater Management	\$1,350,000	18.80%
	Air Quality	\$759,000	10.57%

Air Quality

Net annual air quality improvements, as a result of decreased ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter (PM₁₀), provided by public trees are valued at \$759,000.

Energy Savings

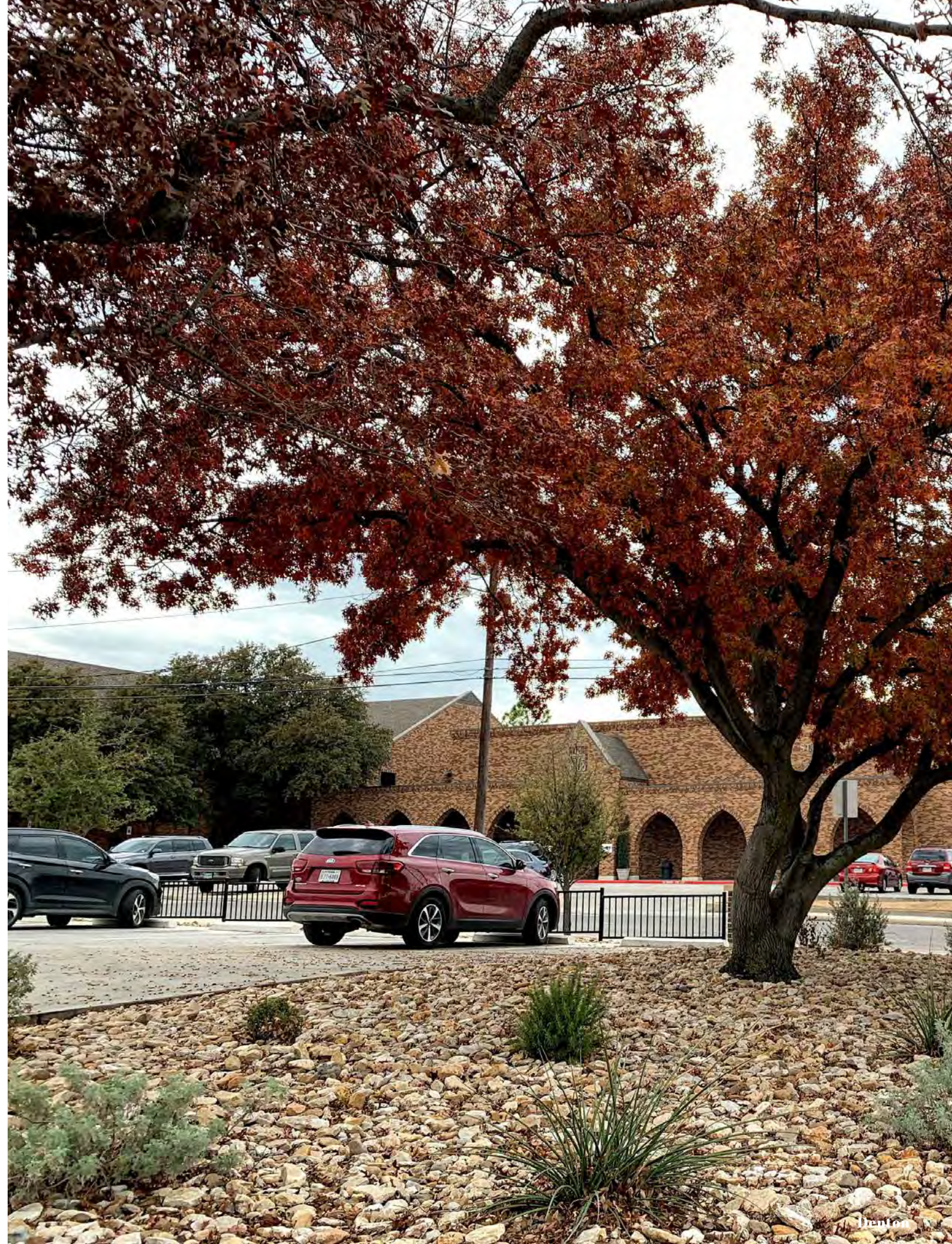
Through shading and modification of their immediate environment, Denton's public trees reduce annual electricity needs by 19,117 megawatts and natural gas use by -52,906 therms, for a total benefit of \$1.6 million.

Stormwater Management

Denton's 3.5 million trees intercept more than 151 million gallons of stormwater annually, protecting ground and surface water supplies from harmful pollutants, for a total value of \$1.3 million annually.

Carbon Reduction

By converting carbon into woody and foliar biomass, Denton's 3.5 million trees currently sequester 23,000 tons of carbon per year, valued at \$3.1 million annually. An additional 3,400 tons of CO₂ is avoided through decreased energy use, resulting in a net value of \$452,000.





The Urban Forest Program

Within the Parks and Recreation Department, the Urban Forestry Division is staffed exclusively by the Urban Forester. The Urban Forester is responsible for the following maintenance activities for street trees:

- Maintain clearance and visibility along City streets and in parks and open space
- Emergency response (clearing tree debris from parks and public property)
- Response to service requests (parks, trails, and center medians)
- Dead and hazardous tree removal
- Design review
- Tree planting
- Pest management
- Community engagement

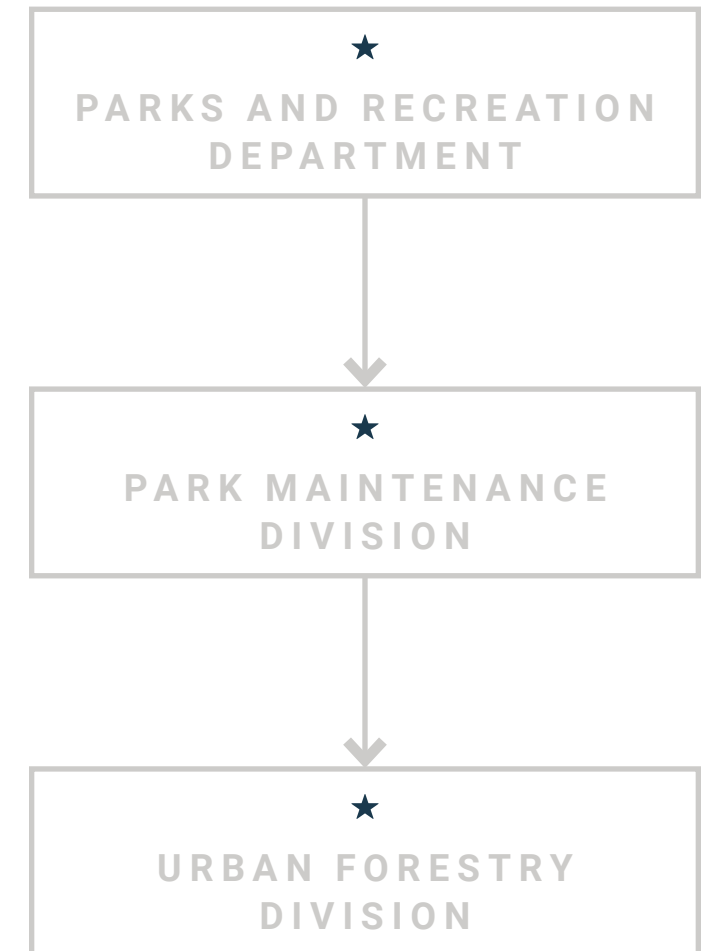
While Denton is fortunate to have a full-time Urban Forester, who is highly trained and skilled in arboriculture and urban forest management, due to lack of internal resources, most tree work is conducted by contractors on an as-needed basis. This differs from other cities within the Dallas-Fort Worth metroplex that have tree crews such as Carrollton, Dallas, Fort Worth, and Plano.

The Urban Forester regularly consults with other City Departments to find solutions for preserving existing trees in the urban landscape and to address drainage concerns. Requests to maintain clearance above streets, sidewalks, and alleyways are addressed by Community Improvement

Services. Per the Denton Development Code, pruning for clearance and visibility are the responsibility of the adjacent property owner, but this work is sometimes contracted out for trees within the right-of-way that pose safety concerns. Occasionally the Urban Forester works with the Water Service Administration to mitigate impacts from development and non-permitted activities in Environmental Sensitive Areas.

Public Works is responsible for street, sidewalk, and stormwater drainage system maintenance and in instances where trees are a source of conflict with infrastructure, the Urban Forester is asked for recommendations on how to fix or mitigate the issue. The Engineering Department communicates with the Urban Forester on Capital Improvement Projects (CIP) if trees may be impacted by the design and the Urban Forest provides suggestions on how to preserve existing trees.

The Urban Forestry Division has numerous pieces of equipment necessary for providing care to City-maintained trees. The Department has a 17-year-old bucket truck with a 90-foot boom capacity. Additionally, the Department has two chippers, both less than ten years old.





★ What do we have?

Services

CLEARANCE AND VISIBILITY

Community Improvement Services receives complaints on a regular basis about tree clearance issues. Primarily these complaints come from other City Departments. The standard of clearance that is required by the Development Code to maintain is 13.5 vertical feet over streets, 7 vertical feet above sidewalks, and 12 vertical feet above alleyways.

Pruning can affect the growth rate of a tree. When trees are young, pruning should primarily be used to promote good structure. Heavy pruning of young trees can result in structurally weak waterspouts (upright, sucker-like shoots emerging on the trunk or branches). While it is important to maintain clearance and visibility, for young or newly established trees pruning to maintain these standards may not be conducive to overall health or for promoting good structure. In such instances where a young or newly established tree is violating these standards, the Urban Forester will primarily focus on creating vertical clearance in drive lanes and maintaining clearance to allow for parked cars.

For mature trees, the Urban Forester coordinates with Community Improvement Services to address safety-related pruning or requests for tree removals. With limited funds, minimal proactive maintenance activities are primarily addressed through contractors.

EMERGENCY RESPONSE

Through coordination within the Parks Maintenance Division, tree debris in parks and other City facilities following storm events and response to immediate hazards is completed with the assistance of Park Maintenance Staff. The Streets Division addresses tree debris in streets.

TREE PLANTING

Currently, tree plantings occur through Keep Denton Beautiful, Inc. (KDB) events such as the Community Tree Giveaway, Tree Your Block events, and Arbor Day events including the annual Denton Redbud Festival, Children's Arbor Day, and the City's inaugural Texas Arbor Day in 2019. Planting incentive programs like Citizen Forester Training Program, the Tree Rebate Program, and Trees Mean Business also contribute to community tree plantings. Additional tree plantings are completed by contractors. Between 2016 and 2018, Parks and KDB planted and distributed 9,629 trees.

Through the Denton Tree Initiative, KDB started an ambitious campaign to mitigate deforestation by 12,000 trees by 2019. While the programming associated with the Initiative was successful at increasing education and engagement, the goal of planting 12,000 trees proved to be a challenge. Challenges associated with achieving the goal of planting 12,000 trees included the cost of irrigation, the overall cost to plant each tree (average cost for planting a 3-inch caliper tree was \$400), and the lack of willing participants with adequate planting space on private land.

Additionally, the Urban Forester collaborates with the City Landscape Architect and Park Maintenance Irrigation Technicians to design new park spaces and ensure proper placement, planting, and irrigation installation for all newly planted trees.

COMMUNITY ENGAGEMENT AND OUTREACH

One of Keep Denton Beautiful's main goals is to provide educational outreach and resources to teach residents about proper tree planting and care. Between 2016-2019, Keep Denton Beautiful (KDB) staff and volunteers provided outreach at 166 events, workshops, and presentations and brought educational awareness to an estimated 22,350 attendees.

During the annual Denton Redbud Festival, Keep Denton Beautiful, Inc. provides educational seminars on tree care and free or reduced cost trees for community members who attend the classes. KDB coordinates volunteer Citizen Foresters through the Community Citizen Forester Training Program, a semester-long training designed by Cross Timbers Urban Forestry Council.

Citizen Foresters attend seven full-day trainings over a six-month period and are mandated to complete a set number of tree-specific volunteer hours every year to maintain their designation. Citizen Foresters assist in various volunteer planting events in Denton. The Urban Forester is looking to expand the Citizen Forester Program to include conducting corrective pruning for park trees.

In November 2018, to celebrate Texas Arbor Day and promote the Denton Tree Initiative, KDB hosted a mini tree giveaway at the City's inaugural Heritage Festival. 100 free trees were given to Denton residents and free classes about native trees and tree care were offered.

The City of Denton and Keep Denton Beautiful promote available tree planting programs and resources by using websites, printed mailings, electronic newsletters and e-blasts, utility bill inserts, press releases, postcard mailings, social media, printed flyers and posters, outreach events, and TV ads.

To promote the Tree Rebate Program, an incentive program that provides residents with \$50 rebates for qualifying tree purchases, printed flyers, posters, and tree tags are printed and distributed to five local nurseries. In 2017, KDB staff visited these nurseries during peak sales times to collect surveys and promote the program to shoppers.

DTV

Denton has a government access channel, where residents can receive information about local happenings. Keep Denton Beautiful, Inc. promotes their annual Community Tree Giveaway and all other tree planting programs on the channel.

PEST MANAGEMENT

Similar to all urban forests, Denton's urban forest experiences pest and disease problems (Integrated Pest Management (IPM) update, 2018). As Denton is in close proximity to large urban centers and a highly mobile population, there is also a risk of future pest introductions. This, coupled with the current changes in climate, make the community vulnerable to pests and diseases. Although some diseases such as Dutch elm disease (DED) and oak wilt are not new threats to the area, they are still of significant concern. Potential pests and diseases that are of most concern to the community forest include:

Dutch elm disease

In Dutch elm disease (DED), beetle vectors carry a fungal pathogen (*Ophiostoma ulmi* and *Ophiostoma novo-ulmi*) that causes the vascular disease. The pathogen blocks the flow of water and nutrients throughout the tree, which quickly causes leaf yellowing and wilting before the tree dies. The pathogen can also move from infected individuals to conspecific neighbors through root grafts. Dutch elm disease has devastated American elm populations, killing over 40 million elm trees since its introduction into the United States in the 1930s (D'Arcy, 2000). This disease is an ongoing threat to Denton's elm populations. Prioritizing preventative measures such as regular inspections, ample watering to increase tree vigor, and pruning out dead branch material (D'Arcy, 2000) have helped maintain elms as street trees in many western communities.

Oak wilt

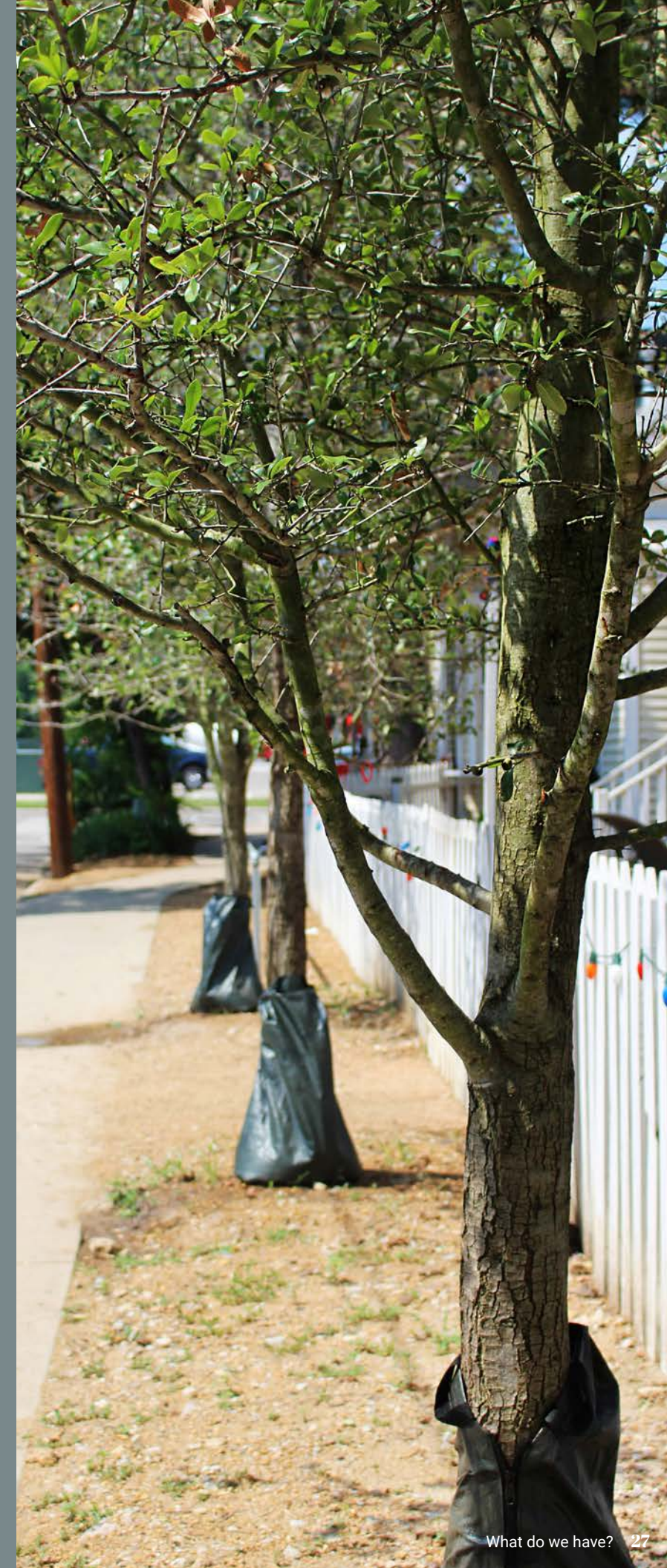
There are many overlaps between oak wilt and DED as they are both beetle vectored vascular diseases that can also be spread through root grafts. Oak wilt is caused by the fungus *Ceratocystis fagacearum*. Oak wilt is one of the most destructive tree diseases in the United States and is considered an epidemic in central Texas (Texas A&M Forest Service, 2019a). All ages and sizes of oaks can be impacted. Red oaks, including live oaks, are highly susceptible to this disease and typically die two to four weeks after infection. In contrast, white oaks are much less susceptible, and in many cases survive an infection.

Granulate ambrosia beetle

The granulate ambrosia beetle (*Xylosandrus crassiusculus*) was first detected in South Carolina in the 1970s and has since spread to multiple states, including east Texas. This beetle feeds on heartwood tissues. Secondary cankers can also form on the bark where beetle entrance and exit wounds occur. The ambrosia beetle has the potential to colonize healthy or stressed trees (Atkinson et al, 2000), and has a large hardwood host range. Known hosts in the United States include: *Acer* (maple); *Albizia* (albizia); *Carya* (hickory); *Cercis* (redbud); *Cornus* (dogwood); *Diospyros* (persimmon); *Fagus* (beech); *Gleditsia* or *Robinia* (locust); *Juglans* (walnut); *Koelreuteria* (goldenrain tree); *Lagerstroemia* (crape myrtle); *Liquidambar* (sweetgum); *Liriodendron* (tulip poplar); *Magnolia* (magnolia); *Populus* (aspen); *Prunus* (cherry); *Pyrus* (pear); *Quercus* (oak); and *Ulmus* (elm) (Cole, 2008).

Emerald ash borer

To date, the emerald ash borer (EAB; *Agrilus planipennis*) has killed hundreds of millions of ash trees making it the costliest introduced forest pest in North America (Emerald Ash Borer Information Network, 2019). EAB was documented in northeastern Texas in 2016 and was recently found north of Fort Worth. Counties nearby (Cass, Harrison, and Marion) and adjacent (Tarrant) to Denton County are under quarantine regulations that restrict the movement of infested ash wood. With the threat of EAB, it is important for Denton to avoid planting additional ash trees. All species of *Fraxinus* (ash) are susceptible to EAB.





★ What do we have?

Program Funding

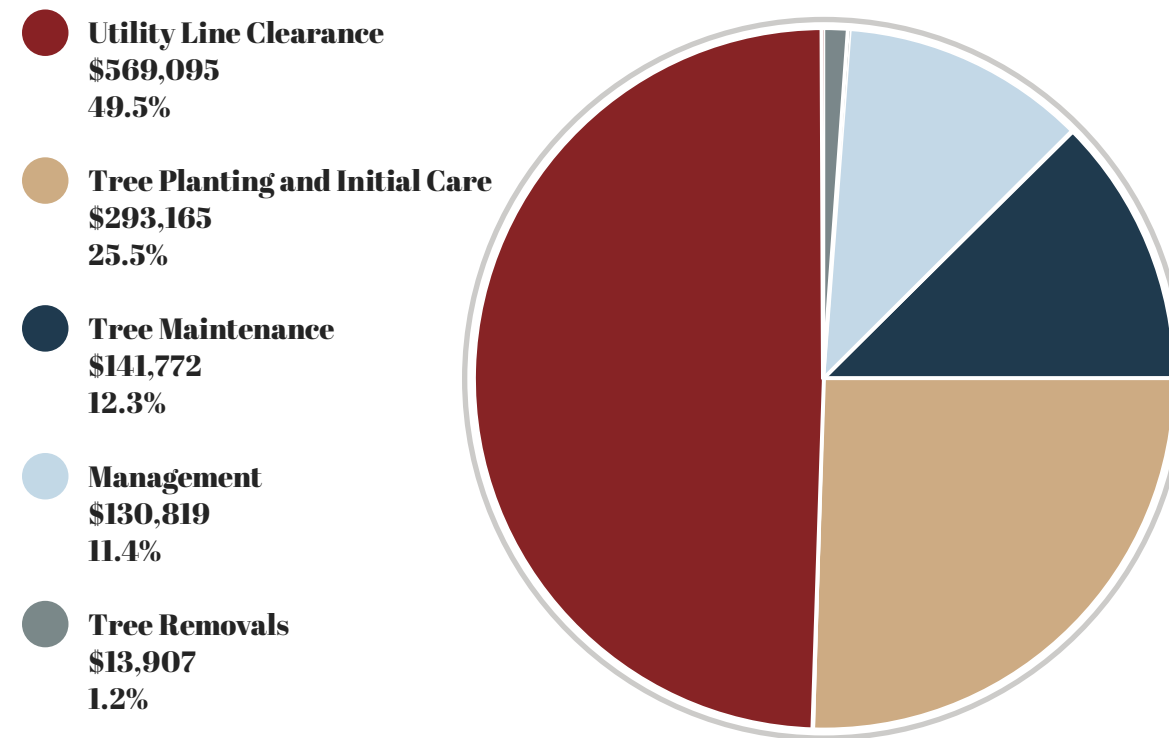
Stable and predictable funding is critical to effective and efficient management of the urban forest. Trees are living organisms, constantly growing and changing over time and in response to their environment. There are a number of factors that affect tree health and structure, including nutrition, available water, pests, disease, wind, and humidity. While it might seem like most changes to trees take a long time to occur, some specific maintenance is critical at certain stages of life. For instance, young trees benefit greatly from early structural pruning and training. Minor corrections that are simple can be applied with low costs when a tree is young. However, if left unattended they can evolve into very expensive structural issues and increase liability as trees mature (at which point it may be impossible to correct the issue without causing greater harm). Over mature trees often require more frequent inspection and removal of dead or dying limbs to reduce the risk of unexpected failure. A stable budget allows urban forest managers to program the necessary tree care at the appropriate life stage when it is most beneficial and cost effective.

Summary of Annual Funding Tree Fund

The average annual budget to care for Denton’s public trees is \$1.1 million (based on budgetary records from 2016-2018). Between 46 to 54% of funds are dedicated to maintaining utility line clearance, which is provided by Denton Municipal Electric (DME). Tree planting and initial care makes up between 25-30% of annual budgets. Contractors provide tree trimming services for trees in the public right-of-way (trees located in center medians or other areas not directly adjacent to private property), approximately \$50,000 annually. Parks receives 35 to 41% of annual funds. The remainder is divided between Planning, Community Improvement Services Capital Improvement Projects, and Keep Denton Beautiful, Inc (Figure 5).

The Tree Fund supports programming to increase and maintain the public tree resource. With estimated average deposits of \$275,000, the funds are used to purchase, plant, maintain, inventory, and plan the urban forest. In addition, they allow for preserving natural forested areas. The Tree Fund also supports Denton Tree Initiative programs such as the Tree Rebate Program, Trees Mean Business, and Tree Your Block, which are programs designed to provide or plant native and adapted tree species on private property. It also supports educational programs to educate the community residents and developers about the benefits and value of trees.

Figure 5: Funding for Denton’s Public Tree Resource, Fiscal Year 2018-2019



Regulations and Policies

Federal and State Law

ENDANGERED SPECIES ACT

Signed in 1973, the Endangered Species Act provides for the conservation of species that are endangered or threatened throughout all or within a significant portion of their range, as well as the conservation of the ecosystems on which they depend.

The listing of a species as endangered makes it illegal to “take” (i.e., harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to do these things) that species. Similar prohibitions usually extend to threatened species.

MIGRATORY BIRD TREATY ACT (MBTA)

Passed by Congress in 1918, this Act defines that it is unlawful to pursue, hunt, take, capture, kill, possess, sell, purchase, barter, import, export, or transport any migratory bird, or any part, nest, or egg or any such bird, unless authorized under a permit issued by the Secretary of the Interior.

The Migratory Bird Treaty Act can impact forestry operations during times when birds are nesting, which may delay work in order to avoid violating the MBTA.

SOLAR SHADE - TEXAS

About twenty-four states, including Texas, have solar access laws that limit Homeowner’s Associations (HOAs) from banning solar panels. These laws override the HOA contract that restricts solar installation. There are two types of solar access rights that protect a homeowner’s right to install solar: solar access laws and solar easements. Both protect property owners’ rights to harness energy from the sun but address different concerns.

In Texas, an HOA cannot legally prohibit a homeowner from installing solar on their property. While these laws protect a homeowner from being denied their right to install solar, HOAs still have the ability to place restrictions on where and how it is installed.

