

December 24th, 2009

Statement of Concern

**To: Alberta Environment
Central Region – Red Deer
304, Provincial Building
4920 – 52 Street
Red Deer, AB T4N 6K8**

Attention: Mr. David Helmer

**Regarding: Sky Country Golf and RV Resort - NE 34-039-02-W5M
Water Act
Notice of Application for:**

- 1. License to divert ground water – 40649 M3/anum for residential purposes (File #00248026)**
- 2. License to divert surface water - 67868 M3/anum for the purpose of irrigation of a lakeside golf course (File #00263299)**
- 3. Storm water management works - the output of which is designed to be directed into Sylvan Lake (File #00263299)**

By Fax: 403.340.5022

From: _____

I own property at, or otherwise use Sylvan Lake. I will be directly affected by the outcome of this Application under the Water Act to divert ground water, to divert tributary water, and to construct storm water management works on the **NE 34-039-02-W5M**.

Non-Compliance with the Lacombe County MDP

The development that will be supported by this application does not comply with the Municipal Development Plan (MDP) of the approving authority Lacombe County. The MDP of Lacombe County requires that an Area Structure Plan (ASP) be adopted prior to any multi-lot residential development taking place in the County. At this time, there is not an Area Structure Plan in place for this lake area.

Storm Water Management Works

Notwithstanding the lack of compliance with the Lacombe County MDP, this application is cause for concern for the protection of water quality and sustainability of aquatic ecosystems at Sylvan Lake. Environmental sensitivities include: a natural drainage for surface water into Sylvan Lake, proximity to key fisheries habitat, key waterfowl habitat and key ungulate habitat. Further, a recent water quality assessment of Sylvan Lake identified drainages coming into the lake as the highest risk to additional nutrient loading from storm water runoff. The subject development proposes to use a natural drainage as part of a golf course irrigation retention pond system. The stated design of the flow-through system will direct

storm water into Sylvan Lake. Therefore there is concern that storm water will carry pollution from the development and golf course directly to the lake.

Storm water modeling using historical rainfall data from a measurement center located more than 30 miles from the site of the proposed development is inadequate considering the magnitude of localized weather events that regularly occur at Sylvan Lake; such extreme weather being caused by proximity to the eastern slopes of the Rocky Mountains.

There is concern that the proposed storm water management plan is inadequate and does not consider: the density of the development; the requirement for paved road works per county standards; roof coverage by RV's, tents and auxiliary buildings. What percentage of land area within this development will be covered by non-permeable material and how will this land coverage affect the capacity requirements for the detention pond system?

There is concern that during high water events residual chemicals and contaminants from this high density development will find their way into the lake. Such contaminants will immediately and cumulatively affect key fisheries, waterfowl and ungulate habitat, and permanently pollute Sylvan Lake.

Recommendations arising from the Sylvan Lake Water Quality Study state generally that storm water detention ponds should be provided in a manner that permits monitoring, measurement, and treatment of storm water prior to being released to the lake. The application provides no content to this scientific recommendation and fails to meet its objective.

The applicant, at the development public hearing, suggested the use of storm water detention ponds for the purpose of irrigating the golf course. There is concern that these ponds will be filled with irrigation water (for retention) at a time when they should be empty in order to serve as detention ponds. It is not logical to use retention ponds for the purpose of detention – by definition the function of such ponds are **opposed** to each other.

License to Divert Groundwater

With respect to the license to divert groundwater, these are some salient concerns:

a. Requested volume is unrealistic – diversion may impact other groundwater users

The applicant may be attempting to allay public concern over excessive groundwater use by under-estimating the volume requested. There is concern that the volume of water requested on this application is unrealistic and insufficient to meet the needs of this development. Considering that the applicant has plans for a water park and has also suggested the use of unsold serviced lots as rental units, there is substantial uncertainty as to the eventual number of residents who will be at this development. There is also uncertainty concerning the seasonal nature of this development as it is now being suggested that restricting use to certain months will not be possible. With so many unknown factors surrounding this development, and the density of its eventual population, there is concern that production of the volume of water actually required will cause negative impacts to existing groundwater users.

