



Water and Wastewater Impact Fee Study

prepared by

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EXECUTIVE SUMMARY

This study calculates the maximum impact fees that the City of Tontitown can charge for water and wastewater facilities. Impact fees are authorized by Arkansas state law as a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. The fees are a one-time, up-front charge, with payment typically required at the time of water meter purchase.

Impact fees are most appropriate for communities that are experiencing rapid growth. The population within the current city limits increased by 75% in the last decade and is projected to increase by 2,600 new residents each of the next two decades. Assessing impact fees on new developments would provide a source of funding to construct the water and wastewater improvements needed to serve growth, without imposing an undue burden on existing residents and ratepayers.

Fee Summary

The water and wastewater impact fees calculated in this study are summarized in Table 1. Fees have been calculated separately for the City and regional components and then combined into the recommended water and wastewater impact fees, because both components are integral to the City's provision of water and wastewater services to its customers. The fees for the smallest meter size of 5/8" by 3/4", which is typically used for a single-family detached unit, are \$6,594 for water and \$7,011 for wastewater. For a new City utility customer who uses the smallest meter size and both services, the total utility impact fee is \$13,605.

These fees represent the fair-share costs of the capacity required to serve new utility customers. They represent the maximum fees the City can charge consistent with the Arkansas impact fee statute and impact fee case law.

Table 1. Water and Wastewater Impact Fee Summary

| | 5/8"x3/4" Meter | 1" Meter | 2" Meter |
|-------------------------------|--------------------|-----------------|------------------|
| Water System | \$6,594 | \$19,782 | \$65,940 |
| Wastewater System | \$7,011 | \$21,033 | \$70,110 |
| Water/Wastewater Total | \$13,605 | \$40,815 | \$136,050 |

Source: Water fees from Table 19; wastewater fees from Table 36.

The City has a number of options for implementing these fees, as described in the next section.

Implementation Options

The City has a number of options for implementing the fees calculated in this report, as discussed below. These approaches can be employed singly or in combination with each other.

Delay Initial Assessment. The City may choose to delay assessment of impact fees after ordinance adoption, in order to prepare administrative procedures for fee collection, accounting, and expenditure, or to give builders and developers time to adjust.

Phase in Increases. The City can phase in fee increases over a period of time. For example, the adopted fees could be assessed at 25% in the first year, 50% in the second year, 75% in the third year, and 100% in the fourth year.

Adopt at Less than 100%. The City has the option to adopt the calculated fees at any percentage up to the full amounts. Different percentages could be adopted for water and wastewater. The City has determined to adopt the fees at 15% of the maximum amounts calculated in this study. Those fees are shown in Table 2.

Table 2. Fees Proposed for Adoption

| | 5/8"x3/4" Meter | 1" Meter | 2" Meter |
|-------------------------------|--------------------|----------------|-----------------|
| Water System | \$989 | \$2,967 | \$9,891 |
| Wastewater System | \$1,052 | \$3,155 | \$10,517 |
| Water/Wastewater Total | \$2,041 | \$6,122 | \$20,408 |

Source: 15% of maximum fees from Table 1.

Adjust Annually for Inflation. The City Council has determined that the fees should be adjusted annually to account for cost inflation. Such a provision has been included in the accompanying draft ordinance.

INTRODUCTION

Impact fees are a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. In contrast to “negotiated” developer exactions, impact fees are charges assessed on new development using a standard formula based on objective characteristics, such as the number and type of dwelling units constructed. The fees are a one-time, up-front charge, with the payment made at the time of certificate of occupancy or water meter purchase. Impact fees require that each new development project pay a pro-rata share of the cost of new capital facilities required to serve that development.

This study calculates the maximum impact fees that the City of Tontitown can charge for water and wastewater.

Growth Context

Tontitown is a city in the Ozark Mountains in northwest Arkansas. It is to some extent a bedroom community for neighboring Fayetteville and Springdale.

Impact fees are most appropriate for communities that are experiencing rapid growth. The population within the current city limits increased by 75% in the last decade and is projected to increase by 2,600 new residents each of the next two decades, as summarized in Table 3 and illustrated in Figure 2. Assessing impact fees on new developments would provide a source of funding to construct the water and wastewater improvements needed to serve growth, without imposing an undue burden on existing residents and ratepayers.

Figure 1. Location Map



Figure 2. City Population, 2000-2040

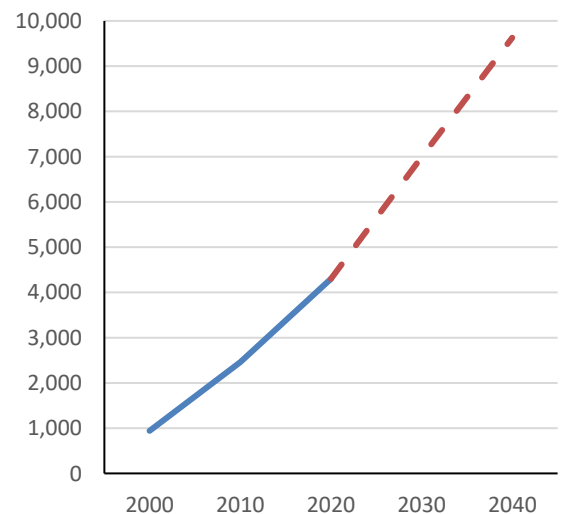


Table 3. City Population Growth, 2000-2040

| Year | Population | Growth | Percent |
|------|------------|--------|---------|
| 2000 | 940 | n/a | n/a |
| 2010 | 2,460 | 1,520 | 161.7% |
| 2020 | 4,301 | 1,841 | 74.8% |
| 2030 | 6,994 | 2,693 | 62.6% |
| 2040 | 9,627 | 2,633 | 37.6% |

Source: 2000-2020 population from US Census; projections from Garver, *NACA Wastewater Treatment Plant Improvements*, November 2020, Table ES-1.

LEGAL FRAMEWORK

The legal framework for impact fees for Tontitown consists of both Arkansas statutes and national impact fee case law.

Arkansas Statutes

Municipalities in Arkansas are authorized by state law to enact impact fee ordinances, provided that they follow the requirements of Arkansas Statutes § 14-56-103, Development Impact Fees. This section provides a brief summary of those requirements most relevant to the City of Tontitown. The full text of the act is provided in the Appendix.

An impact fees is a one-time charge that is only assessed on new development. While other types of impact fees must be assessed at the time of issuance of the certificate of occupancy, a municipal water or wastewater utility may assess them “in connection with and as a condition of the installation of the water meter,” per Section 14-56-103(f)(2). The amount of impact fees paid for a newly-constructed building must be separately itemized on the closing statement at the time the property is sold. The City can allow the fee to be paid in installments.

Impact fees must be spent for capital improvements that provide benefit to the fee-paying development. This can include existing improvements that have excess capacity that was built to accommodate future growth. Section 14-56-103(c)(1) provides that the fees can only be used for:

... the planning, design and construction of new public facilities or of capital improvements to existing public facilities that expand its capacity or for the recoupment of prior capital improvements to public facilities that created capacity that is available to serve new development.

Impact fees can be pledged to repay bonds that have been issued to fund growth-related capital improvements. However, they cannot be used to pay for:

... the operation or maintenance of any public facility, or for the construction or improvement of public facilities, that does not create additional capacity. (Section 14-56-103(c)(3))

In Arkansas, impact fees can only be adopted to fund certain types of public facilities. Section 14-56-103(b) limits the use of impact fees to “providing necessary public facilities,” and Section 14-56-103(a)(7) defines “public facilities” to include only the following:

- (A) Water supply, treatment, and distribution, for either domestic water or for suppression of fires;*
- (B) Wastewater treatment and sanitary sewerage;*
- (C) Stormwater drainage;*
- (D) Roads, streets, sidewalks, highways and public transportation;*
- (E) Library;*

- (F) *Parks, open space, and recreation areas;*
- (G) *Police or public safety;*
- (H) *Fire protection; and*
- (I) *Ambulance or emergency medical transportation and response.*

To assess impact fees, a city must first adopt an ordinance. The ordinance must be preceded by the development of a capital plan and level of service standards for the types of facilities for which the impact fees are to be imposed. The capital plan must include:

... a description of new public facilities or of new capital improvements to existing public facilities or of previous capital improvements to public facilities that continue to provide capacity available for new development that includes cost estimates, and capacity available to serve new development ... (Section 14-56-103(1)(1))

This report is intended to meet the State law requirements for levels of service and capital plans for water and wastewater impact fees for the City of Tontitown. The level of service standards are shown in Table 4. The capital plans are presented in Table 20 for water and Table 37 for wastewater.