Texas Property Code 202.010 states that HOAs are not allowed to include or enforce provisions within their regulations, covenants, or by-laws that prohibit or restrict homeowners from installing a solar energy device. While this protects a homeowner’s right to utilize solar energy, there are still several caveats that allow HOAs to regulate the installation of solar panels in certain situations. The law also stipulates that the HOA may designate where the panels should be located on the roof (a way around that is for the homeowner to show that the designation hinders the performance of the solar panels).

Texas is quickly becoming a leader in the nation at adopting solar technologies and Denton is one of the early adopters of renewable technologies and policy within the state (SEIA, 2019). Denton, after Georgetown, is the second city in Texas to announce a goal of 100 percent renewable energy by the year 2020. This new goal updates the Renewable Denton Plan where the original goal was to use 70% renewables by the same year.

Denton’s utility company, Denton Municipal Electric (DME), is a municipally owned utility (MOU) that serves most of the City’s needs. An MOU is different from an investor owned utility (IOU) where customers have decision making power to decide where they purchase power from (Hoisch, 2019). The flexibility of a MOU combined with decreasing prices of solar and other renewable technologies (Mahajan, 2018) allows for Denton to take ownership of their utilities, diversify their sources of energy, and utilize cleaner technologies that allow for them to be a more resilient city.

The University of North Texas is also a leader of integrating renewable energy credits for parts of the Denton campus as well as the Discovery Park campus.



★ What do we have?

DENTON PLAN 2030

The Denton 2030 Plan provides a vision for the extended future of Denton. The Plan places a strong emphasis on the viability of the urban forest by defining clear goals to protect and enhance greenspace. Citizens and stakeholders consistently see Denton's tree canopy as a critical part of the future of the community. They identified the urban forest as a dynamic component that can improve resident's quality of life when considered in future planning. In this Plan, urban forests are factored into urban design principles that support sustainability and build community character, and the community goals to enhance the conservation and preservation of natural resources in Denton.

DENTON DEVELOPMENT CODE

Denton Development Code (updated April 2019) has 7 subchapters that provide considerations for trees or forested areas, including: Subchapter 2, Subchapter 3, Subchapter 4, Subchapter 6, Subchapter 7, Subchapter 8, and Subchapter 9.

Subchapter 2: Administration and Procedures

Subchapter 2 provides alternative plans for Environmentally Sensitive Areas when development plans do not meet the established development standards provided in Subchapter 7.

Subchapter 3: Zoning Districts

Subchapter 3 considers the preservation of forested lands in some zoning districts.

Subchapter 4: Overlay and Historic Districts

Subchapter 4 applies height limitations to natural structures, including trees, within the airport zones. Denotes the incorporation of trees in front of buildings as an architectural standard in some Subareas.

Subchapter 6: Gas Wells

Subchapter 6 designates priority to gas well ordinances if a conflict between tree preservation and natural gas drilling arises. Environmentally Sensitive Areas (ESAs) are considered, and a tree inventory plan is required for proposed Drilling and Production sites in ESAs. In situations where drilling encroachment is allowed in ESAs, tree mitigation measures apply and tree removal requests are required.

Subchapter 7: Development Standards

Subchapter 7 provides standards for the management, protection, and expansion of tree canopy within all land and development in Denton, unless otherwise noted. The subchapter also specifies how the City administers the Tree Fund for tree related work.

The subchapter prohibits the untimely removal of trees; promoting the protection of existing trees. As such, the subchapter requires tree removal permits and proper mitigation standards if tree removal is necessary and designates authorities to enforce code and administer penalties. The subchapter defines and provides a map of designated Environmentally Sensitive Areas (ESAs). Additionally, the subchapter provides development standards for floodplains, Cross Timbers Upland Habitat, and riparian ESAs. For such areas, a percent tree canopy retention level is set for residential and non-residential developments in Cross Timbers Upland Habitat.

Subchapter 7 outlines requirements for landscaped buffers that provide transition between different land use areas by minimizing noise, light, and other nuisances. This section designates types of buffers and their associated canopy cover.

This subchapter requires tree protection during construction as outlined in the tree protection detail. Standards for relocating heritage and quality trees are provided. Additionally, the subchapter provides pruning guidelines and defines other activities that could influence tree replacement standards. Designates when tree removal permits are needed during land disturbance activities and requires protection of street trees during land disturbance activities. The subchapter defines scenarios which necessitate tree mitigation. Tree mitigation can include replacement plantings or payments to the Tree Fund.

The purpose of the Tree Fund is defined and includes the purchase, planting, maintenance, and preservation of trees in the City. Tree Preservation is further supported through preservation incentives, called preserved credits. Credits are awarded for when preservation goes beyond the minimum requirement and can be applied towards landscape canopy requirements. The subchapter authorizes enforcement for standards on protected trees, and allows the Director to approve removals of protected trees if determined to endanger public health, welfare, or safety.

The subchapter requires a Tree Survey and Preservation/Replacement Plan to include details on all protected trees within the area impacted by the development. The Tree Survey and Preservation Plans must meet the minimum preservation requirements for each classification of protected tree (e.g. Landmark Tree or Heritage Tree, Quality Tree, of Secondary Tree).

This subchapter lists circumstances for exceptions to tree preservation and removal. Alternatives to tree replacement requirements are also included, which provide alternatives to the tree replacement requirements (e.g. preserved credit, replacement trees, payment to the Tree Fund, tree donation, and conservation easement). Incentives for preserving or replacing trees as well as reducing hardscapes are outlined.

Sets minimum standards for percent tree canopy coverage throughout the City, including for the different ecoregions present in Denton. The subchapter applies minimum requirements for canopy cover and landscaping elements according to zoning.

Landscaping elements require a designated percent of new plantings to be contained within the Landscape Plant List in the Site Design Criteria Manual and maintenance guidelines. The subchapter requires the use of appropriate planting materials and the landscape area point system as standards for public areas. Different buffers are required by zoning and adjacent land use, and standards for such buffers are also provided. Parking design standards also include landscape screening. This subchapter also outlines enforcement of, and alternatives to the landscape standards for development sites and buffers that include payment in lieu of planting.

The subchapter designates street tree planting standards with specifications on location, spacing and planting plans that require species diversity, planting standards for trees, and maintenance. Outlines protections for street trees. Designates property owners responsible for maintaining adjacent street trees.

Subchapter 8: Subdivisions

Subchapter 8 recognizes ESAs in the development of subdivisions and references the landscape requirements provided in Subchapter 7 to be used in lands set aside for common open space.

Subchapter 9: Definitions

Subchapter 9 defines tree and forest related terms.

2012 SIMPLY SUSTAINABLE DENTON

Simply Sustainable: A Strategic Plan for Denton's Future is a comprehensive report meant to improve sustainability-related programming throughout the City. In collaboration with the community, the City created a vision, "to improve our environment, create economic value, and support and strengthen our community", which guided the Simply Sustainable document. Although the Plan identifies eight focus areas (Water; Air Quality and Greenhouse Gas Management; Energy Efficiency and Conservation; Land Use and Open/Natural Space; Transportation; Education, Communication and Community Involvement; Material Resource Management; and Local Food Production), the Land Use and Open/Natural Space focus area emphasizes the importance of the urban forest. The Plan recommends preserving and maintaining the green infrastructure, while aiming to enhance tree canopy cover over time (from 19% in 2011). Importantly, the Simply Sustainable Denton Plan identifies the need to set targets for increased canopy cover goals and places a high priority on developing and implementing Tree Code.

DENTON MOBILITY PLAN – 2012 DENTON BIKE PLAN

The Denton Mobility Plan is currently being updated. The 2012 Denton Bike Plan supports the environmental, access, and safety goals contained in the Denton Plan 2030, as well as, safety goals of the US Department of Transportation. For example, the Denton Plan 2030 envisions creating a network of green infrastructure throughout the City. Tree plantings around pedestrian and bike trails provide barriers that lessen the impact of adjacent cityscapes (e.g. traffic, noise, and air pollution) and increase the overall aesthetics of the community. Tree canopy can also improve the character and usage of trails by increasing shading and helping mitigate the effects of the urban heat island.

DENTON PARKS, RECREATION AND TRAILS MASTER PLAN

The working Parks, Recreation, and Trails Master Plan was accepted in 2001 and updated in 2009. The development of a new Master Plan which reflects the changes in the community is currently underway.

DENTON MUNICIPAL ELECTRIC BROCHURE

If a tree canopy has the potential to grow into above ground utility lines, then it becomes a safety hazard and warrants intervention. The Denton Municipal Electric Brochure outlines ways to prevent tree and utility line conflicts and explains Denton Municipal Electric (DME) procedures when conflicts arise. For prevention, DME encourages residents to plant small stature trees that would not interfere with above ground utility lines when their mature heights are reached. DME resolves emergency situations typically through contracts with certified arborists to prune trees and maintain safe distances from utility lines.

CITY OF DENTON INTEGRATED PEST MANAGEMENT PROGRAM

Approved by City Council in May of 2019, the Integrated Pest Management Program affirms the City's intentions to provide a holistic approach to managing pests that are harmful to the health, function or aesthetic value of park landscapes and public health. The Integrated Pest Management Program applies multi-faceted strategies that minimize economic, health and environmental risks.

The Program includes goals to increase connectivity to nature and enhance sustainability through conservation practices within parks; create and maintain a safe environment for the community; provide a natural, healthy, educational, and social environment; educate and promote natural areas and cultural practices; and ensure stewardship of fiscal resources. The Program provides a definition of "IPM" consistent with U.S. Environmental Protection Agency publications.

The Program identifies multiple strategies for the management of pests including prioritization, tolerance thresholds, design, plant selection, cultural practices, mechanical and physical control, biological control, and pesticides. The Program identifies 19 strategies that outline the City's policies on pest management including; licensing and training, pest management procedures, pesticide material management, safety measures and emergency response, and targeted pest management.

★ What do we have?

CONCLUSION

As a Tree City USA, Denton is well aware of the importance of trees and urban forests to the health and sustainability of their community. With a dedicated, well-trained Urban Forester and an active non-profit (Keep Denton Beautiful, Inc.) that provides educational programming on the importance of trees, the City is well positioned to sustain the health and environmental benefits provided by its urban forest.

The local non-profit, Keep Denton Beautiful, Inc., has been invaluable for the last 30+ years in engaging the community through educational activities, volunteer tree planting events, and the annual Denton Redbud Festival. Keep Denton Beautiful continues to be a strong advocate on the behalf of the urban forest, but also for providing a robust volunteer base.

Because the urban forest is a dynamic, growing, and ever-changing resource it will require sound and proactive management to fully realize its maximum potential. Trees are an integral part of the urban landscape and the one component of urban infrastructure that has the potential to increase in value over time and with proper care!

Denton is a leader in sustainability, which is reflected in recent revisions to the Denton Development Code to expand tree canopy cover in new development and through the Tree Fund. While this fund has been greatly beneficial to the enhancement of Denton's urban forest, much of the funds have been unavailable for use as a result of competing interests in how the fund should be distributed. Clear direction on the intent of the Tree Fund, whether it is to purchase land with existing trees to preserve for future generations or to fund tree plantings throughout the City, will allow for more opportunities to use the fund efficiently and cost-effectively.

State of the Denton Urban Forest Report (2016) determined that the current tree canopy cover is 28%. A planting priority analysis determined that there are 32,009 acres on public and private land where additional trees could be planted. While this significant amount of acreage highlights areas of opportunity to increase tree canopy cover through additional trees plantings, there are some other considerations that should be taken into account. For instance, some of the acres identified as able to support tree plantings are actually planned for development (residential and commercial). These areas will eventually represent a mixture of land cover that includes both hardscape (impervious surface) and tree canopy. It is also important to recognize that impervious surfaces and canopy cover can co-exist in many instances especially with the incorporation of appropriate design standards. Canopy that extends over hardscape features (including parking lots, streets, and structures) can add to the overall amount of canopy cover and reduce the ratio between canopy cover and impervious surfaces. In addition, shade provided by tree canopy can demonstrably extend the life span of materials used in the construction of hardscape features (McPherson et al, 2005).

Currently utilities compete for space within the public right-of-way (water, electric, sewer, etc.). Utility easements can restrict the amount of space available for planting a tree, making it challenging to meet Design Standards intended to promote tree canopy cover, as well as, provide the necessary soil volume to support a tree throughout its lifetime.

While the State of the Denton Urban Forest Report (2016) provided estimates of the species that comprise Denton's urban forest, the study did not include an inventory of all City-planted trees. A tree inventory is crucial to understanding the health of the community tree resource and also the necessary maintenance needs of trees in the public right-of-way. A complete inventory would provide the Urban Forestry Division with information to determine the resources required to address the maintenance requirements of trees in parks and in the public right-of-way (all of which would improve public safety).

Adjacent property owners are currently responsible for all maintenance needs of trees planted in the public right-of-way. Many property owners are unaware of their responsibilities or may ignore maintenance until they are cited by Community Improvement Services or the tree is dead. Lack of maintenance poses a risk to the public and can greatly reduce the environmental benefits these trees provide to the community. With a complete inventory of trees, the City could explore the feasibility of transitioning the maintenance responsibility of trees from adjacent property owners to the City.

With a highly mobile population in Denton, pests and pathogens that threaten the health and longevity of urban trees is an ever-present threat. Among the pests that are a concern is the emerald ash borer (EAB) which effects all species of ash (it was recently discovered in Fort Worth). This pest has proven throughout much of the Midwest to be a highly destructive and expensive pest to manage. Denton's urban forest population is estimated to have approximately 4% green ash (140,000 of the 3.5 million trees in Denton) which could prove to be costly and result in significant losses to the overall tree canopy cover. Monitoring for this pest is critical in ensuring early detection and proactively manage this highly destructive pest.

If EAB or some other pest arrives in Denton, a potential challenge will be the City's inability to require property owners to remove dead, dying, or diseased trees on private property. Not only do these dead, dying, or diseased trees pose a threat to public safety, but if infested with a damaging pest, these trees could negatively affect the entire urban forest if infestation spreads. Without an amendment to the Code of Ordinances, the City has no ability to protect the public or the urban forest from such trees.

Ultimately, protecting and growing the urban forest requires a commitment from the entire community. While growth and development are vital to the economic well-being of Denton, preservation of the urban forest is equally important for ensuring that quality of life expectations are maintained. Adopting and enforcing proactive preservation objectives that compliment development goals and recognize the rights of property owners will ensure that Denton remains a vibrant and attractive community.

★ What do we want?

To better understand how the community values the benefits of the urban forest resource and to provide residents and other stakeholders an opportunity to express their views about management policy and priorities, the Plan development process included two community meetings.

Managing Partners

While awareness may vary, many individuals and departments within the City share some level of responsibility for the community urban forest, including planning for, caring for, and/or affecting the policy of urban forest assets. City partners were invited to participate in an interview and discussion about their role and perspective for the urban forest as well as their views, concerns, and ideas for the Plan. These interviews provided important information about the current function of the Urban Forestry program and potential for improvement. Concerns, requests, and suggestions from all stakeholders were of primary interest and were provided full consideration in the development of the Plan.



Key concepts gathered through the stakeholder interview process include the following:

1. Dead, dying, or diseased trees on private property pose a threat to public and private property and public safety, but the City has no jurisdiction over the removal of these trees.
2. Loss of natural oak stands as a result of rapid development, climate change, flood control, and poor species selection are the biggest challenges looking ahead to the future.
3. Competing utility easements restrict the space available for planting trees.
4. There is a strong desire to have an active and engaged community group whose goal is to preserve and protect the urban forest as well as the Cross Timbers ecoregion in natural areas and expanding developments.
5. There is a need for more education, or a modification to the current code, regarding the care of trees planted in the public right-of-way within residential areas. Not all homeowners realize their responsibility to care for these trees; as a result, not all trees are receiving adequate care.
6. Trees are primarily valued for aesthetics; privacy screening, greening, and property value improvements, as well as environmental benefits; shading, and improving air quality.
7. Some view trees as a hindrance to development and solar energy infrastructure, or a complication to maintenance activities.

Table 2: Managing Partners

Managing Partners
Denton Municipal Electric
Water Utilities/Environmental Services/ Watershed Protection
Parks, Recreation & Beautification Board
Solid Waste
Fire/Community Improvement Services
Keep Denton Beautiful, Inc.
Planning/Development Services/ Building Inspections
Engineering



How do they protect the heavily wooded areas, how do they preserve natural areas, and build an urban forestry department?

★ MANAGING PARTNERS

★ What do we want?

Community Partners

Community partners that impact Denton’s urban forest were engaged in a discussion. Six community partners were identified for input including Keep Denton Beautiful, Inc., Texas Trees Foundation, Denton County, Denton Community Development Alliance, Dallas Builders Association, and Preservation Tree, the Consulting Group. Meetings were held on August 20th and August 21st, 2019 to engage with each partner about a series of questions and discussion sessions.

Community partners were asked to speak on their role in the care/advocacy of Denton’s urban forest. Each partner provides unique services that directly or indirectly enhance the urban forest. Keep Denton Beautiful organizes tree education programs, fundraising, and supports urban forestry related advocacy programs. Additionally, they act as a liaison between stakeholder groups. Texas Trees Foundation helps bring partners together and provides support to implement planning decisions. The Denton Community Development Alliance considers land development and urbanization, and advocates for a balanced and equitable urban forest. Dallas Builders Association is an advocate for residential construction and the development sector.

Overall community partners feel that the City’s Urban Forestry Division is striving to do what is right for Denton’s urban forest and community residents. Partners recognized the Urban Forestry Division for providing long standing programming and places for the public to engage.

Several major challenges and opportunities were identified for the urban forest over the next 5 to 20 years. The primary concerns were (1) determining the right trees to plant during a period of changing weather patterns, (2) protecting and growing the urban forest in the midst of rapid development, and (3) increasing the canopy cover and level of tree care in non-residential areas of Denton.

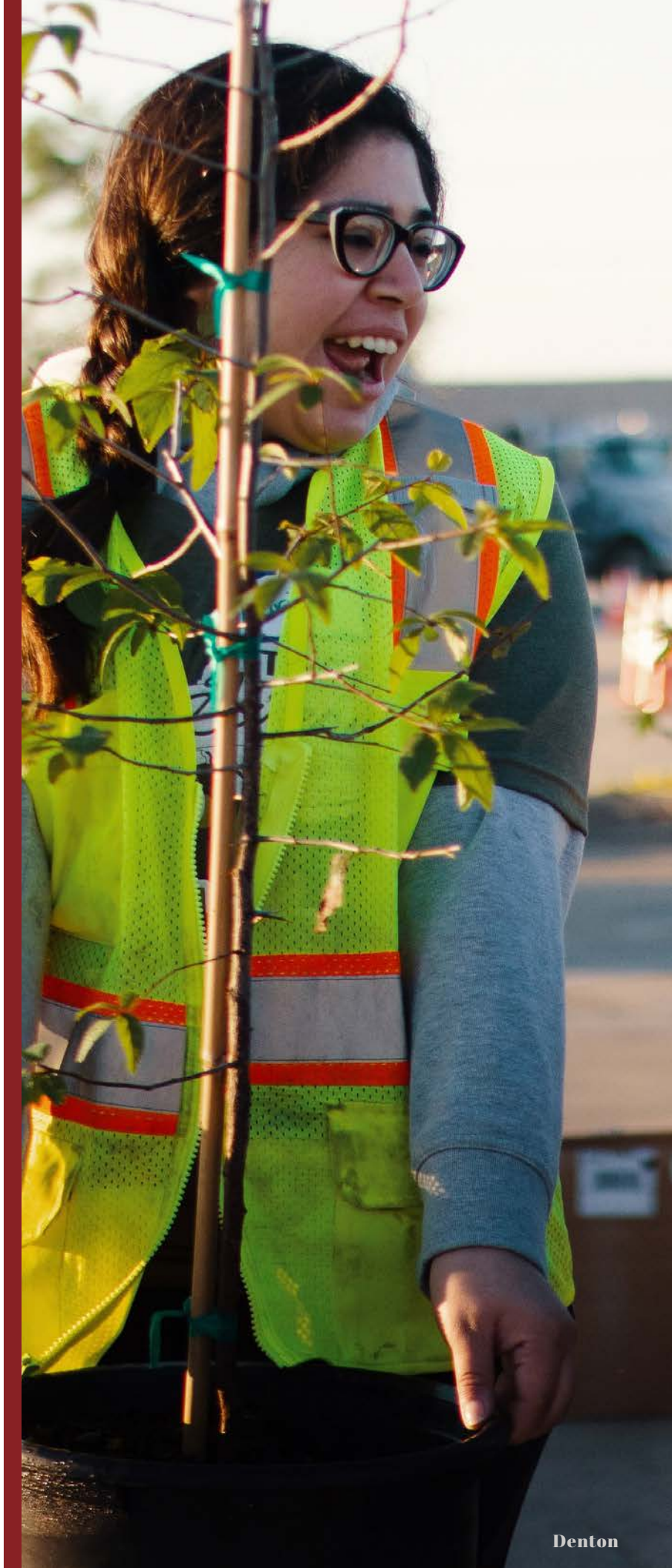
Denton’s current canopy cover is estimated at 28%. Although some community partners supported an increase in canopy cover, their consensus is to consider economic and environmental factors when deciding upon future plantings. Participants encouraged enhancing canopy cover for certain land use space such as commercial and parking lot plantings, as well as increasing tree diversity.

Community partners advocated for tree planting efforts on all kinds of City property including parks, right-of-way, new residential neighborhoods, and commercial complexes. Additionally, partners suggested identifying tree canopy goals by land use type (instead of one canopy goal for the entire City).

Currently, trees planted by the City within the public right-of-way are the responsibility of the adjacent property owner. Community partners thought that property owners should not be obligated to care for public right-of-way trees. However, funding would be needed for the City to assume the maintenance of neighborhood trees. Partners suggested receiving funding from: 1) the General Fund, 2) the existing Tree Fund, 3) a tree care fee, 4) or property taxes in order for the City to maintain these trees.

In regard to natural areas, community partners encouraged preservation through (1) incentivizing developers and landowners to preserve existing natural areas, (2) accepting natural areas as parks, (3) establishing guiding documents to discourage the removal of natural areas, (4) expanding upon current ideas of natural areas that would fit community goals and preservation challenges (i.e. add fruit and nut trees, habitat, leave snags and over growth, increase species diversity), and (5) forming collaborative networks such as land trusts or co-ops to advocate for preservation.

According to the Code of Ordinances, the City has some ability to require property owners to abate grass and weeds, but there are no specific provisions for dead, dying, or diseased trees on private property which pose a threat to public property and/or safety. Community partners thought the Code of Ordinances should be amended to support the City’s ability to protect the public from such trees but cautioned that the Urban Forestry Division might not have the means or the funding to be able to provide this service at no cost or a reduced cost.



★ What do we want?

Community Meetings

Two community meetings were held during the Plan development process. Both meetings were advertised through social media City emails, City website, and City newsletters.

The first meeting was held on Thursday, August 1st, 2019, from 6:00 p.m. to 8:00 p.m at City Hall and was attended by 36 community members. The meeting included a presentation about the community's urban forest and current program status. Following the presentation, attendees participated in a discussion and planning session to identify goals and objectives for the Urban Forest Master Plan.

Attendees were asked to provide their expectations for public tree maintenance, locations for additional tree plantings, and potential canopy goals. Participants were also asked to share their opinions on types of education and outreach and the best opportunities for providing educational materials and outreach activities.

Urban Forestry Staff engaged with community members to understand their opinions on amending the Code of Ordinances to allow the City to require private property owners to remove dead, dying, or diseased trees that pose a threat to public property and safety. Additionally, residents were asked about their stance on the City caring for trees in the public right-of-way. Finally, residents were asked their preferences on the use of the Tree Fund, whether funds should be used to purchase land to preserve existing trees or to fund additional tree plantings.

More than 25% of responses to the question about canopy goals indicated that they were not in favor of a goal of no net loss of canopy. While over 31% of the responses to the question indicated goals of a 35 to 52% canopy cover, nearly 43% of the responses indicated that participants were interested in additional information on the canopy goals, most notably goals based on land use type.

Participants were asked to indicate their preferences on where trees should be planted in Denton. Nearly 23% of respondents to the question indicated that they did not support a policy of not planting more trees. New developments were favored by 25% of respondents as a focus area for new tree plantings. Support for other planting areas was varied, but widely positive with nearly 31% in favor of tree plantings regardless of location.

Over 38% of respondents did not support a "Keep It Natural" or no maintenance approach when asked about the desired level of care for public trees. Coincidentally, 35% of respondents to the question indicated that they would prefer proactive or a plant health care-based approach. Notably, 20% of respondents indicated that they were not sure about the level of care that would be appropriate and would require additional information.

Dead, dying, or diseased trees on private property are not an uncommon site in Denton. While Community Improvement Services frequently receive complaints about such trees where members of the public are concerned about public safety, the City has no ability to require private property owners to remove such trees. Input was sought on revisions to the Code of Ordinances to

require property owners to remove dead, dying, or diseased trees that endanger public property and safety. While over 33% of respondents to the question indicated support for an amendment (only one person indicated that they would not support such an amendment) the majority of respondents (61%) indicated that they were not sure and would require additional information.

According to the Denton Development Code, trees required by the City to be planted in the public right-of-way are the responsibility of the adjacent property owner. Urban Forestry staff were interested in gauging the community's support of this policy and asked if the City (instead of the adjacent property owner) should care for neighborhood trees in the public right-of-way. Nearly 47% of respondents to the question indicated support for this change in policy. Similarly, nearly 37% of respondents indicated that they did not support the City not maintaining neighborhood trees in the public right-of-way. Like other questions posed to the community, over 16% of respondents were not sure and wanted additional information.