b. Unknown recharge rate of lake water source point

The water to be extracted under this license will be diverted from a recharge point source for the lake. There is concern that the volume requested by the applicant may represent a significant portion of the total groundwater flow entering the lake

at this location. Reduced recharge flow may have significant long-term implications for the level and quality of water remaining in the lake. There are significant data gaps for measurements taken at the Alberta Environment Observation Well #474, located near the site. The pressure head at this observation well is an important driver of underground flow into the lake. A continuous record is desirable for monitoring the effect on local pumping rates. A concern arises due to the significant data gap, and resulting uncertainty with respect to the effects of long term diversion of recharge water in these amounts, from this location, to support this high density sub-division.

c. Permanent diversion of recharge water

The volumes to be produced under the proponent's license will be **permanently removed** from the Sylvan Lake Watershed and either evaporated as part of the stated use, or physically transported for release downstream into the Red Deer River. The quantity of water in Sylvan Lake has remained relatively constant because of a fortuitous natural balance between precipitation and groundwater inputs, and losses by evaporation. Excessive withdrawal of water will upset this natural balance and may cause the lake level to drop. The following questions arise from the proposal: What is the relationship between the recharge flow into the lake at this location and the volume that will ultimately be required by the applicant? What long-term impact from this permanent diversion can be expected on the level of the lake, and on the quality of its remaining water?

d. Lack of wastewater infrastructure, risk to public safety, point source pollution

Wastewater disposal is to be accomplished using road transport. There is concern for public safety on community roads upon the granting of this license to divert. Volumes requested by the applicant represent trucking in the order of 10 loads per day, each day, during a typical season. The trucking of wastewater as a solution that will support a multi-lot sub-division of this size and density creates unnecessary risk to an entire community that uses the roadways in this area. What government body will bear legal responsibility for the unnecessary risk that trucking sewage poses to the general public at large? Cumulative effects related to sewage hauling will be doubled when sewage from an additional 238 homes is trucked for disposal. Total truck traffic has been estimated by Lacombe County at 28 loads per day.

Lacombe County requires the proponent to capture all wastewater for treatment and disposal. Presently, human waste from Lacombe County is captured and released onto the landscape within the lake watershed and in view of the lake. There is concern that this method of handling waste is already a point source for nutrient loading on the lake. There is concern that Lacombe County will be incapable of preventing human waste from polluting Sylvan Lake or its surface watercourses because of ongoing development approvals. These approvals are given in the absence of wastewater infrastructure or enforcement of proper disposal policy.

e. Conservation

The cumulative volumes requested by the applicant supports a philosophy of wastefulness. Conservation measures must be planned when owners are building

and landscaping new property. Granting license for such an excessive rate of production per household sends the wrong message to property owners. Giving notice now, by way of a substantially reduced production limit will have the immediate effect of influencing construction and landscaping decisions in a timely manner and in a way that supports the conservation objectives of Alberta's "Water for Life Strategy".

f. Lack of Control over gray water disposal

The majority of RV sites on the development will contain typical RV trailers and motor homes. To handle wastewater, this equipment utilizes separate gray-water and black-water systems – either of which can be dumped independently. There is concern that to save trucking costs related to sewage disposal, residents of this development will dump gray-water on the ground within the development. There is concern that dumping such wastewater within the development will become a source of phosphates and other household contaminants that will eventually enter and pollute the lake. The lack of certainty and control over wastewater handling within the resort brings risk to the lake and raises significant concern about this development.

g. Pesticide and fertilizer usage

Residential and golf course landscaping typically involves the use of pesticides, herbicides and fertilizers. Governing municipalities remain reluctant to exert their authority to control use of these chemicals for ornamental purposes within the Sylvan Lake Watershed. There is a significant risk that these chemicals will eventually enter the lake and permanently damage aquatic ecosystems and water quality. There is already significant development on the shores of Sylvan Lake that undoubtedly contributes these kinds of pollutants. Advance knowledge of limited water availability will serve to advise future owners that they must landscape in a manner that naturally eliminates the need for the use of pesticides, herbicides and fertilizers.

