



City of Melissa

COMPREHENSIVE PLAN 2006



Chapter 4

UTILITIES ASSESSMENT





Introduction

Planning for and providing infrastructure is perhaps one of the most important responsibilities of a city government. Citizens should be secure in the knowledge that they can rely on their local government to ensure that there is adequate water and wastewater capacity for the current population, as well as for future growth. Without these basic necessities, a community simply cannot accommodate growth.

The City of Melissa has been diligent in reviewing its water and wastewater needs on a consistent basis. In fact, a Water System Capital Improvement Plan was completed for the City by a private engineering firm in March of 2002. Expansion of both systems, water and wastewater, will be of the utmost importance as the City grows and must supply an increasing number of citizens. This *Utilities Assessment* is intended to provide an overview of Melissa's infrastructure system and the capacity of that system in relation to the current population and to the future population that is anticipated to be part of Melissa.



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Water & Wastewater Service Provision

WATER SERVICES

Water service provision is an especially critical issue for all cities in North Central Texas. The availability of water has become an increasing concern throughout Texas. Not only is potable water a necessary commodity for drinking, it is presently being used for irrigation systems. Potable water supply has become a major challenge in Melissa, since the vast majority of new homes built within the City have in-ground sprinkler systems. The irrigation systems heavily tax the potable water supply during the dry summer months. Current information on Melissa's water service is as follows:

- ✦ Current water usage in the City ranges from approximately 125 gallons per day (gpd) per capita during winter months to approximately 225 to 275 gpd per capita in summer months.
- ✦ The water system is currently able to support the population of approximately 4,000 people, but expansion must occur every year due to rapid growth. Future capacity needed to support the estimated ultimate population of approximately 100,000 (refer to Chapter 3, the *Future Land Use Plan*) will range from 50 to 60 million gallons per day (mgd) for the maximum daily demand.
- ✦ The City is currently supplied with potable water from one groundwater well and a 12-inch water supply line through which potable water is purchased from the North Texas Municipal Water District. In addition, the City is in the final steps of acquiring three additional groundwater wells. In total, the City has (after purchase of the three additional groundwater wells) a water supply of approximately 1.5 million gallons per day. This water supply is sufficient to meet minimum state requirements for a population of approximately 5,000.
- ✦ A new water supply line, which is being constructed by the cities of Melissa, Anna, Van Alstyne, and Howe in cooperation with the Greater Texoma Utility Authority, the North Texas Municipal Water District, and the City of McKinney, is scheduled to be completed in 2007. This new water line will provide additional potable water for the City to accommodate additional growth within the City.
- ✦ The City currently has one 750,000 water tower and a 4 mgd pump station. These facilities will support a population of approximately 10,000. Additional water distribution facilities will be constructed by the City to allow the City to utilize water from the new water supply line discussed above and to accommodate growth.



WASTEWATER SERVICES

The City has adequate wastewater service and capacity. Current information on Melissa's wastewater service is follows:

- ✦ Current wastewater usage is estimated at 95 gallons per person per day, which calculates into approximately 400,000 gpd for the current population of Melissa.
- ✦ The total wastewater system capacity is in excess of 5 million gallons per day.
- ✦ Wastewater treatment is provided to the City by the North Texas Municipal Water District at the Wilson Creek treatment plant south of McKinney, Texas.
- ✦ Future wastewater system capacity needed to support the ultimate population of approximately 100,000 will be approximately 10 mgd.



Recommended Utility Policies

Following are the recommended utility-related policies. The *Implementation Plan*, Chapter 9, will outline specific ways in which the City can implement the utility policies, along with other recommended policies from within this *2006 Comprehensive Plan*.

POLICY 1: ENSURE CITY SERVICES ARE ADEQUATE AS MELISSA CONTINUES TO GROW

U1.1 – The City should continue to monitor and increase water service availability.

- ✦ System expansion should be consistent in order to meet the needs of local population growth and to meet the State requirements for water supply related to population.
- ✦ Water conservation measures and related public awareness should continue, especially during high-usage summer months.
- ✦ The *Future Land Use Plan Map (Plate 3-1)* should be used to determine where and how water system expansion should be pursued (i.e., in relation to land use type and density).
- ✦ A water system master plan should be kept up-to-date, with planned water system expansion correlated to funding.

U1.2 – The City should continue to monitor and increase wastewater service availability.

- ✦ As with the water system, the wastewater system should also be consistently expanded to meet population growth and State requirements for wastewater supply. However, water system expansion is more of a critical issue than wastewater system expansion.
- ✦ The *Future Land Use Plan Map (Plate 3-1)* should be used to determine where and how wastewater system expansion should be pursued (i.e., in relation to land use type and density).
- ✦ A wastewater system master plan should be kept up-to-date, with planned wastewater system expansion correlated to funding.

POLICY 2: PROVIDE SERVICES IN THE ETJ IN LIMITED INSTANCES

Part of the challenge for Texas cities is that the State does not allow the application of consistent requirements within city limits and within ETJ areas. This often causes ETJ areas to grow more rapidly than areas within cities, and such growth is often of a lesser quality that that which occurs within cities. Melissa therefore needs to have a strong policy related to how service provision is extended to its ETJ areas. Such provision needs to be consistent with procedures and requirements



within the City limits, so that a “hidden” incentive is not provided that in effect encourages development in Melissa’s ETJ.

U2.1 – The City should ensure that services are provided in the ETJ (outside the City limits) only under the following circumstances.

- ✦ As part of an agreement that provides for development consistent with the Comprehensive Plan;
- ✦ The City’s ability to annex the property in the future;
- ✦ The quality of the development occurring is consistent in every way to City standards;
- ✦ That would otherwise be imposed if development was occurring within the City limits;
- ✦ For a use or development that offers significant public benefits (such as major employment, public services, education, etc.) to the entire Melissa community.

U2.2 – The City should ensure that its subdivision regulations are equally enforced within the ETJ, as they are in the City limits.

- ✦ If standards are reduced in the ETJ, the City could create economic advantages for developers to develop in the ETJ.
- ✦ It is in Melissa’s interest to require the same standards in the ETJ, because it is likely that at some point in the future, the ETJ area will be within the City limits. The City does not need to have the financial responsibility for improving sub-standard development when such development is brought into the City.

POLICY 3: INVESTIGATE INCREASED DEVELOPER PARTICIPATION IN UTILITY INFRASTRUCTURE

U3.1 – The City should investigate whether water and wastewater impact fees are an appropriate funding mechanism for the utility infrastructure that will be needed as development occurs.

Chapter 395 of the Texas Local Government Code addresses the issue of developer participation in the construction of off-site facilities such as water, wastewater, and roadways. This state law allows cities in Texas to decide whether to assess fees for utility-related construction to new residential and nonresidential development. Impact fees can be described as fees charged to new development based on that development’s impact on the infrastructure system. The primary advantage to having this funding source is that it provides cities with the increased ability to plan and construct capital facilities so that the needed infrastructure system capacity is available when the market warrants.

- ✦ Conducting an impact fee study would help the City understand the extent of the expenditures that will have to be made for new development in the coming years.
- ✦ With impact fees, the development community is responsible for paying its related share of the cost of growth and the impact of that growth on local infrastructure systems.



- ✦ With impact fees, utility system expansions will likely be financed through taxes (e.g., ad valorem, sales tax, pro rata), which are paid by existing as well as future residents.
- ✦ Impact fees are also a means by which proportionality (of what the developers should be required to contribute) can be established.

