



	<p>Title: Requirements for Wastewater Treatment Systems</p>
<p>Legal References: Municipal Government Act Safety Codes Act Safety Codes Council – Alberta Private Sewage Systems Standard of Practice 2009 Model Process Reference Document AAMDC Dec 2004</p>	<p>Policy Category: Infrastructure & Operations</p>
<p>Cross References: Policy 430 – Communal Wastewater System Management Procedure #PRO 449 Performance Requirements for Wastewater Treatment Systems Rocky View County Servicing Standards</p>	<p>Effective Date: May10, 2011 Revision Date: November 1, 2016</p>
<p>Purpose: To provide Sewage Treatment System requirements in order to provide Environmental Protection from sewage nutrient contamination. This policy may also require creation of viable wastewater utilities (for developments which create more than 60 lots within a 600m radius). Decentralized or Regional Wastewater Treatment Systems will be taken over by the County and provide viable and cost effective wastewater utility systems which can be operated by the County directly or by a County Utility Corporation.</p> <p>This Policy is based on the background studies contained within the Model Process Reference Document AAMDC Dec 2004 which state: “For developments where lot size for each private residence within the development is one Hectare (Approximately 2.5 Acres) or larger, the risk that boundary limits imposed by these guidelines may be exceeded by private sewage disposal systems is considered acceptable in most cases. It is assumed that attenuative processes within a one hectare lot will be sufficient to reduce the nitrate-nitrogen to an acceptable concentration in groundwater below adjacent properties. It should be noted that sufficient attenuative processes may not be present in hydro geologically sensitive environments, or where there is little water surplus available.”</p> <p>The required level of treatment systems covered by this policy is based on three options:</p> <ol style="list-style-type: none"> 1. Regional Wastewater Treatment Systems 2. Decentralized Wastewater Treatment Systems 3. Private Sewage Treatment Systems (PSTS) <p>Definitions:</p> <ul style="list-style-type: none"> • “County” means Rocky View County. • “Decentralized Wastewater Treatment Systems” consist of a communal system that collects typical wastewater strength effluent from multiple lots, conveys effluent to a wastewater treatment plant for treatment and discharges to an approved discharge location. • “Development” means development as defined in the <i>Municipal Government Act</i>, R.S.A. 2000, c. M-26. • “FAC” means Final Acceptance Certificate. • “Master Servicing Strategy” is a detailed analysis of servicing options, best possible locations and ultimate discharge strategies for wastewater for a defined service area. • “Odour Control Mechanisms” means an air outlet discharging air that has been filtered/treated to 	

remove/minimize human detectable odours with the use of UV light or other appropriate means.

- “Packaged Sewage Treatment Plant” means a manufactured unit that is used to substantially improve the effluent quality beyond the quality of effluent expected of a septic tank that meets the requirements of BNQ 3680-910 and NFS/ANSI Standard 40 specifications.
- “Private Sewage Treatment Systems” provide on-site wastewater treatment and include septic tank and tile fields, treatment mounds, and packaged sewage treatment plants.
- “Regional Wastewater Treatment Systems” consists of a communal system that collects sewage from large developed or developing areas and conveys the sewage to a regional treatment facility.
- “Standard PSTS” consists of traditional tank and tile systems
- “Transfer Agreement” means an agreement supported by a Cost Feasibility and Sustainability Analysis that sets out the terms and timelines for the transfer of wastewater infrastructure and/or operational responsibility from one party to another.
- “Typical Wastewater” means wastewater that:
 - a. 80% of the time has
 - i) BOD_5 of less than 200mg/L,
 - ii) TSS of less than 220 mg/L, and
 - iii) oil and grease content of less than 50 mg/L, and
 - b. does not exceed
 - i) BOD_5 of 300 mg/L,
 - ii) TSS of 350 mg/L, and
 - iii) oil and grease content of 70 mg/L.

Note: Assumed design peak daily flow of 340 L per person per day.

Policy Statements:

1. The County is committed to sustainable sewage disposal practices and shall, at a minimum, require sanitary sewage systems to be designed, installed, tested and manufactured in accordance with the current legislation, regulation, codes, standards and practices set out in Procedure 449.
2. For Regional or Decentralized Wastewater Treatment Systems the County shall require proponents of development to provide a detailed assessment of sanitary sewage disposal options prepared by qualified engineering consultant for County review.
3. In evaluating sanitary sewage disposal options, the County shall primarily consider the design life, the ease of maintenance and the ease of operation of the proposed system(s).
4. Proponents of development shall provide a Cost Feasibility and Sustainability Analysis report outlining the life-cycle cost of the construction, operation, maintenance and replacement of proposed Wastewater Management Systems for County review and consideration. This report must also outline projected utility rates and number and type of system users required to reach a breakeven point.

