

# COUNTY OF ST. PAUL NO. 19

*Our Mission - To create desirable rural experiences*

## UTL-1 Water Service Delivery Policy

Department: Utilities

### POLICY OBJECTIVE:

The County of St. Paul desires to create a framework to assist Council and administration in making decisions related to water as well as provide a set of expectations for residents and industry in relation to water service delivery in the County.

### POLICY STATEMENTS:

#### 1.0 Guiding Principles

1.1 These guiding principles have been used to develop and organize the following objectives:

- (a) Balance the rural character of the County with regional vitality, orderly growth and diversified economic opportunities;
- (b) Promote environmental stewardship and conservation of natural resources;
- (c) Foster innovation and research to improve the community;
- (d) Seek collaborative approaches for effective service delivery and quality of life improvement; and
- (e) Strive for operations efficiency and stability to provide affordable services to residents.

#### 2.0 Balancing the Rural Character of the County

2.1 The County has an objective to ensure that enough water is provided to support its communities and strategic new development.

##### *Levels of Service*

2.2 The drinking waterworks systems in the County are divided into two categories:

- (a) Pressurized Systems include raw water source infrastructure, treatment facilities, transmission systems and pressurized distribution

systems (reservoir, distribution pumps and pipeline networks). This type of system delivers pressurized water to the tap.

- (b) Non-Pressurized Systems include raw water source infrastructures, treatment facilities, transmission system and distribution systems (pipeline networks and service connections). This type of systems delivers water to each user’s cistern. The user is responsible for providing storage and pressure for their household usage.

2.3 The levels of service for pressurized and non-pressurized are defined in the following table:

Service Delivery	Pressurized Systems	Non-Pressurized Systems
<b>Water Quantity</b>	<ol style="list-style-type: none"> <li>1) Under normal supply conditions, adequate drinking water will be supplied to meet the following needs:               <ol style="list-style-type: none"> <li>a) Indoor domestic</li> <li>b) Institutional</li> <li>c) Commercial and industrial</li> <li>d) Household irrigation</li> </ol> </li> <li>2) Under drought conditions, adequate water will be supplied for indoor domestic needs first. Excess capacity, when available, will be supplied to the remaining needs in the priority listed above.</li> <li>3) Adequate water is defined as sufficient water to meet the reasonable needs of each user class (as defined in the County’s Engineering Design Standards). Water wastage by any user class will not be encouraged or supported.</li> <li>4) Water will be supplied at appropriate pressures (as defined in the County’s Engineering Design Standards) for the above uses at their tap.</li> </ol>	<ol style="list-style-type: none"> <li>1) Under normal supply conditions, adequate drinking water will be supplied to meet the following needs:               <ol style="list-style-type: none"> <li>a) Indoor domestic</li> <li>b) Institutional</li> <li>c) Commercial and industrial</li> <li>d) Household irrigation</li> </ol> </li> <li>2) Under drought conditions, adequate water will be supplied for indoor domestic needs first. Excess capacity, when available, will be supplied to the remaining needs in the priority listed above.</li> <li>3) Adequate water is defined as sufficient water to meet the reasonable needs of each user class (as defined in the County’s Engineering Design Standards). Water wastage by any user class will not be encouraged or supported.</li> <li>4) Water will be supplied at atmospheric pressure for the above uses at the user’s connection point.</li> </ol>

<b>Fire Protection</b>	<ol style="list-style-type: none"> <li>1) The level of fire protection (fire flows and storage) will be established with consideration of the Fire Underwriters Survey (FUS) as published by the Insurance Advisory Organization, Alberta Environment's Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems, and in consultation with the local fire department.</li> <li>2) For existing systems, where the level of fire protection is not able to comply with the FUS recommendations, the County will ensure that customers are aware of the level of service that is being delivered.</li> <li>3) For existing systems that do not have adequate water flows for fire protection, alternatives such as foam-based fire trucks and building sprinklers should be reviewed.</li> </ol>	No fire flow is provided
<b>System Reliability</b>	<ol style="list-style-type: none"> <li>1) The County will deliver the peak hourly demand to the users as defined in the County's Engineering Design Standards.</li> <li>2) All systems will be designed and operated to account for predictable failure events with minimal interruption to water service delivery.</li> <li>3) Health-based treatment systems will be equipped with generator back-up power.</li> <li>4) Where systems are designed without adequate reservoir storage, the County will consider providing back-up power for source supply equipment, subject to engineering review, risk analysis and cost/benefit analysis.</li> </ol>	<ol style="list-style-type: none"> <li>1) The County will deliver the maximum day demand to the users of as defined in the County's Engineering Design Standards.</li> <li>2) As there is no storage available for emergency purposes, the risk of supply interruption is higher for the Non-Pressurized Systems. In case of failure events, the County will work with the users to minimize the impact of the supply interruptions in the timely manner.</li> <li>3) Health-based treatment systems will be equipped with generator back-up power.</li> </ol>

