8. INFRASTRUCTURE ELEMENT

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CHAPTER 8: INFRASTRUCTURE ELEMENT

INTRODUCTION TO INFRASTRUCTURE SYSTEMS

People and businesses choose to locate in cities because of the value they provide. The infrastructure of buildings, streets, pipes, and open spaces is an essential, if sometimes under-appreciated, aspect of the value provided by a city. These systems may be less visible and they may be less frequently cited as the reason a resident or business chose a certain city. But they play a vital role in creating the quality of life residents desire and the business environment a company seeks.

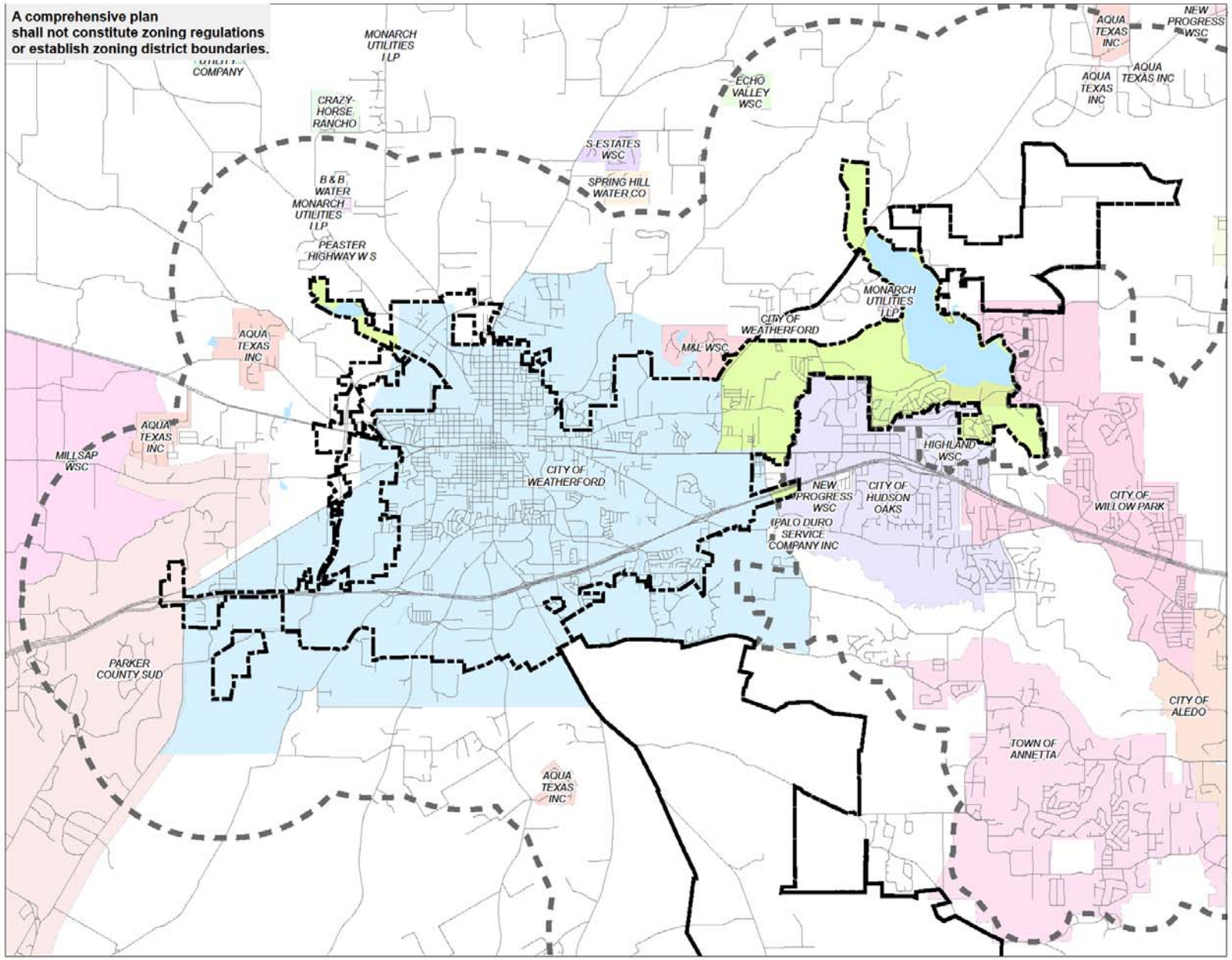
The infrastructure addressed in this chapter of the General Plan includes Weatherford's water, wastewater, stormwater, solid waste, electric and street systems. Each of these is operated by the City and is funded through a variety of sources. Water, wastewater, stormwater, solid waste and electricity generally charge a monthly fee for providing the service to users and revenues are placed into a specific fund for each service. These services are considered "self-supporting" because the users pay the cost of the service they use. Bonds to construct improvements for these utilities are paid through their specific funds. They are considered "revenue bonds" and do not need a vote of the citizens to issue them since they are paid for by the actual user not by taxpayers. Street construction and maintenance is not billed to the citizens directly but paid by taxes, grants and other sources. Bonds for street construction and maintenance are called "general obligation bonds" paid for by taxpayers. Issuance of general obligation bonds requires a vote of the citizens. As Weatherford plans for its future, it must ensure it can provide an adequate level of service to meet the basic needs in these areas, as well as make additional investments that deliver the character and quality of service residents and businesses desire. This infrastructure chapter of the General Plan provides direction for construction, maintenance and operation of Weatherford's infrastructure consistent with the Plan's Guiding Principles. The General Plan is designed to give decision-makers an overview of the role these infrastructure systems play in the future Weatherford community. The system plans, policies and priorities discussed in this chapter should provide the service needed and desired for the future development shown in Chapter 4's Place Type Diagram. However, this General Plan does not include the detailed facility analysis and planning for constructing and operating these systems. Those detailed plans and designs are found in master plans for each of individual systems. These master plans are referenced in this

chapter. They should be reviewed for more specific information about particular facilities or systems.

WATER UTILITY CURRENT AS OF JANUARY 2018

The Water Utility is part of the Weatherford Utility Department, and is administered through the Weatherford Municipal Utility Board, which is separate from the City but is housed and staffed in conjunction with the City. Weatherford's existing water system treats and distributes potable water to customers within a service area of approximately 27 square miles in and around the City of Weatherford. Weatherford's service area is established by a Certificate of Convenience and Necessity (CCN), which is authorized by the Texas Commission on Environmental Quality (TCEQ). A CCN gives a water supplier the exclusive right to provide retail water service within the identified geographic area. Municipalities can serve areas even if they do not have a CCN, provided that another water supplier does not hold a CCN for that area. A municipality may not provide retail water service within an area for which another utility holds a CCN, unless the municipality also holds a CCN for that area. Exhibit 8.1 shows Weatherford's current CCN boundaries. There are also procedures that would allow Weatherford to serve areas that are outside of the current CCN boundary. Weatherford also provides potable water to the City of Hudson Oaks on a wholesale basis to their public utility.

The overview, policies and investments described below summarize the role the water system plays in Weatherford's future and its contribution to achieving the Vision Statement. For more detailed information on this system, please consult the Water Master Plan approved in 2013, available online at http://weatherfordtx.gov/DocumentCenter/View/11381.



CITY OF WEATHERFORD

GENERAL PLAN

Existing Water CCN Boundary

Date: 08/09/2017

LEGEND

- Weatherford City Limits
- Weatherford ETJ Limits
- Weatherford Water CCN
- Service Area Outside CCN, Inside City Limits

Miles 0 0.5 1 1.5 NORTH

Exhibit 8.1 – Existing Water CCN Boundary

WATER SYSTEM OVERVIEW

The Water Utility system consists of raw water pump stations and pipelines, a 14 Million Gallon per Day (MGD) water treatment plant, pump stations, pipelines and storage tanks. Lake Weatherford serves as the primary water supply, with additional water supplies available from Sunshine Lake and Lake Benbrook. Raw water is pumped to a 14-MGD water treatment plant, where the water is treated to drinking water quality. From there, potable water is pumped into the distribution system through a network of pipelines, storage tanks and pump stations.

Lake Weatherford is on the Clear Fork of the Trinity River seven miles east of downtown Weatherford. The drainage area above the dam is 109 square miles which helps control the floodwaters of the river. It is owned and operated by the City of Weatherford and was completed in 1957. Based on the most recent sedimentation survey conducted in 2008, the lake has a storage capacity of 17,812 acre-feet and has a surface area of 1,112 acres. With its storage and the supply from Lake Weatherford, Sunshine Lake and Lake Benbrook, Weatherford is well poised for future development as the only existing entity than can reliably provide water to surrounding areas and western Parker County.

Because of the varying topography across the City, it is necessary to separate the distribution system into multiple pressure planes to maintain water pressure within a reasonable range. The distribution system is separated into six "pressure planes". Adequate water pressure is necessary for both residential usage and fire hydrants. Low water pressure not only affects how much water comes out of the faucet, but also is dangerous because it can be inadequate to put out fires. On the other hand, water pressure that is too high can blow out or damage plumbing in houses or businesses, so pressure reducing valves may be required of individual businesses or homes in those areas. Water pressure is maintained through the use of elevated storage tanks, which are generally raised 100'-200' above ground. As the water utility's service area continues to expand, it will be necessary to create additional pressure planes to serve certain portions of the service area. Exhibit 8.2 is a map of the existing pressure plane boundaries. A proposed boundary for future pressure planes is included in the Water Master Plan.