The consultant will also prepare a draft water and wastewater impact fee ordinance that will meet state law requirements. Pursuant to Section 14-56-103(e)(3), the impact fee ordinance must contain the following:

- (A) *A statement of the new public facilities and capital improvements to existing public facilities that are to be financed by impact fees and the level of service standards included in the capital plan for the public facilities that are to be financed with impact fees;*
- (B) *The actual formula or formulas for assessing the impact fee, which shall be consistent with the level of service standards;*
- (C) *The procedure by which impact fees are to be assessed and collected; and*
- (D) *The procedure for refund of excess impact fees, in accordance with subsection (b) of this section.*

Impact fees collected must be deposited into a separate interest-bearing account and spent only for the type of improvements for which they were collected. Interest earned on these accounts shall be spent for the same purposes as the impact fees themselves. Any funds not spent within seven years must be refunded to the fee-payer.

Case Law Requirements

Impact fees were pioneered by local governments long before state legislatures passed explicit enabling acts. The authority to adopt such fees was found in local government’s “police power” to regulate development so as to protect the health, safety and welfare of its citizens. Developers challenged early impact fees, and state court decisions gradually developed a body of case law setting out the standards that should govern impact fees.

Some of these principles, such as that impact fees should be designed to cover capital costs attributable to growth, should be proportional to the impact of a development, should be earmarked to be spent on the types of facilities for which they were collected, and should be spent in a reasonable period of time so as to provide reasonable benefit to fee payers, are embodied in the Arkansas statute. However, some other principles are not explicitly spelled out. This section describes our understanding of the general principles of impact fees and some implications for calculating Tontitown's water and wastewater fees.

A fundamental principle of impact fees, rooted in both case law and norms of equity, is that impact fees should not charge new development for a higher level of service than is provided to existing development. While the impact fees could be based on a higher level of service than the one existing at the time of the adoption of the fees, two things are required if this is done. First, another source of funding other than impact fees must be identified and committed to fund the capacity deficiency created by the higher level of service. Second, the impact fees must generally be reduced to ensure that new development does not pay twice for the same level of service, once through impact fees and again through general taxes that are used to remedy the capacity deficiency for existing development. In order to avoid these complications, the general practice is to base the impact fees on the existing level of service.

A corollary principle is that new development should not have to pay twice for the same level of service. As noted above, if impact fees are based on a higher-than existing level of service, the fees should be reduced by a credit that accounts for the contribution of new development toward remedying the existing deficiencies. A similar situation arises when there is outstanding debt on facilities included in the existing level of service. Outstanding debt on existing facilities that are counted in the existing level of service will be retired, in part, by revenues generated from new development that will also pay impact fees to maintain the existing level of service. Consequently, impact fees should be reduced to account for future tax payments that will retire outstanding debt on existing facilities.

In general, credit against impact fees is not required for other types of funding that have historically been used for growth-related, capacity-expanding improvements. While new development may contribute toward such funding, so does existing development, and both existing and new development benefit from the higher level of service that the additional funding makes possible. To insist that historical capital funding patterns must be continued after the adoption of impact fees, and that new development is entitled to a credit for its contribution to those funding sources, would be to argue that local governments cannot require "growth to pay for growth" unless they have always done so. Local funding that is committed to be used for capacity expansion in the future needs to be taken into account only in cases where there is no reasonable need for or benefit from higher levels of service than the existing level of service embodied in the impact fee calculations. As long as the fees are based on new development paying to maintain existing levels of service that have been paid for in full by existing development, and additional funding can reasonably be used to raise the level of service for existing and new development alike, no additional revenue credits are warranted.

METHODOLOGY

This chapter provides a brief overview of impact fee methodology, with a focus on water and wastewater. Key components of an impact fee methodology include the following:

- the set of facilities for which the impact fees are charged,
- the geographic area served by that set of facilities (“service area”),
- the measure of demand on those facilities (“service unit”),
- the amount of demand generated by a unit of development for a particular land use type (“demand schedule”),
- the cost per service unit to accommodate new development at the appropriate level of service,
- the amount by which the cost per service unit should be reduced to account for future revenues attributable to new development that will pay for the same facilities or existing deficiencies (known as “revenue credits”), and
- the combination of the components to produce the impact fee schedule.

While it can get more complicated in its application, the basic impact fee formula is simple. The cost per service unit is reduced by the revenue credit per service unit to determine the net cost per service unit, which is then multiplied by the number of service units generated by a development per assessment unit (e.g., meter size/capacity) to determine the net cost per assessment unit. The basic formula is summarized in Figure 3.

Figure 3. Basic Impact Fee Methodology

$$\text{Fee} = \text{Service Units Generated} \times \text{Net Cost per Service Unit}$$

where:

$$\text{Service Units Generated} = \text{Assessment Units} \times \text{Service Units per Assessment Unit}$$
$$\text{Net Cost per Service Unit} = \text{Cost per Service Unit} - \text{Revenue Credit per Service Unit}$$

The most important legal principle for impact fee methodology is related to the concept of “level of service.” Impact fees should not charge new development for a higher LOS than is provided to existing development. This principle recognizes that public infrastructure provides a shared level of service to all development within a service area. If impact fees are based on a desired level of service that is higher than what is being provided to existing development, new development would bear a disproportionate share of the cost of raising the LOS. For the purposes of water and wastewater impact fees, “development” is synonymous with “customers” (i.e., connections to the water and wastewater systems). Level of service is generally defined as the ratio of the capacity of the facilities to the demand for those facilities. The “demand” denominator is simpler to quantify, and is addressed first.

Demand

To calculate water and wastewater impact fees, the demand associated with different types of customers must be expressed in a common unit of measurement, called a “service unit.” Water and wastewater demand is typically defined by the capacity of the water meter.

The standard meter-capacity approach does not use the maximum capacity of the meter directly in terms of maximum gallons per day (gpd). Instead, it converts the maximum capacity of the meter to a relative measure of demand typically expressed as an “equivalent dwelling unit” or EDU. The smallest meter size, which is the one used by most single-family units, represents one EDU, while larger meters represent multiple EDUs based on their capacity relative to that of the smallest meter. Total daily gallons per day of water consumption by all current customers is divided by the total number of existing EDUs in order to determine the average demand (gpd) per EDU.

One might wonder why local consumption data by meter size is not typically used instead of meter capacity. After all, water utility rates are almost always based on metered consumption, so the utility should have historical data that can be used to compute average water consumption by meter size. In practice, however, this is rare, except perhaps for single-family meters. One analyst researched consumption by meter size to explore this alternative basis for the City of Phoenix. He found that there was a lot of variation in average consumption by meter size, especially for larger meters where there is a small sample size. He found anomalies where a larger meter had lower average consumption than a smaller one.¹ The use of meter capacity to allocate relative water demand avoids these kinds of issues. The size of the meter installed represents, in effect, the purchase of a certain amount of capacity. The new customer makes the choice of the size of meter that it thinks will meet its needs. This is a simple, intuitive approach that has become the standard practice in water impact fee studies.

Wastewater impact fees are also commonly based on water meter capacity. Wastewater flows are seldom metered for other than the largest customers. The general idea is that the amount of water that is consumed is proportional to the sewage that flows out. Meter capacity is expressed in the same EDUs per meter that are used for water impact fees, and as with water impact fees, the average wastewater demand per EDU is determined by dividing total system-wide wastewater demand by the total number of EDUs. New wastewater customers that are not also water customers can be assessed wastewater fees based on the water meter size determined by the utility to be appropriate for the proposed use, although all of the City’s current wastewater customers are also water customers.

Capacity

Water and wastewater systems are comprised of two general components: regional facilities and local water distribution/wastewater collection facilities. Capacity is typically measured differently for the two components, as described below.

¹ Doug Frost, former Principal Planner with City of Phoenix Water Services Department, May 19, 2021 communication.

Regional Facilities

Capacity is relatively easily measured for centralized facilities, which include water and wastewater treatment plants, water supply pipelines, water rights, water transmission lines from the treatment plant, and wastewater interceptor to the treatment plant. The capacity of this set of facilities is typically measured in terms of the capacity of the treatment plant. For these types of facilities, which often have excess capacity to accommodate short-term growth, level of service is generally defined as a one-to-one ratio of system capacity to system demand. In other words, an additional gallon per day (gpd) of demand is charged the cost to construct an additional gpd of capacity. In Tontitown’s case, these centralized facilities are provided by regional entities that also serve a number of other local utilities.