Questions posed to participants about the best methods of outreach and topics for education indicated that community members appreciate multiple methods of outreach and engagement. Of the educational topics that most interested participants, 20% of respondents wanted educational materials to help them decide which tree to plant in their yard.

Urban Forestry Staff also wanted to understand the community member's opinion on how the Tree Fund should be used in Denton. Community members had numerous ideas such as tree giveaways, street median and sidewalk improvements, grants for local nurseries to cultivate appropriate tree species, mapping of the Cross Timber Region, tree spades for moving valuable species for preservation, saving big trees, and funding for tree removal assistance. There was no clear consensus on how funds should be allocated as maintenance on conservation easements had the most support (only 12% of respondents).

Although participants were not asked directly about the conservation of the Cross Timbers Region, numerous community members verbalized their concerns for this natural resource and its preservation.

The second meeting was held on Thursday, January 9th, 2020, from 6:00 p.m. to 8:00 p.m. at City Hall. The meeting included a presentation of the proposed goals and objectives that were recommended in the Plan based on the review process and feedback from the first meeting, held on August 9th, 2019. The meeting was attended by 38 community members.

★ What do we want?

Plan, Goals, & Actions

Based upon a review of the current Urban Forestry program and resources, and input from the community and other stakeholders, the Plan identifies nine goals and seven existing policies that support and represent what Denton residents, stakeholders, and staff want for the future of Denton's urban forest. These goals and existing policies, and the strategies that support them, are intended to optimally manage the City's community forest in an efficient, cost-effective, sustainable, and safe manner. Through this collaborative stakeholder and community input process, the Plan identifies three major focus areas:

1. A safe and healthy urban forest
2. Sustain environmental benefits
3. Engage the community to ensure the future of the urban forest



Denton loves their trees no matter what condition, species or location.

★ **PARKS MANAGER,**
CITY OF DENTON

FOCUS AREA: A SAFE AND HEALTHY URBAN FOREST

This focus area aims for the implementation of more proactive and quality tree maintenance. In general, trees pose a minimal risk to the public, but tree care should be taken into consideration when striving to make the community safer and the urban forest more resilient.

Goal 1: Efficiently manage the community tree resource.

Striving to obtain information on all existing trees and vacant sites present in the urban forest will enhance staff's ability to determine areas with priority for tree care or planting. As a result, maintenance can be done in a more efficient manner.

Goal 2: Promote tree health and good structure.

When trees are well-maintained throughout their lifetimes, the risks trees pose to the public are reduced. Promoting tree health and good structure decreases the chances of having hazardous trees in the community and helps prevent tree conflicts with utilities.

Goal 3: Mitigate and reduce risk of wildfire.

Living in areas, which are vulnerable to wildfire, comes with the responsibility of managing and reducing the risks that come with that exposure. Wildfires are a naturally occurring event and therefore cannot be prevented from occurring. Denton and its community members have the ability to mitigate and reduce the risks and potential impacts of wildfire when it occurs.



★ What do we want?

FOCUS AREA: SUSTAIN ENVIRONMENTAL BENEFITS

This focus area aims to preserve and enhance the existing tree canopy thereby maintaining the numerous benefits provided by the urban forest. It is prudent to grow the urban forest in a sustainable manner to ensure that trees are planted and to also plan so that trees are maintained throughout their lifetimes.

Goal 4: Recognize trees as green infrastructure.

Trees are essential infrastructure that need to be planned for during design, similar to other utilities. Considering trees as green infrastructure aims to ensure their longevity through the planning and implementation of comprehensive designs.

Goal 5: Promote tree preservation and protection.

As the community grows, it is important to promote the protection of community trees. In addition to following the current tree protections, the Code of Ordinances should be periodically reviewed and revised to refine and identify requirements to support the urban forest and canopy cover goal.

Goal 6: Develop a City-wide planting plan.

Planting plans not only encourage the opportunity to maintain or enhance future tree canopy they can also optimize the benefits that are gained from the urban forest (based on planting priority and choosing the right tree species for the space). Furthermore, planting plans can prioritize the equitable distribution of canopy cover and support canopy goals set for various land use designations (Table 3).

Goal 7: Plant Health Care (PHC) policies.

Pests and disease will always be a threat to the urban forest. Implementing a Plant Health Care strategy will make the urban forest more resilient and able to withstand invasive species. The strategy should incorporate the use of multiple tools for preventing pest and disease establishment and managing current pest problems.

FOCUS AREA: ENGAGE THE COMMUNITY TO ENSURE THE FUTURE OF THE URBAN FOREST

The urban forest is more likely to be preserved and maintained by a community that understands the benefits it provides. Connecting the community to the urban forest creates an environment for the community members to advocate for the urban forest.

Goal 8: Support community engagement and stewardship of the urban forest.

Although the City is not directly responsible for the care of trees on private property, all trees are an important component of the urban forest. Education and outreach to encourage best management practices for trees on private property should be done to support the wellness and benefits of the overall urban forest.

Goal 9: Celebrate the importance of urban trees.

Community designations and events surrounding the urban forest build awareness and excitement that ultimately encourages constituents to help build upon existing canopy.

Table 3: Canopy Goals for Future Land Use

Future Land Use Designation	Land Acres	Canopy Cover (%)	Canopy Acres
Residential	28,412	55.0%	15,627
Commercial	8,415	10.0%	842
Industrial	9,025	25.0%	2,256
Other	16,423	40.0%	6,569
All Land Use Designations	62,275	40.6%	25,294



★ How do we get there?

The goals and actions proposed by the Urban Forest Master Plan are organized by focus areas:

1. A safe and healthy urban forest
2. Sustain environmental benefits
3. Engage the community to ensure the future of the urban forest

Each focus area is supported by measurable goals, existing policies, and specific actions that are intended to guide Denton's urban forest programming over the next 20 years, providing the foundation for annual work plans and budget forecasts. Many goals and actions support more than one focus area.

For each action, the Plan identifies a priority, a suggested timeframe for accomplishing the action, an estimated cost range, and potential partners. Priority is identified as:

- High- An action that is critical to protecting existing community assets, reducing/ managing risk, or requires minimal resources to accomplish
- Medium- An action that further aligns programming and resource improvements that have been identified as desirable by the community, partners, and/or urban forest managers, but that may require additional investment and financial resources over and above existing levels
- Low- An action that is visionary, represents an increase in current service levels, or requires significant investment

The estimated cost is categorized in the following ranges:

- \$ (less than \$25,000)
- \$\$ (\$25,000-\$100,000)
- \$\$\$ (\$100,000-\$200,000)
- \$\$\$\$ (greater than \$200,000)

The Plan is intended to be a dynamic tool that can and should be adjusted in response to accomplishments, new information and changes in community expectations, and available resources. In addition to serving as a day-to-day guide for planning and policy making, the Plan should be reviewed regularly for progress to ensure that the actions and sub actions are integrated into the annual work plan.





Focus Area: A safe and healthy urban forest

Goal 1: Efficiently manage the community tree resource.

PERFORMANCE MEASURE:

Complete inventory and plans for maintenance cycles for the community tree resource.

RATIONALE:

A complete inventory of City-planted trees would allow the Urban Forestry Division to identify maintenance needs and determine the feasibility of the City caring for City-planted trees in neighborhoods. Additionally, an inventory can be used to quantify the ecosystem services provided by public trees.

RISK:

A lack of understanding of the age, structure, benefits, and maintenance needs of public trees makes the community tree resource vulnerable to loss of canopy cover. It also creates challenges in responding to pests and could increase the costs of managing such threats.

BENEFIT:

A better understanding of the public tree resource enables Urban Forestry Division staff to prioritize tasks, improve efficiency, and better plan for and manage pests and pathogens.

OBJECTIVE:

Improve understanding of the structure and composition of Denton's community tree resource.

ACTIONS:

1. Conduct an inventory of all trees in parks, open space, trails, City facilities, and public right-of-way.
 - a. After completion, regularly update inventory data as maintenance occurs.
 - b. Compare and contrast the use of contractors versus an in-house crew.
 - c. Consider redistributing funds to provide more proactive maintenance.
 - d. Include potential tree planting sites to assist in planning for future plantings.
2. Conduct a Resource Analysis for public trees to understand the benefits provided by the public tree resource.
3. Consider the use of TreeKeeper® or similar tree inventory management software.
4. Review Urban Forest Master Plan goals every 5 to 10 years, and report progress via The State of the Urban Forest Report.

COST

\$\$

TARGET

1 YEARS

PRIORITY

HIGH



Focus Area: A safe and healthy urban forest

Goal 1: Efficiently manage the community tree resource.

PERFORMANCE MEASURE:

Complete inventory and plans for maintenance cycles for the community tree resource.

RATIONALE:

A complete inventory of City-planted trees would allow the Urban Forestry Division to identify maintenance needs and determine the feasibility of the City caring for City-planted trees in neighborhoods. Additionally, an inventory can be used to quantify the ecosystem services provided by public trees.

RISK:

A lack of understanding of the age, structure, benefits, and maintenance needs of public trees makes the community tree resource vulnerable to loss of canopy cover. It also creates challenges in responding to pests and could increase the costs of managing such threats.

BENEFIT:

A better understanding of the public tree resource enables Urban Forestry Division staff to prioritize tasks, improve efficiency, and better plan for and manage pests and pathogens.

OBJECTIVE:

Following completion of a tree inventory, develop pruning and maintenance cycles.

ACTIONS:

1. Identify costs required to maintain trees in parks and within the public right-of-way.
2. Distribute maintenance needs evenly across grids or maintenance areas.
 - a. Aim to provide maintenance according to the industry standard of 4–5 years.
 - b. Consider areas that have been slated for development or areas considered for annexation.
3. Publish maintenance cycles on the Urban Forestry Division web page.
 - a. Include maintenance cycle maps.
 - b. Project timeframes for maintenance.
4. Review the Urban Forest Master Plan, and provide updates as needed.

COST

\$

TARGET

1-5 YEARS

PRIORITY

MODERATE



Focus Area: A safe and healthy urban forest

Goal 1: Efficiently manage the community tree resource.

PERFORMANCE MEASURE:

Complete inventory and plans for maintenance cycles for the community tree resource.

RATIONALE:

A complete inventory of City-planted trees would allow the Urban Forestry Division to identify maintenance needs and determine the feasibility of the City caring for City-planted trees in neighborhoods. Additionally, an inventory can be used to quantify the ecosystem services provided by public trees.

RISK:

A lack of understanding of the age, structure, benefits, and maintenance needs of public trees makes the community tree resource vulnerable to loss of canopy cover. It also creates challenges in responding to pests and could increase the costs of managing such threats.

BENEFIT:

A better understanding of the public tree resource enables Urban Forestry Division staff to prioritize tasks, improve efficiency, and better plan for and manage pests and pathogens.

OBJECTIVE:

Continue to use planting funds successfully.

ACTIONS:

1. Determine a planting schedule to guide and prioritize new tree plantings.
2. Plant the largest species of tree possible in the available space.

OBJECTIVE:

Review the Urban Forest Master Plan, and provide updates as needed.

ACTIONS:

1. Review Urban Forest Master Plan (UFMP) goals every 2 to 5 years.
2. Adjust targets to continue to align with:
 - a. Community values and expectations of the urban forest.
 - b. Funding availability.
 - c. City goals, policies, and actions.
3. Conduct a State of the Urban Forest Report (at year one), then every two to five years.
4. Report progress and challenges of the UFMP via The State of the Urban Forest Report.

COST

\$

TARGET

ONGOING

PRIORITY

MODERATE



Focus Area: A safe and healthy urban forest

Goal 2: Promote tree health and good structure.

PERFORMANCE MEASURE:

Reduction in removals and claims against the City.

RATIONALE:

When the minimum level of care is met for all community trees, the potential for all the trees to reach maturity increase and the benefits provided by those trees also increases as trees mature.

RISK:

The community tree resource and the greater urban forest could suffer significant losses to tree canopy cover as a result of removals or from pest infestations due to lack of maintenance.

BENEFIT:

Regular maintenance and inspection of the community tree resource promotes better tree health and structure, which reduces the number of removals, branch and tree failures as a result of poor structure, and increases the benefits provided to the community.

OBJECTIVE:

Explore the feasibility of the City taking responsibility for the maintenance of community trees in neighborhoods.

ACTIONS:

1. Examine the resources that would be required to maintain community trees in neighborhoods.
2. Consider current staffing levels.
 - a. Explore the addition of staff to the Urban Forestry Division.
 - b. Consider the use of contractors to complete maintenance tasks.

COST

\$

TARGET

1 YEARS

PRIORITY

HIGH

OBJECTIVE:

Revise policies and standards for pruning young trees to promote healthy growth and structure.

ACTIONS:

1. Allow for flexibility for clearance and visibility requirements for young trees to promote good structure and health.

COST

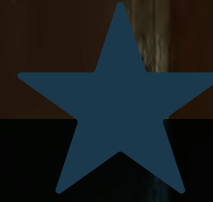
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TARGET

5 YEARS

PRIORITY

MODERATE



Focus Area: A safe and healthy urban forest

Goal 2: Promote tree health and good structure.

PERFORMANCE MEASURE:

Reduction in removals and claims against the City.

RATIONALE:

When the minimum level of care is met for all community trees, the potential for all the trees to reach maturity increase and the benefits provided by those trees also increases as trees mature.

RISK:

The community tree resource and the greater urban forest could suffer significant losses to tree canopy cover as a result of removals or from pest infestations due to lack of maintenance.

BENEFIT:

Regular maintenance and inspection of the community tree resource promotes better tree health and structure, which reduces the number of removals, branch and tree failures as a result of poor structure, and increases the benefits provided to the community.

OBJECTIVE:

Ensure community trees are maintained according to industry standards to promote tree health, longevity, and also public safety.

ACTIONS:

1. Educate community members about their responsibilities in the care of public trees.
2. Use current ANSI and BMPs.
3. Consider requiring professional licensing for tree care companies operating within City limits.

COST

\$

TARGET

5 YEARS

PRIORITY

MODERATE



Focus Area: A safe and healthy urban forest

Goal 3: Mitigate and reduce risk of wildfire.

PERFORMANCE MEASURE:

Reduction in ladder fuels and a Community Wildfire Protection Plan.

RATIONALE:

According to the Texas Wildfire Risk Assessment Portal, Denton has vulnerabilities to wildfire. Wildfires are a naturally occurring phenomenon, but Denton and its community members have a role in mitigating the risks associated with living in the Wildland Urban Interface.

RISK:

Wildfires result in the burning of forests and pastureland, but also accumulate in the staggering loss of property and life. Recovery from wildfires can have negative economic impacts for years following fire.

BENEFIT:

Mitigating the risk of fire, reduces the likelihood of losses to property and life.

OBJECTIVE:

Contribute to a fire safe community.

ACTIONS:

1. Initiate contact with the Texas A&M Forest Service Wildland Urban Interface (WUI) Specialist to assist in developing a Community wildfire protection plan.
2. Reduce ladder fuels in natural areas.

COST

\$

TARGET

ONGOING

PRIORITY

HIGH



Focus Area: Sustain environmental benefits

Goal 4: Recognize trees as green infrastructure.

PERFORMANCE MEASURE:

Reduced number of removals and conflicts reported between trees and other utilities.

RATIONALE:

Designating trees as green infrastructure designates trees as a key element in cityscapes, as is expected for other infrastructure.

RISK:

Trees and other utility conflicts may result in undesirable pruning or tree removals that could have been avoided through alternative design solutions and repairs.

BENEFIT:

Planning for trees limits the need to mitigate conflicts between trees and other utilities and promotes tree longevity.

OBJECTIVE:

Minimize the encroachment of other utilities.

ACTIONS:

1. Consider amending clearance and visibility standards to avoid excessive pruning of young or newly established trees.
2. Use root barrier to reduce root and sidewalk conflicts.
3. As the General Plan or other long-term planning documents are revised, consider impacts on trees.
4. Maintain a Tree Committee to review changes to the Denton Development Code.
5. Promote Complete Streets in the Denton Parks, Recreation and Trails Master Plan and the Denton Mobility Plan.

COST

\$

TARGET

5 YEARS

PRIORITY

HIGH



Focus Area: Sustain environmental benefits

Goal 4: Recognize trees as green infrastructure.

PERFORMANCE MEASURE:

Reduced number of removals and conflicts reported between trees and other utilities.

RATIONALE:

Designating trees as green infrastructure designates trees as a key element in cityscapes, as is expected for other infrastructure.

RISK:

Trees and other utility conflicts may result in undesirable pruning or tree removals that could have been avoided through alternative design solutions and repairs.

BENEFIT:

Planning for trees limits the need to mitigate conflicts between trees and other utilities and promotes tree longevity.

OBJECTIVE:

Develop maintenance and design strategies for mitigating conflicts with otherwise healthy trees.

ACTIONS:

1. Detour walkways around trees, ramping over roots, and grinding down displaced sidewalk panels to reduce tripping hazards without causing undue harm to critical roots.
2. Explore alternative sidewalk designs to allow space for trees and compliance with ADA and avoid tree removal.
 - a. Crushed granite.
 - b. Gravel sub-base and other structural soils.
 - c. Other structural cells (Strata Cells or Silva Cells).
 - d. Interlocking concrete paver products.
 - e. Flexipave, a system similar to rubber sidewalks.
 - f. Alternative tree grate structures.
 - g. Polygrate, a recycled plastic form of tree grate.

COST

\$-\$\$\$

TARGET

10 YEARS

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 4: Recognize trees as green infrastructure.

PERFORMANCE MEASURE:

Reduced number of removals and conflicts reported between trees and other utilities.

RATIONALE:

Designating trees as green infrastructure designates trees as a key element in cityscapes, as is expected for other infrastructure.

RISK:

Trees and other utility conflicts may result in undesirable pruning or tree removals that could have been avoided through alternative design solutions and repairs.

BENEFIT:

Planning for trees limits the need to mitigate conflicts between trees and other utilities and promotes tree longevity.

OBJECTIVE:

Ensure Design Standards adequately consider trees.

ACTIONS:

1. Continue to require minimum canopy cover goals as identified in Subchapter 7 of the Denton Development Code.
2. Revise Design Standards to include minimum parkway widths to allow for tree plantings.
 - a. Consider expanding the minimum width of planting strips from 5.5 feet to 8 feet.

COST

\$

TARGET

10 YEARS

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 5: Promote tree preservation and protection.

PERFORMANCE MEASURE:

Reduction in removals and no-net loss in tree canopy cover.

RATIONALE:

Trees take a long time to grow. Preserving and protecting existing trees ensures that the stream of benefits provided by community trees is not lost or disrupted and has the opportunity to increase this stream of benefits over time.

RISK:

Loss of tree canopy cover and associated environmental benefits.

BENEFIT:

Preservation of community trees, including iconic post oak trees, ensures the environmental benefits are sustained and trees that have been preserved and protected have the potential to provide even more benefits to the community over the course of their lifetimes.

OBJECTIVE:

Revise and amend the Code of Ordinances to promote the protection of community trees.

ACTIONS:

1. Amend the Code of Ordinances to allow the City to require private property owners to remove dead, dying, or diseased trees that pose a risk to public property and safety.
2. Prohibit dumping and storage of deleterious substances near trees.

COST

\$

TARGET

1-5 YEARS

PRIORITY

MODERATE

OBJECTIVE:

Define the purpose and use of the Tree Fund.

ACTIONS:

1. The Tree Fund shall be allocated as follows:
 - a. 60% tree planting
 - b. 35% property purchase (see Property Purchase Criteria, Appendix G)
 - c. 5% education/outreach
2. Enforce conservation standards laid out in the Denton Development Code.
3. Explore ways to expand tree canopy through Open Space.

COST

\$-\$\$\$\$

TARGET

ONGOING

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 5: Promote tree preservation and protection.

PERFORMANCE MEASURE:

Reduction in removals and no-net loss in tree canopy cover.

RATIONALE:

Trees take a long time to grow. Preserving and protecting existing trees ensures that the stream of benefits provided by community trees is not lost or disrupted and has the opportunity to increase this stream of benefits over time.

RISK:

Loss of tree canopy cover and associated environmental benefits.

BENEFIT:

Preservation of community trees, including iconic post oak trees, ensures the environmental benefits are sustained and trees that have been preserved and protected have the potential to provide even more benefits to the community over the course of their lifetimes.

OBJECTIVE:

Mitigate the impacts of development on native post oak stands.

ACTIONS:

1. Avoid disturbance to soils as much as possible.
2. Set up Tree Protection Zones around post oak trees deemed for preservation within development projects.
3. Continue to incentivize the preservation of post oak for development projects.

COST

\$

TARGET

ONGOING

PRIORITY

MODERATE

OBJECTIVE:

Educate the community about their role in maintaining a safe urban forest.

ACTIONS:

1. Provide a list of certified arborists and licensed professionals to perform maintenance on private trees.
2. Provide educational materials on proper pruning techniques.
3. Provide education to property owners about the importance of not planting trees under overhead utilities and identifying underground utilities prior to digging a hole to plant a tree.

COST

\$

TARGET

ONGOING

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 6: Develop a City-wide planting plan.

PERFORMANCE MEASURE:

More equitable distribution of tree canopy cover across the City.

RATIONALE:

A planting plan provides direction and clarity so canopy goals can be set, tracked, and achieved.

RISK:

Although tree plantings would still occur, efforts may not be targeted to areas where increased tree canopy would provide the community with the maximum benefits.

BENEFIT:

Canopy goals are more easily set and reached.

OBJECTIVE:

Achieve 40% canopy cover by 2040.

ACTIONS:

1. Adjust canopy goals per Land Use designation.
 - a. 55% for Residential
 - b. 25% for Commercial
 - c. 10% for Industrial
 - d. 40% for Other (rural and right-of-way)
2. Set a sustainable annual planting goal.
3. Promote the planting of trees on private property within areas of high or very high planting priority.
4. Conduct a Land Cover Assessment with revised City boundaries, including newly annexed areas.
5. Enforce conservation standards laid out in the Denton Development Code.
6. Explore ways to expand tree canopy through Open Space.

COST

\$

TARGET

ONGOING

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 6: Develop a City-wide planting plan.

PERFORMANCE MEASURE:

More equitable distribution of tree canopy cover across the City.

RATIONALE:

A planting plan provides direction and clarity so canopy goals can be set, tracked, and achieved.

RISK:

Although tree plantings would still occur, efforts may not be targeted to areas where increased tree canopy would provide the community with the maximum benefits.

BENEFIT:

Canopy goals are more easily set and reached.

OBJECTIVE:

Promote species diversity in the urban forest.

ACTIONS:

1. Continue to choose species that are better suited to the local climate.
2. Continue to avoid planting species of trees with similar vulnerabilities to pests and disease as current species.
3. Continue to incorporate native species into planting palettes.
4. Continue to use drought tolerant species.
5. Use pest and disease resistant species when available.
6. At a minimum, pursue species diversity goals that meet the 10-20-30 rule, but strive for even greater diversity among genera.
7. Cease plantings of ash to mitigate impacts of emerald ash borer.

COST

\$

TARGET

ONGOING

PRIORITY

HIGH



Focus Area: Sustain environmental benefits

Goal 6: Develop a City-wide planting plan.

PERFORMANCE MEASURE:

More equitable distribution of tree canopy cover across the City.

RATIONALE:

A planting plan provides direction and clarity so canopy goals can be set, tracked, and achieved.

RISK:

Although tree plantings would still occur, efforts may not be targeted to areas where increased tree canopy would provide the community with the maximum benefits.

BENEFIT:

Canopy goals are more easily set and reached.

OBJECTIVE:

Encourage equitable distribution of tree canopy cover across the City.

ACTIONS:

1. Use planting priority mapping to identify planting sites within higher planting priority areas.
2. Conduct planting priority analysis to identify planting sites that would have the greatest impact of reducing urban heat islands and stormwater runoff.
3. Classify and prioritize available planting sites based on:
 - a. Space and minimum planting setbacks.
 - b. Soil characteristics.
 - c. Irrigation infrastructure.
 - d. Landscape objectives and tree density.
 - e. Site constraints and existing infrastructure, including hardscape, utilities (overhead and underground), bridges, and culverts.

COST

\$

TARGET

ONGOING

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 6: Develop a City-wide planting plan.

PERFORMANCE MEASURE:

More equitable distribution of tree canopy cover across the City.

RATIONALE:

A planting plan provides direction and clarity so canopy goals can be set, tracked, and achieved.

RISK:

Although tree plantings would still occur, efforts may not be targeted to areas where increased tree canopy would provide the community with the maximum benefits.

BENEFIT:

Canopy goals are more easily set and reached.

OBJECTIVE:

Set emphasis on planting the right tree in the right place.

ACTIONS:

1. Reduce hardscape and utility conflicts.
2. Match tree species to soil and water conditions.
3. Match tree species to planter size and intended use.
4. Consider mature crown spread.
 - a. Optimize shade and environmental benefits by planting large stature trees where feasible.

COST

\$

TARGET

ONGOING

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 6: Develop a City-wide planting plan.

PERFORMANCE MEASURE:

More equitable distribution of tree canopy cover across the City.

RATIONALE:

A planting plan provides direction and clarity so canopy goals can be set, tracked, and achieved.

RISK:

Although tree plantings would still occur, efforts may not be targeted to areas where increased tree canopy would provide the community with the maximum benefits.

BENEFIT:

Canopy goals are more easily set and reached.

OBJECTIVE:

Encourage the expansion of the urban forest through tree plantings on private property.