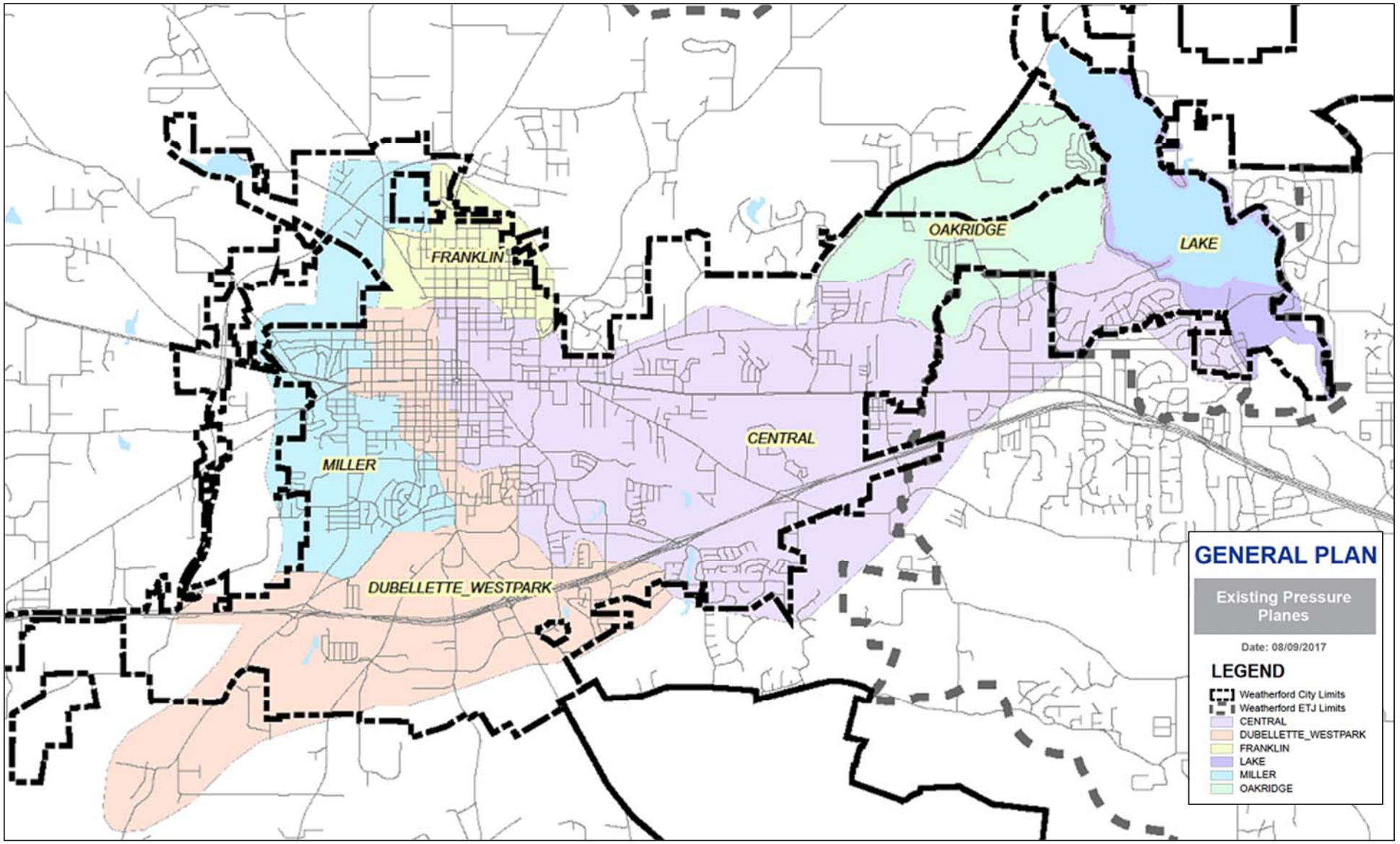


Exhibit 8.2 - Existing Pressure Plane Boundaries

TCEQ regulations dictate the requirements for water treatment plant capacity, water pumping capabilities, pipeline sizing, and storage tank capacity. The existing water treatment plant has a rated capacity of 14 MGD. The TCEQ regulations set specific trigger points for when the expansion of the water treatment plant is required. It is anticipated that design of the next expansion must begin within the next few years, and that construction must be completed by 2024.

The distribution system includes 275 miles of pipelines, ten water storage tanks and five pump stations. As the distribution system expands to accommodate future growth, new pipelines, storage tanks and pump stations will be required. In some cases, existing pipelines may need to be enlarged to provide greater water supply capabilities. In addition to expansion of the distribution system to meet future water demand, it is important to keep up with maintenance of the existing system to continue providing reliable service to the existing water customers.

WATER POLICIES

The Municipal Utility Board sets the policies for the Water Utility. The policies below include some of the major policies established by the Municipal Utility Board, as well as some additional proposed policies for the Municipal Utility Board to consider. This list is not meant to be an all-inclusive list, nor is this General Plan meant to establish new policies that have not been approved by the Municipal Utility Board.

W1. The City of Weatherford will design, construct, operate and maintain a water system that provides adequate water supplies for future development of a scale, location and timing consistent with this General Plan and illustrated by the Plan's Place Type Diagrams. The funding for expansion of facilities may be provided through various sources, including but not

limited to water rate revenues, capital bonds, impact fees, private funding, and/or grants.

W 2. The City's capital investments should place a priority on identified replacement or rehabilitation projects needed to maintain the efficient and effective operation of the current water supply system. The current policy adopted by the Municipal Utility Board is for replacement and/or rehabilitation of two percent of the existing distribution system per year.

W3. Phasing of water system expansions through public investment should be coordinated with investments in other services and facilities so the full range of infrastructure is available when new development is completed and occupied.

W4. Water system expansions should be fiscally responsible – major public capital investments in system expansions should occur when sufficient new development is expected in the expansion area to demonstrate that revenues from the development will be adequate to cover the costs of the expansion.

W5. In some cases, capital investments in the water system may not happen without private developer participation, or may happen sooner than their planned phasing if a developer requests the expansion and demonstrates consistency with other General Plan principles, policies and place types. The City and developer will enter into an agreement specifying the timing of private funding for the improvements and any public participation that may be available for the facilities. Facility capacities will be determined by the City consistent with overall projected demands for water service in the area to be served.

W6. The City will use education, incentives, and standards to encourage water system users to maximize water conservation and efficient water use.

W7. The City will work with state and regional agencies to coordinate the efficient use of water resources, maintenance and protection of water quality in supply reservoirs and the watershed, and effective strategies for water reuse.

W8. When it is not feasible for a developer to connect to the City's water distribution system, the City may consider alternatives to allow use of private water wells or a public water system.

W9. The City will not supply additional water to other jurisdictions thereby reducing its long-term supply and/or capacity unless it is in the best interests of Weatherford to do so.

W10. Properties in areas with water distribution systems sized for future higher density development shown in the Place Type Diagram (including suburban living, urban living and other non-residential place types) should be encouraged to develop at these intensities to provide the best return on these capital investments.

W11. The City should require voluntary annexation in exchange for the provision or financing of any utility, roadway, drainage facility, public safety or other public service. The City should not provide such services outside the City or its CCN.

W12. The Water Utility should consider expansions to the City's CCN only when they are consistent with the City's 2050 ETJ policies and when they provide a positive fiscal impact to the utility.

WATER UTILITY ACTIONS AND INVESTMENTS

The following actions include recommendations to be considered by the Municipal Utility Board as well as key projects identified in the 2013 Water Master Plan and the 2016 Water and Wastewater Impact Fee Program. Some of those actions are noted as the Department's response to the growth plans and place types contained in this general plan and are color coded as either ***Short Term*** or ***Long Term***. All others are important to the Water Utility. This list is not all-inclusive, and the reader is encouraged to contact the Department or refer to the documents listed below.

Action 8.11 **Refine for General Plan Consistency.** The Water Utility is recently completed updates to the 2013 Water Master Plan to reflect significant changes in two of the pressure planes. Future updates to the Water Master Plan should incorporate revisions as necessary to ensure consistency with the General Plan and support future development that achieves this vision of Weatherford's future.

Action 8.12 **New Reclaimed Water Project**. This project will provide an additional reliable water supply by transferring treated effluent from the wastewater treatment plant to a tributary of Lake Weatherford, and at a lower life-cycle cost than the Lake Benbrook alternative.

Action 8.13 **New 16" and 12" Water Line along Ric Williamson Memorial Highway – West Loop**. This project will provide expanded water service to new customers along the western loop of Ric Williamson Memorial Highway.

Action 8.14 **New Elevated Water Storage Tank – Miller Pressure Plane**. This project includes a new elevated water storage tank and 12" pipeline to provide additional storage capacity in the Miller Pressure Plane. Due to growth within

the Miller Pressure Plane, and changing of the pressure plane boundaries to provide better water pressure, the existing water storage capacity in the Miller Pressure Plane is reaching its allowable limit.

Action 8.15 **4.0 MGD Water Treatment Plant Expansion**. This project is a 4.0 MGD expansion to the existing water treatment plant. TCEQ recommends a water treatment plant capacity of 0.6 gpm per connection, plus any obligations for wholesale water customers. The water demand is projected to exceed the existing plant capacity by 2024.

Action 8.16 **Expansion of Major Transmission Mains**. This project includes several transmission main projects to increase conveyance capacity from the water treatment plant into the distribution system and multiple pressure planes to meet increased water demands. Alternatively, consider a new transmission main along the proposed Eastern Loop of Ric Williamson Memorial Highway. This action item represents several different projects identified in the Water Master Plan.

Action 8.17 **Water Conservation.** Continue or enhance current water conservation programs for Weatherford's residents and businesses.

Action 8.18 **Landscape Ordinance.** Revise the City's landscape ordinance to encourage water-conserving landscape.

