

## After the flush . . . What happens next?

# City of Kamloops - Liquid Waste Management Plan Review Newsletter

July 2009

No. 2

### What's Up With Sewage in Kamloops?

The City has been hard at work to protect the Thompson River and Kamloops Lake water quality. Their vision is to provide environmentally sound, financially affordable and generationally sustainable sewage infrastructure after you flush the toilet! To that end, the City recently received a grant of \$14.2 million towards the construction of a new sewage treatment plant. The last major upgrade of the sewage treatment plant was in 1984/85. This new plant is the outcome of more than 10 years of studies and discussion with all affected stakeholders. The new plant incorporates some innovative concepts that will save the residents of Kamloops over \$30 million.

The aims of the next upgrade are to:

- Reduce greenhouse gases;
- Provide capacity for growth within the City;
- Improve operations to sludge handling;
- Eliminate odours;
- Meet new government regulations;
- Maximize nutritional value of effluent being reused for irrigation; and
- Provide a more consistent quality of treated sewage (effluent).

*The purpose of this newsletter is to engage the community in understanding the issues and the solutions relating to liquid waste management.*



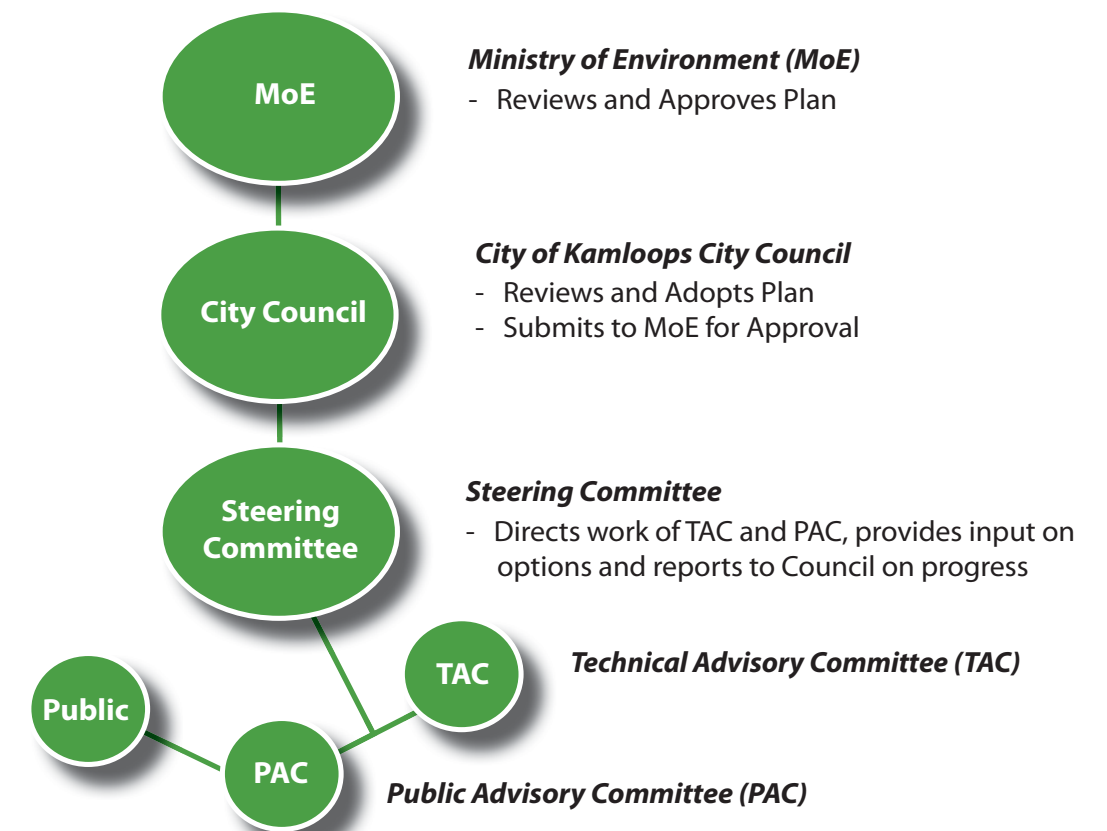
### What is a Liquid Waste Management Plan Review?

A Liquid Waste Management Plan Review is required after five years of the first LWMP being completed, particularly if circumstances have changed. The review involves:

- Reconstituting the technical and public advisory committees;
- Reviewing progress with respect to commitments made in the 2003 LWMP;
- Identifying any issues that may have arisen that need to be dealt with;
- Assessing the suitability of the alternative process to meet the intent of the 2003 LWMP; and
- Involving the public in the review.