#### 2.4 Water Quality Aesthetics – Raw Water Source

The County of St. Paul will endeavor to provide all customers of water utilities with drinking water that meets the aesthetic objectives identified in the *Guidelines for Canadian Drinking Water Quality*. However, the County of St. Paul recognizes that the source and the quality of raw water have significant impact on the treatment process, associate costs and consequently the possibility of meeting those objectives. Where the objectives can be met in a cost-effective manner, they will be pursued by the County and costs shared equitably amongst benefitting utility customers. In other instances where meeting the objectives would result in excessive cost burdens on impacted utility customers, they will not be pursued by the utility in a collective manner, although individual customers may wish to install their own treatment systems within their premises.

## 2.5 *Sizing Water Infrastructure*

The County of St. Paul will develop the Engineering Design Standards that provide design parameters to size the water infrastructure. The County's Engineering Design Standards will meet the performance levels contained in the Alberta Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage System.

## 2.6 *Type of Use*

The County of St. Paul will consider providing drinking water to all types of users (commercial, industrial, and residential). Priority will be given to water that is required for human consumption.

## 2.7 *Coordinating Land Use Planning*

The County of St. Paul recognizes the strong link between potable water service and development pressure. In order to ensure that the provision of potable water supports the overall vision of the County, any relevant economic development strategy, regional plan, Municipal Development Plan and Land Use Bylaw regulations will be considered during water infrastructure planning. Further, these documents will be updated as needed to ensure co-ordination between land-use planning regulations and policies with water service delivery objectives.

## 2.8 *Keeping Policies and Practices Up to Date*

The County of St. Paul will review its policies and practices every five years to ensure that its approach to water service provision is effective and that it reflects current applicable best practices for water resource management, provincial/federal legislation and policies, environmental conditions, economic conditions, public expectations, and land uses.

## **3.0 Promote Environmental Stewardship and Conservation of Natural Resources**

The County has an objective to protect the quantity and quality of the County's water for current and future generations.

### **Water Quantity**

#### *Water Usage*

- 3.1 The County of St. Paul will implement Demand Management Plans to reduce the overall water usage in the County over time.

#### *Metering*

- 3.2 The County of St. Paul will require meters on all new and existing development that is connected to municipal waterworks systems.

- 3.3 The County of St. Paul will use a variety of tools to encourage water conservation such as water rate structure, public education programs, increasing enforcement on demand management plans, monitoring and data collection, water re-use programs and others.

*Minimizing Water Losses*

- 3.4 The County of St. Paul will implement monitoring tools and preventive measures in both design and operations of their waterworks systems to reduce the overall water losses in all aspects of the waterworks systems (treatment process, transmission system, distribution pipelines and reservoirs, etc.).

**Water Quality**

*Complying with Legislation*

- 3.5 The County of St. Paul will ensure compliance with Alberta Environment's source-to-tap, multi-barrier approach for Drinking Water.

*Managing Water Resources Regionally and Holistically*

- 3.6 The County of St. Paul will manage its water resources and protect its water sources by taking a regional approach that views water holistically (i.e., considers a comprehensive set of values associated with water such as environmental, social and economic).

**Energy and Power**

*Energy Efficiency*

- 3.7 The County of St. Paul will implement methods that ensure efficient use of energy in both the design and operations of their waterworks systems.

**4.0 Foster Innovation and Research**

- 4.1 The County has an objective to support vibrant communities by considering and implementing (where appropriate) innovative water service provision.

*Innovative Approaches*

- 4.2 The County of St. Paul will consider innovative approaches to achieve continuous improvement and pursue better solutions for delivery of safe drinking water, in all the dimensions of waterworks system (planning, water re-use, conservation methods, supply, treatment, distribution, materials, etc.), subject to engineering review and acceptance.