WASTEWATER SYSTEM CURRENT AS OF JANUARY 2018

The Wastewater Utility is part of the Weatherford Utility Department, and is administered through the Weatherford Municipal Utility Board, which is separate from the City but is housed and staffed in conjunction with the City. Weatherford's existing wastewater system collects and treats wastewater from customers within a service area of approximately 30 square miles in and around the City of Weatherford. Weatherford's service area is established by a Certificate of Convenience and Necessity (CCN), which is authorized by the Texas Commission on Environmental Quality (TCEQ). A CCN gives a utility the exclusive right to provide retail wastewater service within the identified geographic area. Municipalities can serve areas even if they do not have a CCN, provided that another wastewater utility does not hold a CCN for that area. However, a municipality may not provide retail wastewater service within an area for which another utility holds a CCN, unless the municipality also holds a CCN for that area. Exhibit 8.3 shows Weatherford's current CCN boundaries. Weatherford is not limited by its current CCN boundary - there are procedures that would allow Weatherford to serve areas that are outside of the current CCN boundary. Weatherford also provides wastewater services to the City of Hudson Oaks on a wholesale basis to their public utility.

The overview, policies and investments described below summarize the role the wastewater system plays in Weatherford's future and its contribution to achieving the Vision Statement. For more detailed information on this system, please consult the Wastewater Master Plan approved in 2017, available online at http://weatherfordtx.gov/3015/Wastewater-Collection-System-Master-Plan.

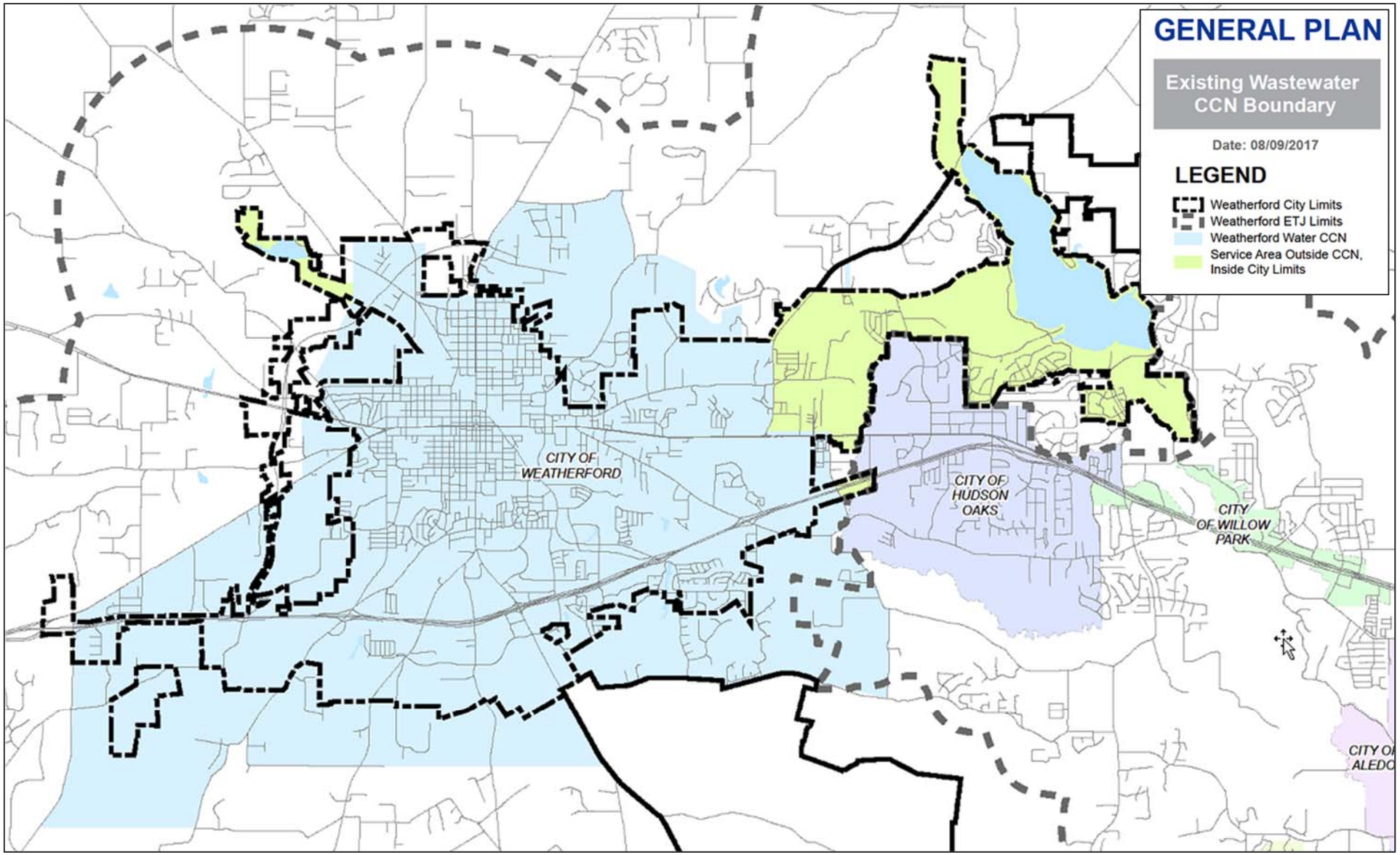


Exhibit 8.3 - Existing Wastewater CCN Boundary

WASTEWATER SYSTEM OVERVIEW

In general, the Wastewater Utility system consists of 208 miles of wastewater/sewer pipelines, 25 lift stations, and a 4.5 MGD wastewater treatment plant. The service area is divided into four drainage basins that follow topography – Town Creek, Willow Creek, Sanchez Creek, and Lake Weatherford. Exhibit 8.4 is a map of the drainage basins in Weatherford. The simplest process is for the wastewater to flow using the force of gravity through a pipeline from a customer's property to the wastewater treatment plant, which is in the Town Creek drainage basin. However, because of the varying topography across the City, it is sometimes necessary to pump the wastewater via a lift station up and over a ridge or high point. Once the flow is pumped over the high point, it can then gravity flow again downhill.

As the wastewater utility's service area expands to accommodate future growth, new pipelines will be required to extend service. In some cases, existing pipelines may need to be enlarged to provide greater wastewater flow capacity. It will also be necessary to construct additional lift stations to serve some portions of the service area. As an alternative to new lift stations, the utility may consider constructing a second wastewater treatment plant in the Sanchez Creek basin to eliminate the lift stations in that basin. In addition to expansion of the collection system to meet future wastewater

flows, it is important to keep up with maintenance of the existing system (pipelines, lift stations, and treatment facilities) to continue providing reliable service to the existing wastewater customers.

TCEQ regulations dictate the requirements for wastewater treatment plant capacity. The existing wastewater treatment plant has a rated capacity of 4.5 MGD. The TCEQ regulations set specific trigger points for when the expansion of the wastewater treatment plant is required. It is anticipated that design of the next expansion might be required within the next ten years, and that construction must be completed by 2037.

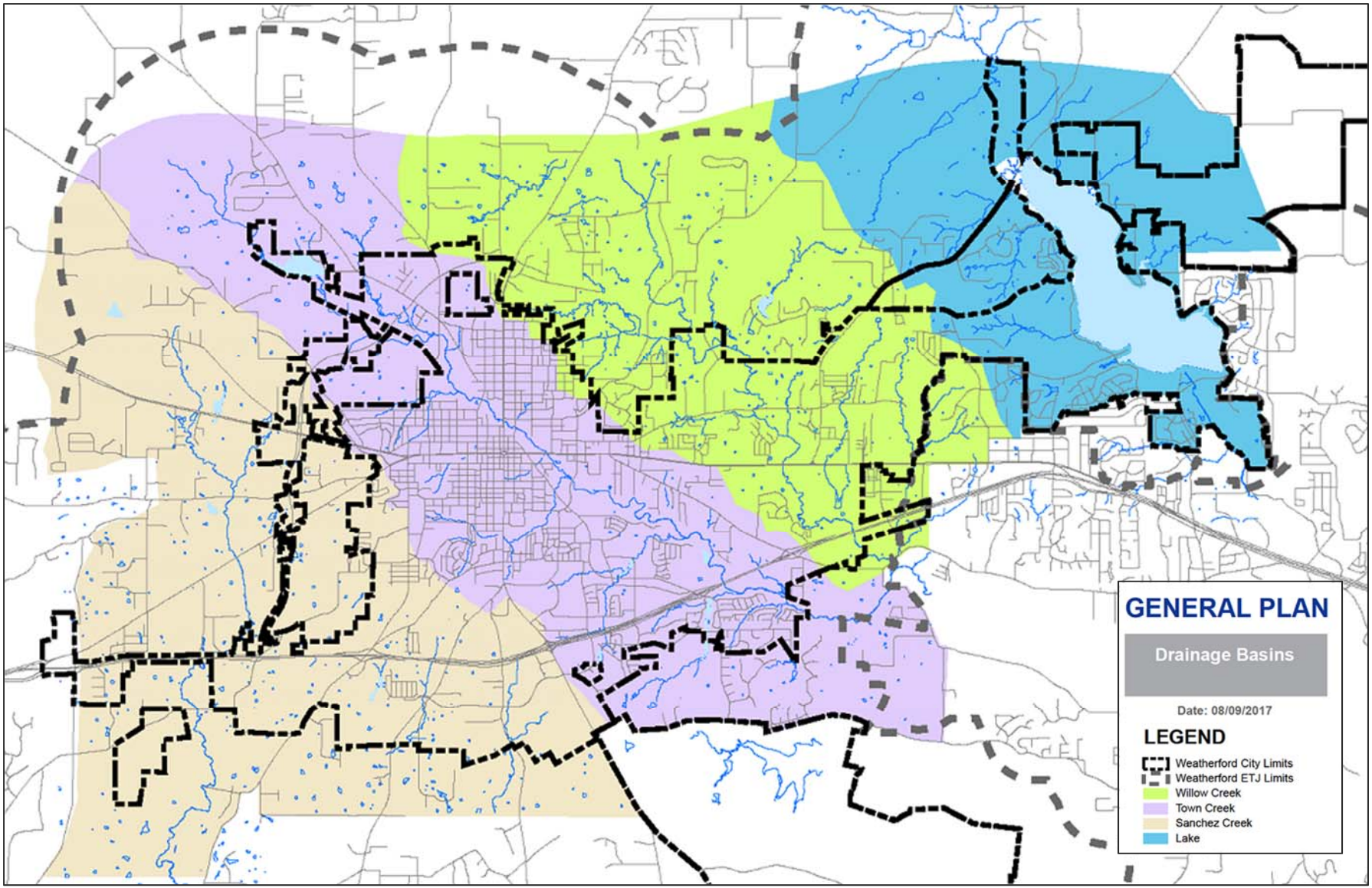


Exhibit 8.4 - Existing Drainage Basins

WASTEWATER POLICIES

The Municipal Utility Board sets the policies for the Wastewater Utility. The policies below include some of the major policies established by the Municipal Utility Board, as well as some additional proposed policies for the Municipal Utility Board to consider. This list is not meant to be an all-inclusive list, nor is this General Plan meant to establish new policies that have not been approved by the Municipal Utility Board.