As part of this review, the City has prepared a background report, submitted it to the technical and public advisory committee members, met with the members on October 9, 2008, hosted a booth at the 2008 October Home Show, completed a detailed predesign report on the way to move forward and met with the Committee on June 11, 2009.

### Who is Involved?



### What Are the Key Issues?

#### Financial Affordability:

The City applied to the Building Canada Fund in September 2008 to have the provincial and federal governments share some of the costs. In early 2009, the City was advised it will receive \$14.2 million towards upgrades to the sewage treatment plant.

**If you would like more details on this topic please visit our website at: [www.kamloops.ca](http://www.kamloops.ca)**

**Unsewered Areas:**

About 4,000 Kamloops residents rely on individual on-site septic disposal systems. On-site systems are prominent in areas such as Raleigh, Karindale, Heffley, Knutsford, and parts of Barnhartvale. These systems use a septic tank for treatment (through removal of solids and floatables) and subsurface trenches or beds for disposal of liquid emerging from the septic tank. There are no conclusive plans to connect these areas to the primary collection and treatment system within the 5 yr term covered by the LWMP review. The City will provide education on the proper maintenance of on-site systems.

**Treatment Process:**

The primary issue in the LWMP Review is to explain and seek approval for the alternative treatment process that is being proposed to meet the required effluent criteria for discharge to the Thompson River. In essence, the alternative process would continue to use a chemical coagulant to reduce phosphorus levels instead of using biological processes. This has been the City's practice for the last 20 years, with no adverse effect on the effluent or the biosolids. The alternative process is estimated to cost approximately \$40 million, which is \$35 million less than the other option.



Spray Irrigation

**Flow Increases:**

The flows entering the plant are close to its capacity. To accommodate growth within the City, it is necessary to expand the plant.

**Sewage That is Trucked to the Plant:**

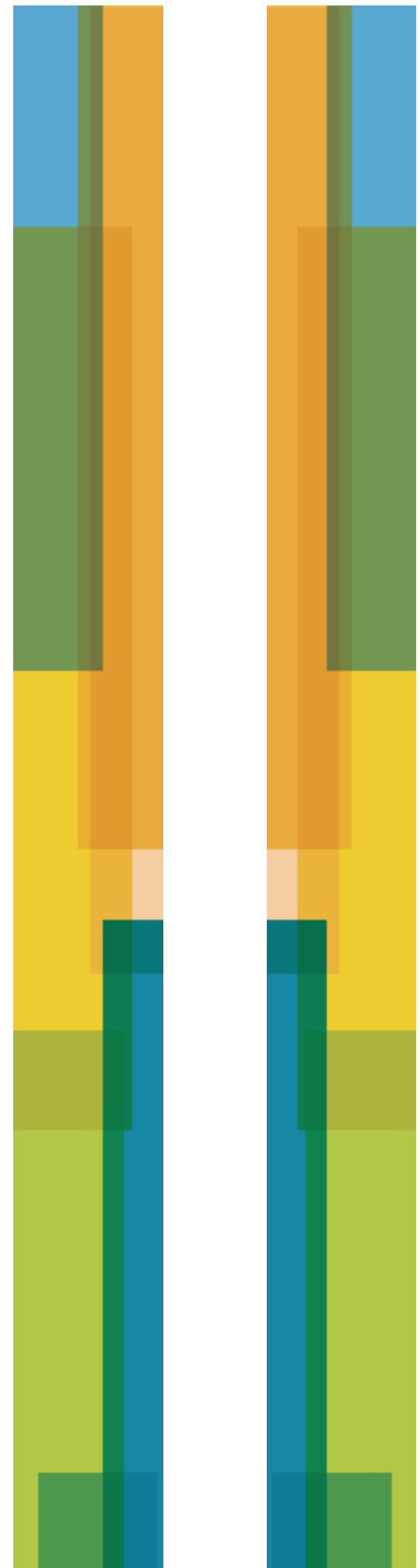
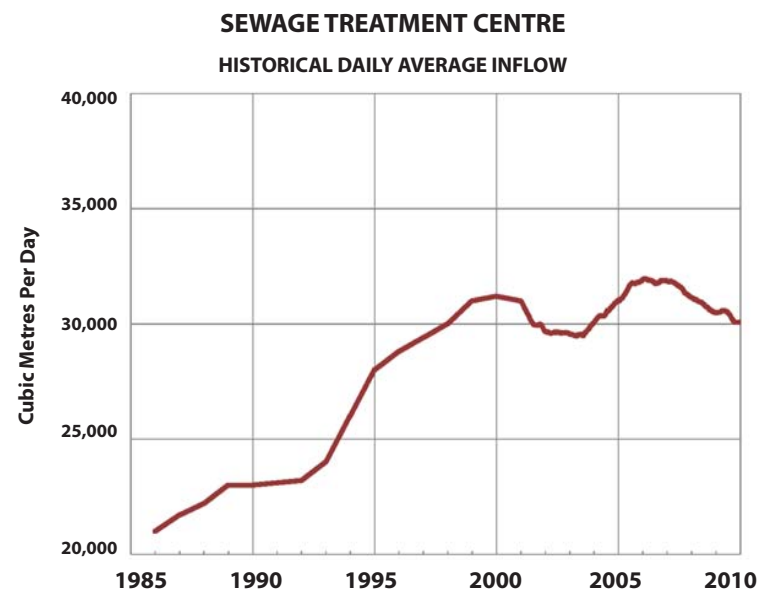
At present, there is very little control over what trucked waste is discharged into the City's sewer system. The plan is to add the necessary facilities.