Local Facilities

Capacity is more difficult to quantify at the level of the water distribution and wastewater collection systems. These types of facilities include pressurized water lines and associated pump stations and elevated water tanks; and wastewater gravity lines, wastewater pump stations and associated force mains. These systems are more horizontal in nature than centralized facilities, seldom have significant amounts of excess capacity, and lack a common capacity measure comparable to the capacity of a treatment plant.

Due to these characteristics, the standard approach for localized facilities, often referred to as “system buy-in” or “incremental expansion,” is to use demand as the measure of capacity. The implicit idea is that capacity, even if it is difficult to quantify, will need to be expanded proportionately with the increase in demand. Instead of trying to quantify a capacity measure in physical terms, the current total replacement value (the current cost to construct today’s existing facilities) serves the role of the capacity numerator in the capacity-to-demand LOS ratio. In simple terms, however, the level of service for localized facilities is the same as for centralized facilities – a one-to-one ratio of system capacity to system demand.

Level of Service Summary

The Arkansas impact fee statute requires that levels of service be specified. The levels of service used in this analysis can be summarized as follows.

Table 4. Level of Service Standards

| | |
|------------|---|
| Water | One daily gallon of capacity per daily gallon of demand |
| Wastewater | One daily gallon of capacity per daily gallon of demand |

WATER

The purpose of this chapter is to calculate proportionate fair-share water impact fees for the City of Tontitown. The City provides water directly to its customers through its local water distribution system. The water the City provides comes through the water supply, treatment and transmission facilities owned by a regional water provider – the Benton Washington Regional Public Water Authority (BWRPWA). The City currently pays for the expansion of these regional facilities to accommodate increased demands through monthly fees based on its customers’ share of total BWRPWA water demand.

This chapter calculates net costs for the local and regional components of the water system separately, then adds them together to compute the potential water impact fee. To make the calculations easier to follow, numbers in one table that are inputs to another table are highlighted in red.

Both components of the water system use the same measure of demand, called a service unit. It is discussed next.

Service Units

To calculate water impact fees, the demand associated with different types of customers must be expressed in a common unit of measurement, called a “service unit.” The service unit for the proposed water impact fees is an “equivalent dwelling unit” (EDU). An EDU is a single-family dwelling unit or its equivalent in terms of water consumption.

Water demand is defined by the capacity of the water meter, measured in gallons per minute (gpm). Single-family homes typically use the smallest meter size, which for Tontitown is 5/8” x 3/4”, so this meter size is assigned a value of one EDU. Other meters represent multiple EDUs, based on their relative meter capacities. Multiplying current customers by the number of EDUs relative to their meter capacity and summing for all meter sizes yields the total number of water service units. The City’s current water customer base consists of 2,666 EDUs, as calculated in Table 5.

Table 5. Existing Local Water Service Units

| Meter Size | Meter Type | Capacity (gpm) | EDUs/Meter | Current Customers | Current EDUs |
|------------|------------|----------------|------------|-------------------|--------------|
| 5/8"x3/4" | Disc | 15 | 1.0 | 2,131 | 2,131 |
| 1" | Disc | 45 | 3.0 | 105 | 315 |
| 2" | Disc | 150 | 10.0 | 22 | 220 |
| Total | | | | 2,258 | 2,666 |

Source: City of Tontitown Public Works, May 18, 2022.

Water usage consists of metered usage and unmetered usage attributable to leakage, line flushing, and other factors. Over the past five years, metered water consumption has accounted for an average of two-thirds of total water purchased from the regional water provider. Total water purchased is the

most appropriate measure for impact fee analysis. Current water consumption by City customers is approximately 636,000 gallons per day (gpd), as shown in Table 6.

Table 6. City Average Daily Water Use, 2017-2021

| Year | Metered Usage | Unmetered Usage | Percent Metered | Total Usage |
|------|---------------|-----------------|-----------------|-------------|
| 2017 | 232,266 | 69,434 | 77% | 301,700 |
| 2018 | 250,244 | 146,627 | 63% | 396,872 |
| 2019 | 282,945 | 137,699 | 67% | 420,643 |
| 2020 | 343,321 | 198,311 | 63% | 541,631 |
| 2021 | 420,786 | 214,795 | 66% | 635,581 |

Source: Gallons per day from City of Tontitown Public Works, May 18, 2022.

Dividing current average daily water consumption by existing service units (EDUs) yields 238 gpd per service unit, as shown in Table 7.

Table 7. City Average Water Use per Service Unit

| | |
|---|------------|
| Current Avg. Daily Total Water Use (gpd) | 635,581 |
| ÷ Existing EDUs | 2,666 |
| Avg. Daily Total Water Use (gpd) per EDU | 238 |

Source: Total average daily gallons per day from Table 6; existing EDUs from Table 5.

City water purchases from the Benton Washington Regional Public Water Authority (BWRPWA) accounted for 4.73% of the regional provider’s total water sales to local utilities in 2021, as shown in Table 8.

Table 8. City Share of Regional Water Demand, 2021

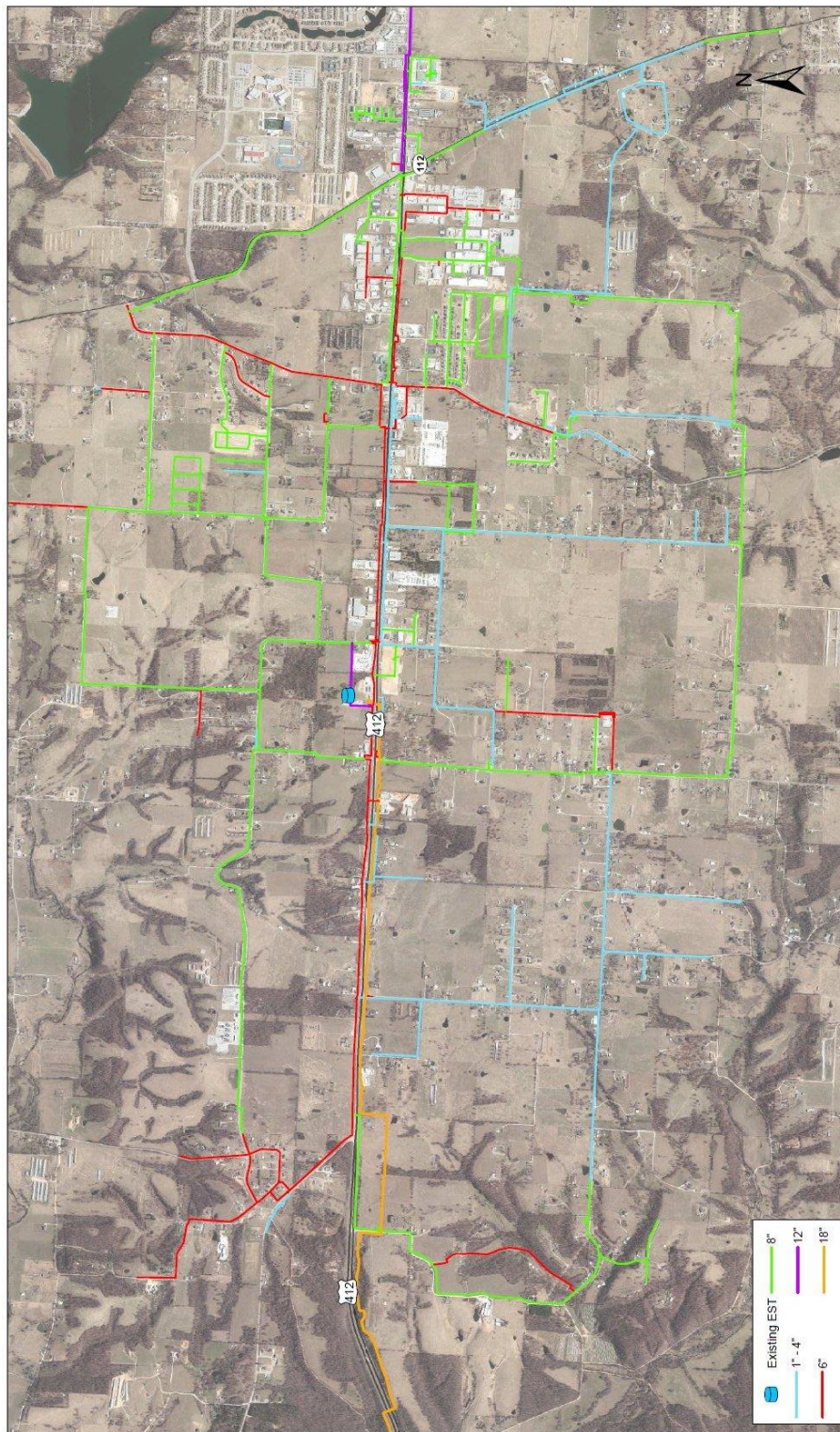
| | |
|--|--------------|
| Tontitown Avg. Daily Water Use (gpd), 2021 | 635,581 |
| Regional Avg. Daily Water Use (gpd), 2021 | 13,427,521 |
| Tontitown Percent of Regional Water Use | 4.73% |

Source: City and total regional water use from BWRPWA, 2020 - 2021 Monthly Usage Comparison by Utility, provided by City of Tontitown on July 11, 2022

Local Water Facilities

The City’s existing local water distribution system consists of water lines, a pump station, and an elevated storage tank. Figure 4 on the following page illustrates the location of existing facilities.