WW1. The City of Weatherford will design, construct, operate and maintain a wastewater system that provides adequate wastewater collection and treatment for future development of a scale, location and timing consistent with this General Plan and illustrated by the Plan's Place Type Diagrams. The funding for expansion of facilities may be provided through various sources, including but not limited to wastewater rate revenues, capital bonds, impact fees, private funding, and/or grants.

WW2. The City's capital investments should place a priority on identified replacement or rehabilitation projects needed to maintain the efficient and effective operation of the current wastewater system. The current policy adopted by the Municipal Utility Board is for replacement and/or rehabilitation of two percent of the existing wastewater system per year.

WW3. Phasing of wastewater system expansions through public investment should be coordinated with investments in other services and facilities so the full range of infrastructure is available when new development is completed and occupied.

WW4. Wastewater system expansions should be fiscally responsible – major public capital investments in system expansions should occur when sufficient new development is expected in the expansion area to demonstrate that revenues from the development will be adequate to cover the costs of the expansion.

WW5. In some cases, capital investments in the wastewater system may not happen without private developer participation, or may happen sooner than their planned phasing if a developer requests the expansion and demonstrates consistency with other General Plan principles, policies and place types. The City and developer will enter into an agreement specifying the timing of private funding for the improvements and any public participation that may be available for the

facilities. Facility capacities will be determined by the City consistent with overall projected demands for wastewater service in the area to be served.

WW6. The City will use education, incentives, and standards to encourage users to protect the wastewater system by avoiding improper disposal of items that are potentially damaging to the wastewater system.

WW7. The City will work with state and regional agencies to coordinate effective strategies for water reuse.

WW8. When it is not feasible for a developer to connect to the City's wastewater distribution system, the City may consider alternatives to allow use of onsite septic systems or a public/community wastewater system.

WW9. The City will not provide additional wastewater services to other jurisdictions thereby reducing its system capacity unless it is in the best interests of Weatherford to do so.

WW10. Properties in areas with wastewater systems sized for future higher density development shown in the Place Type Diagram (including suburban living, urban living and other non-residential place types) should be encouraged to develop at these intensities to provide the best return on these capital investments.

WW11. The City should require voluntary annexation in exchange for the provision or financing of any utility, roadway, drainage facility, public safety or other public service. The City should not provide such services outside the City or its CCN.

WW12. The Wastewater Utility should consider expansions to the City's CCN only when they are consistent with the City's 2050 ETJ policies and when they provide a positive fiscal impact to the utility.

WASTEWATER ACTIONS AND INVESTMENTS

The following actions include recommendations to be considered by the Municipal Utility Board as well as key projects identified in the 2017 Wastewater Master Plan and the 2016 Water and Wastewater Impact Fee Program. Some of those actions are noted as the Department's response to the growth plans and place types contained in this general plan and are color coded as either ***Short Term*** or ***Long Term.*** All others are important to the Water Utility. This list is not all-inclusive, and the reader is encouraged to refer to the Wastewater Master Plan for a complete list of recommendations.

Action 8.20 **Refine for General Plan Consistency.** Future updates to the Wastewater Master Plan should incorporate revisions as necessary to ensure consistency with the General Plan and support future development that achieves this vision of Weatherford's future.

Action 8.21 **New Reclaimed Water Project**. This project will provide an additional reliable water supply by transferring treated effluent from the wastewater treatment plant to a tributary of Lake Weatherford, and at a lower life-cycle cost than the Lake Benbrook alternative. This project includes process improvements at the wastewater treatment plant, as well as new conveyance facilities.

Action 8.22 **New 15" and 12" Town Creek Wastewater Extension to Ric Williamson Memorial Highway**. This project will provide expanded wastewater service to new customers along the western loop of Ric Williamson Memorial Highway in the northwest portion of the city.

Action 8.23 **New 12" and 8" Wastewater Extension along Old Brock Road to Lift Station #25**. This project will provide new service to areas inside the western loop of Ric Williamson Memorial Highway from I-20 to Ranger Highway. This project will also allow the Utility to decommission lift stations #10 and #22.

Action 8.24 **New Lift Station #26 and Associated Pipelines**. This project extends wastewater service westward along I-20 from Ric Williamson Memorial Highway to the Sanchez Creek drainage basin. Subsequent development may include the expansion of a gravity main northward along the Sanchez Creek to Mineral Wells Highway.

Action 8.25 **Expansion of Major Wastewater Interceptors**. This project includes several wastewater pipeline projects to increase conveyance capacity to the wastewater treatment plant to accommodate future wastewater flows.

Action 8.26 **Consider Future Expansion of Wastewater Treatment Plant and/or Development of New Wastewater Treatment Plant in Sanchez Creek Drainage Basin.** This

project includes the consideration of multiple expansion projects to the existing wastewater treatment plant, as well as the possibility of developing a new wastewater treatment plant in the Sanchez Creek drainage basin.

WATER AND WASTEWATER SYSTEMS INFORMATION

CURRENT AS OF JANUARY 2018

CONTACT INFORMATION

Responsible Department:	Water/Wastewater Utilities	(817) 598-4473	rshaffer@weatherfordtx.gov
Web Page		http://www.ci.weatherford.tx.us/22/WaterWastewaters	

FULL ELECTRONIC COPY OF PLANS AND DOCUMENTS SUMMARIZED IN THIS CHAPTER:

Water Master Plan	http://weatherfordtx.gov/DocumentCenter/View/11381
Wastewater Collection System Master Plan	http://weatherfordtx.gov/DocumentCenter/View/13224
Water and Wastewater Impact Fee Program	http://weatherfordtx.gov/DocumentCenter/View/12513

STORMWATER MANAGEMENT
CURRENT AS OF JANUARY 2018

In natural settings, precipitation/rain is primarily absorbed into the soil before draining into creeks, channels and drainage ways. In developed environments, there is less absorption of storm water into the soil because of the addition of impervious surface (i.e. roofs, pavement, etc.). This addition of impervious surface has a direct impact on the volume and timing of storm water runoff which, without proper planning and control, can lead to flooding, erosion, and water quality issues. Therefore, it is essential that storm water be managed to mitigate the potential effects of these issues. To meet this task, the City of Weatherford established the Storm Water Utility system, thereby providing a funding source for the management, planning, design, construction, maintenance, and repair of public storm water facilities.

The overview, policies and investments described below summarize the role the Storm Water Utility system plays in Weatherford's future and its contribution to achieving the Vision Statement. For more detailed information on this system, refer to Ordinance 578-2012-27, the Engineering Division webpage and the Capital Projects Department webpage. (http://ci.weatherford.tx.us/1847/Engineering-Division),

STORMWATER OVERVIEW

The Storm Water Utility is managed by the Capital Projects Department, with implementation ultimately overseen by the City Council. The focus area of the Storm Water Utility is the incorporated limits and ETJ of the City, however, the nature of watersheds and topography dictate that consideration be given to the larger region in planning and analysis efforts when managing and developing the public storm water systems.

Weatherford consists of 4 major watersheds – Sanchez Creek, Town Creek, Willow Creek, and the Clear Fork Trinity River. As Exhibit 8.5 shows, these watersheds vary greatly in topography and level of development, as well as flood risk. Lake Weatherford is fed from the Clear Fork of the Trinity River and serves as the primary water supply source for the City. Town Creek and Willow Creek are the most centralized watersheds within the City and thus the most impacted by development and growth, while Sanchez Creek to the Southwest is in an area of less density and more undeveloped land.