**5.0 Seek Collaborative Approaches For Effective Service Delivery and Quality of Life Improvement**

- 5.1 The County has an objective to support vibrant communities and quality of life by

embracing collaborative approaches to water resources.

*Recognize the Link Between Drinking Water Quality and Quality of Life*

- 5.2 The County of St. Paul recognizes the strong and direct relationship between a safe and reliable supply of potable water in a community, and that community's quality of life. This recognition is also embedded within the Government of Alberta's Water for Life strategy.

*Drinking Water Quality Standards*

- 5.3 All water systems owned and operated by the County of St. Paul will supply water that meets the Government of Alberta's *Environmental Protection and Enhancement Act*, and *Public Health Act*, as well as the *Guidelines for Canadian Drinking Water Quality*. In instances where these standards are not being met, or where the standards evolve, the County of St. Paul will plan and implement improvements designed to achieve the standards.

*Collaborate with the Government of Alberta to Achieve Drinking Water Quality Standards*

- 5.4 The County of St. Paul will work closely with the Government of Alberta on many dimensions of drinking water quality standards – understanding their origin, content and importance, communicating this to others in the County and region, monitoring and reporting current conditions, planning and designing any required infrastructure improvements, and funding this infrastructure.

*Collaborate with other Communities in the County and the Region, and others (Private Partners)*

- 5.5 The County of St. Paul will work together with other communities within the County and the region, as well as private partners to deliver safe and affordable drinking water to its residents.

*Watershed Planning*

- 5.6 The County of St. Paul recognizes that planning for the geographically-extensive watershed, from which it sources its water supplies, extends beyond its reach; yet it holds a greater degree of influence within a portion of that watershed. In order to merge these two considerations, the County of St. Paul will collaborate with Alberta Environment and its Watershed Advisory and Planning Council (North Saskatchewan Watershed Alliance) in watershed planning endeavours relating to surface water and groundwater supplies.

*Engaging Water Users*

- 5.7 The County of St. Paul will effectively engage their water users to ensure they are kept up-to-date regarding initiatives (e.g., current water quality conditions, evolving regulations, infrastructure upgrades, fees and charges to users) related

to water service provision and have the opportunity to provide local input into water-related decisions.

#### *Emergency Response*

5.8 The County of St. Paul will work with Alberta Environment to implement the necessary steps in case of unpredictable and uncontrolled situations that may compromise the delivery of safe secure drinking water to residents. These steps include:

- Boil Water Advisory
- Water usage Advisory

The County of St. Paul will ensure effective communication during the incident and the successful resolution to address the incident.

#### **6.0 Strive for Operations Efficiency and Stability to Provide Affordable Services to Residents**

6.1 The County has an objective to provide affordable and reliable drinking water services.

#### *Recognize the Link between Water Demand and Quality and Operating Cost*

6.2 The County of St. Paul recognizes that there is a direct link between water demands and operating costs. Therefore, the policies set out in Section 2 of this document are viewed as fundamental to achieving operating cost reductions.

#### *Ensure Efficient Water Treatment and Conveyance Systems*

6.3 Water treatment can be an operations - intensive process in terms of staff time and resource inputs (energy, chemicals), and therefore costly. This is also true of conveyance systems (particularly pumping facilities). Careful attention will be paid during design of any new works to their operation requirements and costs, and these considerations balanced with capital costs of new infrastructure.

#### *Operating Model*

6.4 The County of St. Paul will explore different operating models to achieve cost reductions and efficiency. These models can include operation by County, operation by private sector firm(s), and through partnerships with other municipalities.

#### *Cost-Benefit Analysis*

6.5 The County of St. Paul will consider life cycle cost/benefit analysis when making decisions related to water projects.

*The User-Pay Principle*

- 6.6 The County of St. Paul will adopt an equitable approach based on the “user-pay principle” for recovering costs associated with drinking water service provision. The County will review each application on a case-by-case basis, considering both costs and benefits to all parties involved.

*Financial Sufficiency and Certainty*

- 6.7 The County will take proactive measures to ensure adequate funding is available to provide the desired level of water services for current and future generations. Implementation steps may include:
- developing an asset management plan
  - limiting dependence on grant funding
  - establishing rates based on full cost recovery
  - limiting borrowing to capital projects (not operations and maintenance)
  - establishing a reserve fund for long-term capital replacement