Figure 4. Existing Local Water Facilities by Line Size



To avoid overlap with lines typically constructed by developers, only water lines of 12 inches or more in diameter are included. At current costs, the total replacement value of existing local water distribution facilities is about \$24 million, as summarized in Table 9 below.

Table 9. Existing Local Water Replacement Value

| Facility Type | Unit | Existing Units | Cost/Unit | Replacement Cost |
|------------------------------------|----------|----------------|-------------|---------------------|
| 18-inch Water Line | Lin. Ft. | 58,000 | \$325 | \$18,850,000 |
| 12-inch Water Line | Lin. Ft. | 6,400 | \$260 | \$1,664,000 |
| Water Pump Station | Each | 1 | \$500,000 | \$500,000 |
| 0.5-MG Elevated Water Storage Tank | Each | 1 | \$3,000,000 | \$3,000,000 |
| Total | | | | \$24,014,000 |

Source: Garver for City of Tontitown, June 13, 2022.

Dividing the total replacement value of existing local water facilities by the number of existing service units (EDUs) results in a cost of \$9,008 per EDU, as shown in Table 10.

Table 10. Local Water Cost per Service Unit

| | |
|-------------------------------------|----------------|
| Existing Facility Replacement Value | \$24,014,000 |
| ÷ Existing EDUs | 2,666 |
| Cost per EDU | \$9,008 |

Source: Existing value from Table 9; existing EDUs from Table 5.

As described in the Legal Framework chapter, credits against the cost per service unit may be warranted if there an existing capacity deficiency or there is outstanding debt on existing facilities serving existing customers. There are no deficiencies in existing local water facilities by definition, because capacity is assumed to be the same as demand. This is the basic premise of the incremental expansion methodology (see discussion in the Methodology chapter). Another was to put it is that the City’s local distribution system is serving all its current customers.

The City has some outstanding debt on its existing water distribution facilities. A reasonable way of ensuring that new development does not pay to maintain the existing level of service and also pay some of the debt on existing facilities is to calculate a credit by dividing the outstanding debt by existing service units. This puts new development on equal footing with existing development in terms of the portion of its costs that will be paid with user rates from all customers. The resulting debt credit is \$4,368 per EDU, as shown in Table 11 on the following page.

Table 11. Local Water Debt Credit per Service Unit

| | |
|--|---------------------|
| 2022B-SUT-Water Construction | \$3,912,101 |
| Grand Say Bk-Trans Line Loan | \$550,000 |
| Sales Use Tax Bond 2017 (F&M) | \$5,215,000 |
| USDA RD Loan 91-01 Water Tower | \$1,272,797 |
| USDA RD Loan 91-02 Water Tower | \$694,479 |
| Total Outstanding Debt Principal, 5/31/2022 | \$11,644,377 |
| ÷ Existing EDUs | 2,666 |
| Outstanding Debt Credit per EDU | \$4,368 |

Source: Outstanding debt as of 5/31/2022 from City of Tontitown on June 29, 2022; existing EDUs from Table 5

Deducting the debt credit from the cost yields the net cost per service unit. As summarized in Table 12, the net cost for local water facilities is \$4,640 per EDU. This represents the net cost for a typical single-family detached unit or other customers who use the smallest meter size.

Table 12. Local Water Net Cost per Service Unit

| | |
|--------------------------------------|----------------|
| City Water Distribution Cost per EDU | \$9,008 |
| – Debt Credit per EDU | -\$4,368 |
| Net Cost per EDU | \$4,640 |

Source: Cost per EDU from Table 10, debt credit from Table 11.

The net cost by meter size is the product of the number of EDUs represented by the meter and the net cost per EDU. The net costs for local water facilities by meter size are calculated in Table 13.

Table 13. Local Water Net Cost Schedule

| Meter Size | EDUs/Meter | Net Cost/EDU | Net Cost/Meter |
|------------|------------|--------------|----------------|
| 5/8"x3/4" | 1.0 | \$4,640 | \$4,640 |
| 1" | 3.0 | \$4,640 | \$13,920 |
| 2" | 10.0 | \$4,640 | \$46,400 |

Source: EDUs per meter from Table 5; net cost per EDU from Table 12.

Regional Water Facilities

Regional water facilities provided by the Benton Washington Regional Public Water Authority (BWRPWA) include water supply, water treatment, major transmissions lines, and associated pumps and storage facilities. The long-range master plan completed in 2021 identified the improvements needed to accommodate demand anticipated for 2045. These are summarized in Table 14.

Table 14. Planned Regional Water Facility Improvements

| Description | Timing | Total Cost |
|--|---------------|----------------------|
| Raw Water Intake Structure and Lines | Short-Term | \$86,940,000 |
| Easement Acquisition - Phase 1 | Short-Term | \$656,000 |
| 54-inch Raw Water Parallel Line - Phase 1 | Short-Term | \$18,933,000 |
| 10 MGD Raw Water Pump Expansion | Mid-Term | \$3,179,429 |
| 18 MGD Raw Water Pump Expansion | Long-Term | \$3,179,429 |
| Subtotal, Raw Water Supply | | \$112,887,858 |
| 18 MGD Water Treatment Plant Expansion | Short-Term | \$76,100,000 |
| 18 MGD Water Treatment Plant Expansion | Mid-Term | \$81,846,000 |
| 18 MGD Water Treatment Plant Expansion | Long-Term | \$77,536,000 |
| Sludge Ponds and Site Grading | Short-Term | \$2,232,000 |
| Elevated Composite Water Storage Tank 3.5MG | Short-Term | \$10,068,000 |
| Surge Tank System at WTP | Short-Term | \$4,618,000 |
| 3 MG Clearwell at WTP | Short-Term | \$4,796,000 |
| 2-3 MG Clearwell at WTP | Mid-Term | \$9,574,000 |
| 2-3 MG Clearwell at WTP | Long-Term | \$8,970,000 |
| High Service Pump Station and Electrical | Short-Term | \$8,767,923 |
| 20 MGD High Service Pump Station Expansion | Mid-Term | \$3,179,429 |
| 18 MGD High Service Pump Station Expansion | Long-Term | \$3,179,429 |
| Subtotal, Water Treatment | | \$290,866,781 |
| Chlorine Booster Station - Lincoln Tank Site | Short-Term | \$950,000 |
| Easement Acquisition - Phase 2 | Short-Term | \$748,000 |
| Easement Acquisition - Phase 3 | Mid-Term | \$759,000 |
| Easement Acquisition - Phase 4 | Mid-Term | \$374,000 |
| 54-inch High Service Parallel Line - Phase 2 | Short-Term | \$46,436,000 |
| 48-inch High Service Parallel Line - Phase 3 | Mid-Term | \$28,783,000 |
| 48-inch High Service Parallel Line - Phase 4 | Mid-Term | \$30,123,000 |
| 3.5 MG Elevated Storage Tank-Centerton | Short-Term | \$9,399,000 |
| 3.5 MG Elevated Storage Tank-Centerton | Long-Term | \$9,399,000 |
| 3 MG Ground Storage Tank - Lincoln | Mid-Term | \$5,381,000 |
| 2-3 MG Ground Storage Tank - Lincoln | Long-Term | \$10,737,000 |
| 2-7.5 MG Ground Storage Tank - Decatur | Mid-Term | \$26,961,000 |
| Booster Pump Station #2 Expansion | Long-Term | \$2,536,000 |
| Subtotal, Treated Water Transmission | | \$172,586,000 |
| Total, Regional Water System Improvements | | \$576,340,639 |

Source: Crist Engineers, BWRPWA Master Plan & Capital Improvement Plan, September 2021.

The improvements identified in the master plan are needed to expand regional system capacity from 30 to 84 million gallons per day. Dividing the total cost of these planned improvements by the capacity added results in a cost of \$10.67 per daily gallon of capacity. Multiplying that by the average daily gallons of demand generated by a new service unit yield a cost of \$2,539 per EDU, as shown in Table 15 on the following page.