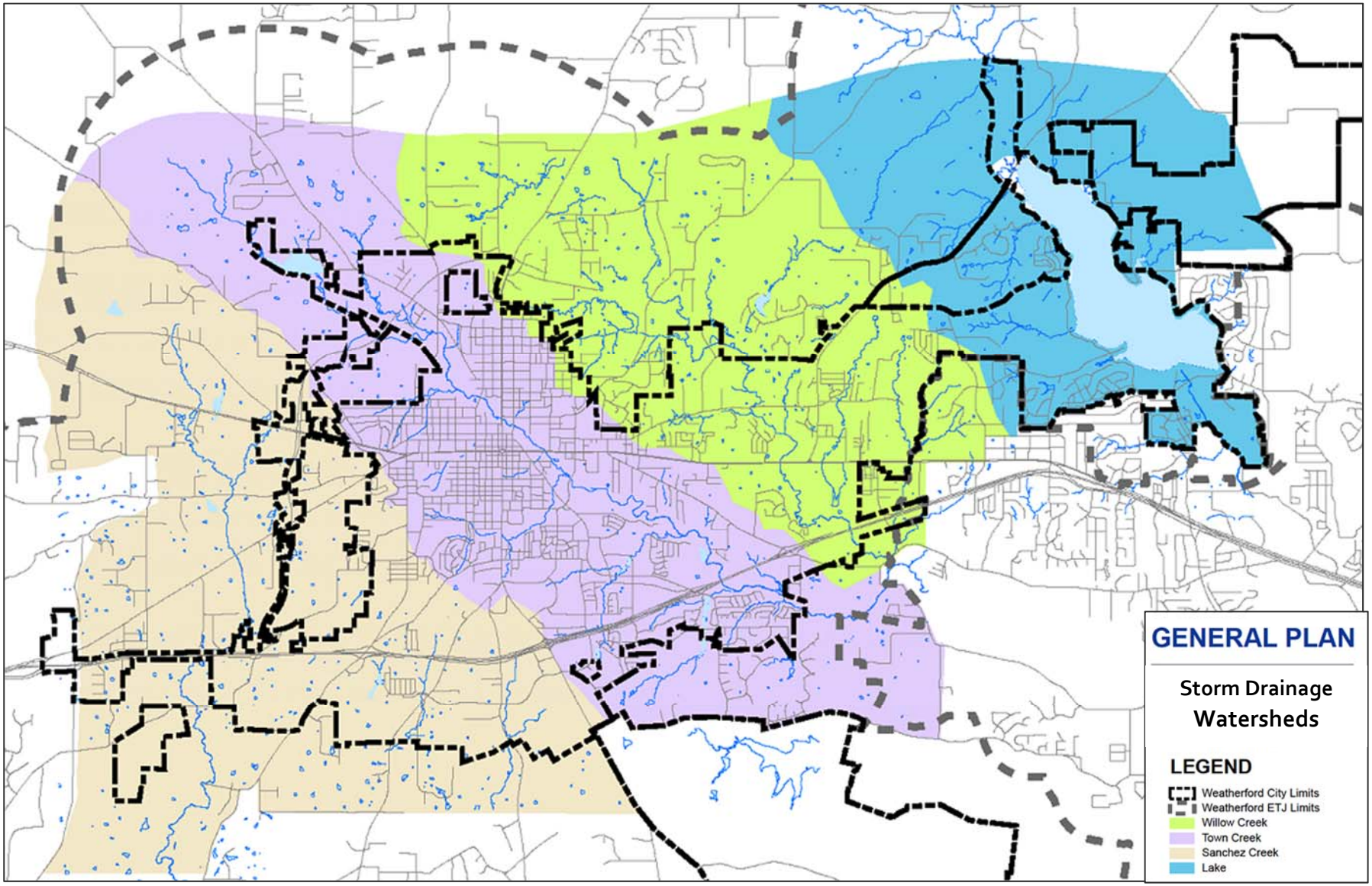


Exhibit 8.5 - Major watersheds

STORMWATER SAFETY IMPACTS

Storm water management is part of a City's responsibility to its residents' safety and to the protection of property and capital investments. Flooding poses major risks to the life and safety of Weatherford's residents as well as to its police, fire and emergency personnel who must respond to flooding emergencies. Flooding also causes erosion of the stream and river banks. Erosion can threaten City infrastructure, such as roads, bridges, water pipes and wastewater lines. Erosion of private property adjacent to creeks can cause damage to City-owned floodways as well… As noted previously, development tends to increase the frequency and intensity of flooding from a storm event because it creates impervious surfaces and increases runoff. The Storm Water Utility uses its planning and resources to anticipate and minimize the negative impacts of storm water on the community.

STORM WATER PLANNING

A primary and early objective of the Storm Water Utility is to assess the existing conditions of Weatherford's drainage corridors. This work will establish benchmarks for the preservation of these public drainage corridors, whether natural or man-made, to allow for responsible development and growth while mitigating the flooding, erosion, and water quality issues previously mentioned. Each section of watershed within the Storm Water Utility, and beyond as necessary, presents widely varying conditions. The completion of hydrologic and hydraulic (H&H) studies along each watershed corridor, and their corresponding tributaries, is the primary means by which the Storm Water Utility will establish a benchmark of the health and capacity of our existing systems.

At the macro level, the H&H study analyzes and illustrates the condition of the drainage ways in not only the existing condition, but equally as important is the condition at "full build-out" of the watershed with respect to the ultimate anticipated development. The Capital Projects Department will use this information to identify and prioritize areas in a current or future need for storm water project programming.

On the micro level, or more focused study level, the Storm Water Utility will take the framework built by the watershed studies and move toward the development of basin-specific infrastructure plans. Basin-specific infrastructure plans, accounting for full build-out, will enable the Storm Water Utility to prioritize and enact the logical phasing of funding and construction of storm water improvements to address existing needs and future growth.

MULTI-USE DRAINAGE CORRIDORS

Another focus of the Storm Water Utility is the effort to acquire and maintain the natural drainage corridors of our area. This includes the acquisition and protection of floodways, floodplains, creeks, tributaries, and other natural or "greenbelt" drainage corridors throughout the City. These natural drainage corridors convey storm water; in addition, they are important habitats in the local ecosystem. Their preservation for storm water management provided an added benefit since they are preserved as natural habitat and vital assets to the community. It is not uncommon for these greenbelt drainage ways to serve as public parks, trails and outdoor gathering "places" in addition to the function of floodplain or drainage conveyance. Therefore, it is critical to identify these areas through the methodology previously mentioned. As new development is proposed, these identified greenbelt corridors can be protected, managed and used to create amenities for the development.

The natural processes of flooding, soil erosion, and stream migration have long been a normal occurrence in the undisturbed environment. As what we consider the "public realm" starts to converge on our drainage corridors, these naturally occurring processes can wreak havoc if not controlled or anticipated. Stream migration or meandering, while natural, is very difficult to predict. The impact of increased development, additional flows and higher velocities being conveyed through the drainage way can in some situations create an urgent need to restrict and inhibit the natural tendencies of the drainage way. This need has led to the creation of a number of proven measures used to control and manage such hazards. However, many control measures

are effective in addressing the immediate problem but less effective as a permanent, environmentally friendly solution to these natural processes. Thus, the Storm Water Utility places a priority on the preservation of the natural corridor by buffering the proximity of development to the 100-year floodplain to prevent the need for control measures. In some situations, control measures are unavoidable and warranted to protect the public health and safety from loss of life and property. The Storm Water Utility will in those cases engage storm water professionals for an assessment, analysis, and

solution to the risk identified and utilize funds for the construction of control measures or, in a worst-case scenario, purchase the affected property when global stability failure is imminent and a control measure is not viable.

The Storm Water Utility also works in conjunction with the roadway rehabilitation and reconstruction efforts of the Transportation and Public Works (TPW) Department. When necessary and practical as part of roadway rehabilitation efforts, storm water infrastructure is funded by the Storm Water Utility and installed by TPW construction crews. This approach results in a safer and better functioning roadway, identifies and corrects existing storm water deficiencies within the public realm, eliminates the redundancy of pavement repair for future storm infrastructure installation, and yields a substantial construction cost savings by utilizing already mobilized and experienced TPW construction crews.

STORMWATER SYSTEM MANAGEMENT

Asset management of the City's storm water infrastructure will become increasingly important as inventory grows. The Storm Water Utility leverages funds to maintain and rehabilitate our existing network of storm water infrastructure: to include underground conduit, inlets, channels, outfalls, as well as the natural drainage ways identified previously. Currently the Storm Water Utility partners with the Transportation and Public Works department to accomplish these tasks, however it is likely that a dedicated storm water maintenance group will be established in the future as an independent entity.

STORMWATER DETENTION AND RETENTION

Another, often misunderstood aspect of stormwater management is the regulation of stormwater runoff from new development and the use of detention and retention ponds to mitigate the impacts of runoff by slowing it down until existing systems can absorb the drainage. A detention, or dry

pond or basin has a drain level with the bottom so that all of the water eventually drains out and it remains dry between storms. Retention basins have a riser with a series of drains or outlets at a higher point so that it retains a permanent pool of water and slowly releases additional storm water. (See picture opposite). Detention and retention ponds are important for storing and slowing (attenuating) the runoff from impervious surfaces such as additional rooftops or pavement. Dry detention basins control flood flows only. A retention basin can also provide water quality benefits by reducing sediments and attached pollutants.

Generally, downstream property owners cannot impede or block existing drainage from upstream or uphill properties. However, upstream property owners in most cases are not entitled to add additional runoff and flood downstream properties, especially if it is created by new development. Weatherford, like most cities, has stormwater regulations and policies that address additional runoff created by new development. Detailed studies are required of new development to determine how much additional stormwater will be created and how the impacts will be mitigated. While the traditional method is to add more storm drains and expand the system, Weatherford, like other cities such as Fort Worth and Dallas are encouraging more sustainable methods such as retention and detention ponds. Weatherford is working to reduce downstream flooding, add water features to the City and create more affordable solutions to flooding. One new problem created by the use of private detention and retention ponds is the long-term maintenance of the facilities as they get older and potentially become an eyesore. The City is working to make the ponds more of an amenity to new development and utilize unique funding situations including public improvement districts and homeowner associations for maintenance. The City is also exploring the use of more regional detention and retention ponds that can also be a public amenity with public maintenance. Some developers are willing to pay for the right to use regional facilities rather than lose developable land for a private detention pond that requires homeowners to pay to maintain a potential eyesore.

STORMWATER POLICIES

Weatherford Ordinance 578-2012-27 formalizes the establishment of the Municipal Storm Water Utility System. The policies below include some of the major policies established by that ordinance, as well as some additional proposed policies for consideration by the Utility Board. This list is not meant to be an all-inclusive list, nor is this General Plan meant to establish new policies that have not been approved by the Utility Board.