ACTIONS:

1. Expand Arbor Day celebrations to include plantings of trees, in addition to eastern redbud, to increase diversity.
2. Continue to provide trees to residents through the annual tree give-away through Keep Denton Beautiful, Inc.
3. Provide educational materials to inform residents about the dangers of planting trees near overhead utilities.
4. Regularly review and update species list to reflect diversity goals and include species that are high performers.
5. Publish recommended species list on the Urban Forestry Division webpage.

COST

\$

TARGET

ONGOING

PRIORITY

MODERATE



Focus Area: Sustain environmental benefits

Goal 6: Develop a City-wide planting plan.

PERFORMANCE MEASURE:

More equitable distribution of tree canopy cover across the City.

RATIONALE:

A planting plan provides direction and clarity so canopy goals can be set, tracked, and achieved.

RISK:

Although tree plantings would still occur, efforts may not be targeted to areas where increased tree canopy would provide the community with the maximum benefits.

BENEFIT:

Canopy goals are more easily set and reached.

OBJECTIVE:

Support stormwater management through the strategic growth of canopy.

ACTIONS:

1. Consider the incorporation of trees in dry retention ponds.
2. Explore the use of bioswales in stormwater management systems.
3. Consider a planting priority analysis with prioritization for stormwater management.

COST

\$

TARGET

10 YEARS

PRIORITY

LOW



Focus Area: Sustain environmental benefits

Goal 7: Adopt Plant Health Care (PHC) policies.

PERFORMANCE MEASURE:

Reduced impact from invasive species.

RATIONALE:

Being aware of and able to identify potential invasive species allows managers to approach management and prevention in a way that fits the community's resources.

RISK:

Undesirable species may become established and threaten native species.

BENEFIT:

Using comprehensive information to outline best management strategies that can be used to prepare for and/or manage invasive species can lessen the detrimental impacts they have on the urban forest.

OBJECTIVE:

Monitor invasive species.

ACTIONS:

1. Continue to follow Denton's Integrated Pest Management program.
2. Reduce the impacts of Chinese privet in Environmentally Sensitive Areas.
3. Inspect ash trees regularly for signs and symptoms of emerald ash borer.

COST

\$

TARGET

10 YEARS

PRIORITY

MODERATE



Focus Area: Engage the community to ensure the future of the urban forest

Goal 8: Support community engagement and stewardship of the urban forest.

PERFORMANCE MEASURE:

Participation in forestry programming.

RATIONALE:

An educated and engaged community is more likely to support and advocate for the urban forest.

RISK:

Apathy towards the urban forest may result in loss in benefits provided by the urban forest to the community.

BENEFIT:

A community that supports the urban forest protects the urban forest and therefore the benefits that it provides to the City.

OBJECTIVE:

Develop and maintain a web page for the Urban Forestry Division on the City website.

ACTIONS:

1. Consolidate important tree-related information on the City website.
2. Summarize maintenance responsibilities of adjacent property owners for City required planted trees.
 - a. Provide links for proper tree-care resources.
 - i. How to plant a tree.
 - ii. How to prune a tree.
 - iii. How to fertilize and mulch.
 - iv. How to irrigate.
 - v. How to hire an arborist or tree care company.
3. Share the Urban Forest Master Plan through the City website.
4. Publish A State of the Urban Forest Report (at year one), then every two to five years.
 - a. Update community members on the overall condition of the community urban forest.
 - b. Highlight services (number of trees planted, number of trees inventoried, etc.).
 - c. Update community members on progress towards canopy goals and trees planted (public and private).
 - d. Update the community on achievements of the Urban Forest Master Plan.

COST

\$

TARGET

ONGOING

PRIORITY

LOW



Focus Area: Engage the community to ensure the future of the urban forest

Goal 8: Support community engagement and stewardship of the urban forest.

PERFORMANCE MEASURE:

Participation in forestry programming.

RATIONALE:

An educated and engaged community is more likely to support and advocate for the urban forest.

RISK:

Apathy towards the urban forest may result in loss in benefits provided by the urban forest to the community.

BENEFIT:

A community that supports the urban forest protects the urban forest and therefore the benefits that it provides to the City.

OBJECTIVE:

Develop and maintain a web page for the Urban Forestry Division on the City website.

ACTIONS (CONTINUED):

5. Share and maintain the recommended tree species list through the City website.
6. Provide a link to Keep Denton Beautiful on the City website.
 - a. Include information about volunteer opportunities.
7. Provide a link to Denton Municipal Electric Tree Trimming Brochure on the City website.
8. Provide a link on the City website to the Denton Development Code Tree Preservation standards for development.
9. Communicate the benefits of trees and tree canopy including environmental, social, and economic benefits.
10. Communicate importance of post oak and blackjack oak trees.



Focus Area: Engage the community to ensure the future of the urban forest

Goal 8: Support community engagement and stewardship of the urban forest.

PERFORMANCE MEASURE:

Participation in forestry programming.

RATIONALE:

An educated and engaged community is more likely to support and advocate for the urban forest.

RISK:

Apathy towards the urban forest may result in loss in benefits provided by the urban forest to the community.

BENEFIT:

A community that supports the urban forest protects the urban forest and therefore the benefits that it provides to the City.

OBJECTIVE:

Interact with community members through a variety of outlets.

ACTIONS:

1. Continue to partner with Keep Denton Beautiful, Inc (KDB).
 - a. Continue to use volunteers through the Cross Timbers Urban Forestry Council Citizen Foresters Training Program.
 - i. Expand Citizen Foresters' skills to provide structural pruning for trees in parks.
 - b. Continue to provide support for KDB programming.
2. Continue to use DTV to provide community members with important information about trees.
3. Explore further engagement through social media, including the existing Denton Trees Facebook Group.
4. Conduct community surveys to gauge public support as objectives of the Urban Forest Master Plan are implemented.

COST

\$

TARGET

ONGOING

PRIORITY

LOW



Focus Area: Engage the community to ensure the future of the urban forest

Goal 9: Celebrate the importance of urban trees.

PERFORMANCE MEASURE:

Continued recognition as a Tree City USA and Arbor Day activities/celebrations.

RATIONALE:

Observing and recognizing the benefits provided by the urban forest encourages community engagement and promotes appreciation for trees.

RISK:

When community members are unaware of the benefits of the urban forest, people are likely going to be less supportive of programming and the resources needed to care for it.

BENEFIT:

Community awareness and appreciation of the urban forest promotes support for the necessary resources to maintain it.

OBJECTIVE:

Maintain Tree City USA.

ACTIONS:

1. Continue to celebrate Arbor Day through the annual Redbud Festival and Texas Arbor Day Celebration.
 - a. Promote species diversity.
 - b. Include education materials about the benefits provided by trees.
 - c. Distribute tree care materials.
 - i. How to plant a tree.
 - ii. How to prune a tree.
 - iii. How to fertilize and mulch.
 - iv. How to irrigate.
 - v. How to hire an arborist or tree care company.

COST

\$

TARGET

ONGOING

PRIORITY

LOW



★ How are we doing?

With appropriate care and planning, the urban forest is an asset that has the potential to increase in value over time. As young trees mature and their leaf surface and canopy grow, so too will the overall benefits and value from the community's urban forest. The objectives and strategies of the Plan are intended to support this process in an appropriate manner that encourages the sustainable stewardship of community trees with consideration for safety, cost efficiency, and community values. The Plan includes strategies for measuring the success of the Plan over time.

Monitoring

Through talking with community partners and those within the urban forestry program, a set of goals were created to meet the strong demand for protecting and enhancing the urban forest, as stated in the community vision. The success of these goals is largely dependent on creating objectives and strategies to meet the targets outlined in the Plan as well as monitor the progress of these action steps.

Annual Plan Review

The Plan is an active tool that will guide management and planning decisions over the next 20 years. Its goals and actions will be reviewed annually for progress and integration into an internal work plan. The Plan presents a long-range vision and target dates are intended to be flexible in response to emerging opportunities, available resources, and changes in community expectations. Therefore, each year, specific areas of focus should be identified, which can inform budget and time requirements for Urban Forest Managers.

Resource Analysis

With a Resource Analysis, Denton can identify quantitatively the value of the composition of public trees, the annual benefit provided to the community, replacement value, and benefit versus investment ratios. With this information, Denton can improve health (condition), species diversity, annual benefits, and overall resource value of its tree resource. When a resource analysis is conducted every five years, the City can illustrate progress and success towards Plan goals. A five-year Resource Analysis review is a possible way to monitor progress on efforts to increase diversity through a list of tree species appropriate for a variety of different spaces and landscapes.

★ How are we doing?

Canopy Analysis

Due to findings from the State of the Denton Urban Forest Report, Denton has a baseline tree canopy for the entire urban forest, which allows for continued monitoring of trends in the canopy cover on private property.

Community Satisfaction

Plan results will be measurable through increased benefits and value in the community tree resource and the preservation and eventual increase in canopy cover over time. Attainment of the objectives and strategies will support better tree health, greater longevity, and a reduction in tree failures. However, one of the greatest measurements of success for the Plan will be its level of success in meeting community expectations for the care and preservation of the community tree resource. Community satisfaction can be measured through surveys and will be evidenced by public support for realizing the objectives of the Plan. Community satisfaction can also be gauged by the level of engagement and support for forestry programs.

Reporting

Completion of this Plan is the first step towards achieving the vision for Denton’s urban forest. Continual monitoring, analysis, and revisions will help forest managers keep stakeholders informed and engaged. By organizing data into specific components (for example; Urban Forest Reports, Community Satisfaction Surveys), it will be possible to revise specific areas of weakness and buttress areas of strength. Revisions to the Plan should occur with major events, such as newly discovered pests or diseases, or significant policy and regulation changes. A complete formal revision should occur in unison with major municipal projects, such as the Comprehensive Plan. It is important to remember that the Denton Urban Forest Master Plan is a living document that should adapt to new conditions.

State of the Urban Forest Report

The purpose of the report is to provide structural and functional information about the urban forest (including the municipal forest) and recommend strategies for its proactive management, protection, and growth.



★ Appendices:

Appendix A: References

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★ Appendices:

Appendix B: Terms and Definitions

American National Standards Institute (ANSI)

A Federation of United States industry sectors (e.g. businesses, professional societies and trade associations, standards developers, government agencies, institutes, and consumer / labor interest groups) that coordinates the development of the voluntary consensus standards system.

American Public Works Association (APWA)

An organization that supports professionals who operate, improve, or maintain public works infrastructure by advocating to increase awareness, and providing education, credentialing, as well as other professional development opportunities.

Arboriculture

The science, art, technology, and business of tree care.

Best Management Practices (BMP)

Management practices and processes used when conducting forestry operations, implemented to promote environmental integrity.

Capital Improvement Projects (CIP)

Infrastructure projects and equipment purchases identified by a government in order to maintain or improve public resources. Projects such as (1) constructing a facility, (2) expanding, renovating, replacing, or rehabilitating an existing facility, or (3) purchasing major equipment are identified, and then purchasing plans and development schedules are developed.

Climate Action Plan (CAP)

Government lead initiatives to decrease greenhouse gas emissions and prepare for the impacts of climate change.

Community Urban Forest

The collection of publicly owned trees within an urban area, including street trees and trees in parks and other public facilities.

Drip Line Area

The area measured from the trunk of the tree outward to a point at the perimeter of the outermost branch structure of the tree.

Dutch Elm Disease (DED)

A wilt disease of elm trees caused by plant pathogenic fungi. The disease is either spread by bark beetles or tree root grafts.

Emerald Ash Borer (EAB)

The common name for *Agrilus planipennis*, an emerald green wood boring beetle native to northeastern Asia and invasive to North America. It feeds on all species of ash.

Greenhouse Gas (GHG)

A gas that traps heat in Earth's atmosphere.

Geographic Information System (GIS)

Computer-based tools designed to increase the organization and understanding of spatial or geographic data. Many different kinds of data can be displayed on one map for visualization and interpretation.

Integrated Pest Management (IPM)

Using pest and environmental information to determine if pest control actions are warranted. Pest control methods (e.g. biological control, habitat manipulation, cultural control, plant resistance, and chemical control) are chosen based on economic and safety considerations.

i-Tree

A state-of-the-art, peer-reviewed software suite from the USDA Forest Service that provides urban and rural forestry analysis and benefits assessment tools.

International Society of Arboriculture (ISA)

An international nonprofit organization that supports professionals in the field of arboriculture by providing professional development opportunities, disseminating applicable research findings, and promoting the profession.

Landmark Tree

A healthy tree that is designated by the property owner on the Texas Big Tree Registry regardless if the tree is protected or a non-protected tree; or a tree designated as a historic tree where an event of historic significance occurred that had local, regional, or national importance; or at the home of a citizen who is famous on a local, regional, or national basis; or that has taken on a legendary stature in the community, is mentioned in literature or documents of historic value, or is considered unusual due to size, age, or other landmark status. Historic trees shall be designated following the historic landmark designation.

Migratory Bird Treaty Act (MBTA)

A United States federal law adopted to protect migratory birds.

Natural Area

A defined area where native trees and vegetation are allowed to grow and reproduce naturally with little or no management except for control of undesirable and invasive species.

Oak Wilt

A tree disease caused by the fungus *Ceratocystis fagacearum*. It is spread by sap feeding beetles and tree root grafts.

Open Space

A defined area of undeveloped land that is open to the public. The land can include native or naturalized trees and vegetation.

Plant Health Care (PHC)

A program that consists of (1) routinely monitoring landscape plant health and (2) individualized plant management recommendations in order to maintain or improve the vitality, appearance, and safety of trees and other plants.

Personal Protective Equipment (PPE)

Equipment worn to enhance workplace safety and minimize the risk to physical hazards (e.g. gloves, hard hats, bodysuits, and foot, eye, or ear protection).

Private Tree

Any tree located on private property, including residential and commercial parcels.

Protected Tree

Landmark, heritage, quality, or secondary trees.

Quality Tree

Healthy non-secondary tree, except Post Oaks, that measure between six and 18 inches dbh.

Public Tree

Any tree located in the public ROW, city park, and/or city facility.

Right Tree, Right Place

Careful planning for the planting of a tree. Considerations for whether a tree is the right tree and whether it is planted in the right place, include: mature height, canopy spread, deciduous/evergreen, form/shape, growth rate, soil requirements, light requirements, water requirements, fruit debris, and hardiness zone.

Secondary Tree

A healthy Ash, Bois D' Arc, Hackberry, or Cottonwood tree, with a dbh greater than six inches.

Street Tree

Any tree growing within the tree maintenance strip whether or not planted by the city.

Structural and Training Pruning

Pruning to develop a sound and desirable scaffold branch structure in a tree and to reduce the likelihood of branch failure.

Tree Canopy

The layer of leaves, branches, and stems of trees that cover the ground when viewed from above.

Tree City USA

A program through the Arbor Day Foundation that advocates for green urban areas through enhanced tree planting and care.

Tree Risk Assessment Qualified (TRAQ)

An International Society of Arboriculture qualification. Upon completion of this training, tree care professionals demonstrate proficiency in assessing tree risk.

Urban Forest

The collection of privately owned and publicly owned trees and woody shrubs that grow within an urban area.

Urban Forest Master Plan (PLAN)

A document that provides a comprehensive information, recommendations, and timelines to guide for the efficient and safe management of a city's tree canopy. The Plan uses adaptive management model to provide reasoned and transparent calls to action from an inventory of existing resources.

Urban Forestry

The cultivation and management of native or introduced trees and related vegetation in urban areas for their present and potential contribution to the economic, physiological, sociological, and ecological well-being of urban society.

Urban Tree Canopy Assessment (UTC)

A document based off of GIS mapping data that provides a birds-eye view of the entire urban forest and establishes a tree canopy baseline of known accuracy. The UTC helps managers understand the quantity and distribution of existing tree canopy, potential impacts of tree planting and removal, quantified annual benefits trees provide to the community, and benchmark canopy percent values.

Wildfire Urban Interface (WUI)

A transition zone where homes are located on the edge of fire prone areas, and are at an increased risk of personal injury or property damage resulting from a wildfire.

Appendix C: Industry Standards

ANSI Z133 SAFETY STANDARD, 2017

Reviews general safety, electrical hazards, use of vehicles and mobile equipment, portable power hand tools, hand tools and ladders, climbing, and work procedures.

ANSI A300

ANSI A300 standards represent the industry consensus on performing tree care operations. The standards can be used to prepare tree care contract specifications.

ANSI A300 Pruning Standard-Part 1, 2017**ANSI A300 Soil Management-Part 2, 2011****ANSI A300 Support Systems Standard-Part 3, 2013****ANSI A300 Construction Management Standard-Part 5, 2012****ANSI A300 Transplanting Standard-Part 6, 2012****ANSI A300 Integrated Vegetation Management Standard-Part 7, 2012****ANSI A300 Root Management Standard-Part 8, 2013****ANSI A300 Tree Risk Assessment Standard. Tree Failure-Part 9, 2017****ANSI A300 Integrated Pest Management-Part 10, 2016**

Includes guidelines for implementing IPM programs, including standards for Integrated Pest Management, IPM Practices, tools and equipment, and definition.

BEST MANAGEMENT PRACTICES (BMPs)

Integrated Pest Management, Second Edition, P. Eric Wiseman and Michael J. Raupp 2016

Provides a comprehensive overview of the basic definitions, concepts, and practices that pertain to landscape Integrated Pest Management (IPM). The publication provides specific information for designing, planning, and implementing an IPM program as part of a comprehensive Plant Health Care (PHC) management system, including topics such as:

- IPM Concepts and Definitions
- Action Thresholds
- Monitoring Tools and Techniques
- Preventive Tactics
- Control Tactics
- Documentation and Recordkeeping

Integrated Vegetation Management, Second Edition, Randall H. Miller, 2014

A guide to the selection and application of methods and techniques for vegetation control for electric rights-of-way projects and gas pipeline rights-of-way. Topics included: safety, site evaluations, action thresholds, evaluation and selection of control methods, implementing control methods, monitoring treatment and quality assurance, environmental protection, tree pruning and removal, and a glossary of terms.

Managing Trees During Construction, Second Edition, Kelby Fite and E. Thomas Smiley, 2016

Describes tree conservation and preservation practices that help to protect selected trees

throughout the construction planning and development process so that they will continue to provide benefits for decades after site disturbance, including planning phase, design phase, pre-construction phase, construction phase, and post-construction phase.

Plant Health Care for Woody Ornamental: A Professional's Guide to Preventing and Managing Environmental Stresses and Pests, Developed in partnership with the USDA Forest Service, 1997

A comprehensive manual on plant health maintenance, which includes information on basic biology of woody plants, understanding stress and pest complexes, abiotic disorders and diseases, management of insect and vertebrate pests, weed management, and working with clients and the public.

Root Management, Larry Costello, Gary Watson, and Tom Smiley, 2017

Recommended practices for inspecting, pruning, and directing the roots of trees in urban environments to promote their longevity, while minimizing infrastructure conflicts.

Special companion publication to the ANSI A300 Part 8: Tree, Shrub, and Other Woody Plant Management—Standard Practices (Root Management)

Tree Planting, Second Edition, Gary Watson, 2014

Provides processes for tree planting, including site and species selection, planting practices, post-planting pruning, and early tree care. Other topics included are time of planting, nursery stock (types, selection, and handling), preparing the planting hole, planting practices, root loss and new root growth, redevelopment of root structure, pruning, palms, after planting, final inspection, and a glossary of terms.

Tree Inventories, Second Edition, Jerry Bond, 2013

Provides considerations for managing large numbers of trees considered as individuals rather than groups and serves as guide for making informed decisions that align with inventory goals with needs and resources, including inventory goals and objectives, benefits and costs, types, work specifications, and maintaining inventory quality.

Tree Risk Assessment, Second Edition, E. Thomas Smiley, Nelda Matheny, and Sharon Lilly, 2017

A guide for assessing tree risk as accurately and consistently as possible, to evaluate that risk, and to recommend measures that achieve an acceptable level of risk, including topics such as: risk assessment basics, levels and scope of tree risk assessment, assessing targets, sites, and trees, tree risk categorization, risk mitigation (preventive and remedial actions), risk reporting, tree related conflicts that can be a source of risk, loads on trees, structural defects and conditions that affect likelihood of failure, response growth, and description of selected types of advanced tree risk assessments.

Tree Shrub Fertilization, Third Edition, E. Thomas Smiley, Sharon Lilly, and Patrick Kelsey, 2013

Aids in the selection and application of fertilizers for trees and shrubs, including essential elements, determining goals and objectives of fertilization, soil testing and plan analysis, fertilizer selection, timing, application, application area, rates, storage and handling of fertilizer, sample fertilizer contract for commercial/municipal clients.

Soil Management, Bryant Scharenbroch, E. Thomas Smiley, and Wes Kocher, 2014

Focuses on the protection and restoration of soil quality that support trees and shrubs in the urban environment, including goals of soil management,

assessment, sampling, and analysis, modifications and amendments, tillage, conservation, and a glossary of terms.

Utility Pruning of Trees, Geoffrey P. Kempter, 2004

Describes the current best practices in utility tree pruning based on scientific research and proven methodology for the safe and reliable delivery of utility services, while preventing unnecessary injury to trees. An overview of safety, tools and equipment, pruning methods and practices, and emergency restoration are included.

AMERICAN PUBLIC WORKS ASSOCIATION

The American Public Works Association (APWA) produces manuals for agencies of any size and with a range of responsibilities to use in order to develop policies and procedures necessary to perform as full-service public works agency. In addition to the Public Works Management Practices Manual (currently in its ninth edition), APWA publishes a series of pocket guides.

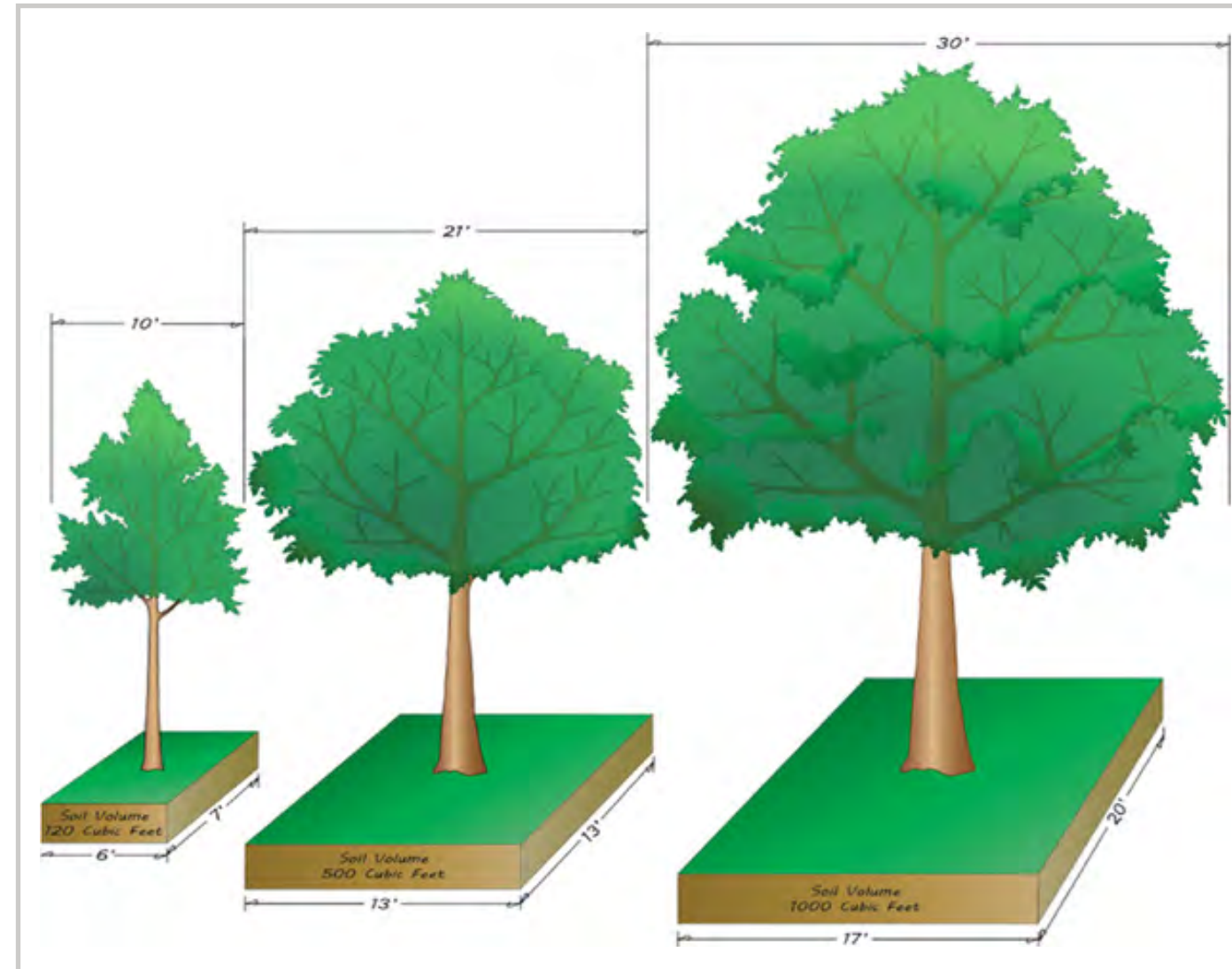
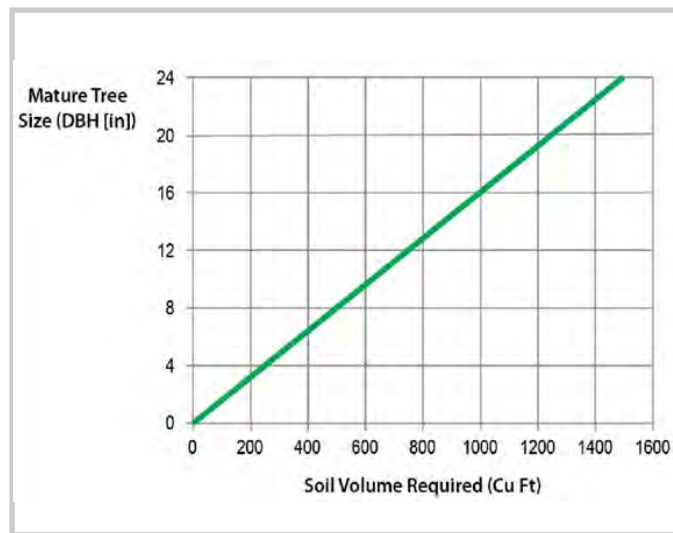
Tree Protection & Preservation: A Pocket Guide of Best Management Practices

The Tree Protection & Preservation Pocket Guide provides basic and practical information on how to manage trees at-risk in construction areas. These Best Management Practices help to give trees the best chance of survival before and after construction.