Table 15. Regional Water Cost per Gallon per Day

| | |
|--|----------------|
| Long-Term (2045) Planned Capacity (gpd) | 84,000,000 |
| – Existing Capacity (gpd) | -30,000,000 |
| Capacity Added by Planned Improvements (gpd) | 54,000,000 |
| Total Estimated Cost | \$576,340,639 |
| ÷ Capacity Added (gpd) | 54,000,000 |
| Cost per Gallon per Day | \$10.67 |
| x Gallons per Day per Service Unit (EDU) | 238 |
| Regional Water Cost per Service Unit | \$2,539 |

Source: Capacities from Crist Engineers, *Benton Washington Regional Public Water Authority (BWRPWA) Master Plan & Capital Improvement Plan*, September 2021; total planned cost from Table 14; gallons per day per EDU from Table 7.

As described in the Legal Framework chapter, credits against the cost per service unit may be warranted if there is an existing capacity deficiency or there is outstanding debt on existing facilities serving existing customers. There are no deficiencies in existing water facilities. The regional treatment plant has the capacity to accommodate average daily demand of 30 mgd, while existing demand is only 13.43 mgd (see Table 8).

The regional water provider, BWRPWA, has some outstanding debt related to existing water facilities and existing capacity. New customers should not have to pay both for their share of planned future improvements and also pay debt related to existing capacity. To avoid this, a credit should be provided against the cost per service unit. The credit is calculated by multiplying the outstanding debt per gpd of capacity by the average daily gallons of demand per service unit. The result is a debt credit of \$585 per EDU, as shown in Table 16.

Table 16. Regional Water Debt Credit per Service Unit

| Bond Issue | Outstanding Debt |
|--|------------------|
| Revenue Bond Series 2019 | \$4,750,000 |
| Revenue Bond Series 2019B | \$55,415,000 |
| Revenue Bond Series 2021 | \$13,745,000 |
| Total, Water System Improvement Bonds | \$73,910,000 |
| ÷ Existing BWRPWA Average Daily Capacity (gpd) | 30,000,000 |
| Outstanding Regional Facility Debt per gpd | \$2.46 |
| x Gallons per Day per Service Unit (EDU) | 238 |
| Regional Water Debt Credit per Service Unit | \$585 |

Source: Outstanding debt principal from BWRPWA, *Financial Statements for Year Ended 12/31/2021*; existing capacity from Table 15; gallons per day per EDU from Table 7.

Deducting the debt credit from the cost yields the net cost per service unit. As summarized in Table 17, the net cost for regional water facilities is \$1,954 per EDU. This represents the net cost for a typical single-family detached unit or other customers who use the smallest meter size.

Table 17. Regional Water Net Cost per Service Unit

| | |
|--|----------------|
| Regional Water Cost per EDU | \$2,539 |
| Regional Water Debt Credit per EDU | -\$585 |
| Regional Water Net Cost per EDU | \$1,954 |

Source: Cost per EDU from Table 15, debt credit from Table 16.

The net cost per meter by meter size for regional facilities is the product of the number of EDUs represented by the meter and the net cost per EDU. The net costs by meter size are calculated in Table 18.

Table 18. Regional Water Net Cost Schedule

| Meter Size | EDUs/Meter | Net Cost/EDU | Net Cost/Meter |
|------------|------------|--------------|-----------------|
| 5/8"x3/4" | 1.0 | \$1,954 | \$1,954 |
| 1" | 3.0 | \$1,954 | \$5,862 |
| 2" | 10.0 | \$1,954 | \$19,540 |

Source: EDUs per meter from Table 5; net cost per EDU from Table 17.

Total Water System

The water impact fees that could be adopted by the City of Tontitown are the sum of the net costs for the local and regional components of the water system. The potential impact fees by meter size are summarized in Table 19. The potential \$6,594 fee for the smallest meter represents the net cost for a typical single-family detached unit or other customers who use the smallest meter size.

Table 19. Potential Water Impact Fees

| | 5/8"x3/4" Meter | 1" Meter | 2" Meter |
|----------------------------|--------------------|-----------------|-----------------|
| Local Water Facilities | \$4,640 | \$13,920 | \$46,400 |
| Regional Water Facilities | \$1,954 | \$5,862 | \$19,540 |
| Total, Water System | \$6,594 | \$19,782 | \$65,940 |

Source: Local facilities from Table 13; regional facilities from Table 18.

The short-term planned improvements, and any debt issued to fund such improvements (which would be eligible for the expenditure of water impact fees), are summarized in Table 20.

Table 20. Water System Capital Plan

| Project Name | Total Est. Cost | City Share | City Cost |
|--|-----------------|------------|---------------------|
| 1-MG Southeast Elevated Storage Tank | \$6,500,000 | 100% | \$6,500,000 |
| 12-inch Waterline for SE EST | \$2,080,000 | 100% | \$2,080,000 |
| 12-inch Line, Old HWY 68 | \$624,000 | 100% | \$624,000 |
| 12-inch Line, Wildcat Creek | \$1,392,000 | 100% | \$1,392,000 |
| 12-inch Line, HWY 112 (1) | \$832,000 | 100% | \$832,000 |
| 12-inch Line, HWY 112 (2) | \$1,092,000 | 100% | \$1,092,000 |
| 18-inch Line, Highway 412 | \$4,875,000 | 100% | \$4,875,000 |
| Subtotal, Local Facilities | | | \$17,395,000 |
| Raw Water Intake Structure and Lines | \$86,940,000 | 4.73% | \$4,112,262 |
| Easement Acquisition - Phase 1 | \$656,000 | 4.73% | \$31,029 |
| 54-inch Raw Water Parallel Line - Phase 1 | \$18,933,000 | 4.73% | \$895,531 |
| 18 MGD Water Treatment Plant Expansion | \$76,100,000 | 4.73% | \$3,599,530 |
| Sludge Ponds and Site Grading | \$2,232,000 | 4.73% | \$105,574 |
| Elevated Composite Water Storage Tank 3.5MG | \$10,068,000 | 4.73% | \$476,216 |
| Surge Tank System at WTP | \$4,618,000 | 4.73% | \$218,431 |
| 3 MG Clearwell at WTP | \$4,796,000 | 4.73% | \$226,851 |
| High Service Pump Station and Electrical | \$8,767,923 | 4.73% | \$414,723 |
| Chlorine Booster Station - Lincoln Tank Site | \$950,000 | 4.73% | \$44,935 |
| Easement Acquisition - Phase 2 | \$748,000 | 4.73% | \$35,380 |
| 54-inch High Service Parallel Line - Phase 2 | \$46,436,000 | 4.73% | \$2,196,423 |
| 3.5 MG Elevated Storage Tank-Centerton | \$9,399,000 | 4.73% | \$444,573 |
| Subtotal, Regional Facilities | | | \$12,801,458 |
| Water System Total | | | \$30,196,458 |

Source: Local facility projects and costs from Garver for City of Tontitown, June 8, 2022 (2020-2025 projects); regional facility projects and costs from Crist Engineers, *BWRPWA Master Plan & Capital Improvement Plan*, September 2021 (short-term improvements); city share of regional facility costs is 2021 share of total regional water usage from Table 8.

WASTEWATER

The purpose of this chapter is to calculate proportionate fair-share wastewater impact fees for the City of Tontitown. The City collects wastewater generated by its customers through its local system of collection lines and lift stations. Some of the City’s wastewater customers are located outside the city limits. The wastewater from the City’s sewer system is conveyed to the regional wastewater provider – the Northwest Arkansas Conservation Authority (NACA). The City pays for the expansion of these regional facilities to accommodate increased demands through monthly fees based on its customers’ share of total NACA wastewater demand.

This chapter calculates potential fees for the City and regional components of the wastewater system separately, then adds them together. To make the calculations easier to follow, numbers in one table that are inputs to another table are highlighted in red.

Both the local and regional components of the wastewater system use the same measure of demand, called a service unit. It is discussed next.

Service Units

To calculate wastewater impact fees, the demand associated with different types of customers must be expressed in a common unit of measurement, called a “service unit.” The service unit for the proposed wastewater impact fees is an “equivalent dwelling unit” (EDU). An EDU is a single-family dwelling unit or its equivalent in terms of maximum wastewater demand. Because wastewater generation is not typically metered, water demand is used as a reasonable proxy for wastewater demand. All current City wastewater customers are also City water customers.