SW1. The City of Weatherford will plan and manage a system of natural and constructed drainage ways that meet the needs of existing and future development of a scale, location and timing consistent with this General Plan and illustrated by the Plan's Place Type Diagrams.

SW2. Planning to manage storm water should consider the conditions in each watershed at build-out as envisioned by this General Plan's Place Type Diagram and the long-range plans for development within parts of the watershed beyond Weatherford's planning areas.

SW3. Studies to develop this storm water system should focus on opportunities to retain undeveloped drainage corridors in their natural state to provide open space, trails and habitat in addition to storm water management.

SW3. New development should be designed so it does not increase the volume of storm water draining from the property.

SW4 Weatherford will utilize techniques to mitigate flooding in a sustainable manner at the least expense to the City and property owners as possible.

STORMWATER UTILITY INFRASTRUCTURE ACTIONS AND INVESTMENTS

The following actions are a general summary of the Stormwater Utility's plans and their key projects, actions and investments. Some of those actions are noted as the Utility's response to the growth plans and place types contained in this general plan and are color coded as either ***Short Term*** or ***Long Term***. All others are important to the Department. This list is not all-inclusive, and the reader is encouraged to contact the Stormwater Utility or refer to the documents listed below.

Action 8.30 **Refine for General Plan Consistency.** The Storm Water Utility will continue watershed analysis that considers projected development Place Types at build-out to ensure consistency with the General Plan.

Action 8.31 **Watershed Management Plans.** Continue studies, by watershed, to analyze floodplains and riparian corridors to evaluate implications of development build-out on flooding, erosion and habitat, and set priorities for land acquisition, capital improvements, habitat preservation, and creation of greenbelts and trails.

Action 8.32 **Holland Lake Dam Spillway and Creek Stabilization.** The Storm Water Utility will design and construct a new dam spillway for Holland Lake. This need was identified under inspection of TCEQ and it critical to ensure appropriate outfall from Holland Lake during large storm events and stabilize the erosion and migration of town creek upstream.

Action 8.33 **Black Warrior Creek Stabilization.** The Storm Water Utility will design and construct stabilization efforts for a portion of Black Warrior Creek that routes through Heritage Park. The project will consist of block wall construction, pedestrian bridge, and utility relocations

STORM WATER SYSTEM INFORMATION

CURRENT AS OF JANUARY 2018

CONTACT INFORMATION

Responsible Department:	Capital Projects	(817) 598-4006	CMarbut@weatherfordtx.gov
Web Page		http://weatherfordtx.gov/1853/Floodplain-Management	

FULL ELECTRONIC COPY OF PLANS AND DOCUMENTS SUMMARIZED IN THIS CHAPTER:

Floodplain Management Ordinance	https://library.municode.com/tx/weatherford/codes/code_of_ordinances
Stormwater Fee - Ordinance 578-2012-27	http://ci.weatherford.tx.us/1847/Engineering-Division

ELECTRIC UTILITY

CURRENT AS OF JANUARY, 2018

The Weatherford Electric Department oversees electrical system planning, construction, and maintenance, electrical substations and distribution system, overhead and underground electric crews, power plant, Supervisory Control and Data Acquisition System (SCADA) and the fiber optic system. It is a municipal utility, created due to dissatisfaction with the Texas Utilities Company's rates in 1937. A bond-funded electric plant located at 614 Fort Worth Highway began operations in 1940. The City has held the electric franchise for its area since 194.

Original 1940 Powerplant

ELECTRIC PROVIDERS

In addition to the Weatherford Electric system that provides service to most residents, two other electric utility systems provide service in Weatherford and its Extra-Territorial Jurisdiction. Weatherford's service area is established by a Certificate of Convenience and Necessity (CCN) which was established by the Public Utility Commission of Texas (PUCT) and cannot expand beyond the initial boundaries that were set without formal approval by the PUCT. The service area includes three areas: single-certified, dual-certified, and tri-

certified. The single-certified area is an area that can only be served by Weatherford while the dual and tri-certified areas are able to be served by either Weatherford (WE), Tri-County Electric Cooperative (TCEC) or Oncor Electric Delivery (formerly TXU). Exhibit 8.6 shows these current boundaries.

ELECTRIC SYSTEM OVERVIEW

The goal of the Weatherford Electric utility is to provide safe, reliable, competitive energy services to benefit our customers, citizens, and the City. The Weatherford Electric Utility serves more than 14,000 residential, commercial and industrial customers. In 2016, the peak demand was 100 MW with an annual energy sales of 408,450 MWh. The certified service area is approximately 52 square miles. In the service area, there are approximately 145 miles of underground and 179 miles of overhead lines. Weatherford Electric now purchases its power from wholesale providers in the marketplace. The market price fluctuates depending on the price of natural gas, petroleum products and coal so the Utility has contracts with different entities using different fuels for their plants to reduce the cost fluctuations of relying on one system.

With deregulation of electric utilities in 1999, customers are able to "shop" for electricity just as they would shop for groceries. Although Texas electric rates are average, annual electric bills are among the highest in the nation because of heavy air conditioning use in the long, hot, summer months. Deregulation allows municipal and cooperative electric systems the choice of if and when to join the new market and customers in the dual and tri-certified areas have a choice so Weatherford Electric must retain competitive electrical rates.

Recently, the electric utility has been performing a number of upgrades to insure continued reliable, reasonable electric service as the population in the CCN grows. Electric Advanced Metering System (AMS) meters have replaced the older meters that were not as accurate and required monthly readings by personnel. A West Loop Substation has been constructed to serve additional areas to the west. Long term, there is a continual need to reduce our wholesale power costs and enter into additional contracts to meet future power needs.

ELECTRIC SYSTEM POLICIES

E1. The City of Weatherford will design, construct, operate and maintain an electric system that provides adequate service for future development of a scale, location and timing consistent with this General Plan and illustrated by the Plan's Place Type Diagrams.

E2. The City's capital investments should place a priority on identified replacement or rehabilitation projects

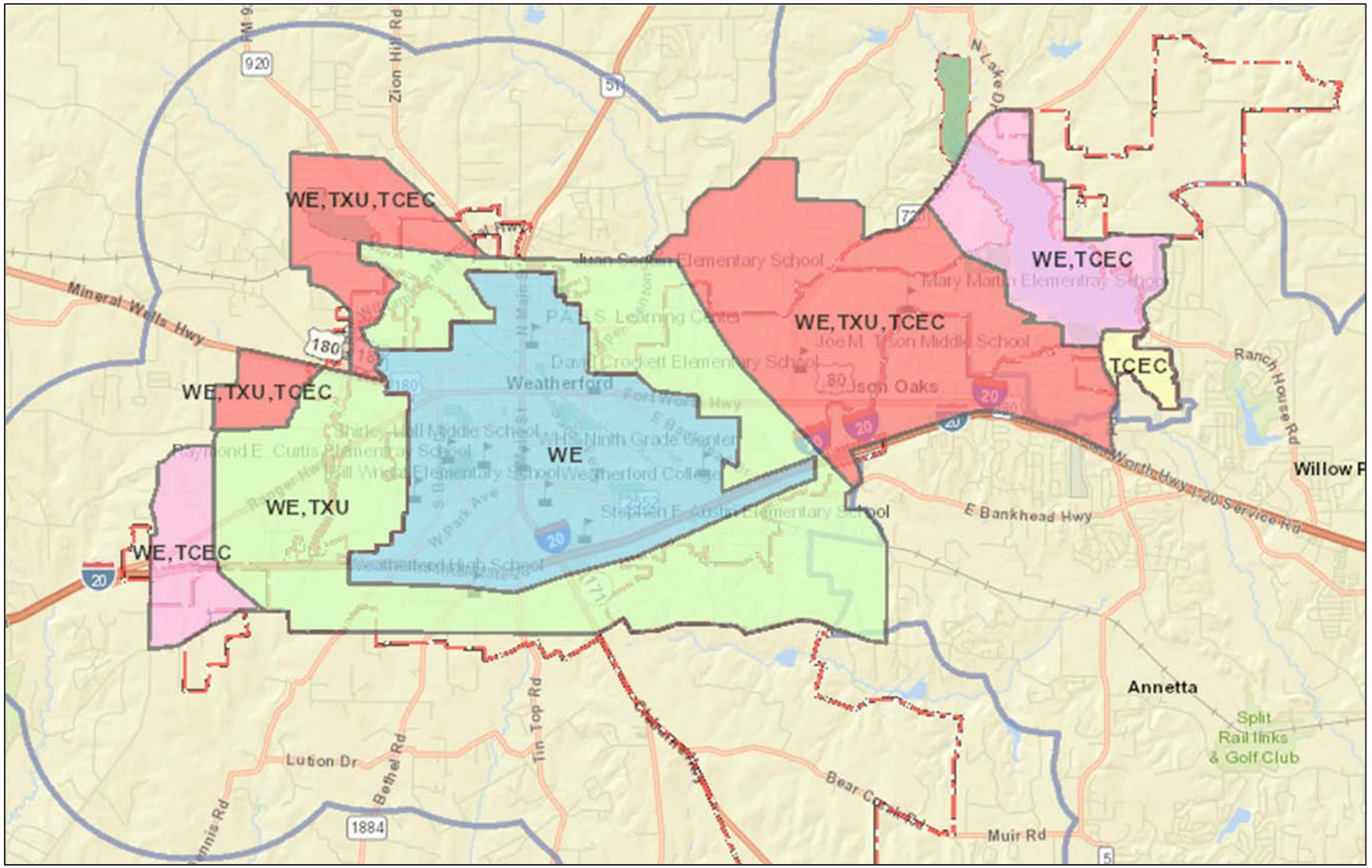


Exhibit 8.6 Current Service Areas of Electric Utilities

needed to maintain the efficient and effective operation of the current electric system.