h. Intensification of Land Use

There is evidence¹ that increased population density and agricultural land use has degraded fish populations in the North Saskatchewan watershed. There is similar documentation to support the general correlation between those factors and the state of water quality. The current land use for the site of this development is low intensity agriculture. On approval of this application, the proponent will intensify the use of this land by a significant magnitude. There is concern that this change in land use will contribute cumulative negative effects that will permanently damage the lake.

i. Critical Limiting Factors / Cumulative Effects

There is concern that water quality and quality of life factors at Sylvan Lake will not be sustained as a consequence of impacts caused by the development. There is concern that important criteria such as water quality standards, public access, storm water management, lake carrying capacity, cumulative effects, protection of

¹M. Sullivan. Cumulative Effects. Presented at the Red Deer River Watershed Alliance Information Meeting. Bowden, AB. 2009-12-25.

natural and environmentally sensitive areas and protection of social values are being ignored by Lacombe County. This application is being rushed ahead of the Alberta Land Stewardship Act. There is concern that many of the critical factors that will limit development of the lake watershed have already been reached. This application must be considered in the context of the 238 lakeshore and adjacent homes that are presently approved for development but not yet realized. There is concern that the pace of development now exceeds the ability to monitor and mitigate impacts and cumulative effects.

License to Divert Tributary Water for the purposes of golf course irrigation

With respect to the license to divert tributary water, this application must be denied. There are three main concerns:

a. Insufficient Tributary Flow – Use of groundwater

Flows sufficient to meet the requested volume are not consistently present in this drainage after early May. There is concern that it will be necessary to retain much of the surface flow in retention ponds intended for storm water detention. Concern also arises that insufficient precipitation will create the need to utilize groundwater for the purpose of golf course irrigation and cause impact to other groundwater users.

b. The need to situate another golf course in close proximity to the lake

Monitoring conducted at a tributary into Sylvan Lake (Golf Course Creek) shows significant ongoing nutrient loading. It is likely that soils in this entire drainage have been contaminated by nutrients over many decades from both agricultural activities and golf course maintenance practices. Monitoring at this tributary shows that nutrients continue to be released at levels that consistently exceed established guidelines considered necessary for the protection of aquatic ecosystems.

Considering the science we know and have available to us today, it is inappropriate to permit a golf course to be constructed in such close proximity to Sylvan Lake, and to allow commercial extraction of lake water for the purpose of golf course irrigation.

c. Confidence in the application

Suggesting the use of irrigation retention ponds for the purpose of storm water detention provides little to inspire confidence in the ability of the applicant and/or his professional consultants to properly construct, maintain and administer the integrated irrigation/storm water management system/golf course being proposed under this application. There is concern caused by a lack of competence in this application.

Concluding Remarks

In summary, the value of this scarce Alberta lake resource need not be compromised by insensitive and environmentally inappropriate development plans. The proponent's RV resort / golf course development plan, including the application for constructing storm water management works and licenses to divert, must be significantly revised or the application denied under the Water Act. This development proposal has been advanced by Lacombe County in a very rushed manner. It appears that the municipality is facilitating rapid approval in order to avoid higher environmental standards demanded by the Alberta Land Stewardship Act, and Alberta's Water for Life Strategy.

Given the large measure of risk and uncertainty posed by this development, and the fact that a Regional Plan has not been prepared, as will be required by the implementation of the Land Use Framework, it is suggested that approval of this application be withheld until the new system of regulation and approval mechanisms is in place.

A further course of action should be for a comprehensive Environmental Impact Assessment to be conducted by the Provincial Government, under the authority of the Water Act and the Environmental Protection and Enhancement Act. Such course of action would serve to allay real public concern over the substantial risk that this application poses to Sylvan Lake and its community of residents.

Respectfully submitted,

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