Maximum wastewater demand is defined by the capacity of the water meter (excluding irrigation-only meters, because that water usage does not become sewage). Potential maximum water demand is defined by the capacity of the water meter. Single-family homes typically use the smallest meter size, which for Tontitown customers is 5/8” x 3/4”, so this meter size is assigned a value of one EDU. Other meters represent multiple EDUs, based on their relative meter capacities. The number of EDUs associated with each water meter are shown in the following table. Multiplying current customers by the number of EDUs relative to their meter capacity and summing for all meter sizes yields the total number of wastewater service units. The City’s current wastewater customer base consists of 1,596 EDUs, as shown in Table 21.

Table 21. Existing Wastewater Service Units

| Meter Size | Meter Capacity (gpm) | Meter Capacity (EDUs) | Existing Customers | Existing EDUs |
|------------|----------------------|-----------------------|--------------------|---------------|
| 5/8" | 15 | 1.00 | 1,245 | 1,245 |
| 1" | 45 | 3.00 | 67 | 201 |
| 2" | 150 | 10.00 | 15 | 150 |
| Total | | | 1,327 | 1,596 |

Source: City of Tontitown Public Works, May 18, 2022.

Wastewater flow from the City’s collection system is metered as it enters the regional system to be conveyed to the treatment plant. Historic annual average daily flows from the city’s system, and the city’s share of total flows to the regional facilities over the last ten years are summarized in Table 22. The City’s current average demand is 306,630 gallons per day (gpd), which represents about 8% of total sewage flow to the regional treatment facility.

Table 22. City and Regional Wastewater Demand

| Year | City Daily Flow (gpd) | City Share | Regional Flow (gpd) |
|------|-----------------------|------------|---------------------|
| 2012 | 54,485 | 3.66% | 1,487,224 |
| 2013 | 78,468 | 4.71% | 1,665,074 |
| 2014 | 73,038 | 4.32% | 1,691,631 |
| 2015 | 109,742 | 4.60% | 2,384,793 |
| 2016 | 94,685 | 4.22% | 2,244,691 |
| 2017 | 135,260 | 5.95% | 2,272,084 |
| 2018 | 149,014 | 5.94% | 2,506,930 |
| 2019 | 231,589 | 7.37% | 3,140,871 |
| 2020 | 270,740 | 7.59% | 3,567,360 |
| 2021 | 306,630 | 8.27% | 3,709,010 |

Source: City of Tontitown, Northwest Arkansas Conservation Authority Expense Report, May 18, 2022.

Dividing current average daily wastewater demand by existing service units (EDUs) yields 192 gallons per day per service unit, as shown in Table 23.

Table 23. Local Wastewater Demand per Service Unit

| | |
|--------------------------------------|------------|
| Average Daily Wastewater Flow (gpd) | 306,630 |
| ÷ Existing EDUs | 1,596 |
| Wastewater Flow per EDU (gpd) | 192 |

Source: Daily wastewater flow from Table 22; EDUs from Table 21.

Local Wastewater Facilities

The City’s existing local wastewater collection system consists of gravity lines, pump stations, and force mains. To avoid overlap with lines typically constructed by developers, only gravity lines larger than 8 inches in diameter or force mains larger than 6 inches are included. At current costs, the total replacement value of existing local wastewater collection facilities is about \$9.5 million, as summarized in Table 24 on the following page.

Table 24. Existing Local Wastewater Replacement Value

| Facility Type | Unit | Existing Units | Cost/ Unit | Total Cost |
|----------------------------|----------|----------------|------------|--------------------|
| 18-inch Gravity Line | Lin. Ft. | 1,000 | \$325 | \$325,000 |
| 15-inch Gravity Sewer Line | Lin. Ft. | 4,500 | \$300 | \$1,350,000 |
| 12-inch Gravity Sewer Line | Lin. Ft. | 18,000 | \$260 | \$4,680,000 |
| 12-inch Force Main | Lin. Ft. | 7,000 | \$240 | \$1,680,000 |
| Pump Station | Each | 6 | \$250,000 | \$1,500,000 |
| Total | | | | \$9,535,000 |

Source: Garver for City of Tontitown, June 13, 2022.

Dividing the total replacement value of existing local wastewater facilities by the number of existing service units (EDUs) results in a cost of \$5,974 per EDU, as shown in Table 25.

Table 25. Local Wastewater Cost per Service Unit

| | |
|-------------------------------------|----------------|
| Existing Facility Replacement Value | \$9,535,000 |
| ÷ Existing EDUs | 1,596 |
| Cost per EDU | \$5,974 |

Source: Existing value from Table 24; existing EDUs from Table 21.

As described in the Legal Framework chapter, credits against the cost per service unit may be warranted if there is an existing capacity deficiency or there is outstanding debt on existing facilities serving existing customers. There are no deficiencies in existing local wastewater facilities by definition, because capacity is assumed to be the same as demand. This is the basic premise of the incremental expansion methodology (see discussion in the Methodology chapter). Another way to put it is that the City's local sewage collection system is serving all its current customers.

The City has some outstanding debt on its existing wastewater collection facilities. A reasonable way of ensuring that new development does not pay to maintain the existing level of service and also pay some of the debt on existing facilities is to calculate a credit by dividing the outstanding debt by existing service units. This puts new development on equal footing with existing development in terms of the portion of its costs that will be paid with user rates from all customers. The resulting debt credit is \$2,488 per EDU, as shown in Table 26.

Table 26. Local Wastewater Debt Credit per Service Unit

| | |
|--|----------------|
| Outstanding Debt on 2022B-Sewer Construction | \$3,971,103 |
| ÷ Existing EDUs | 1,596 |
| Outstanding Debt per EDU | \$2,488 |

Source: Outstanding debt principal as of March 2022 from City of Tontitown, May 18, 2022; existing EDUs from Table 21.

Deducting the debt credit from the cost yields the net cost per service unit. As summarized in Table 27, the net cost for local wastewater facilities is \$3,486 per EDU. This represents the net cost for a typical single-family detached unit or other customers who use the smallest meter size.

Table 27. Local Wastewater Net Cost per Service Unit

| | |
|--|----------------|
| Local Wastewater Cost per Service Unit (EDU) | \$5,974 |
| – Debt Credit per EDU | -\$2,488 |
| Net Cost per EDU | \$3,486 |

Source: Cost per EDU from Table 25, debt credit from Table 26.

The net cost per meter by meter size is the product of the number of EDUs represented by the meter and the net cost per EDU. The net costs of local wastewater facilities by meter size are calculated in Table 28.

Table 28. Local Wastewater Net Cost Schedule

| Meter Size | EDUs/Meter | Net Cost/EDU | Net Cost/Meter |
|------------|------------|--------------|-----------------|
| 5/8"x3/4" | 1.0 | \$3,486 | \$3,486 |
| 1" | 3.0 | \$3,486 | \$10,458 |
| 2" | 10.0 | \$3,486 | \$34,860 |

Source: EDUs per meter from Table 21; net cost per EDU from Table 27.

Regional Wastewater Facilities

In 2002, the cities of Rogers and Springdale created the Northwest Arkansas Conservation Authority (NACA) pursuant to Arkansas Code Annotated 14-233-101, et seq, the “Joint County and Municipal Solid Waste Disposal Act,” to address the treatment and disposal of bio-solids in Washington and Benton counties. Since its creation, the Authority’s mission expanded to include not only biosolids, but also wastewater treatment, community education, and watershed monitoring and protection. Its current membership roster includes the cities of Bentonville, Bethel Heights, Cave Springs, Elm Springs, Highfill, and Tontitown. Each member city is represented on the Authority’s board of directors.

NACA provides a biosolids treatment facility that not only handles the output of the NACA wastewater treatment plant, but also provides cost-effective biosolids management for the other wastewater treatment facilities in northwest Arkansas. Biosolids costs are not included in this analysis.

The existing NACA wastewater treatment plant has a rated capacity of 3.6 million gallons per day (mgd) average day capacity, with a peak hydraulic rating of 9.0 mgd. The NACA WWTP consists of several liquid treatment and solids handling processes and is generally considered to be in good overall condition. To accommodate increased demand on its facilities, NACA is planning to double the capacity of the treatment plant to treat the anticipated 7.2 mgd annual average day and 18.0 mgd peak day flow. As summarized in Table 29, the added capacity will cost \$22.92 per gpd, and \$4,401 to accommodate the demand from an additional service unit (EDU).

Table 29. Regional Wastewater Treatment Cost per Service Unit

| | |
|--------------------------------|----------------|
| Treatment Plant Expansion Cost | \$82,500,000 |
| ÷ Capacity Added (daily gpd) | 3,600,000 |
| Cost per Gallon per Day | \$22.92 |
| x Gallons per Day per EDU | 192 |
| Treatment Cost per EDU | \$4,401 |

Source: Treatment plant expansion cost from Garver, June 14, 2022; capacity added from Garver, *NACA Wastewater Treatment Plant Improvements*, Nov. 2020; gallons per day per EDU from Table 23.