★ Appendices:

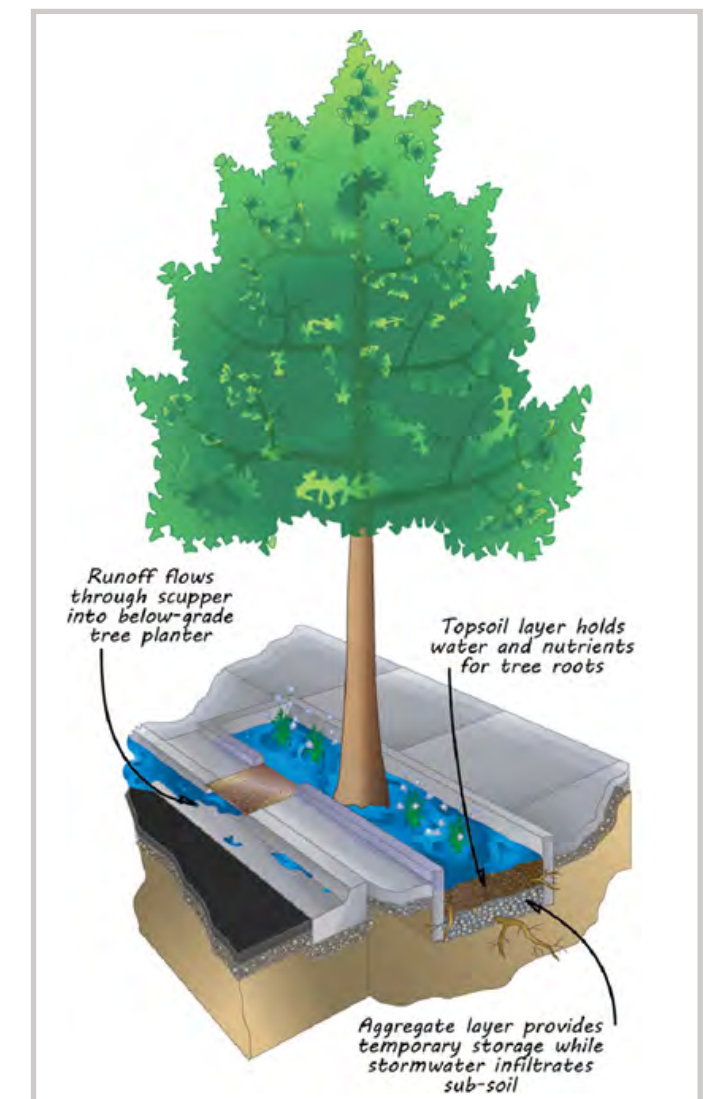
Appendix D: Soil Volume & Tree Stature

Tree growth is limited by soil volume. Larger stature trees require larger volumes of uncompacted soil to reach mature size and canopy spread (Casey Trees, 2008).



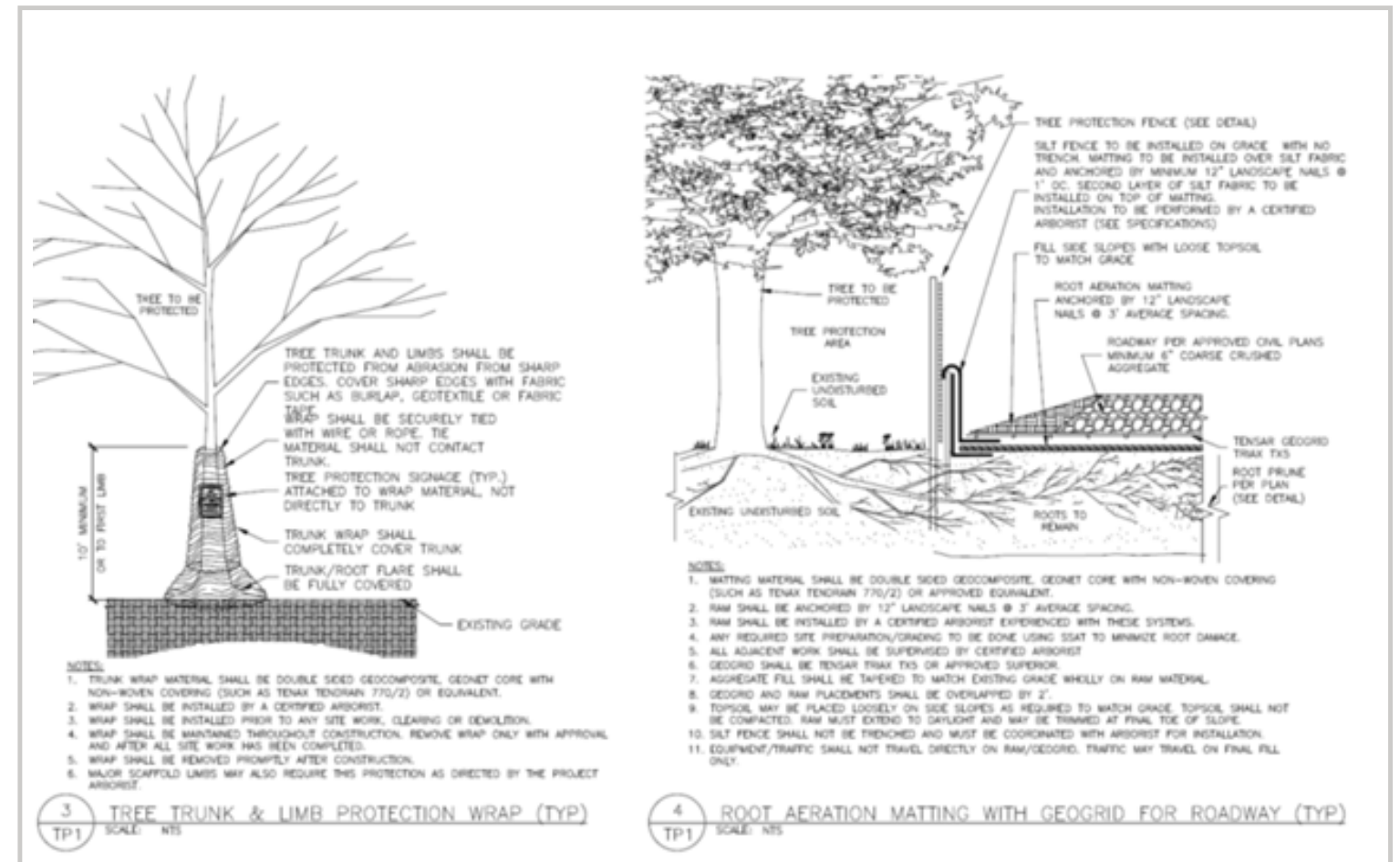
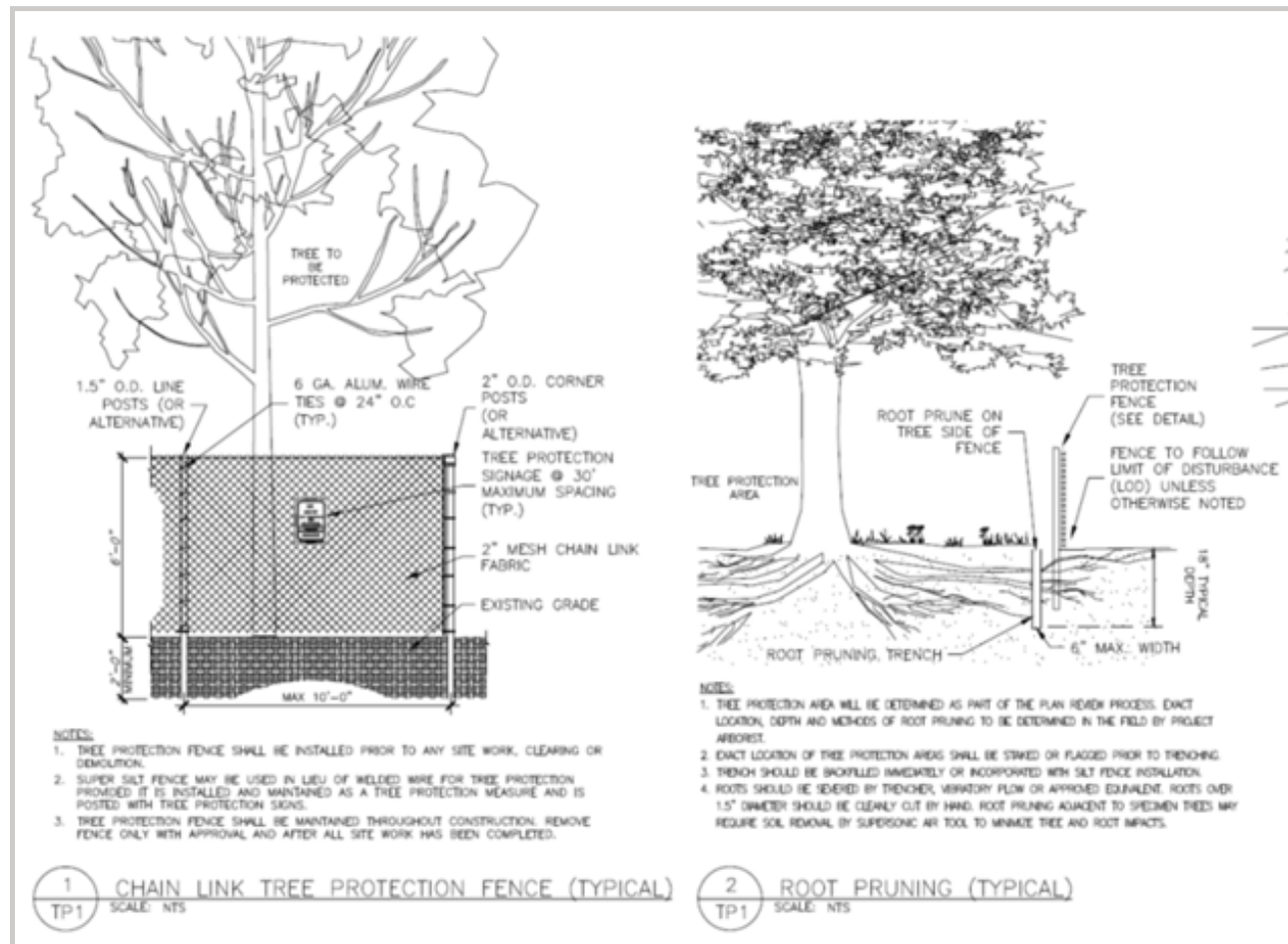
Appendix E: Alternative Planter Designs

Stormwater tree pits are designed to collect runoff from streets, parking lots, and other impervious areas. Stormwater is directed into scuppers that flow into below-grade planters that then allow stormwater to infiltrate soils to supplement irrigation.



★ Appendices:

Tree Protection Zone – Example



★ Appendices:

Tree Protection Zone – Example

5 TEMPORARY ROOT PROTECTION MATTING (TYPICAL)
TP1 SCALE: NTS

6 TREE PROTECTION FOR UNDERGROUND UTILITY (TYP)
TP1 SCALE: NTS

7 TREE PROTECTION AREA SIGN (TYPICAL)
TP1 SCALE: NTS

Labels and Notes for Diagram 5:

- TREE TO BE PROTECTED
- TREE PROTECTION FENCE (SEE DETAIL)
- SILT FENCE TO BE INSTALLED ON GRADE WITH NO TRENCH. MATTING TO BE INSTALLED OVER SILT FABRIC AND ANCHORED BY MINIMUM 12" LANDSCAPE NAILS @ 1' OC. SECOND LAYER OF SILT FABRIC TO BE INSTALLED ON TOP OF MATTING. INSTALLATION TO BE PERFORMED BY A CERTIFIED ARBORIST (SEE SPECIFICATIONS)
- COVER MATTING WITH AGGREGATE FOR HEAVY TRAFFIC USE
- ROOT PROTECTION MATTING ANCHORED BY 18" LANDSCAPE NAILS @ 3' AVERAGE SPACING.
- 12" WOOD CHIP MULCH
- ROOT PRUNE PER PLAN (SEE DETAIL)
- EXISTING UNDISTURBED SOIL
- ROOTS TO REMAIN

Notes for Diagram 5:

- MATTING MATERIAL SHALL BE DOUBLE SIDED GEODECOMPOSITE, GEOTEXT CORE WITH NON-WOVEN COVERING (SUCH AS TEXAR TENDAR 770/2) OR APPROVED EQUIVALENT.
- RPM SHALL BE INSTALLED BY A CERTIFIED ARBORIST.
- TO BE USED FOR DESIGNATED TEMPORARY CONSTRUCTION ACCESS AND STOCKPILE AREAS.
- MATTING SHALL BE PLACED ON 12" WOOD CHIP MULCH UNLESS OTHERWISE DIRECTED.
- FOR HEAVY TRAFFIC AREAS, MATTING SHALL BE COVERED WITH 6-8" WELL GRADED CRUSHED AGGREGATE. ADDITIONAL LAYERS OF GEOTEXTILE MAY BE NEEDED.

Labels and Notes for Diagram 6:

- EXISTING UNDISTURBED GRADE
- EXISTING TREE TO REMAIN
- CRITICAL ROOT ZONE
- ROOT PROTECTION MAT (SEE DETAIL)
- WOOD CHIP MULCH LAYER
- ROOT PRUNE TRENCH
- EXCAVATOR
- PLACE EXCAVATED SOIL AWAY FROM TREE TO BE PROTECTED OR PLACE ON ROOT PROTECTION MAT
- TREE PROTECTION FENCE
- TRENCH BOX OR SHEETING & SHORING AS DETERMINED BY CIVIL PLANS
- SLOPE PER OSHA REQUIREMENTS
- SPECIFIED UTILITY

Notes for Diagram 6:

- EXACT RPM DIMENSIONS TO BE DETERMINED BY PROJECT ARBORIST
- ARBORIST TO COORDINATE WITH SITE SUPERINTENDENT FOR PIPE LAYOUT, DEPTH/SIZE OF EQUIPMENT, WIDTH OF TRENCH, AND OVERDIG TO DETERMINE LOCATION AND LAYOUT OF TREE PROTECTION
- ARBORIST TO COORDINATE WITH SITE SUPERINTENDENT FOR OVERHEAD CLEARANCE ISSUES. MAY REQUIRE SELECT PRUNING OR TEMPORARY CUTTING.
- ARBORIST TO MONITOR BACK FILL AND RESTORATION ADJACENT TO PROTECTED TREES.

Labels and Notes for Diagram 7:

- TREE PROTECTION SIGNAGE @ 50' MAXIMUM SPACING (TYP.)
- YELLOW BACKGROUND WITH BLACK LETTERING
- TREE PROTECTION FENCE
- HEAVY GAUGE VINYL OR EQUAL TO RESIST ELEMENTS FOR 1-2 YEARS
- MINIMUM 11'
- MINIMUM 8.5'

Sign Text:

TREE PROTECTION AREA
KEEP OUT!
MACHINERY, DUMPING, OR STORING MATERIALS IS PROHIBITED
PROHIBIDO ENTRAR ZONA DE PROTECCION DEL ARBOL
RESPONSIBLE PARTY AND CONTACT INFORMATION

Notes for Diagram 7:

- SIGNS TO BE ATTACHED TO TREE PROTECTION FENCE ON POSTS AT READABLE LEVEL.
- 50' MINIMUM SPACING AVERAGE ADJUSTED FOR MAXIMUM READABILITY.
- MINIMUM ONE SIGN FOR SMALL TREE PROTECTION AREAS.
- SIGNS MAY BE REMOVED FROM RESIDENTIAL LOTS UPON ISSUANCE OF USE AND OCCUPANCY.
- SIGNS TO REMAIN ON NON-RESIDENTIAL SITES FOR MAINTENANCE PERIOD.

Definitions:

- Certified Arborist:** Credential of an individual arborist issued and administered by the International Society of Arboriculture. This credential must be current and valid to qualify to use the copyrighted designation of "Certified Arborist". Refer to www.isa-arbor.com for additional information.
- Project Arborist:** Arboricultural firm contracted to provide site investigation and documentation (tree inventories, assessments, forest stand delineations, etc.) and develop tree preservation plans, methods, details and specifications in collaboration with the project design team.
- Contract Arborist:** Arboricultural firm contracted to implement the approved tree preservation plans on site. All crews conducting arboricultural operations on site shall consist of at least one Certified Arborist who directly oversees all work by that crew. Arboricultural operations include, but are not limited to, pruning, tree protection device installation and maintenance (fencing, matting, etc.), root pruning, air tool root excavation/exploration, soil care activities, soil testing, mulch application, tree inspections, pesticide/chemical application and tree removal.

★ Appendices:

Appendix F: Indicators of a Sustainable Urban Forest

Table 3: A Sustainable Urban Forest Indicators Combined Results

Indicators of a Sustainable Urban Forest		Assessed Performance Level		
		Low	Medium	High
THE TREES	Urban Tree Canopy		X	
	Equitable Distribution	X		
	Size/Age Distribution	X		
	Condition of Public Trees - Streets, Parks	X		
	Condition of Public Trees - Natural Areas	X		
	Trees on Private Property		X	
	Species Diversity	X		
	Suitability		X	
	Soil Volume	X		
THE PLAYERS	Neighborhood Action		X	
	Large Private & Institutional Landholder Involvement	X		
	Green Industry Involvement		X	
	Funder Engagement		X	
	Number of Species Exceeding 10%	X		
	Utility Engagement		X	
	Developer Engagement		X	
	Public Awareness		X	
	Regional Collaboration	X		
THE MGMT APPROACH	Tree Inventory	X		
	Canopy Assessment			X
	Management Plan	X		
	Risk Management Program	X		
	Maintenance of Publicly-Owned Trees (ROWs)		X	
	Planting Program		X	
	Tree Protection Policy		X	
	City Staffing and Equipment		X	
	Funding		X	
	Disaster Preparedness & Response		X	
	Communications			X
Totals	13	15	2	

Table 4: A Sustainable Urban Forest Indicators: The Trees

THE TREES				
Indicators of a Sustainable Urban Forest	Overall Objective or Industry Standard	Performance Levels		
		Low	Medium	High
Urban Tree Canopy	Achieve the desired tree canopy cover according to goals set for the entire city and neighborhoods. Alternatively, achieve 75% of the total canopy possible for the entire city and in each neighborhood.”	Canopy is decreasing. - and/or - No canopy goals have been set.	Canopy is not dropping, but not on a trajectory to achieve the established goal.	Canopy goal is achieved, or well on the way to achievement.
Location of Canopy (Equitable Distribution)	Achieve low variation between tree canopy and equity factors citywide by neighborhood. Ensure that the benefits of tree canopy are available to all, especially for those most affected by these benefits.	Tree planting and public outreach and education is not determined by tree canopy cover or benefits.	Tree planting and public outreach and education is focused on neighborhoods with low tree canopy.	Tree planting and public outreach and education is focused in neighborhoods with low tree canopy and a high need for tree benefits.
Age of Trees (Size and Age Distribution)	Establish a diverse-aged population of public trees across the entire city and for each neighborhood. Ideal standard: 0-8” DBH: 40% 9-17” DBH: 30% 18-24” DBH: 20% Over 24” DBH: 10%	No current information is available on size. - OR - Age distribution is not proportionally distributed across size classes at the city level.	Size classes are evenly distributed at the city level, though unevenly distributed at the neighborhood level.	Age distribution is generally aligned with the ideal standard diameter classes at the neighborhood level.
Condition of Publicly Owned Trees (trees managed intensively)	Possess a detailed understanding of tree condition and potential risk of all intensively-managed, publicly-owned trees. This information is used to direct maintenance actions.	No current information is available on tree condition or risk.	Information from a partial or sample or inventory is used to assess tree condition and risk.	Information from a current, GIS-based, 100% complete public tree inventory is used to indicate tree condition and risk.
Condition of Publicly-Owned Natural Areas (trees managed extensively)	Possess a detailed understanding of the ecological structure and function of all publicly-owned natural areas (such as woodlands, ravines, stream corridors, etc.), as well as usage patterns.	No current information is available on tree condition or risk.	Publicly-owned natural areas are identified in a sample-based “natural areas survey” or similar data.	Information from a current, GIS-based, 100% complete natural areas survey is utilized to document ecological structure and function, as well as usage patterns.
Trees on Private Property	Possess a solid understanding of the extent, location and general condition of trees on private lands.	No data is available on private trees.	Current tree canopy assessment reflects basic information (location) of both public and private canopy combined.	Detailed information available on private trees. Ex. bottom-up sample-based assessment of trees.
Diversity	Establish a genetically diverse population of publicly-owned trees across the entire city and for each neighborhood. Tree populations should be comprised of no more than 30% of any family, 20% of any genus, or 10% of any species.	No current information is available on species. - OR - Fewer than five species dominate the entire tree population citywide.	No species represents more than 20% of the entire tree population citywide.	No species represents more than 10% of the entire tree population citywide.
Climate Resilience/ Suitability	Establish a tree population suited to the urban environment and adapted to the overall region. Suitable species are gauged by exposure to imminent threats, considering the “Right Tree for the Right Place” concept and invasive species.	No current information is available on species suitability. - OR - Less than 50% of trees are considered suitable for the site.	50% to 75% of trees are considered suitable for the site.	More than 75% of trees are considered suitable for the site.
Space and Soil Volume	Establish minimum street tree soil volume requirements to ensure there is adequate space and soil for street trees to thrive. Minimum soil volumes by mature size: 1000 cubic feet for large trees; 600 cubic feet for medium trees; 300 cubic feet for small trees.	Minimum street tree soil volumes have not been established.	Minimum street tree soil volume has been established based on mature size of tree.	Minimum street tree soil volumes have been established and are required to be adhered to for all new street tree planting projects.

Table 5: A Sustainable Urban Forest Indicators: The Players

THE PLAYERS				
Indicators of a Sustainable Urban Forest	Overall Objective or Industry Standard	Performance Levels		
		Low	Medium	High
Neighborhood Action	Citizens understand, cooperate, and participate in urban forest management at the neighborhood level. Urban forestry is a neighborhood-scale issue.	Little or no citizen involvement or neighborhood action.	Some active groups are engaged in advancing urban forestry activity, but with no unified set of goals or priorities.	The majority of all neighborhoods are organized, connected, and working towards a unified set of goals and priorities.
Large Private & Institutional Landholder Involvement	Large, private, and institutional landholders embrace citywide goals and objectives through targeted resource management plans.	Large private land holders are unaware of issues and potential influence in the urban forest. No large private land management plans are currently in place.	Education materials and advice is available to large private landholders. Few large private landholders or institutions have management plans in place.	Clear and concise goals are established for large private land holders through direct education and assistance programs. Key landholders and institutions have management plans in place.
Green Industry Involvement	The green industry works together to advance citywide urban forest goals and objectives. The city and its partners capitalize on local green industry expertise and innovation.	Little or no involvement from green industry leaders to advance local urban forestry goals.	Some partnerships are in place to advance local urban forestry goals, but more often for the short-term.	Long-term committed partnerships are working to advance local urban forestry goals.
City Department and Agency Cooperation	All city departments and agencies cooperate to advance citywide urban forestry goals and objectives.	Conflicting goals and/or actions among city departments and agencies.	Informal teams among departments and agencies are communicating and implementing common goals on a project-specific basis.	Common goals and collaboration occur across all departments and agencies. City policy and actions are implemented by formal interdepartmental and interagency working teams on all city projects.
Funder Engagement	Possess a detailed understanding of the ecological structure and function of all publicly-owned natural areas (such as woodlands, ravines, stream corridors, etc.), as well as usage patterns.	Local funders are engaged and invested in urban forestry initiatives. Funding is adequate to implement citywide urban forest management plan.	Little or no funders are engaged in urban forestry initiatives.	Funders are engaged in urban forestry initiatives at minimal levels for short-term projects. Multiple funders are fully engaged and active in urban forestry initiatives for short-term projects and long-term goals.
Utility Engagement	All utilities are aware of and vested in the urban forest and cooperates to advance citywide urban forest goals and objectives.	Utilities and city agencies act independently of urban forestry efforts. No coordination exists.	Utilities and city agencies have engaged in dialogues about urban forestry efforts with respect to capital improvement and infrastructure projects.	Utilities, city agencies, and other stakeholders integrate and collaborate on all urban forestry efforts, including planning, site work, and outreach/education.
State Engagement	State departments/agencies are aware of and vested in the urban forest and cooperates to advance citywide urban forest goals and objectives.	State departments/agencies and City agencies act independently of urban forestry efforts. No coordination exists.	State department/agencies and City agencies have engaged in dialogues about urban forestry efforts with respect to capital improvement and infrastructure projects.	State departments/agencies, City agencies, and other stakeholders integrate and collaborate on all urban forestry efforts, including planning, site work, and outreach/education.
Public Awareness	The general public understands the benefits of trees and advocates for the role and importance of the urban forest.	Trees are generally seen as a nuisance, and thus, a drain on city budgets and personal paychecks.	Trees are generally recognized as important and beneficial.	Trees are seen as valuable infrastructure and vital to the community's well-being. The urban forest is recognized for the unique environmental, economic, and social services its provides to the community.
Regional Collaboration	Neighboring communities and regional groups are actively cooperating and interacting to advance the region's stake in the city's urban forest.	Little or no interaction between neighboring communities and regional groups.	Neighboring communities and regional groups share similar goals and policy vehicles related to trees and the urban forest.	Regional urban forestry planning, coordination, and management is widespread.