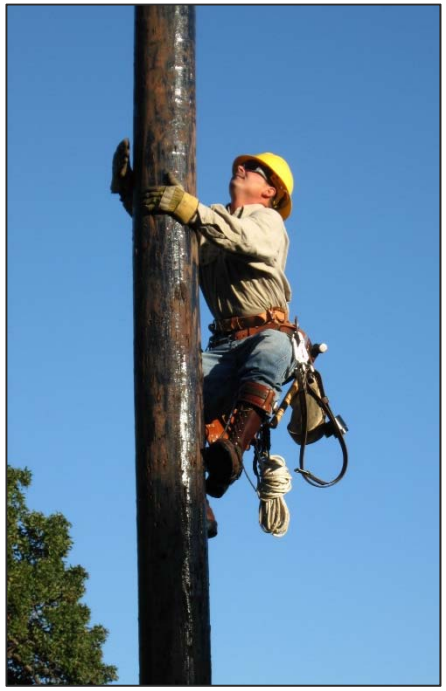
E3. Phasing of electric system expansions through public investment should be coordinated with investments in other services and facilities so the full range of infrastructure is available when new development is completed and occupied.

E4. Electric system expansions should be fiscally responsible – major public capital investments in system expansions should occur when sufficient new development is expected in the expansion area to demonstrate that revenues from the development will be adequate to cover the costs of the expansion.

E5. In some cases, capital investments in the electric system may not happen without private developer participation, or may happen sooner than their planned phasing if a developer requests the expansion and demonstrates consistency with other General Plan principles, policies and place types. The City and developer will enter into an agreement specifying the timing of private funding for the improvements and any public participation that may be available for the facilities. Facility capacities will be determined by the City consistent with overall projected demands for electric service in the area to be served.

E6. The City will use education, incentives, and standards to encourage efficient use of electricity.

E7. The City will not amend its CCN to provide additional electric services to other jurisdictions thereby reducing its system capacity unless it is in the best interests of Weatherford to do so.



E8. Properties in areas with electric systems sized for future higher density development shown in the Place Type Diagram (including suburban living, urban living and other non-residential place types) should be encouraged to develop at these intensities to provide the best return on these capital investments.

E9. The City should require voluntary annexation in exchange for the provision or financing of any utility, roadway, drainage facility, public safety or other public service. The City should not provide such services outside the City or its service area.

E10. The Electric Utility should consider expansions to the City's service area only when they are consistent with the City's 2050 ETJ policies and when they provide a positive fiscal impact to the utility.

ELECTRIC INFRASTRUCTURE ACTIONS AND INVESTMENTS

The following actions are a general summary of the Weatherford Electric Utility's plans and their key projects, actions and investments and are subject to the Weatherford Utility Board approval. Some of those actions are noted as the Utility's response to the growth plans and place types contained in this general plan and are color coded as either ***Short Term*** or ***Long Term.*** All others are important to the Department. This list is not all-inclusive, and the reader is encouraged to contact the Weatherford Electric or refer to the documents listed below.

Action 8.40 **Refine for General Plan Consistency**. Review and revise the Master Plan for electric infrastructure systems as necessary to ensure consistency with the General Plan and support future development that achieves this vision of Weatherford's future.

Action 8.41 **Capital Improvements Program.** Design departments' capital improvements plans, projects and procedures to be consistent with this General Plan and supportive of its anticipated development pattern.

Action 8.42 **Transmission Cost of Service Study.** Perform a Transmission Cost of Service Study in order to reduce the wholesale power supply costs.

Action 8.43 **Wholesale Power Supply Contract.** Enter into a wholesale power supply contract for one/third of Weatherford's power needs replacing a contract that expires in 2018.

ELECTRIC SYSTEM INFORMATION

CURRENT AS OF JANUARY 2018

CONTACT INFORMATION

Responsible Department: Weatherford Electric Utility (817) 598-4257 jfarley@weatherfordtx.gov

Web Page http://weatherfordtx.gov/241/Electric

STREETS AND ROADWAY MAINTENANCE AND REPAIR

CURRENT AS OF JANUARY, 2018

The Department of Transportation and Public Works (TPW) handles street and roadway maintenance and repairs and manages the system of existing City streets including the right-of-way. They work with the Transportation Advisory Board to implement improvements to the street network and traffic management. The Department reviews construction plans and issues construction permits for work within the ROW to be in compliance with the City's right-of-way management ordinance. The Department also oversees inspection of new public infrastructure. Finally, they coordinate the various activities with local, county and state entities.

STREET SYSTEM OVERVIEW

The Transportation and Public Works (TPW) Department oversees the maintenance of over 189 miles of City roads. The Street division activities include major and minor street reconstruction, preventative maintenance, storm drainage improvements, etc. Street reconstructions are scheduled according to the three and five-year street rehabilitation plan. The Traffic division maintains over 5,000 street signs within City's right-of-way and all pavement markings including cross walks. The Field Services division is responsible for the

inspection of existing and new roadway infrastructure. Field Services staff handle all in house surveying and design of street reconstruction projects. The TPW administration staff handles all right-of-way construction permitting and contractor registrations. All R.O.W. Construction permitting and registration is regulated by the City's right-of-way management ordinance.
https://www.ci.weatherford.tx.us/DocumentCenter/View/11252

In addition, the division has a Neighborhood Street Improvement Program which improves neighborhood streets. See Exhibit 8.7 also found at
http://www.weatherfordtx.gov/DocumentCenter/View/13404

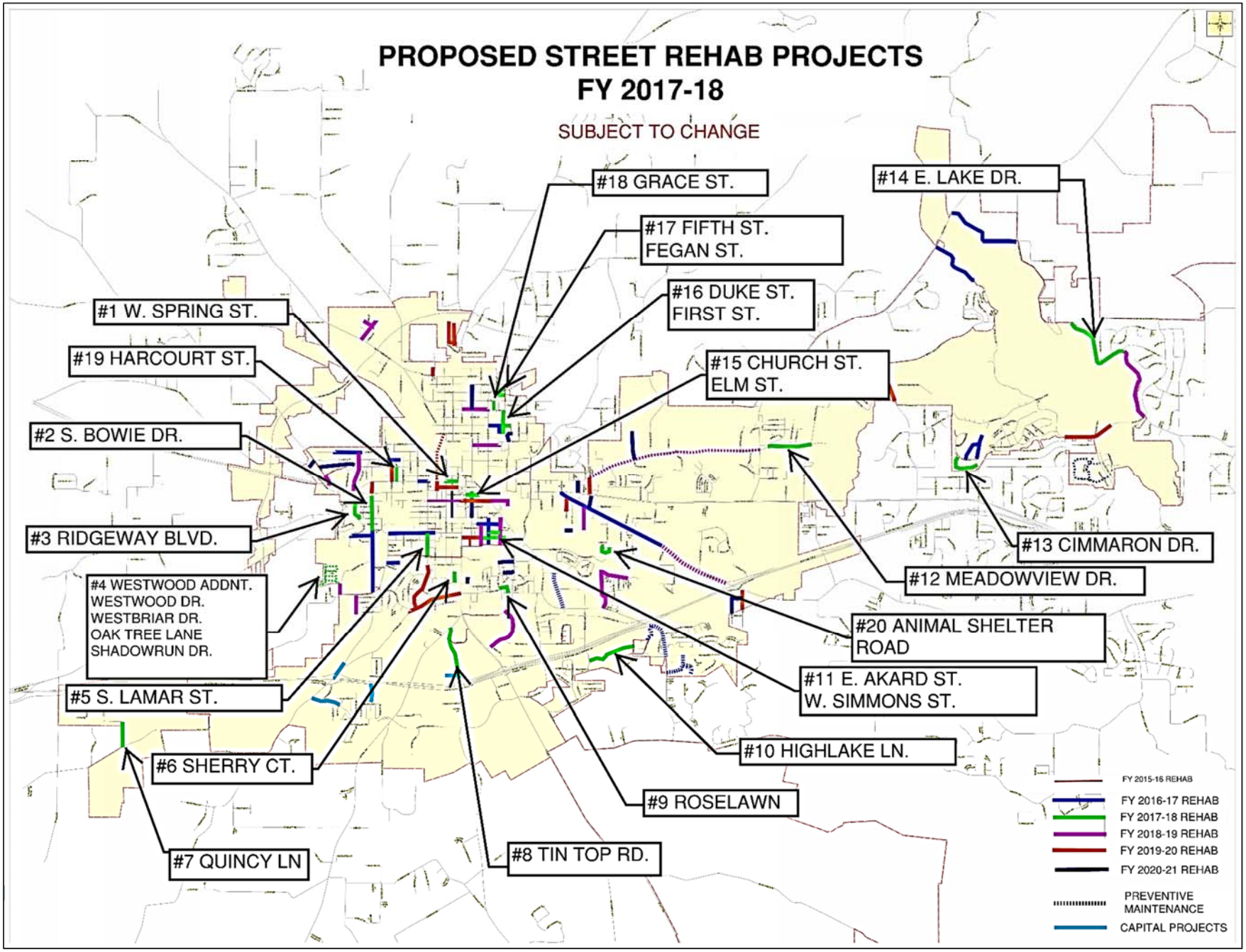


Exhibit 8.7 -http://www.weatherfordtx.gov/DocumentCenter/View/13404

The Department is located at the TPW complex at 802 East Oak Street. Long term, as the City encourages redevelopment around the historic neighborhoods and the downtown, the facility may need to relocate to a more convenient location with enough land for equipment and materials storage and staging.

taStreets are generally constructed of either asphalt or concrete. While concrete costs more initially, they tend to last twice as long. Asphalt streets, if not maintained, can deteriorate and need replacement in just 15 years. Two types of repair projects are preventive maintenance and rehabilitation (or reconstruction). The City primarily uses

micro-surfacing overlays for preventive maintenance, and in-place reclamation for rehabilitation work. Micro-surface overlays by placing a thin (1/4 inch) layer of a emulsified asphalt mixed with crushed aggregate filler on top of the existing surface, creating a new seal on top and minimizing water seepage. It can generally arrest the deterioration of a segment for 4 to 8 years. Rehabilitation projects involve full reconstruction of a street segment. The City of Weatherford uses the technique of in-place reclamation, which recycles existing asphalt and base material with added concrete to create a new subgrade, followed by an overlay of asphalt between 2 and 6 inches. Once rehabilitated, a segment's condition is improved as if it were newly constructed.