Besides the treatment plant, the other major regional facility is the conveyance line that carries the City's wastewater flow to the treatment plant. This conveyance line is shared with the Bentonville wastewater utility; the City's share of the conveyance line cost is 28%. NACA issued a bond to pay for the line in 2017, and existing customers in Tontitown and Bentonville are paying the debt service through their user rates. The original \$22.7 million debt has been reduced to an outstanding principal of \$18.1 million, which represents a current \$4.6 million equity value in the line that has been paid for by existing customers. Tontitown's share of this equity value is about \$1.3 million, or \$4.21 per gpd of current City demand. Multiplying that by the average daily demand per service unit (EDU) results in a new customer cost of \$808 per EDU to put new customers on an even plane with existing customers. These calculations are summarized in Table 30.

Table 30. Regional Wastewater Conveyance Cost per Service Unit

| | |
|---|---------------|
| Regional Conveyance Line Cost | \$22,700,000 |
| – Outstanding Debt on Series 2017 Bond | -\$18,090,000 |
| Conveyance Line Equity Value | \$4,610,000 |
| x Percent Paid by Tontitown | 28% |
| City Share of Conveyance Line Equity Value | \$1,290,800 |
| ÷ Current Total City Average Daily Demand (gpd) | 306,630 |
| Conveyance Line Cost per gpd | \$4.21 |
| x Gallons per Day per EDU | 192 |
| Conveyance Cost per EDU | \$808 |

Source: Conveyance line cost is total original debt amount, which was provided by the City on August 29, 2022; outstanding debt principal as of May 31, 2022 and City percentage share from City of Tontitown, June 29, 2022; City current average daily demand from Table 22; gallons per day per EDU from Table 23.

The total regional cost per service unit is the sum of treatment plant and conveyance line costs. This results in \$5,209 per equivalent dwelling unit, as shown in Table 31.

Table 31. Total Regional Wastewater Cost per Service Unit

| | |
|------------------------------------|----------------|
| Treatment Cost per EDU | \$4,401 |
| Conveyance Cost per EDU | \$808 |
| Total Regional Cost per EDU | \$5,209 |

Source: Treatment cost from Table 29; conveyance cost from Table 30.

As described in the Legal Framework chapter, credits against the cost per service unit may be warranted if there is an existing capacity deficiency or there is outstanding debt on existing facilities serving existing customers.

The regional wastewater treatment plant is technically over its capacity. Its estimated current capacity is 3.6 million gallons per day (mgd), but it is currently processing about 3.7 mgd, which is about 3% more than its ideal capacity. Applying this percentage to the treatment plant cost per equivalent dwelling unit results in a deficiency credit of \$133 per EDU, as shown in Table 32.

Table 32. Regional Wastewater Deficiency Credit per Service Unit

| | |
|--|--------------|
| Existing Daily Regional Wastewater Demand (gpd) | 3,709,010 |
| – Existing Daily Treatment Plant Capacity (gpd) | -3,600,000 |
| Treatment Plant Capacity Deficiency (gpd) | 109,010 |
| Capacity Deficiency Percentage | 3.03% |
| x Treatment Cost per EDU | \$4,401 |
| Regional Wastewater Deficiency Credit per EDU | \$133 |

Source: Existing regional demand from Table 22; existing plant capacity from Garver, *NACA Wastewater Treatment Plant Improvements*, Nov. 2020; deficiency percent is ratio of deficiency to existing plant capacity; treatment cost per EDU from Table 29.

The regional wastewater provider, NACA, has some outstanding debt related to existing facilities and capacity. This debt is retired with a portion of user rates from all ratepayers served by NACA. New customers should not have to pay both for their share of planned future improvements and also pay debt related to existing capacity. To avoid this, a credit should be provided against the cost per service unit. The credit is calculated by multiplying the outstanding debt per gpd of capacity by the average daily gallons of demand per service unit. The result is a debt credit of \$1,551 per EDU, as shown in Table 33.

Table 33. Regional Wastewater Debt Credit per Service Unit

| Bond Description/Other | Outstanding Debt Principal |
|--|----------------------------|
| Revenue Bond 2008A-ANRC | \$9,521,906 |
| Osage Basin deferred loan | \$171,631 |
| Revenue Bond 2009A-ANRC | \$7,529,441 |
| Revenue Bond 2010A-ANRC | \$10,806,702 |
| Revenue Bond 2010b-ANRC | \$1,041,638 |
| Total, Treatment Plant Improvement Bonds | \$29,071,318 |
| ÷ Average Daily Treatment Plant Capacity (gpd) | 3,600,000 |
| Outstanding Treatment Plant Debt per gpd | \$8.08 |
| x Gallons per Day per EDU | 192 |
| Debt Credit per EDU | \$1,551 |

Source: Outstanding debt principal as of May 31, 2022 from City of Tontitown, June 29, 2022; current treatment plant capacity from Garver, *NACA Wastewater Treatment Plant Improvements*, Nov. 2020; gallons per day per EDU from Table 23.

Deducting the debt and deficiency credits from the cost yields the net cost per service unit. As summarized in Table 34, the net cost for regional wastewater facilities is \$3,525 per EDU. This represents the net cost for a typical single-family detached unit or other customers who use the smallest meter size.

Table 34. Regional Wastewater Net Cost per Service Unit

| | |
|----------------------------------|----------------|
| Total Regional Cost per EDU | \$5,209 |
| – Debt Credit per EDU | -\$1,551 |
| – Deficiency Credit per EDU | -\$133 |
| Regional Net Cost per EDU | \$3,525 |

Source: Cost from Table 31; debt credit from Table 33; deficiency credit from Table 32.

The net cost by meter size is the product of the number of EDUs represented by the meter and the net cost per EDU. The regional wastewater net costs by meter size are calculated in Table 35.

Table 35. Regional Wastewater Net Cost Schedule

| Meter Size | EDUs/Meter | Net Cost/EDU | Net Cost/Meter |
|------------|------------|--------------|----------------|
| 5/8"x3/4" | 1.0 | \$3,525 | \$3,525 |
| 1" | 3.0 | \$3,525 | \$10,575 |
| 2" | 10.0 | \$3,525 | \$35,250 |

Source: EDUs per meter from Table 5; net cost per EDU from Table 34.

Total Wastewater System

The wastewater impact fees that could be adopted by the City of Tontitown are the sum of the net costs for the local and regional components. These are summarized in Table 36.

Table 36. Potential Wastewater Impact Fees

| | 5/8"x3/4" Meter | 1" Meter | 2" Meter |
|---------------------------------|--------------------|-----------------|-----------------|
| Local Wastewater Facilities | \$3,486 | \$10,458 | \$34,860 |
| Regional Wastewater Facilities | \$3,525 | \$10,575 | \$35,250 |
| Total, Wastewater System | \$7,011 | \$21,033 | \$70,110 |

Source: Local from Table 28; regional from Table 35.

The planned improvements to the City’s collection system and the regional treatment plant, as well as the existing conveyance line to the regional system that has excess capacity to accommodate growth, are summarized in Table 37 on the following page.

Table 37. Wastewater System Capital Plan

| | Total Cost | City Share | City Share |
|--|----------------------|-------------------|---------------------|
| 12-inch Line, Hwy 412 & 612 Extension | \$1,846,000 | 100% | \$1,846,000 |
| 18-inch Line, Mantegani Extension | \$1,850,000 | 100% | \$1,850,000 |
| 12-inch Line, Klenc & Tuscan Sun Extension | \$2,762,500 | 100% | \$2,762,500 |
| 27-inch Line, Barrington Extension | \$2,340,000 | 100% | \$2,340,000 |
| Subtotal, Local Facilities | \$8,798,500 | | \$8,798,500 |
| Treatment Plant Expansion | \$85,000,000 | 8.27% | \$7,029,500 |
| Conveyance Line (Debt) | \$18,090,000 | 28% | \$5,065,200 |
| Subtotal, Regional Facilities | \$103,090,000 | | \$12,094,700 |
| Water System Total | | | \$20,893,200 |

Source: Local facility projects and costs from Garver for City of Tontitown, June 8, 2022 (2020-2025 projects); treatment plant cost from Garver, June 14, 2022; city share of treatment plant cost from Table 22; conveyance line debt and city percent from City of Tontitown, June 29, 2022.