Regional Wastewater Treatment Systems

5. The County shall encourage the use of Regional Wastewater Treatment Systems and connections whenever it is feasible to do so.
6. Regional Wastewater Treatment Systems and connections must follow the guidelines and recommendations set out in the applicable County Master Servicing Strategy (if available).
7. Regional Wastewater Treatment Systems constructed in Rocky View must be sited on public utility lots where the title is held by the County and the Developer shall be responsible for ensuring they meet or exceed all Federal, Provincial and municipal guidelines and regulations and design requirements.
8. County Subdivision Authority may request the appropriate Provincial department to approve/grant relaxation for setbacks of proposed Regional Wastewater Treatment Systems based on proven system technology.
9. Ownership of Regional Wastewater Treatment Systems will be transferred from the Developer to the County in accordance with system-specific terms and conditions set out in an executed Transfer Agreement and in accordance with Policy 430.

Decentralized Wastewater Treatment Systems

10. Where connection to a Regional Wastewater Treatment System is not feasible, the feasibility of proposed developments hooking up to an existing or creation of a new Decentralized Wastewater Treatment System shall be investigated.
11. When a proposed subdivision will result in the creation of any lot(s) less than 4 acres and where development density exceeds 60 proposed, conditionally approved or existing lots within a 600m radius of the centre of the proposed development, the County will not permit the use of standard PSTS to support the development, but will require a Decentralized or Regional Wastewater Treatment System, if neither of these two options are feasible then a Packaged Sewage Treatment Plant must be used for each newly created lot along with a deferred servicing agreement for future requirement of connection to a decentralized or regional system once available. For lot sizes less than R1 zoning (1.98 Acres), the County does not support the use of any type PSTS.
12. All primary, secondary, tertiary and disinfection treatment components of a Decentralized Wastewater Treatment System constructed in Rocky View must be sited on public utility lots where the title is held by the County and the Developer shall be responsible for ensuring they meet or exceed all Federal, Provincial and municipal guidelines and regulations and design requirements.
13. County Subdivision Authority may request the appropriate Provincial department to approve/grant relaxation for setbacks of proposed Decentralized Wastewater Treatment Systems based on proven system technology.
14. Ownership of Decentralized Wastewater Treatment Systems will be transferred from the Developer to the County in accordance with system-specific terms and conditions set out in an executed Transfer Agreement.

Private Sewage Treatment Systems (PSTS)

15. Where hook-up to a Regional or Decentralized Wastewater Treatment System is not feasible, Private Sewage Treatment Systems will be considered.
16. The County shall not support the use of sewage holding tanks to support residential subdivision.
17. For residential developments relying on PSTS, where lot sizes are equal to, or greater than, 1.98 acres but less than 3.95 acres, the County requires the use of a Packaged Sewage Treatment Plant on individual lots which meet the Bureau de Normalisation du Quebec (BNQ) standards for treatment and the requirements set out in Procedure 449. For lot sizes less than 1.98 acres, the County does not support the use of PSTS.
18. For residential developments relying on PSTS where lot sizes are equal to or greater than 4 acres but less than 10 acres, the County encourages the use of Packaged Sewage Treatment Plant methods that meet the Bureau de Normalisation du Quebec (BNQ) standards for treatment and the requirements set out in Procedure 449, but permits the use of conventional PSTS systems unless a Packaged Treatment System is recommended by the Assessment conducted under the Model Process.
19. The County relies on the *Model Process Reference Documents* and the *Alberta Private Sewage Systems Standard of Practice* to guide its decisions on the testing, installation, permitting and compliance monitoring requirements for PSTS.
20. The County requires the approval of a permit prior to the installation of any PSTS.
21. The installation of PSTS must be completed by a certified installer and must meet the requirements of the Safety Codes Act.
22. The County recommends the use of sewage holding tanks for industrial, commercial and institutional land uses when it is not feasible to connect to a Regional or Decentralized systems.
23. The County does not permit the use of PSTS and disposal for any purpose other than typical wastewater

strength and volumes as outlined in the Alberta Private Sewage Systems Standard of Practice 2009.