The City hired the firm Infrastructure Management Services (IMS) in 2006 and again in 2013 to perform a pavement condition survey. The 2013 survey found that of the 169 centerline miles of streets in Weatherford, almost 87 centerline miles (over half) needed to have preventative maintenance or micro-sealing and 63 centerline miles needed to be rehabilitated or reconstructed at a projected total cost of $37 million. Based on the survey, City Council has approved a preventative streets/rehabilitation program and has been approving in TPW's annual FY budget request approximately $1.4 million annually. .

The proposed Turnback Program proposed in Chapter 6 will allow the City to take control of those facilities and remove unwanted truck and through traffic in the downtown. However, it will also add nearly 8 more centerline miles for the City to maintain in the future. The details of these operations are found in master plans and the budget for the City's Transportation and Public Works Department

STREET SYSTEM POLICIES

TPW1 The City of Weatherford will operate and maintain a streets system that provides adequate service for future development of a scale, location and timing consistent with this General Plan and illustrated by the Plan's Place Type Diagrams.

TPW2 The City will budget enough annual budget funds to finance preventative maintenance efforts to good condition streets in order to increase the streets surface life span for 5 to 7 years

TPW3 The City will provide funds to provide critical rehabilitation/reconstruction funds especially in areas will it will help stabilize and enhance neighborhoods and commercial areas.

STREETS INFRASTRUCTURE ACTIONS AND INVESTMENTS

The following actions are a general summary of the Streets and Roadway Division's plans and their key projects, actions and investments and are subject to the Transportation Advisory Commission approval. Some of those actions are noted as their response to the growth plans and place types contained in this general plan and are color coded as either

Short Term or ***Long Term*****.** All others are important to the Department. This list is not all-inclusive, and the reader is encouraged to contact the Department of Transportation and Public Works (TPW) or refer to the documents listed below.

Action 8.50 **Life-Cycle Roadway Funding.** Perform another pavement condition survey to determine the annual costs to maintain streets at desired standards, and consider creation of a life-cycle cost fund to provide resources for repair and restoration.

Action 8.51 **Three Year Street Rehabilitation Plan.** Continue to use and update every year the three-year plan that provides an overview of planned street rehab/reconstruction projects. This plan is provided to utility franchise entities to coordinate construction activities.

Action 8.52 **Three Year Street Preventive Maintenance Plan.** Continue to use and update every year the three-year plan/ overview of streets that will undergo some type of preventative maintenance (i.e. microsurfacing, seal coating, slurry seal, etc.). Preventative maintenance is applied to good condition streets in order to increase the streets surface life span for 5 to 7 years.

STREETS AND ROADWAY INFORMATION

CURRENT AS OF JANUARY, 2018

CONTACT INFORMATION

Responsible Department:	Transportation and Public Works	(817) 598-4296	mpalacios@weatherfordtx.gov
Web Page		http://www.weatherfordtx.gov/104/Transportation-Public-Works	

FULL ELECTRONIC COPY OF PLANS AND DOCUMENTS SUMMARIZED IN THIS CHAPTER:

Street Condition Survey	http://www.weatherfordtx.gov/DocumentCenter/View/13404
Public Right-of-Way Management Ordinance No. 759-2016-05	https://www.ci.weatherford.tx.us/DocumentCenter/View/11252

SOLID WASTE AND RECYCLING
CURRENT AS OF JANUARY, 2018

The Sanitation Division strives to provide an excellent and consistent curbside solid waste collection service to the private residents and commercial firms of Weatherford. The Sanitation Division works at meeting and satisfying the demands of this community in an efficient and professional manner, ensuring a clean and healthy environment for the City of Weatherford.

OVERVIEW

SOLID WASTE, TRASH AND BRUSH PICKUP

The division ensures a clean and healthy way for citizens to have their refuse waste taken care of. The division provides curbside collection on a twice weekly basis for each resident, servicing approximately 10,300 customers and collecting over 12,000 tons of household solid waste. Due to environmental rules, collection does not include tires, batteries, motor oil and filters, hazardous chemicals, paint, or liquids of any kind. Residential customers also have the opportunity once a month to have bulk waste, such as lumber, furniture, and appliances, removed by simply putting it on the curb. Customers are charged based on the number of cubic yards picked up, receiving up to 6 cubic yards free each year to help

keep Weatherford beautiful. In 2016, Solid Waste received 2,989 requests and picked up an additional 1,790 tons of bulk/brush pickup. The Solid Waste Division has 17 employees. Currently the solid waste operation has six trucks that operate on four Routes, with an additional two brush trucks. With the additional growth and recent annexations, the distance and households to be covered and the volume of solid waste has increased. An Operational Study is expected to be finished in early 2018, with an additional truck and crew needed to handle the growth of the city.

RECYCLING

The Solid Waste & Recycling division actively promotes and is committed to waste diversion and reuse. In 2009, the city started a recycling program by providing voluntary curbside recycle. This program allows residents to recycle materials such as paper, various metals, cardboard, plastic, and glass. A voluntary curbside recycling program enables city residents to conveniently recycle and reduce the volume of waste from entering the landfill. The Recycling drop-off centers were closed in 2010 due to the increased hauling costs and trash contamination in the landfill. In 2016, over 1,500 customers participated in the recycling program, diverting 409 tons of waste from the landfill. In 2012, the city started an electronic recycling program in which residents could recycle their computers, TV's, and other electronic waste in an environmentally friendly manner. In 2017, the city started another waste diversion program where brush material is chipped and reused as mulch. This extends the life of the landfill, because a significant amount of brush is diverted and recycled. By not having to pay the "tipping" fees it reduces the expense to the City and ultimately to the customer.

THE LANDFILL AND TRANSFER STATION

The landfill was recently annexed into the city and is located on a 112-acre tract at 3131 Old Brock Road. The city has contractual obligations with Waste Connections, the landfill

Existing Landfill at 3131 Old Brock Road

operator, to collect city refuse beyond year 2040. Recent efforts to expand the existing landfill on an adjacent 131-acre tract and open a transfer station on 15 acres on the north side of Old Brock Road were withdrawn due to neighboring property owner opposition. A transfer station would have been utilized to transfer solid waste from smaller collection trucks to a larger landfill when the Weatherford site closes down. The current landfill is expected to have a remaining life of two to five years.

POLICIES

I1. The City of Weatherford will design, construct, operate and maintain a solid waste collection and recycling system that provides adequate service for future development of a scale, location and timing consistent with this General Plan and illustrated by the Plan's Place Type Diagrams.

I2. The City will use education, incentives, and standards to encourage efficient recycling and other efforts to reduce the generation of solid waste.

SOLID WASTE INFRASTRUCTURE ACTIONS AND INVESTMENTS

The following actions are a summary of the Solid Waste/ Recycling Division's plans and their key projects, actions and investments subject to Transportation Advisory Commission approval. Some actions are noted as their response to growth plans and place types contained in this general plan and are color coded as either ***Short Term*** or ***Long Term.*** All others are important to the Department. This list is not all-inclusive, and the reader is encouraged to contact Weatherford Solid Waste and Recycling or refer to the documents listed below.

Action 8.60 **Refine for General Plan Consistency**. Develop a Solid Waste Master Plan for as necessary to ensure consistency with the General Plan and support future development achieving this vision of Weatherford's future.

Action 8.61 **Conduct Operational Review**. To sustain a viable Solid Waste and Recycling program as the City continues to grow, an operational study will be completed to ensure that rates, staffing, and fleet are appropriate to accommodate new development and recently annexed areas.

Action 8.62 **Long Term Landfill Capacity**. Work with landfill operators to ensure long term capacity to accommodate growth.

SOLID WASTE AND RECYCLING SYSTEM INFORMATION

CURRENT AS OF JANUARY, 2018

CONTACT INFORMATION

Responsible Department:	Municipal and Community Services	(817) 598-4145	callen@weatherfordtx.gov
Web Page			http://weatherfordtx.gov/23/Sanitation-Division

OVERALL INFRASTRUCTURE ACTIONS AND INVESTMENTS

CURRENT AS OF JANUARY, 2018

The following actions are an overall summary of the City's plans and their key projects, actions and investments and are subject to the City Council approval. Some of those actions are noted as their response to the growth plans and place types contained in this general plan and are color coded as either ***Short Term*** or ***Long Term***. All others are important to the City. This list is not all-inclusive, and the reader is encouraged to contact the City of Weatherford or refer to the documents listed in this Chapter.

Action 8.01. **Refine for General Plan Consistency**. Review and revise the Master Plans for these infrastructure systems as necessary to ensure consistency with the General Plan and support future development that achieves this vision of Weatherford's future.

Action 8.02**. Update General Plan Elements.** Individual Plan Elements can be amended as master plans and information on these other infrastructure systems become available.

Action 8.03**. Operating Programs.** Design departments' operations, projects and procedures to be consistent with this General Plan and supportive of its anticipated development pattern. As this General Plan is implemented, all infrastructure agencies should participate in planning, studies and other implementation programs so ensure that their services can be provided effectively as the community grows.

Action 8.04**. Capital Improvements Program.** Design departments' capital improvements plans, projects and procedures to be consistent with this General Plan and supportive of its anticipated development pattern.