APPENDIX: ARKANSAS DEVELOPMENT IMPACT FEES ACT

TITLE 14, Arkansas Code CHAPTER 56, SUBCHAPTER 1

SB 620 passed by legislature 4/16/2003
signed by Governor as Act 1719, 4/22/2003

Underline/strike-out are changes made by SB 298
passed by legislature 3/14/2007
signed by Governor as Act 310, 3/19/2007

Section 2 of SB 298: This act shall be applied retroactively to July 16, 2003. Any municipality or municipal service agency that, on or after July 16, 2003, collected a utility hookup fee or access fee that fits the definition of development impact fee as defined in § 14-56-103(a)(3) shall refund any portion of the fee or fees that were not levied for making the physical connection for utility services or to recover the construction costs of the line to which the connection is made.

14-56-103. Development impact fees.

(a) As used in this section:

(1) “Capital plan” means a description of new public facilities or of new capital improvements to existing public facilities or of previous capital improvements to public facilities that continue to provide capacity available for new development that includes cost estimates and capacity available to serve new development;

(2) “Development” means any residential, multifamily, commercial, or industrial improvement to lands within a municipality or within a municipal service agency's area of service;

(3) (A) “Development impact fee” means a fee or charge imposed by a municipality or by a municipal service agency upon or against a development in order to generate revenue for funding or for recouping expenditures of the municipality or municipal service agency that are reasonably attributable to the use and occupancy of the development. A fee or charge imposed for this purpose is a “development impact fee” regardless of what the fee or charge is called.

(B) “Development impact fee” shall not include:

(i) Any ad valorem real property taxes;

(ii) Any special assessments for an improvement district;

(iii) Any ~~utility hookup fees or access fees~~ fee for making the physical connection for utility services, or any fee to recover the construction costs of the line to which the connection is made; or

(iv) Any fees for filing development plats or plans for building permits or for construction permits assessed by a municipality or a municipal service that are approximately equal to the cost of the plat, plan, or permit review process to the municipality or the municipal service agency; or

(v) Any fee paid according to a written agreement between a municipality or municipal service agency and a developer for payment of improvements contained within the agreement.

(4) “Municipality” means:

- (A) A city of the first class;
- (B) A city of the second class; or
- (C) An incorporated town;

(5) “Municipal service agency” means:

- (A) Any department, commission, utility, or agency of a municipality, including any municipally owned or controlled corporation;
- (B) Any municipal improvement district, consolidated public or municipal utility system improvement district, or municipally owned nonprofit corporation that owns or operates any utility service;
- (C) Any municipal water department, waterworks or joint waterworks, or a consolidated waterworks system operating under the Consolidated Waterworks Authorization Act, §§ 25-20-301 et seq.;
- (D) Any municipal wastewater utility or department;
- (E) Any municipal public facilities board; or
- (F) Any of these municipal entities operating with another similar entity under an interlocal agreement in accordance with §§ 25-20-101 et seq. or §§ 25-20-201 et seq.;

(6) “Ordinance” means a municipal impact fee ordinance of a municipality or an authorizing rate resolution by a board of commissioners of a consolidated waterworks system authorized to set rates for its customers under the Consolidated Waterworks Authorization Act, §§ 25-20-301 et seq.; and

(7) “Public facilities” means publicly owned facilities that are one (1) or more of the following systems or a portion of those systems:

- (A) Water supply, treatment, and distribution for either domestic water or for suppression of fires;
- (B) Wastewater treatment and sanitary sewerage;
- (C) Storm water drainage;
- (D) Roads, streets, sidewalks, highways, and public transportation;
- (E) Library;
- (F) Parks, open space, and recreation areas;
- (G) Police or public safety;
- (H) Fire protection; and
- (I) Ambulance or emergency medical transportation and response.

(b) A municipality or a municipal service agency may assess by ordinance a development impact fee to offset costs to the municipality or to a municipal service agency that are reasonably attributable to providing necessary public facilities to new development.

(c) (1) A municipality or municipal service agency may assess, collect, and expend development impact fees only for the planning, design, and construction of new public facilities or of capital improvements to existing public facilities that expand its capacity or for the recoupment of prior capital improvements to public facilities that created capacity available to serve new development.

(2) The development impact fee may be pledged to the payment of bonds issued by the municipality or municipal service agency to finance capital improvements or public facilities for which the development impact fee may be imposed.

(3) No development impact fee shall be assessed for or expended upon the operation or maintenance of any public facility or for the construction or improvement of public facilities that does not create additional capacity.

(d) (1) A municipality or a municipal service agency may assess and collect impact fees only from new development and only against a particular new development in reasonable proportion to the demand for additional capacity in public facilities that is reasonably attributable to the use and occupancy of that new development.

(2) The owner, resident, or tenant of a property that was assessed an impact fee and paid it in full shall have the right to make reasonable use of all public facilities that were financed by the impact fee.

(e) (1) A municipality or municipal service agency may assess, collect, and expend impact fees only under a development impact fee ordinance adopted and amended under this section.

(2) A development impact fee ordinance shall be adopted or amended by the governing body of a municipality or municipal service agency only after the municipality or municipal service agency has adopted a capital plan and level of service standards for all of the public facilities that are to be so financed.

(3) The development impact fee ordinance shall contain:

(A) A statement of the new public facilities and capital improvements to existing public facilities that are to be financed by impact fees and the level of service standards included in the capital plan for the public facilities that are to be financed with impact fees;

(B) The actual formula or formulas for assessing the impact fee, which shall be consistent with the level of service standards;

(C) The procedure by which impact fees are to be assessed and collected; and

(D) The procedure for refund of excess impact fees in accordance with subsection (h) of this section.

(f) (1) The municipality or municipal service agency shall collect the development impact fee at the time and manner and from the party as prescribed in the ordinance and shall collect the fee separate and apart from any other charges to the development.

(2) (A) A development impact fee shall be collected at either the closing on the property by the owner or the issuance of a certificate of occupancy by the municipality.

(B) However, a municipal water or wastewater department, waterworks, joint waterworks, or consolidated waterworks system operating under the Consolidated Waterworks Authorization Act, §§ 25-20-301 et seq., may collect a development impact fee in connection with and as a condition to the installation of the water meter serving the property.

(3) At closing, the development impact fee that has been paid or will be paid for the property shall be separately enumerated on the closing statement.

(4) The ordinance may include that the development impact fee may be paid in installments at a reasonable interest rate for a fixed number of years or that the municipality or municipal service agency may negotiate agreements with the owner of the property as to the time and method of paying the impact fee.

(g) (1) The funds collected under a development impact fee ordinance shall be deposited into a special interest-bearing account.

(2) The interest earned on the moneys in the separate account shall be credited to the special fund and the funds deposited into the special account and the interest earned shall be expended only in accordance with this section.

(3) No other revenues or funds shall be deposited into the special account.

(h) (1) The municipality or municipal service agency shall refund the portion of collected development impact fees, including the accrued interest, that has not been expended seven (7) years from the date the fees were paid.

(2) (A) A refund shall be paid to the present owner of the property that was the subject of new development and against which the fee was assessed and collected.

(B) Notice of the right to a refund, including the amount of the refund and the procedure for applying for and receiving the refund, shall be sent or served in writing to the present owners of the property no later than thirty (30) days after the date on which the refund becomes due.

(C) The sending by regular mail of the notices to all present owners of record shall be sufficient to satisfy the requirement of notice.

(3) (A) The refund shall be made on a pro rata basis and shall be paid in full not later than ninety (90) days after the date certain upon which the refund becomes due.

(B) If the municipality or municipal service agency does not pay a refund in full within the period set in subdivision (h)(3)(A) of this section to any person entitled to a refund, that person shall have a cause of action against the municipality for the refund or the unpaid portion in the circuit court of the county in which the property is located.

(i) (1) (A) On and after July 16, 2003, a municipality or municipal service agency shall levy and collect a development impact fee only if levied and collected under ordinances enacted in compliance with this section.

(B) Beginning January 1, 2004, a municipality or municipal service agency shall collect development impact fees under ordinances enacted before July 16, 2003, or under ordinances amended after July 16, 2003, only if collected in compliance with subsections (f)-(h) of this section.

(2) However, except for the compliance with the collection requirements under subsections (f)-(h) of this section, this section does not invalidate any development impact fee or a similar fee adopted by a municipality or municipal service agency before July 16, 2003, nor does this section apply to funds collected under any development impact fee or similar fee adopted July 16, 2003.

(3) In addition, a municipality with a park land or green space ordinance that has been in existence for ten (10) years on July 16, 2003, and any amendments to the ordinance, which allows the option to pay a fee or to dedicate green space or park land in lieu of a fee, may continue to be administered under the existing ordinance.