**Environmental Monitoring:**

The City and the Ministry of Environment (MOE) have been taking samples upstream and downstream of the outfall in the Thompson River for over five years. The results have demonstrated that the City's effluent is causing no measurable effect.

**Stormwater:**

The City has completed an Integrated Stormwater Management Plan to address the appropriate collection, treatment and release of stormwater into the receiving environment.



**What Treatment and Discharge Solutions Have Been Identified So Far?**

**Treatment Level Required:**

The treatment level required to protect the Thompson River has been determined by the City's existing permit, the BC Municipal Sewage Regulation, the Canada-wide Municipal Wastewater Strategy, and an Environmental Impact Study that was completed as part of the 2003 LWMP. The treatment level to protect irrigable lands has been determined in the City's Permit.

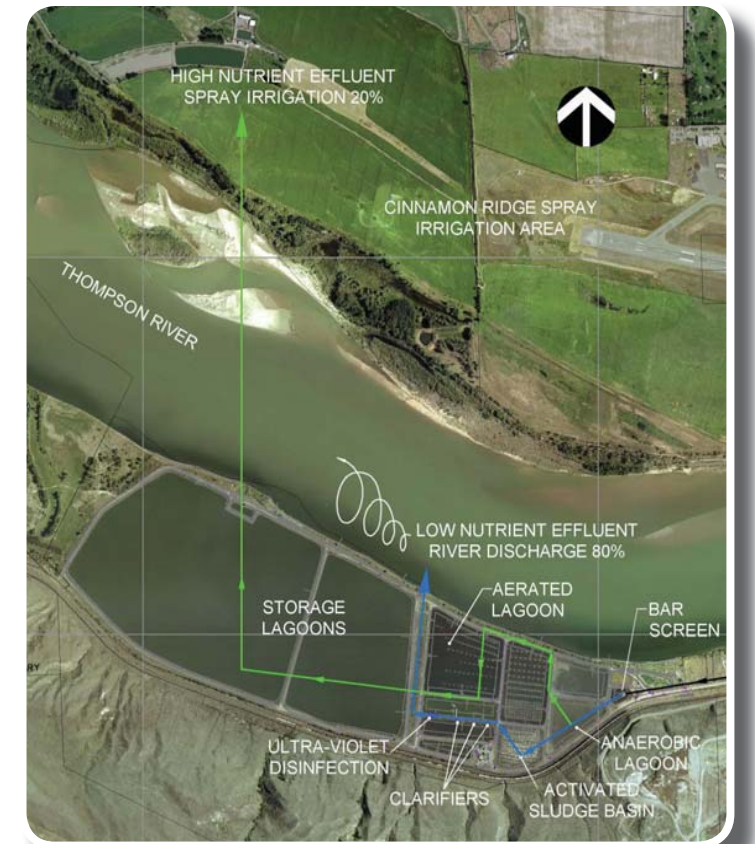
**Treatment Solutions:**

The preferred treatment solution is illustrated below. It consists of two parallel treatment plants. The first plant will treat 5,500 m<sup>3</sup> per day and will not reduce phosphorus or nitrogen because the effluent will be reused for irrigation on the north side of the river. This will reduce the amount of chemical fertilizer required.

The second treatment plant will treat the balance of flows (at design that would be 54,500 m<sup>3</sup> per day). This consists of an activated sludge plant with clarifiers and ultraviolet light for disinfection that maximizes the reuse of existing infrastructure. In this way construction costs are minimized.

**Discharge Solutions:**

The City has committed to the reuse of effluent at Cinnamon Ridge for 20 years. This currently accounts for approximately 20 per cent of the annual volume of treated effluent. The balance of treated effluent will be discharged into the deep portion of the river to achieve the appropriate level of mixing.



**Comments/Information**

If you have any comments or concerns or would like to discuss the LWMP Review, please contact:

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