Table 6: A Sustainable Urban Forest Indicators: The Management

THE MANAGEMENT APPROACH				
Indicators of a Sustainable Urban Forest	Overall Objective or Industry Standard	Performance Levels		
		Low	Medium	High
Tree Inventory	Comprehensive, GIS-based, current inventory of all intensively-managed public trees to guide management, with mechanisms in place to keep data current and available for use. Data allows for analysis of age distribution, condition, risk, diversity, and suitability.	No inventory or out-of-date inventory of publicly-owned trees.	Partial or sample-based inventory of publicly-owned trees, inconsistently updated.	Complete, GIS-based inventory of publicly-owned trees, updated on a regular, systematic basis.
Canopy Assessment	Accurate, high-resolution, and recent assessment of existing and potential city-wide tree canopy cover that is regularly updated and available for use across various departments, agencies, and/or disciplines.	No tree canopy assessment.	Sample-based canopy cover assessment, or dated (over 10 years old) high resolution canopy assessment.	High-resolution tree canopy assessment using aerial photographs or satellite imagery.
Management Plan	Existence and buy-in of a comprehensive urban forest management plan to achieve city-wide goals. Re-evaluation is conducted every 5 to 10 years.	No urban forest management plan exists.	A plan for the publicly-owned forest resource exists but is limited in scope, acceptance, and implementation.	A comprehensive plan for the publicly owned forest resource exists and is accepted and implemented.
Risk Management Program	All publicly-owned trees are managed for maximum public safety by way of maintaining a city-wide inventory, conducting proactive annual inspections, and eliminating hazards within a set timeframe based on risk level. Risk management program is outlined in the management plan.	Request-based, reactive system. The condition of publicly-owned trees is unknown.	There is some degree of risk abatement thanks to knowledge of condition of publicly-owned trees, though generally still managed as a request-based reactive system.	There is a complete tree inventory with risk assessment data and a risk abatement program in effect. Hazards are eliminated within a set time period depending on the level of risk.
Maintenance Program of Publicly-Owned Trees (trees managed intensively)	All intensively-managed, publicly-owned trees are well maintained for optimal health & condition in order to extend longevity & maximize benefits. A reasonable cyclical pruning program is in place, generally targeting 5-7 year cycles. Maintenance program is outlined in the management plan.	Request-based, reactive system. No systematic pruning program is in place for publicly-owned trees.	All publicly-owned trees are systematically maintained, but pruning cycle is inadequate.	All publicly-owned trees are proactively and systematically maintained and adequately pruned on a cyclical basis.
Maintenance Program of Publicly-Owned Natural Areas (trees managed extensively)	The ecological structure and function of all publicly-owned natural areas are protected and enhanced while accommodating public use where appropriate.	No natural areas management plans are in effect.	Only reactive management efforts to facilitate public use (risk abatement).	Management plans are in place for each publicly-owned natural area focused on managing ecological structure and function and facilitating public use.
Planting Program	Comprehensive and effective tree planting and establishment program is driven by canopy cover goals, equity considerations, and other priorities according to the plan. Tree planting and establishment is outlined in the management plan.	Tree establishment is ad hoc.	Tree establishment is consistently funded and occurs on an annual basis.	Tree establishment is directed by needs derived from a tree inventory and other community plans and is sufficient in meeting canopy cover objectives.
Tree Protection Policy	Comprehensive and regularly updated tree protection ordinance with enforcement ability is based on community goals. The benefits derived from trees on public and private property are ensured by the enforcement of existing policies.	No tree protection policy.	Policies are in place to protect trees, but the policies are not well-enforced or ineffective.	Protections policies ensure the safety of trees on public and private land. The policies are enforced and supported by significant deterrents and shared ownership of city goals.
City Staffing and Equipment	Adequate staff and access to the equipment and vehicles to implement the management plan. A high level urban forester or planning professional, strong operations staff, and solid certified arborist technicians.	Insufficient staffing levels, insufficiently-trained staff, and/or inadequate equipment and vehicle availability.	Certified arborists and professional urban foresters on staff have some professional development, but are lacking adequate staff levels or adequate equipment.	Multi-disciplinary team within the urban forestry unit, including an urban forestry professional, operations manager, and arborist technicians. Vehicles and equipment are sufficient to complete required work.
Funding	Appropriate funding in place to fully implement both proactive and reactive needs based on a comprehensive urban forest management plan.	Funding comes from the public sector only, and covers only reactive work.	Funding levels (public and private) generally cover mostly reactive work. Low levels of risk management and planting in place.	Dynamic, active funding from engaged private partners and adequate public funding are used to proactively manage and expand the urban forest.
Disaster Preparedness & Response	A disaster management plan is in place related to the city's urban forest. The plan includes staff roles, contracts, response priorities, debris management and a crisis communication plan. Staff are regularly trained and/or updated.	No disaster response plan is in place.	A disaster plan is in place, but pieces are missing and/or staff are not regularly trained or updated.	A robust disaster management plan is in place, regularly updated and staff is fully trained on roles and processes.
Communication	Effective avenues of two-way communication exist between the city departments and between city and its citizens.	No avenues are in place. City departments and public determine on an ad-hoc basis the best messages and avenues to communicate.	Avenues are in place, but used sporadically and without coordination or only on a one-way basis.	Avenues are in place for two way communication, are well-used with targeted, coordinated messages.

★ Appendices:

Appendix G: Property Purchase Decision Criteria

PROPERTY CHARACTERISTIC	DESCRIPTION
<p>Purchasing property provides an opportunity to preserve trees and set aside space for future tree plantings. It is important to consider costs and the existing real-estate market along with the following criteria when purchasing property.</p> <p>Canopy Cover</p>	<p>Tree canopy provides numerous benefits to the community. Although, the quality of the canopy, i.e. health, and overall expanse of the canopy impacts the overall environmental benefits.</p>
<p>High Value Canopy/Species</p>	<p>Trees provide numerous environmental benefits to the community. But not all trees provide the same level of benefits. Native tree species and other significant species, recognized for their contribution to ecosystem benefits, are especially valuable. In addition to providing wildlife habitat, native trees are well-adapted to the local climate and may require less maintenance and less water than introduced species. Significant trees or high-value tree species may or may not be native trees but are significant contributors to the overall diversity of the urban forest and significantly contribute to the overall environmental benefits. Other considerations for what make a tree significant include: size, crown density, drought-tolerance, longevity, contributions to air quality and stormwater capture, reducing energy consumption, and mitigating the effects of urban heat islands.</p>
<p>Forest Connectivity</p>	<p>Forest connectivity promotes ecosystem functionality and biodiversity, and creates wildlife habitat and corridors for birds, insects, and other animals. Strategic purchase of property that connects with and/or bridges existing core canopy, open space, and/or greenbelts can greatly benefit wildlife and forest ecosystems.</p>
<p>Stormwater Benefits</p>	<p>Higher impervious surfaces, characteristic of urban areas, result in increased surface runoff and nonpoint source pollution. Stormwater management can add significantly to the cost of infrastructure a community must invest to manage/treat stormwater. Trees and canopy capture stormwater, reduce runoff, increase soil percolation, and filter pollutants. Therefore, trees can contribute to stormwater management and reduce the need for additional infrastructure. Additionally, trees along streams, creeks, rivers, and man-made water management systems can stabilize the soils along the banks to reduce erosion.</p>
<p>Equitable Distribution</p>	<p>Numerous studies have shown that tree canopy is not always equally distributed across communities. Often, in urban areas, these discrepancies can be observed across socioeconomic and demographic lines. Tree canopy provides numerous environmental and social benefits to the community, but if tree canopy is not proportionate, benefits provided by public trees are not enjoyed equitably.</p>
<p>Passive Recreation</p>	<p>Open space areas and tree canopy promote engagement with nature and the outdoors, especially when they are easily accessible and/or congruent with existing trails and greenbelts. Passive recreation (e.g., hiking, forest bathing) offer residents an important respite from urban stress. Creating opportunities for passive recreation generally requires only minimal development (e.g., signage, trail maintenance) and forestlands can be minimally managed with less impact on the ecosystem.</p>
<p>Parcel size and shape</p>	<p>Some parcels of land are subdivided over time. Sometimes remaining parcels are narrow, irregularly shaped, or are not large enough to allow for building and development. Irregularly shaped and/or otherwise low-value parcels may be available at a reduced price.</p>
<p>Brownfield land/Foreclosure</p>	<p>Contaminated brownfield sites can sit unused for decades because the cost of cleaning the site is more than the value of the land would be worth for redevelopment. Similarly, foreclosures may have debt beyond market feasibility. Additionally, sites may have EPA liens, past taxes, and in severely deteriorated condition.</p>
<p>Category Score</p>	
<p>Combined Score</p>	

	PROPERTY CHARACTERISTIC	PROPERTY CHARACTERISTIC	PROPERTY CHARACTERISTIC
	Tree canopy cover is not well understood; GIS land cover layer is not available/ existing. Canopy cover of property is estimated to be minimal (<20%). Health of the overall canopy cover on the property is in less than fair condition.	Tree canopy is mapped through GIS land cover layer. Estimates indicate that the property has at least a moderate level of tree canopy (20-35%) and in mostly fair or better condition.	Tree canopy is understood through a GIS land cover layer. Tree canopy coverage is high (>35% canopy cover) and the overall health is in fair or better condition.
	Property has none or few native or significant trees. Property may include a prevalence of invasive species or high- maintenance species that are not well-adapted to the local climate.	Property has native or significant trees. May also include some invasive or high- maintenance species where control is manageable. Health of the trees are in fair or worse condition. May include valuable habitat/forage for wildlife. May be adjacent to, or including, wetlands, rivers, streams, and/or steep slopes, where canopy provides benefits to water quality, fish habitat, and soil preservation.	Property is mostly populated by native or significant trees. Trees and canopy are in overall fair or better condition. May also include high-value habitat/ forage for wildlife and/or threatened and endangered species. Is adjacent to, or including, wetlands, rivers, streams, and/or steep slopes, where canopy provides benefits to water quality, fish habitat, and soil preservation.
	Property is not adjacent to existing core canopy. Location does not provide support or connectivity to known wildlife corridors or high-value habitat. Core canopy is defined as tree canopy that exists within and relatively far from the forest/non-forest boundary (i.e., forested areas surrounded by more forested areas).	Property includes <i>edge</i> or <i>perforated</i> canopy and is connected/adjacent to core canopy. Location may augment and/or support connectivity to known wildlife corridors and/or high value habitat. <i>Edge</i> canopy is defined as the boundary between core forests and large core forests and large non-forested land cover features. <i>Perforated</i> canopy defines the boundary between core forests and relatively small clearings (perforations) within the forest landscape.	Property includes core canopy and augments existing canopy corridors known to support wildlife habitat, nesting, foraging and migration. Core canopy is defined as tree canopy that exists within and relatively far from the forest/non-forest boundary (i.e., forested areas surrounded by more forested areas).
	Property has high levels of impervious surface or bare soil, which increases the effects of stormwater runoff or property is not located adjacent to water bodies to positively contribute to reducing erosion.	Property has a mixture of both tree canopy and low-lying vegetation (shrubs and grasses), which positively contribute to reducing stormwater runoff OR property is adjacent to bodies of water or stormwater management systems.	Property has a high level of canopy, which may be a mix of trees, shrubs, and grasses AND is adjacent to bodies of water or stormwater management systems, with a likelihood to reduce stormwater runoff and erosion.
	Canopy would not positively contribute to the equitable distribution of canopy across the community OR the distribution of canopy is not well studied or understood in the community.	n/a	Canopy would contribute to a more equitable distribution of canopy across the community.
	Property is land-locked or not located in an area that would easily transition to a state that would provide passive recreation opportunities.	Property may require some investment to provide passive recreation activities or has potential for future connections or access based on adjacent property use.	Property requires minimal investment to provide passive recreation opportunities for the community and promotes preservation of environmentally sensitive areas. Property has connections to other recreation areas, trails, or connectivity to existing open space.
	Parcel is regular shaped and/or large enough to permit building for development.	n/a	Parcel is irregularly shaped or smaller than the required buildable area for development.
	Property is marketable for redevelopment OR the site is not suitable for tree canopy.	n/a	Property is designated as a brownfield site or is in foreclosure with EPA liens, past taxes, and the cost to clean the property or the debt of the property makes it undesirable for redevelopment or development. However, property is suitable for tree canopy and/or includes canopy and may be available at a reduced price.
	Areas with a low score are assigned a value of 1.	Areas with a moderate score are assigned a value of 2.	Areas with a high score are assigned a value of 3.
	A combined score of 13 or less suggests the property will not likely preserve or expand canopy cover.	A combined score of between 14 and 19 suggests the property may preserve or expand canopy cover. Additional considerations may be required before purchase.	A combined score of 20 or more suggests that property will likely preserve and expand canopy cover.



“

“Though the word beautification makes the concept sound merely cosmetic, it involves much more: clean water, clean air, clean roadsides, safe waste disposal and preservation of valued old landmarks as well as great parks and wilderness areas. To me...beautification means our total concern for the physical and human quality we pass on to our children and the future.

★ **LADY BIRD JOHNSON**

**INFORMAL STAFF REPORT
TO MAYOR AND CITY COUNCIL**

SUBJECT:

Tree Protection during construction.

BACKGROUND:

In January, staff received a request to develop a comprehensive tree protection protocol for internal and external development/redevelopment projects as it relates to construction. Parks and Recreation staff coordinated with Engineering to develop criteria that are consistent with the industry best management practices (BMPs) produced by Texas A&M Forest Service, and rooted in the American National Standards Institute (ANSI) A300 Part 5: "Trees, Shrubs, and other Woody Plant Maintenance – Standard Practices (Management of Trees and Shrubs During Site Development, and Construction)."

DISCUSSION:

The guide provides BMPs for protecting trees to be preserved during the replacement, repair, and construction of infrastructure in the City of Denton. The intent is to cover the majority of tree protection scenarios. However, there may be site-specific circumstances that require a custom solution to working around the tree to be preserved. The guide covers general tree protection but focuses on protecting trees while constructing/reconstructing or repairing streets, curbs, sidewalks, and underground utilities. While developing the process, staff took into consideration the protection of trees on public right-of-ways as well as private property.

CONCLUSION:

The guide will be distributed to internal and external crews that construct/reconstruct public infrastructure projects for the City of Denton. Once in use, it will reduce construction-related damage to trees above and below the ground.

STAFF CONTACT:

Haywood Morgan
Urban Forester, Parks and Recreation
Haywood.Morgan@cityofdenton.com

REQUESTOR:

City Council

PARTICIPATING DEPARTMENTS:

Parks and Recreation
Engineering

STAFF TIME TO COMPLETE REPORT:

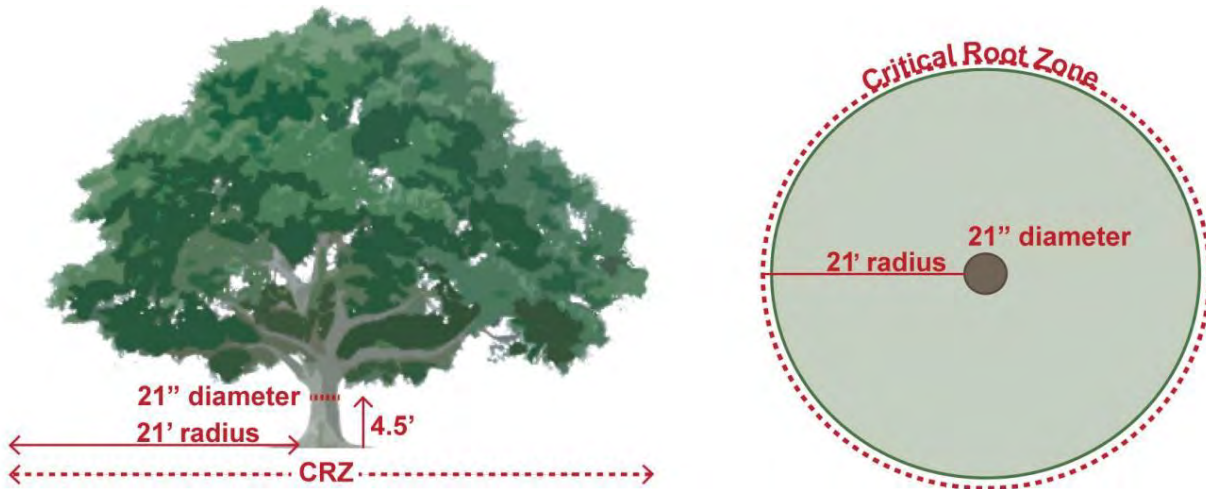
Parks and Recreation	12 hours
Engineering	<u>3 hours</u>
Total	15 hours

City of Denton Tree Protection During Construction

This guide is to provide Best Management Practices (BMPs) for protecting trees to be preserved during the replacement, repair, & construction of infrastructure in the City of Denton. The following requirements are based on ANSI A300 Part 5: Trees, Shrubs, and other Woody Plant Maintenance – Standard Practices (Management of Trees and Shrubs During Site Development, and Construction). The intent is to cover the majority of tree protection scenarios, however there may be site specific circumstances that require a custom solution to working around the tree to be preserved.

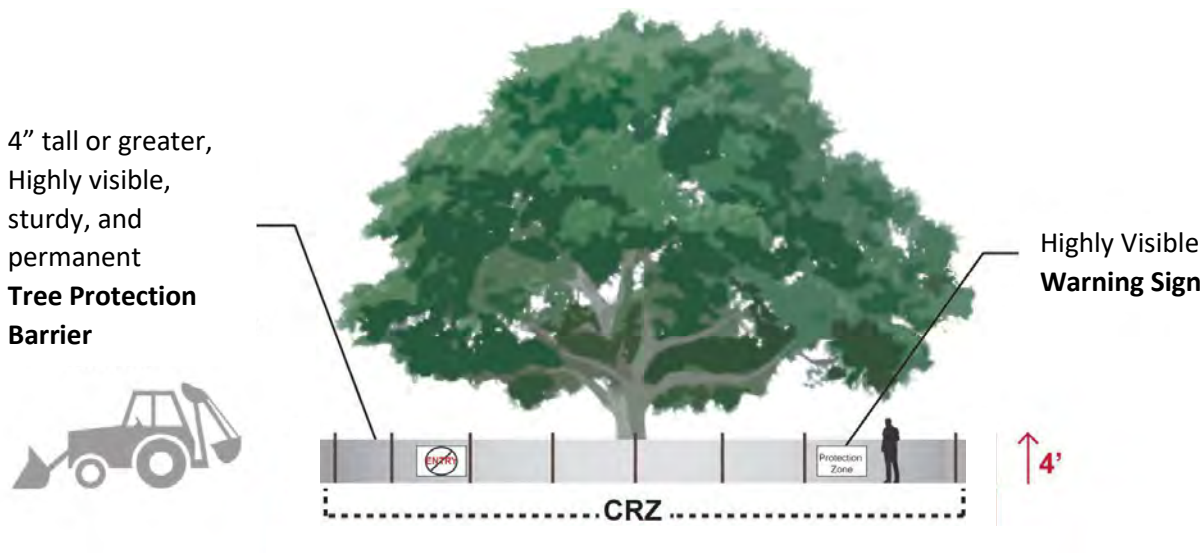
Definitions

Critical Root Zone (CRZ) is the area of soil extending from the tree trunk where roots required for future tree health and survival are located. This area can also be defined as a circle with a minimum radius of 1' for every 1" in trunk diameter at 4.5" above ground.



Tree protection barrier encloses the Tree Protection Zone and is at least 4' tall, highly visible, sturdy, permanent and has warning signs on or near it for the duration of any construction activities.

Trunk protection consist of 2-inch thick wooden planks such as 2x4's installed around the tree with a closed-cell foam pad secured with straps or wire to hold the planks in place.



Tree Protection Zone (TPZ) is an area where construction activities are prohibited or restricted to prevent injury to preserved trees, especially during pre-construction and construction, and includes the Critical Root Zone and/or beyond. For the City of Denton purposes the TPZ will be equal to the CRZ.

Streets and Curbs

Existing street and curb reconstruction or repair – When reconstructing or repairing existing streets the CRZ of trees located within the tree lawn are to be protected with a tree protection barrier in all pervious areas of the R.O.W. For trees behind the sidewalk including private trees that have CRZ that extend into the right of way (R.O.W.). The CRZ is to be protected with a tree protection barrier in all pervious areas of the R.O.W. Tree protection is not to extend on private property.

Construction of new streets and sidewalk – When constructing new streets the CRZ of all trees identified to be preserved are to be protected with a tree protection barrier. In an effort to preserve more trees, encroachment into the CRZ on the street side of the tree is allowed up to ½ the distance to the trunk. All expose roots are to be pruned back to the soil level.

Sidewalks and Curbs

Existing sidewalk reconstruction or repair – When reconstructing or repairing existing sidewalks, the trunks of trees located within the tree lawns are to have trunk protection. Any private tree within 5 feet of the sidewalk is to have a tree protection barrier parallel to the sidewalk in the R.O.W for the length of the CRZ. Tree protection is not to extend on private property. Under no circumstance should heavy equipment be driven on the CRZ before or after the sidewalk has been removed. Do not pile/store anything in the CRZ of the protected trees including but not limited to soil, gravel, concrete, tool and equipment.

When replacing sidewalk next to existing trees it may be necessary to allow more space for future growth of the tree by: 1) shifting the sidewalk to the furthest extent of the R.O.W. away from the tree, 2) reducing the width of the sidewalk adjacent to the tree, 3) acquiring additional R.O.W. to shift the sidewalk away from the tree, 4) pruning or ramping over the offending root before pouring new sidewalk or 5) a combination of the above.

Construction of new sidewalks in existing neighborhood – When constructing new sidewalks, the trunks of trees located within the tree lawns are to have trunk protection. Any private tree within 5 feet of the side walk is to have a tree protection barrier parallel to the sidewalk in the R.O.W for the length of the CRZ. Tree protection is not to extend on private property. Under no circumstance should heavy equipment be driven on the CRZ before or after the sidewalk has been removed. Do not pile/store anything in the CRZ of the protected trees including but not limited to soil, gravel, concrete, tool and equipment. The following methods of excavation is the CRZ are acceptable: 1) air spade, 2) hand digging or hydro-excavator. The air space is preferable. Expose roots less than 2 inches may be pruned back to edge of the sidewalk forms as needed.

When constructing new sidewalk next to exiting trees it may be necessary to allow more space for future growth of the tree by: 1) shifting the sidewalk to the furthest extent of the R.O.W. away from the tree, 2) reducing the width of the side walk adjacent to the tree, 3) acquiring additional R.O.W. to shift the sidewalk away from the tree or 4) pruning or ramping over the offending root before pouring new sidewalk or 5) a combination of the above.

Curbs

Existing curb reconstruction or repair – When reconstructing or repairing existing curbs, the CRZ of trees located within the tree lawn are to be protected with a tree protection barrier in all pervious areas of the R.O.W. For trees behind the sidewalk including private trees that have CRZ that extend into the R.O.W. the CRZ is to be protected in all pervious areas of the R.O.W. Tree protection is not to extend on private property. Any excavation next to tree is to be done by 1) Air spade, 2) hand digging or hydro-excavator.

Underground Utilities

Underground utilities installation or repair – When installing underground utilities within the CRZ install by boring, if excavation is necessary in the CRZ, the following methods are acceptable: 1) air spade, 2) hand digging or hydro-excavator. The air space is preferable. The trunks of trees located within the tree lawns are to have trunk protection. Any private tree within 5 feet of the side walk is to have a tree protection barrier parallel to the R.O.W or easement for the length of the CRZ. Tree protection is not to extend on private property. Under no circumstance should heavy equipment be driven on the CRZ before or after the sidewalk has been removed. Do not pile/store anything in the CRZ of the protected trees including but not limited to soil, gravel, concrete, tool and equipment.

**INFORMAL STAFF REPORT
TO MAYOR AND CITY COUNCIL**

SUBJECT:

Landmark Tree Designation Criteria

BACKGROUND:

In mid-December, staff received inquiries from Council Member Meltzer and Council Member Armintor about the process of having local trees classified as “Legacy,” if it is not on the Texas A&M Forest Service Big Trees Registry. The Parks and Recreation staff coordinated with Development Services to develop criteria consistent with the Denton Development Code (DDC).

DISCUSSION:

The DDC defines a Landmark tree as, “A healthy tree that is designated by the property owner on the Texas Big Tree Registry regardless if the tree is protected or a non-protected tree; or a tree designated as a historic tree where an event of historic significance occurred that had local, regional, or national importance; or at the home of a citizen who is famous on a local, regional, or national basis; or that has taken on a legendary stature in the community, is mentioned in literature or documents of historic value, or is considered unusual due to size, age, or other landmark status. Historic trees shall be designated following the historic landmark designation procedure.”

