



July 30, 2010

NorCan Consulting Group

RE: Correspondence from Alberta Environment on Fawn Meadows Community Wastewater System

Frank,

As requested by Parkland County, SD Consulting Group – Canada (SD) discussed the proposed community wastewater system at the Fawn Meadows Development with Alberta Environment (AENV). The purpose of this correspondence was to have AENV issue communication with Parkland County indicating their willingness to review a community wastewater system. The attached email resulted from that conversation and a detailed discussion is provided with this letter.

Mr. Harshan Radhakrishnan, the Municipal Approvals Coordinator for the Spruce Grove AENV Office, was contacted and in response, he issued the attached email. Mr. Radhakrishnan shared AENV's view on communal wastewater systems in a series of points. Each point is reviewed below along with its applicability to Fawn Meadows:

1. *"AENV does not have an established policy for communal systems"* – This is true as Alberta regulations only issue rules for systems up to 5.7 m³/day. SD Consulting is working on large communal wastewater systems in other areas of the Province. The most successful path to completion is correspondence between all stakeholders. Early meetings are held with the County, Alberta Environment, and the owners to ensure that all procedures are acceptable. Although there are no rules directly applicable to communal systems, they are allowed in the Province and are growing in popularity.
2. *"Water Quality Concerns"* – The Fawn Meadows Development will be utilizing soil disposal so the contamination of lakes and streams is not possible through a direct discharge. Drinking water limits will be met in the groundwater as it leaves the property. This will be monitored by a number of shallow water table monitoring wells.
3. *"While we discourage communal septic systems (no secondary treatment)..."* – The proposed system at Fawn Meadows will treat wastewater to secondary standards and further treatment will be achieved in the soil. Standard septic tank – drainfield systems



- are not proposed. In addition, a surface water discharge is not proposed, so there will not be a receiving stream. All treated wastewater will be infiltrated back into the soil.
4. *“Long term viability of communal wastewater systems”* – The ownership of the system will be determined prior to the design submittal and coordinated with Parkland County. Since Parkland County has no interest in owning and operating these systems, the developer will form a private utility to own and operate the system. An operator certified through AENV’s training process will be hired to handle the day to day operations of the system.
 5. *“A groundwater system is proposed to service the development”* – The ownership of the community groundwater system will be the same as the wastewater systems and coordinated with the County before submission. Advanced treatment of the groundwater supply is proposed.
 6. *“It appears that a request to vary the setback from the wastewater treatment system would be required in this case”* – The first step in the application process is the waiver application for the 300 meter setback. This is an old rule based on when all wastewater systems were lagoons or ponds. At this time, this setback was necessary to protect human health and prevent odors. The proposed system at Fawn Meadows will not have any exposed water and everything will be underground. Therefore, a smaller setback distance from the treatment system is warranted. SD has successfully reduced this distance through a waiver process in Rocky View Counties on projects of similar size. In addition, AENV central region has lowered their setback requirements based on information provided by SD.

To summarize, AENV will consider the application for approval of a community wastewater treatment systems. All applicable rules need to be met as discussed above and a setback waiver must be granted. In addition, the proposed system must meet all public notice criteria and be granted an approval from AENV. However, if all these conditions are met, approval of the communal wastewater system is possible for the Fawn Meadows Development.

If you have any questions, please contact Shane Sparks or Bryan DeSmet and we will be happy to assist you. Thank you for your time.

Sincerely,

SD Consulting Group – Canada, Inc.

Shane Sparks
Project Manager

Bryan DeSmet, P. Eng
Principal

Alberta Permit to Practice #: P10913.

Shane Sparks

From: Harshan Radhakrishnan
Sent: Friday, July 23, 2010 12:37 PM
To: pvincent@parklandcounty.com
Cc: Bryan DeSmet; Guangyu Yan; Neil Hollands;
Subject: RE: Fawn Meadows Development in Parkland County

Hi Pat,

I am the Approvals Coordinator who will be working with the applicant to approve the water and wastewater systems for Fawn Meadows residential development in Parkland County. The consultant requested us to issue a "concept approval" after a brief review of the proposal. While we do not issue concept approvals, we would like to share with the County the position the Department holds with respect to approval of cluster type water/wastewater servicing options:

- Current approval/permit system of the Province deals well with individual wastewater systems (for single lots) and centralized wastewater systems (for towns and cities). However, approving communal/cluster wastewater systems which are in the "gray zone" between individual and centralized systems, is a recent development, and AENV does not have established policy in the area.
- The concerns related to receiving water quality are specific to the most sensitive receptors, typically groundwater and lakes. AENV Central Region will apply the principle of negligible impact on groundwater and lake water quality for approving communal wastewater systems.
- While we discourage communal septic systems (no secondary treatment), we do consider communal cluster wastewater systems differently (minimum secondary treatment, plus filtration and potentially disinfection). Where the receptor (receiving water bodies) is not a concern or the impact to environment is shown to be negligible, we will consider approving the above-mentioned systems.
- One crucial consideration for our approvals is the long-term viability of communal wastewater systems, especially for sites near sensitive environmental receptors. We would encourage the County to provide greater assurance in this aspect and assume the responsibility of long-term operation of these systems (owning or contracting out). The Department sees the long-term viability of privately owned and operated systems as a significant issue for rural subdivisions approved by the County.
- A groundwater system is proposed to service the development. Potable water supply for the noted communal developments is an even higher priority than wastewater. We would also ask the County to look after the long-term viability of communal potable water systems.
- It appears that a request to vary the setback from the wastewater treatment system would be required in this case. A setback variance for wastewater plant is a decision made by the County. AENV has a process for issuing consent for setback variance and will consider the County's request for AENV's consent.
- The availability and adequacy of the sewage disposal system for rural subdivisions have traditionally been managed through existing area wastewater treatment systems. However, with the closure/capacity/distance issues, it is necessary that the subdivision and development authority consider and incorporate into the planning process how wastewater will be managed to ensure that the subdivision applications are suitable for the intended purpose.

Please call me should you want to discuss this further.

Regards,
Harshan Radhakrishnan, M.A.Sc.
Municipal Approvals Coordinator
Central Region