In drafting the attached criteria, Parks and Recreation staff identified three categories of eligibility, trees that are:

1. On the Texas A&M Forest Service Big Tree Registry,
2. historic, and
3. Legendary in stature

The criteria expands upon and specifies what qualifies a tree as being “legendary in stature in the community,” and provides a form to nominate individual trees for Landmark tree consideration. To qualify as “Legendary in Stature,” a tree must meet one of the following:

1. The tree must measure 60 percent of the circumference or tree index score of the State Champion of the same species as listed on the Texas A&M Forest Service Big Tree Registry.
2. The tree must be large for its species in a neighborhood or region of the City. The size of the tree is based on the diameter at breast height (DBH), the height, and the average crown spread.
3. Any Post Oak over 30” Diameter.
4. Any Blackjack Oak over 20” Diameter.
5. The tree is rare for this area and is a good specimen of the species.
6. The tree is mentioned in literature or documents of historical value.

CONCLUSION:

The Landmark Tree criteria were agreed upon by Parks and Recreation and Development Service staff for implementation without the need for a DDC amendment. Parks and Recreation will administer the process with a fillable form available on the city website. Development Services will let permit applicants know of the availability of the program.

STAFF CONTACT:

Haywood Morgan
Urban Forester, Parks and Recreation
Haywood.Morgan@cityofdenton.com

REQUESTOR:

Council Member Meltzer
Council Member Armintor

PARTICIPATING DEPARTMENTS:

Parks and Recreation
Development Services

STAFF TIME TO COMPLETE REPORT:

Parks and Recreation	16 hours
Development Services	<u>1.5 hour</u>
Total	17.5 hours

City of Denton Landmark Tree Criteria

General Description

Tree: Woody perennial usually having one dominant trunk and a mature height greater than 5 meters (16 feet). (Definition by ISA)

Landmark Trees: A healthy tree that is designated by the property owner on the Texas Big Tree Registry regardless if the tree is protected or a non-protected tree; or a tree designated as a Historic Tree where an event of historic significance occurred that had local, regional, or national importance; or at the home of a citizen who is famous on a local, regional, or national basis; or that has taken on a legendary stature in the community, is mentioned in literature or documents of historic value, or is considered unusual due to size, age, or other landmark status. Historic Trees shall be designated following the Historic Landmark Designation procedure.

Eligibility

To be eligible for Landmark Tree designation the tree must meet one of the following:

Texas A&M Forest Service Texas Big Tree Registry

- The tree is listed on the Texas A&M Forest Service Texas Big Tree Registry.

Historic

- Tree that is designated as a Historic Tree where an event of historic significance occurred that had local, regional, or national importance.
- The tree is located at the home of a citizen who is famous on a local, regional, or national basis.

Legendary in stature

- The tree must measure 60 percent of the circumference or tree index score of the State Champion of the same species as listed on the Texas A&M Forest Service Big Tree Registry.
- The tree be must large for its species in a neighborhood or region of the City. The size of the tree is based on the diameter at breast height (DBH), the height and the average crown spread.
- Any Post Oak over 30" Diameter.
- Any Blackjack Oak over 20" Diameter.
- The tree is rare for this area and is a good specimen of the species.
- The tree is mentioned in literature or documents of historic value.

Landmark Tree Nomination Form



**Email, Mail or Fax completed forms to the
Parks and Recreation Department**

901-B Texas Street
Denton, TX 76209
parknrec@cityofdenton.com

If you have any question call (940) 349-8337

Species:

Common Name: _____

Scientific Name: _____

Nominator:

Name _____ Phone _____

Address _____ Email _____

Owner:

Name _____ Phone _____

Address _____ Email _____

_____ Signature _____

Does the owner agree to the tree being designated a Landmark if it meets the criteria? Yes ___ No ___

Does the owner agree to allow City staff or volunteers to inspect the tree? Yes ___ No ___

Tell us a little about the tree and why it should be designated as a Landmark tree. _____

Where is the tree located on the property? (Give the location for someone who is not familiar with the site).

Policy and Worksession Requests

Completed	Council Member Requestor	Date	Summary of Request	Staff Assigned	Department	Comments
<input type="checkbox"/>	Council Member Meltzer	01/13/20	Will staff prepare a report detailing the total amounts of PM 10 and PM 2.5 emissions currently allowed by permit to entities in the City?	Banks		Request will be presented during an upcoming Pending Request work session
<input type="checkbox"/>	Council Member Briggs	02/03/20	Would like to request council discuss a citywide public health study. http://www.austintexas.gov/sites/default/files/files/Health/Info_to_Post/HealthReport-linked.pdf Like this	Mendoza	City Manager's Office	Request will be presented during a future Pending Request work session
<input type="checkbox"/>	Council Member Armintor	02/09/20	(1) Can staff explore the possibility of a temporary restriction on parking on the mailbox side of Lattimore until sidewalks can be constructed on that side of the street? Even with the USPS door delivery option for seniors and people with disabilities, until sidewalks can be constructed the best option for general neighborhood accessibility for residents with disabilities and senior residents might be restricting parking on one side (indicated with paint). (2) Can someone please let me know which other residential Denton streets besides Lattimore are lacking both sidewalks and USPS door service (i.e. lacking both at the same time, not just one or the other)?	Estes	Capital Projects	Request will be presented during an upcoming Pending Request work session
<input checked="" type="checkbox"/>	Council Member Briggs	02/22/20	Will staff look into crosswalk concern at Montecito near White Dove?	Estes	Capital Projects	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Briggs	03/02/20	How many developments do we have left that fall under our old tree code	McDonald	Development Services	Request will be presented during a future Pending Request work session
<input checked="" type="checkbox"/>	Council Member Briggs	03/03/20	Can staff follow up on the stop sign request on Ryan Road at the entrance to the Good Samaritan Village?	Jahn	Capital Projects	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Armintor	03/03/20	Would like a work session on passing an "Engine Braking Prohibited" ordinance in Denton.	Kuechler	City Manager's Office	On hold at Council Member's Request - Request will be presented during a future Pending Request work session
<input checked="" type="checkbox"/>	Mayor Pro Tem Hudspeth	03/06/20	Can staff look at the school zone area on Glenwood Lane near Windsor?	Jahn	Capital Projects	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Briggs	03/26/20	Does staff need to do anything to follow up on citizen request to TxDOT regarding I-35E service road at US 77?	Deshmukh	Capital Projects	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Briggs	03/26/20	The new turn from northbound Mayhill to Mills Road is too tight for buses so they cannot use that route to access the bus lot. They have to go around a different way. Can staff look into addressing this?	Estes	Capital Projects	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Davis	03/27/20	Construction Vehicles on Malone/Ector. Can staff please look into reports that our road construction contractors' vehicles are speeding down Ector St. Potentially Malone St. as well? Thanks!	Estes	Capital Projects	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Briggs	03/27/20	Can staff give background on the zoning of the Green Belt Business Park on US 380?	Cannone	Development Services	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Armintor	04/07/20	Does staff have an update regarding the Westglen flooding issue?	Estes	Capital Projects	Information will be provided in future Friday Report
<input type="checkbox"/>	Council Member Briggs	04/07/20	Can staff coordinate a response to a resident regarding the NAA extensions?	Leal/McDonald	Legal/Development Services	Information will be provided in future Friday Report
<input checked="" type="checkbox"/>	Council Member Briggs	04/06/20	What is the new process when you get a ticket? With courts closed, are there fines and penalties, warrants, etc?	Puente	Municipal Court	Information will be provided in the April 10 Friday Report
<input checked="" type="checkbox"/>	Council Member Meltzer	04/06/20	Can staff clarify and reach out to a resident regarding identification requirements when changing out his solid waste carts?	Foster	Customer Service	Information will be provided in the April 10 Friday Report
<input checked="" type="checkbox"/>	Council Member Briggs	04/06/20	Is staff able/interested in attending a webinar from the Department of Energy?	Barnett	Sustainability	Information will be provided in the April 10 Friday Report
<input checked="" type="checkbox"/>	Council Member Armintor	04/08/20	Can we please have a work session on the Credit and Collections policy? This would include a proactive moratorium on the requirement to create a new account with a new deposit every time you move.			
<input type="checkbox"/>	Council Member Armintor	04/08/20	Requesting a Council resolution to the Secretary of State in support of no-excuse universal mail-in ballots for all elections to ensure our constituents maximum voting access during the COVID-19 crisis and at all times.	Balthrop-Mendoza	CMO	Request will be presented during a future Pending Request work session

April 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 Cancelled -2:30pm Agenda Committee	2 Cancelled - 8:30 DEDC Cancelled - 4:00 Public Art Committee	3	4
5	6 CANCELLED -11:30 am Council Luncheon CANCELLED -COE 1:30 CANCELLED -Traffic Safety Commission 5:30 pm	7 Council Meeting 3:30pm Closed 4:30pm Work Session 6:30 Regular CANCELLED-Audit/Finance 10:30 CANCELLED- COCE 10:30	8 CANCELLED -11:00 EDPB CANCELLED -2:30pm Agenda Committee 6:30pm P&Z Regular Session	9 Cancelled HOT & S 1:00	10	11
12	13 Cancelled-PUB 9am Cancelled-HLC 5:30pm Cancelled--Library Board 5:30pm	14 Cancelled-2:00 pm 2nd Tuesday Session Cancelled-Mobility Committee Meeting 9:00 am	15 Cancelled-2:30pm Agenda Committee	16 Cancelled-6:00pm Committee on Persons with Disabilities Cancelled-HABSCO 4pm	17	18
19	20	21 2:00 pm CC Work Session 6:30 pm CC Regular Session	22 2:30pm Agenda Committee 5:00pm P&Z Work Session 6:30pm P&Z Regular Session	23	24	25
26	27 PUB 9am ZBA 5:30pm	28 10am Council Airport Committee 2:00 pm 4th Tuesday Session	29 2:30pm Agenda Committee	30 CANCELLED - 5:30PM Board of Ethics		

May 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 PUB 9am 11:30 am Council Luncheon COE 1:30 Traffic Safety Commission 5:30 pm	5 2:00 pm CC Work Session 6:30 pm CC Regular Session	6 2:30pm Agenda Committee 5:00pm P&Z Work Session 6:30pm P&Z Regular Session	7 8:30 DEDC 4:00 Public Art Committee	8	9
10	11	12 4:00 pm CC Election Reception / Meeting Mobility Committee Meeting 9:00 am	13 11:00 EDPB 5:30 Airport Advisory Board	14 HOT Committee 1pm	15	16
17	18 PUB 9am ZBA 5:30pm	19 2:00 pm CC Work Session 6:30 pm CC Regular Session	20 2:30pm Agenda Committee 5:00pm P&Z Work Session 6:30pm P&Z Regular Session	21 6:00pm Committee on Persons with Disabilities HABSCO 4pm	22	23
24	25 Memorial Day Holiday	26 10am Council Airport Committee No Council Meeting	27 12:00 TIF Board (TIRZ) 2:30pm Agenda Committee	28 5:30PM Board of Ethics	29	30
31						

June 2020

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 11:30 am Council Luncheon COE 1:30 Traffic Safety Commission 5:30 pm	2 2:00 pm CC Work Session 6:30 pm CC Regular Session	3 2:30pm Agenda Committee 5:00pm P&Z Work Session 6:30pm P&Z Regular Session	4 8:30 DEDC 4:00 Public Art Committee	5	6
7	8 PUB 9am	9 2:00 pm 2nd Tuesday Session Mobility Committee Meeting 9:00 am	10 11:00 EDPB 2:30pm Agenda Committee 5:30 Airport Advisory Board	11	12	13
14	15	16 2:00 pm CC Work Session 6:30 pm CC Regular Session	17 5:00pm P&Z Work Session 6:30pm P&Z Regular Session	18 HOT & S 9:00 6:00pm Committee on Persons with Disabilities HABSCO 4pm	19	20
21	22 PUB 9am	23 10am Council Airport Committee 2:00 pm 4th Tuesday Session	24	25 HOT & S 9:00 5:30PM Board of Ethics	26	27
28	29 ZBA 5:30pm	30 No Council Meeting				



City of Denton

City Hall
215 E. McKinney St.
Denton, Texas 76201
www.cityofdenton.com

Meeting Agenda

City Council

Tuesday, April 21, 2020

12:00 PM

Work Session Room

WORK SESSION BEGINS AT 12:00 P.M. IN THE WORK SESSION ROOM

REGULAR MEETING BEGINS AT 6:30 P.M. IN THE WORK SESSION ROOM

Note: Mayor Chris Watts, Mayor Pro Tem Gerard Hudspeth, and Council Members Keely Briggs, Jesse Davis, John Ryan, Deb Armintor and Paul Meltzer will be participating in the closed meeting, work session, and regular meeting via video/teleconference.

REGISTRATION GUIDELINES FOR ADDRESSING THE CITY COUNCIL

Due to COVID-19 precautions, members of the public will not be able to attend the Tuesday, April 21, City Council meeting in-person. To accommodate and receive input on agenda items, citizens will be able to participate in one of the following ways (NOTE: Except for public hearings, citizens may only comment once per agenda item and cannot use both methods to comment on a single item.):

- Virtual “White Card” – On Friday, April 17, the agenda was posted online at www.cityofdenton.com/publicmeetings. Once the agenda is posted, a link to the Virtual White Card, an online form, will be made available under the main heading on the webpage. Within this form, citizens may indicate support or opposition, and submit a brief comment about a specific agenda item. Similar to when a citizen submits a physical white card to indicate their position on the item, these comment forms will be sent directly to City Council members and recorded by the City Secretary. The Mayor will announce the number of Comment Cards submitted in support or opposition to an item during the public comment period. Comments may be submitted up until the start of the meeting, which begins at 6:30 p.m. Online comments received after 6:30 p.m. will not be delivered to the City Council nor entered into the public record.

OR

- BY PHONE – Citizens wishing to speak to the Council on an agenda item over the phone, may call (940) 349-7800 up to 30 minutes prior to the meeting, which begins at 6:30 p.m. When the call is initially received, a staff member will receive the caller’s information and either: 1) offer to call the citizen back when it is time for them to speak on their requested item, or 2) record the caller’s information, support or opposition, and comment. If the caller chooses to record their support or opposition, rather than speaking during the meeting, the Mayor will announce the number of comments submitted in support or opposition to the item. If the caller wishes to receive a call back, the voice of each caller will be broadcast into the meeting during the public commenting time of their desired agenda item. Individuals will be able to comment once per agenda item, no matter the method.

- At regular meetings only, citizens can speak on any topic that is not on the agenda (Open Microphone). Alert the call taker if you wish to speak under the Open Microphone category.

After determining that a quorum is present, the City Council of the City of Denton, Texas will convene in a Work Session on Tuesday, April 21, 2020, at 12:00 p.m. in the Council Work Session Room at City Hall, 215 E. McKinney Street, Denton, Texas at which the following items will be considered:

WORK SESSION

1. Citizen Comments on Consent Agenda Items

This section of the agenda allows citizens to speak on any item listed on the Consent Agenda prior to its consideration. Each speaker will be given a total of three (3) minutes to address any item(s). Any person who wishes to address the City Council regarding these items may do so by submitting a Virtual White Card or by telephonic participation as referenced under the REGISTRATION GUIDELINES FOR ADDRESSING THE CITY COUNCIL found on the first page of this agenda.

2. Requests for clarification of agenda items listed on this agenda.

3. Work Session Reports

- A. ID 20-771** Receive a report, hold a discussion, and give staff direction regarding an update to the City of Denton's COVID-19 response.
- B. ID 20-830** Receive a report, hold a discussion, and give staff direction regarding the Budget Reduction Strategy.
- C. ID 20-831** Receive a report, hold a discussion, and give staff direction regarding boards, commissions and Council committees meeting schedules.
- D. ID 20-832** Receive reports, hold discussions, and give staff direction on the following with respect to Green Tree Estates.
- E. DCA20-0001** Receive a report, hold a discussion, and give staff direction for creating a policy for requests to create Municipal Utility Districts (MUDs) within the City and the Extraterritorial Jurisdiction (ETJ).
- F. ID 20-176** Receive a report, hold a discussion, and give staff direction on pending City Council requests for information.

Following the completion of the Work Session, the City Council will convene in a Closed Meeting to consider specific items when these items are listed below under the Closed Meeting section of this agenda. The City Council reserves the right to adjourn into a Closed Meeting on any item on its Open Meeting agenda consistent with Chapter 551 of the Texas Government Code, as amended, or as otherwise allowed by law.

1. Closed Meeting:

TBD PLACEHOLDER - For any potential closed meeting item

Any final action, decision, or vote on a matter deliberated in a Closed Meeting will only be taken in an Open Meeting that is held in compliance with Texas Government Code, Chapter 551, except to the extent such final decision, or vote is taken in the Closed Meeting in accordance with the provisions of Section 551.086 of the Texas Government Code (the 'Public Power Exception'). The City Council reserves the right to adjourn into a Closed Meeting or Executive Session as authorized by Texas Government Code, Section 551.001, et seq. (The Texas Open Meetings Act) on any item on its open meeting agenda or to reconvene in a continuation of the Closed Meeting on the Closed Meeting items noted above, in accordance with the Texas Open Meetings Act, including, without limitation Sections 551.071-551.086 of the Texas Open Meetings Act.

NOTE: Any item for which a formal action at the Regular Meeting has been taken by Council may be subject to a request for a motion for reconsideration at any time during the meeting, at the Concluding Items Section, or after the meeting. In order to comply with the Texas Open Meetings Act, a request for a motion for reconsideration made during, at the end of, or after a Council meeting will be placed on the agenda and considered at the next official meeting of the City Council.

REGULAR MEETING OF THE CITY OF DENTON CITY COUNCIL AT 6:30 P.M. IN THE COUNCIL WORK SESSION ROOM AT CITY HALL, 215 E. MCKINNEY STREET, DENTON, TEXAS AT WHICH THE FOLLOWING ITEMS WILL BE CONSIDERED:

1. PRESENTATION FROM MEMBERS OF THE PUBLIC

A. Review of procedures for addressing the City Council.

B. Reports from members of the public shall be received through the following two (2) methods. A total of up to seven (7) speakers are permitted to provide public comment and may include any combination of prior registration and open microphone speakers.

1) Pre-registration. This section of the agenda permits any person who has registered in advance to make a citizen report regarding a public business item he or she wishes to be considered by the City Council. Each speaker is allowed a maximum of four (4) minutes to present their report. At the conclusion of each report, the City Council may pose questions to the speaker or may engage in discussion. If the City Council believes that a speaker's report requires a more detailed review, the City Council will give the City Manager or City Staff direction to place the item on a future work session or regular meeting agenda and advise staff as to the background materials to be desired at such meeting.

2) Open Microphone. This section of the agenda permits any person who has not registered in advance for a citizen report to make comments about public business items not listed on the agenda. Such person(s) shall have registered via email or telephone as specified by the City on its website or meeting notice.

During open microphone reports under this section of the agenda, the Council may listen to citizens speak. However, because notice of the subject of the open microphone report has not been provided to the public in advance, the Texas Open Meetings Act limits any deliberation or decision by the Council to: a proposal to place the item on a future agenda; a statement of factual policy; or a recitation of existing policy. Council Members may not ask the open microphone speakers questions or discuss the items presented during open microphone reports.

NOTE: If audio/visual aids during presentations to Council are needed, they must be submitted to the City Secretary 24 hours prior to the meeting.

2. CONSENT AGENDA

Each of these items is recommended by Staff and approval thereof will be strictly on the basis of the Staff recommendations. Approval of the Consent Agenda authorizes the City Manager or his designee to implement each item in accordance with the Staff recommendations. The City Council has received background information and has had an opportunity to raise questions regarding these items prior to consideration.

Listed below are bids, purchase orders, contracts, and other items to be approved under the Consent Agenda (Agenda Items A – N). This listing is provided on the Consent Agenda to allow Council Members to discuss or withdraw an item prior to approval of the Consent Agenda. If no items are pulled, the Consent Agenda Items will be approved with one motion. If items are pulled for separate discussion, they may be considered as the first items following approval of the Consent Agenda.

- A. ID 20-809** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Secretary or her designee to file a Catastrophe Notice with the Office of the Texas Attorney General, pursuant to Section 552.233(b) of the Government Code, to suspend the applicability of the requirements of the Public Information Act (the “PIA”) in accordance with Sections 552.233(c) and 552.233(e) of the Government Code; and providing an effective date.
- B. ID 20-816** Consider adoption of an ordinance of the City of Denton authorizing the City Manager, or his designee, to execute a Supplemental Agreement No. 1 to Easement No. DACW63-2-01-0673, between the City and the United States Army Corps of Engineers, related to the raw water pump station at Lake Ray Roberts, located in the Martha Langston Survey, Abstract No. 739, part of the United States of America, Tract 210 - Lake Ray Roberts, County of Denton, Texas; and providing for severability and an effective date.
- C. ID 20-818** Consider approval of a resolution approving use of unspent proceeds of Revenue Bonds issued by New Hope Cultural Education Facilities Finance Corporation on behalf of the CHF - Collegiate Housing Denton, L.L.C. in an amount not to exceed \$2,700,000 for the costs relating to parking facilities at Texas Women’s University; recognizing that the City of Denton is not responsible for issuing the Revenue Bonds and has no financial obligation to pay any principal of or interest on the Revenue Bonds; making certain findings in connection therewith; and providing an effective date.
- D. ID 20-819** Consider adoption of an ordinance of the City of Denton, Texas to declare the intent to reimburse capital program expenditures of the General Government (\$3,423,000) with Certificates of Obligation with an aggregate maximum principal amount not to exceed \$3,423,000; and providing an effective date.
- E. ID 20-822** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the approval of a fifth amendment to a Professional Services Agreement between the City of Denton and Teague Nall and Perkins, Inc., amending the contract approved by the City Manager on April 10, 2017, in the not-to-exceed amount of \$93,500; amended by amendments 1 - 4 approved by City Council, City Manager and Purchasing Staff; said fifth amendment to provide engineering and design services relating to the hickory creek road west project; providing for the expenditure of funds therefor; and providing an effective date (File 6427 - providing for an additional fifth amendment

expenditure amount not-to-exceed \$67,635, with the total contract amount no-to-exceed \$293,185).

- F. ID 20-823** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, rejecting any and all competitive bids under RFP 6945 for Land Management Software for the City of Denton Development Service Department; and providing an effective date (RFP 6945).
- G. ID 20-824** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Milsoft Utility Solutions, Inc., for continued vendor support of the Milsoft Interactive Voice Response and associated software modules along with new hardware and software upgrades, which is the sole provider of this software, in accordance with Texas Local Government Code 252.022, which provides that procurement of commodities and services that are available from one source are exempt from competitive bidding, and if over \$50,000 shall be awarded by the governing body; and providing an effective date (File 7209 - awarded to Milsoft Utility Solutions, Inc., in the five (5) year not-to-exceed amount of \$410,588).
- H. ID 20-825** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Trilliant Networks, Inc., for continued vendor support services for Advanced Metering Infrastructure (AMI) for Denton Municipal Electric Metering Department, in accordance with Texas Local Government Code 252.022, which provides that procurement of commodities and services that are available from one source are exempt from competitive bidding, and if over \$50,000 shall be awarded by the governing body; and providing an effective date (File 7218 - awarded to Trilliant Networks, Inc., in the five (5) year not-to-exceed amount of \$817,304.50).
- I. ID 20-826** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with CRC Lawncare and Landscape LLC, for Park locations, Cemeteries, Libraries, Public Buildings, Medians, Fire Stations, Water Reclamation, Beneficial Reuse, and Airport mowing services and maintenance, Sections A, B, C, D, E, F, G, H, J, and K; providing for the expenditure of funds therefor; and providing an effective date (RFP 7254 - awarded to CRC Lawncare and Landscape LLC, for one (1) year, with the option for one (1) additional extensions, in the total two (2) year not-to-exceed amount of \$600,000).
- J. ID 20-827** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Custom Landscaping Inc. dba Classic Landscapes Maintenance, Inc., for Section I - DME Offices/Substation locations mowing services and maintenance; providing for the expenditure of funds therefor; and providing an effective date (RFP 7254 - awarded to Custom Landscaping Inc. dba Classic Landscapes Maintenance, Inc., for one (1) year, with the option for one (1) additional extensions, in the total two (2) year not-to-exceed amount of \$160,000).
- K. ID 20-829** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Progressive Services

Inc. dba Progressive Roofing, through The Interlocal Purchasing System (TIPS) Cooperative Program Contract # RCSP 190201 for the roof replacement of the Municipal Lab Building; providing for the expenditure of funds therefor; and providing an effective date (File 7266 - awarded to Progressive Services Inc. dba Progressive Roofing, in the amount of \$172,260).

- L. ID 20-835** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation, authorizing the City Manager to execute a contract with Interfaith Ministries of Denton, Inc., for a utility assistance program for low-income households; providing for the expenditure of funds therefor; and providing an effective date (RFP 7244 - awarded to Interfaith Ministries of Denton, Inc., for one (1) year, with the option for four (4) additional one (1) year extensions, in the total five (5) year not-to-exceed amount of \$625,000).
- M. ID 20-838** Consider adoption of an ordinance authorizing the City Manager, or his designee, to execute a development agreement between the City of Denton and Shercross Development, LLC for the installment of critical infrastructure related to Hercules Drive; authorizing the expenditure of funds therefor; and providing for an effective date.
- N. ID 20-849** Consider approval of the minutes of March 17, March 20, March 31, and April 6, 2020.

3. ITEM(S) FOR INDIVIDUAL CONSIDERATION

- A. ID 20-617** Consider adoption of an ordinance of the City of Denton authorizing the City Manager, or his designee, to execute an amendment to an Advance Funding Agreement with the Texas Department of Transportation for an expansion of Mayhill Road from a two-lane rural roadway to a four-lane divided urban arterial roadway from IH 35 East to US 380 in the City of Denton; authorizing the expenditure of funds therefor; and providing an effective date.
- B. ID 20-744** Consider adoption of an ordinance of the City Council of the City of Denton approving the execution of an insurance binder by the City Manager for forced outage insurance of the Denton Energy Center for the summer of 2020, and providing an effective date, in an amount not to exceed \$975,000. The policy will be awarded to the qualified bidder that provides the lowest price on the date the insurance binder is executed.
- C. ID 20-837** Consider adoption of an ordinance of the City of Denton, a Texas home-rule municipal corporation ("City"), authorizing the execution of a Contract of Sale, and Amendment, between the City, as Buyer, and Saratan Corporation I, a Texas Corporation ("Saratan"), as Seller, for the purchase of 909 N. Loop 288, Denton, Denton County, Texas ("Property"), for the purchase price of \$5,200,000.00; authorizing the expenditure of funds therefor including the cash amount of \$3,395,000.00 towards the purchase price; accepting the donation value of the property from seller of \$1,805,000.00; providing for severability; and providing an effective date.

4. PUBLIC HEARING(S)

- A. Z20-0001b** Hold a public hearing and consider adoption of an ordinance of the City of Denton, Texas, approving a change in the zoning district and use classification from the Residential

2 (R2) zoning district and use classification to the Mixed-Use Neighborhood (MN) zoning district and use classification; on approximately 3.46 acres of land located on the northeast side of I-35, approximately 196-feet northwest of Thunderbird Drive, in the City of Denton, Denton County, Texas; adopting an amendment to the city's official zoning map; providing for a penalty in the maximum amount of \$2,000.00 for violations thereof; providing for severability; and establishing an effective date. The Planning and Zoning Commission recommends approval with conditions (5-0) (Z20-0001, I-35 Offices, Cindy Jackson)

5. CONCLUDING ITEMS

A. Under Section 551.042 of the Texas Open Meetings Act, respond to inquiries from the City Council or the public with specific factual information or recitation of policy, or accept a proposal to place the matter on the agenda for an upcoming meeting AND Under Section 551.0415 of the Texas Open Meetings Act, provide reports about items of community interest regarding which no action will be taken, to include: expressions of thanks, congratulations, or condolence; information regarding holiday schedules; an honorary or salutary recognition of a public official, public employee, or other citizen; a reminder about an upcoming event organized or sponsored by the governing body; information regarding a social, ceremonial, or community event organized or sponsored by an entity other than the governing body that was attended or is scheduled to be attended by a member of the governing body or an official or employee of the municipality; or an announcement involving an imminent threat to the public health and safety of people in the municipality that has arisen after the posting of the agenda.

B. Possible Continuation of Closed Meeting topics, above posted.

C E R T I F I C A T E

I certify that the above notice of meeting was posted on the bulletin board at the City Hall of the City of Denton, Texas, on the 17th day of April, 2020 at _____

CITY SECRETARY

NOTE: THE CITY OF DENTON'S DESIGNATED PUBLIC MEETING FACILITIES ARE ACCESSIBLE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY WILL PROVIDE ACCOMMODATION, SUCH AS SIGN LANGUAGE INTERPRETERS FOR THE HEARING IMPAIRED, IF REQUESTED AT LEAST 48 HOURS IN ADVANCE OF THE SCHEDULED MEETING. PLEASE CALL THE CITY SECRETARY'S OFFICE AT 940-349-8309 OR USE TELECOMMUNICATIONS DEVICES FOR THE DEAF (TDD) BY CALLING 1-800-RELAY-TX SO THAT REASONABLE ACCOMMODATION CAN BE ARRANGED.

FUTURE WORK SESSION ITEMS MATRIX

As of April 10, 2020

FUTURE WORK SESSION ITEMS MATRIX							
As of April 10, 2020							
Meeting Date	Currently Slated Work Session Items						
21-Apr	COVID-19 Update 20-771	Green Tree Estates 20-832	Denton MUDDs DCA20-0001	Budget Reduction Strategy 20-830	Boards, Commissions & Committees Meeting Schedules 20-831		Review of Council Requests Apr 21 20-176
28-Apr	CANCELLED						
4-May Lunch @ 11:30 a.m.	CIP Update						
5-May	EV Charger Upgrade 20-732	Internal Audit/Capital Proj. Admin. - Planning & Design 20-729	Internal Audit/Capital Proj. Admin. - Property Acquisition 20-730	2019-20 Audit Plan 20-731	SB. 2 Budget Implications 20-582	2020 Mobility Plan Update ⁷ 20-245	Review of Council Requests May 05 20-458
12-May							Review of Council Requests May 19 20-459
19-May	Drop-off Recycling Center 20-768	DTB Public Meetings	FY 19-20 Budget, CIP, & 5-Year Forecast 20-806	Denton Development Code Amendments	Ethics Ordinance Changes TBD		Review of Council Requests May 19 20-460
26-May	No meeting; Day after Memorial Day Holiday						
June 1 Lunch @ 11:30 a.m.							
2-Jun							Review of Council Requests June 02 20-671
9-Jun							Review of Council Requests June 09 20-672
16-Jun							Review of Council Requests June 16 20-673
23-Jun							Review of Council Requests June 23 20-674
30-Jun	No meeting; 5th Tuesday						
Work Sessions Planned - Date TBD	Accessory Dwelling Units, and Screening DCA19-0011	Delegated Authority	Doorbell Monitoring Technology 19-2959	Stormwater Master Plan	Construction Code Review (TBD)		NOTE: No Meetings July 6, 7, and 14
	Group Home Code Amendment	Public Art	Purchasing Manual Update	Right of Way Ordinance Follow-up			Review of Council Requests July 21 20-847
	Municipal Broadband 20-556	Denton Development Code Amendments (Cont'd)	Urban Forest Master Plan 20-426	Sustainability Plan 20-521	Plugged Gas Wells		Review of Council Requests July 28 20-848
	Library Master Plan 20-526	TIF Grants for Accessibility					
Work Session Requests Determined by Council - Date TBD	Community Public Art and Community Tree Grants	Ethics Ordinance Revision	Small Cell Lawsuit Participation	Tree Ordinance Review	Veteran Source of Income Housing Discrimination Ordinance		



Street Closure Report

Upcoming Closures

Week of April 13, 2020 - April 19, 2020



Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
941 Precision	Airport Rd	W. Oak St.	04/20/20	05/29/20	Concrete Street Repair. The process starts with Barricading the failed sections of pavement, remove the pavement and subgrade, and install new concrete pavement.	Streets			N/A	(940) 349-7146
I35E northbound service road	located	500 ft west of Bonnie Brae	TBD	TBD	Wastewater Improvements (Temporary Lane Closures)	Wastewater				(940) 349-8909
Pembrooke	Chasewood	Long Ridge	04/20/20	05/22/20	Curb and Gutter Repair. The process starts with Barricading the failed sections of, Curb and Gutter remove and install Curbs. Also Mill and Overlay section of Street that was impacted with the curb repair.	Streets			N/A	(940) 349-7146
Robson	East Side of RR	35W	TBD	TBD	Wastewater Main Install (Temporary Lane Closure)	Wastewater				(940) 349-8909
Rockwood Ln.	Royal	Mistywood	TBD	TBD	bundle	Engineering	this will be part of bundle		Door Hangers	
Roselawn Dr.	Bonnie Brae	Kansas City Southern RR	TBD	TBD	Drainage and Roadway Construction Bonnie Brae Phase 1 (One Lane traffic control)	Engineering	Part of Bonnie Brae Ph. I Capital Project			(940) 349-8910
Royal Ln.	Royal	Rockwood	TBD	TBD	bundle	Engineering	this will be part of bundle			
Thomas St.	Panhandle	Oak	TBD	TBD	Streets Construction	Capital Projects	Part of 2019 Street Bundle			(940) 349-7104
Total										6



Street Closure Report

Current Closures

Week of April 13, 2020 - April 19, 2020



Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
Bent Creek	Kappwood	Spring Creek	01/06/20	04/24/20	Concrete Street panel and Sidewalk repair. The process starts with barricading the failed sections of concrete pavement, remove the pavement and subgrade, and install new concrete pavement.	Streets			N/A	(940) 349-7146
Broken Arrow	Dunes	Old Orchard	03/09/20	03/17/20	Concrete Sidewalk Repair. The process starts with Barricading the failed sections of concrete sidewalk, remove , and install new concrete.	Streets	Project on hold due to COVID-19		N/A	(940) 349-7146
Brown Dr	Roberts St	Woodland St	02/10/20	03/17/20	Wastewater collections will be installing a new wastewater main line and services	Wastewater	Project on hold due to COVID-19		N/A	(940) 349-8909
Cherrywood Ln	Woodland St	Northwood Tr	02/10/20	03/17/20	Wastewater collections will be installing a new wastewater main line and services	Wastewater	Project on hold due to COVID-19		N/A	(940) 349-8909
Colorado Blvd	Brinker Rd	3201 Colorado Blvd	02/17/20	04/13/20	Private Development: Drainage, Water, Sanitary Sewer, and Pavement for Fire Station #8	Public Works Inspections, Private Development			NextDoor, Direct business contact	(940) 205-9230
Dunes St	Broken Arrow	Old Orchard	03/02/20	03/17/20	Concrete Curb and Sidewalk Repair. The process starts with Barricading the failed sections of concrete and, remove , and install new concrete.	Streets	Project on hold due to COVID-19		N/A	(940) 349-7146
Eagle	Elm	Locust	03/30/20	05/08/20	PEC 4 1&2 Drainage and Utility Improvements	Engineering			NextDoor, N/A	(940) 349-8938

Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
Elm St.	Oak	Parkway	09/23/19	04/18/20	Sidewalk Improvements	Engineering	3/26/20 - Contractor delayed for 2 weeks. Part of Downtown TIF Sidewalk & Lighting CIP - Temporary lane and shoulder closures due to sidewalk reconstruction. Schedule delayed due to significant weather impacts and traffic signal relocations at McKinney.			(940) 349-8425
FM 2181	City of Denton/Corinth City limits	Lillian Miller	11/18/19	TBD	Street Widening	TxDOT	Watch TxDOT message boards for local street closure updates.			(940) 349-8425
FM 2499	Pine Hills	Hickory Creek Rd	03/27/20	05/01/20	Ana Site Construction: Water and Sewer Bore FM2499	Public Works Inspections, Private Development			NextDoor	(940) 205-9230
Foxcroft	Emerson	Emerson	01/30/20	03/17/20	Wastewater main replacement. Projects extends, Emerson from Emerson Circle to Foxcroft. Emerson Circle from Emerson to End Foxcroft from Emerson to Northcrest Foxcroft from Old North to Emerson	Wastewater	Project on hold due to COVID-19		N/A	(940) 349-8909
Foxcroft Cir	Emerson Ln	Emerson Ln	03/09/20	03/17/20	Water Distribution will be replacing the water main and water services.	Water	Project on hold due to COVID-19		N/A	(940) 349-7278
Ft. Worth Dr. (US 377)	IH 35E	Mission St	10/17/19	11/27/20	Infrastructure Safety Upgrades (temporary closures)	TxDOT				(940) 349-8938
Ft. Worth Dr. (US 377)	IH 35E	0.26 mi south of FM 1830	12/03/18	12/12/20	Street Widening (Temporary Lane Closures during non-peak traffic)	TxDOT		10/08/19		(940) 387-1414
Hidden Meadows Trail	Intersection with Vintage Blvd	back of Vintage blvd right of way	03/16/20	05/01/20	Intermittent closures of this intersection for construction activities	Engineering			NextDoor, Email Notification	(940) 349-8938
Hobson	Country Club	Forest Ridge	04/06/20	04/20/20	Paving connection at FM1830 as part of the TxDOT 377 project.	Engineering, TxDOT			NextDoor, Message Boards	(940) 349-8938
Hollyhill Ln	Longridge Dr	Tennyson Trl	03/06/20	03/17/20	Water Distribution will be replacing the water main and water services.	Water	Project on hold due to COVID-19		N/A	(940) 349-7278

Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
Jim Christal	Westen Blvd	Army Reserve Center 3250 Jim Christal Rd	04/17/20	04/20/20	Warranty repair -Road repair around a Sewer Man Hole.	Waste Water, Private Development			Direct business contact, contractor will have direct contact with affected parties. April 10 2020	(940) 783-6800
John Paine Road	Southwest Pump Station	John Paine Road at John Paine Road near IH 35W	01/06/20	05/31/20	Construction is continuing thru COVID-19. Please respect workers efforts in the field and always maintain social distancing. 4/8/20 John Pain Closure to be set up this week due to construction phasing progress. 4/1/20 John Paine closure to set up on 04/13/2020 thru 4/17/20. 3/25/20 John Paine closure to set up on 04/13/2020. Notices will be released the week before closure. John Paine Road will be closed as needed. Project includes installation of water main along Old John Paine and Allred Road between the Southwest Pump Station on John Paine Road near Parkplace Dr. on and South Bonnie Brae St.	Water			NextDoor	(940) 349-8925
Johnson Lane	John Paine Road	Just west of first driveway	01/06/20	05/31/20	3/25/20 Construction is continuing thru COVID-19. Please respect workers efforts in the field and always maintain social distancing. Road closure is for the installation of new water main along Old John Paine Rd. and Allred Rd. between the Southwest Pump Station on John Paine Rd. near Parkplace Dr. and South Bonnie Brae St.	Water			NextDoor	(940) 349-8925
Johnson Street; Smith Street	Dallas Drive	Daughtery Street, at S Locust Street	04/06/20	07/31/20	Atmos Energy is relocating/ replacing existing gas mains and services for upcoming reconstruction of Smith Street; including gas main crossing Johnson Street at Smith Street.	Atmos			Direct business contact, Atmos Energy to distribute door hangers, place sign boards, and notify residents in person	(940) 268-7285
Kerley Street	Duncan Street	Shady Oaks Drive	02/05/20	03/17/20	Street Reconstruction	Streets	Project on hold temporarily due to COVID-19 response			(940) 349-7146

Current Closures

Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
Locust St.	Warren Ct.	Sycamore St.	03/09/20	04/24/20	Storm drain improvements as part of Pec-4 Ph 1&2 Project. West side lane closure.	Engineering			Direct business contact	(940) 349-8938
Locust St.	Highland St	Eagle Dr	03/09/20	04/27/20	Sewer main improvements, as part of Pec-4 Ph 1&2 Project. West side lane closure.	Engineering			Direct business contact	(940) 349-8938
Locust St.	Oak	McKinney	04/13/20	05/15/20	Sidewalk Improvements	Engineering	3/26/20 - Contractor Delayed for 2 weeks. Part of Downtown TIF Sidewalk & Lighting CIP. Schedule delayed due to weather			(940) 349-8910
Loop 288	Colorado	225 west of Colorado blvd	03/16/20	05/15/20	This project is to install a drive approach at the Golden Triangle Mall as part of the Colorado Blvd and Loop 288 intersection improvements.	Engineering, Floyd Smith Concrete	Floyd Smith concrete will resume work on this project April 6th 2020.		Direct business contact	(940) 349-7104
Masch Branch	U S 380	Jim Crystal	02/17/20	03/17/20	We will be reconstructing Masch Branch from 380 to Jim Crystal.	Streets	Project on hold due to COVID-19		Direct business contact, Door hangers	(940) 349-7146
Mayhill Rd.	US 380 (E. University Dr.)	Edwards Rd.	09/01/17	04/30/20	Street Widening (Temporary Lane Closures)	Engineering, Traffic, TxDOT, CIP	Construction is continuing thru COVID-19. Please respect workers efforts in the field and always maintain social distancing. 4/8/20 - Lanes continue to open. Expect various lane closures as work wraps up without benefit of full lane closures. 4/1/20 - Ultimate Lanes are being opened as roadwork is coming to end. 3/25/20 - Additional Lane(s) may open as early as this week. 3/18/20 - Project Walkthrus are underway and lanes will continue to be closed as needed to facilitate final work.		Door Hangers	(940) 349-8925
Mockernut Rd.	Intersection with Vintage Blvd.	back of Vintage Blvd. right of way	03/16/20	05/01/20	Intermittent closures of this intersection for construction activities.	Engineering			NextDoor, Email Notification	(940) 349-8938

Current Closures

Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
N. Bell Ave	Texas	College	02/28/20	05/10/20	Building out west side of building	Public Works Inspections, Private Development			NextDoor	(940) 205-9230
Prairie St.	Locust St.	Elm St.	03/23/20	06/26/20	Storm drain improvements, as part of Pec-4 Ph 1&2 Project. Street closed to thru traffic.	Engineering			Direct business contact	(940) 349-8938
Quail Creek Dr.	Quail Creek Dr.	Berry Down Ln.	03/16/20	03/17/20	Concrete Street Panel Repair. At roundabout Circle. The process starts with barricading the failed sections of concrete pavement, remove the pavement, and install new concrete.	Streets	Project on hold due to COVID-19		N/A	(940) 349-7146
Roberts St	Bell Ave	Cherrywood Ln	02/10/20	03/17/20	Wastewater collections will be installing a new wastewater main line and services.	Wastewater	Project on hold due to COVID-19		N/A	(940) 349-8909
S. Elm St.	Prairie St.	Eagle	03/16/20	04/27/20	Water main improvements along Elm St. as part of the Pec-4 Ph 1&2 Project.	Engineering	West side lane closure.		Direct business contact, Door hangers	(940) 349-8938
S. Locust St.	Warren Ct.	Highland St.	12/16/19	04/24/20	Drainage Improvements as part of the Pec-4 Ph 1&2 Project.	Engineering	West side lane closure		Direct business contact, Door hangers	(940) 349-8938
Scripture Street	Thomas Street	Malone	03/16/20	06/30/20	The 2019 Street Reconstruction project consists of the reconstruction of roadways listed above. This reconstruction shall include new curb and gutter, ADA compliant ramps in sidewalks, asphalt or concrete roadways as well as upgraded drainage, water and wastewater facilities	Engineering			NextDoor, Email Notification	(940) 349-7426
Shagbark Dr	intersection with Vintage Blvd	back of Vintage Blvd right of way	03/16/20	05/01/20	Intermittent closure of the intersection for construction activities.	Engineering			NextDoor, Email Notification	(940) 349-8938
Thomas Street	W. Oak	Panhandle	03/16/20	06/01/20	The 2019 Street Reconstruction project consists of the reconstruction of roadways listed above. This reconstruction shall include new curb and gutter, ADA compliant ramps in sidewalks, asphalt or concrete roadways as well as upgraded drainage, water and wastewater facilities	Engineering			NextDoor, Email Notification, Direct business contact	(940) 349-7426

Current Closures

Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
US 380 (E. University Dr.)	1200' East of N. Mayhill Rd.	1200' West of E. Mayhill Rd.	11/01/19	04/30/20	Signal Upgrade and Installation	Engineering, Traffic, TxDOT, CIP	Construction is continuing thru COVID-19. Please respect workers efforts in the field and always maintain social distancing. 4/8/20 - Ongoing 4/1/20 - US 380/Mayhill Signal Installation is wrapping up successfully. Next step requires pavement marking installations to set stop bars and pedestrian crosswalks. This work will require various lanes of travel to be closed. Typically, there will be 2 lanes closed in each direction (eastbound and westbound) with a minimum of one-lane open at all times. 3/25/20 - US 380/Mayhill Signal Installation is in progress. Expected to last 1 - 2 weeks and will require various lanes of travel to close.		Additional outreach not needed	(940) 349-8925
Warren Ct.	Wainwright St.	Locust St.	12/16/19	06/05/20	Drainage Improvements as part of Pec-4 Ph 1&2 Project	Engineering	Closed to thru traffic		Direct business contact, door hangers	(940) 349-8938
West Windsor Drive	Mesquite Street	North Elm Street	03/30/20	05/16/20	Closure of lanes of Windsor Drive to facilitate paving operations related to the Magnolia Phase II drainage improvement project. Westbound and center lanes will be closed and re-paved and then swapped to a closure of the Eastbound and center lanes once the Westbound lanes are complete.	Engineering			Email Notification	(940) 349-8425
Woodland St	Brown Dr	Cherrywood Ln	02/10/20	03/17/20	Wastewater collections will be installing a new wastewater main line and services	Wastewater	Project on hold due to COVID-19		N/A	(940) 349-8909
Total										42



Street Closure Report

Completed Closures

Week of April 13, 2020 - April 19, 2020



Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
3309 Forest Ridge	Rolling Hills	El Paseo	03/02/20	03/27/20	Concrete Street Panel Repair. The process starts with Barricading the failed sections of concrete pavement, remove the pavement, and install new concrete.	Streets	Changed per email from Rogelio San Miguel		N/A	(940) 349-7146
Bell Ave.	Texas	College	02/10/20	04/27/20	Building out East side of building	Public Works Inspections, Private Development	Rescheduling street closure for later date		NextDoor	(940) 205-9230
Bent Oaks	Teasley	Cul V Sac	02/24/20	03/17/20	Concrete Street Panel and Sidewalk Repair. The process starts with Barricading the failed sections of concrete pavement, remove the pavement, and install new concrete.	Streets	Project on hold due to COVID-19		N/A	(940) 349-7146
Haven Way	Brookside	Park Place	02/24/20	03/27/20	Concrete Street Panel and Sidewalk Repair. The process starts with Barricading the failed sections of concrete pavement, remove the pavement, and install new concrete.	Streets			N/A	(940) 349-7146
Hickory Creek Rd.	Teasley	Riverpass	TBD	TBD	Street Widening (Temporary Lane Closures)	Engineering	From 1/13/20 to 3/8/20, City's Contractor will be clearing trees and vegetation along the south side of Hickory Creek Rd., from the west property line of McNair Elementary School to the Riverpass Dr. intersection. This will not involve any lane closures, but construction zone signage will be put up to warn motorists. Atmos still needs to relocate their facilities east of the Montecito intersection before our Contractor can fully deploy to the project.		Phone call to McNair Elementary Principal	(940) 349-7112

Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
Hinkle Dr.	Headlee	Windsor	07/03/19	03/28/20	Street and Drainage Improvements Magnolia Drainage Ph. II (Street Closure)	Engineering	Significant delays in placing base pavement due to weather. Pavement placed 3/11 and 3/12 on Hinkle. Rain on the afternoon of 3/12 and continuing through 3/19 has delayed completion of road surface. New anticipated finish date of Hinkle and opening to through traffic pushed back 1 week to 3/28/20			(940) 349-8910
Industrial	Sycamore	Bell	03/09/20	03/27/20	Installing Valley Gutter across Industrial at the intersection of Sycamore. The process starts with barricading then remove pavement and subgrade, and install new concrete Valley Gutter.	Streets			N/A	(940) 349-7146
IOOF Street	Eagle Drive	Sycamore Street	01/06/20	03/17/20	Closer no longer needed.	Atmos, Public Works Inspections			Atmos Energy to notify apartment complex's in area at least three business days in advance.	(940) 205-8278
Long Rd	Sherman/428	Natorium Entrance	03/09/20	03/28/20	Closed Long Rd. from Sherman/428 to entrance of Natatorium to install a water connection and sewer connection in Long Rd.	Water, Waste Water			NextDoor, Direct business contact	(940) 391-6299
Maple St.	Elm St.	Myrtle St.	02/24/20	03/06/20	Water Line improvements, as part of Pec-4 Ph 1&2 Project. Alternating lane closures.	Engineering			Direct business contact	(940) 349-7112
Montecito Dr.	Hickory Creek Rd.	Buena Vista Dr.	TBD	TBD	Installation of new storm drainage line. Full street closure.	Engineering			City PM will contact McNair Elementary Principal again on 2/7/20.	(940) 349-7112
Oak St. at Fry St. Signal	Intersection of	Fry	11/04/19	04/10/20	Signal Construction (Intermittent Lane Closures)	Traffic				(940) 349-7486
Prairie St.	Elm St.	Pierce St.	11/04/19	04/10/20	Water and Wastewater Main improvements, as part of Pec-4 Ph 1&2 Project. Prairie St. will be closed to thru traffic.	Engineering				(940) 349-8938
Rushing Springs Dr.	Hickory Creek Rd.	Marble Cove Ln.	TBD	TBD	Installation of new storm drainage line. Intersection closure. Traffic will be detoured to Serenity Way.	Engineering			N/A	(940) 349-7112

Completed Closures

Street/Intersection	From	To	Closure Start Date	Closure End Date	Description	Department	Upcoming Info/Notes	Public Meeting	Other Communication	Department Contact
S. Bonnie Brae St.	Willowwood St.	Highland Park Rd.	01/28/20	04/11/20	Water transmission main installation. Street will be closed to thru traffic.	Engineering	Changed per email from Robin Davis		Door hangers delivered to local residents on 1/29/20.	(940) 349-7112
Union Circle	Welch	Welch	03/09/20	03/20/20	Curb And Gutter Repair. Repairing Broken Curbs and Drive Approaches, barricade and remove and install new Concrete Curbs.	Streets			N/A	(940) 349-7146
W Parkway Street	Locust Street	N Elm Street	03/16/20	04/17/20	This project is a sidewalk installation project on the south side of W Parkway from Locust to Elm. It is part of our 2018 Sidewalk Program that will improve pedestrian access and upgrade ADA infrastructure. The local businesses in this area will be notified by door hanger and personal visits by staff to ensure all necessary concerns are addressed.	Engineering, Public Works Inspections, Floyd Smith Concrete			Direct business contact, Door hangers	(940) 349-7104
West Windsor Drive	Parkside Drive	Mesquite Street	11/11/19	04/04/20	Windsor opened from Parkside to Riney Road. Still local traffic only from Riney to Mesquite.	Streets, Drainage, Water, Waste Water			NextDoor, Email Notification	(940) 349-8425
Total										18