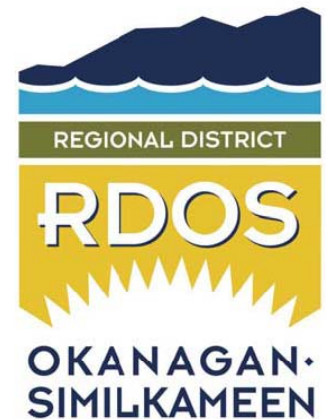




## Regional District of Okanagan-Similkameen

AECOM Canada

Piero Galvagno, P.Eng.  
Tim Forty, P.Eng.





# Liquid Waste Management Plan Amendment, *for the* OK Falls, Skaha Estates and Kaleden Areas

## Public Information Meeting

November 18, 2009



## Public Information Meeting – November 18, 2009

### Agenda & Meeting Objectives

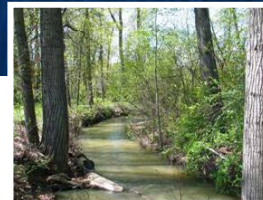
- Welcome & Introductions
  - Advisory Committee (AC)
- What is a LWMP & why are we developing one?
- What are the ***Preferred Solutions*** selected by the AC

## Advisory Committee Members

ORGANIZATION	TITLE	FIRST_NAME	LAST_NAME	Contact email	Bus. Phone
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Penticton Indian Band	Mr.	Greg	Gabriel	<a href="mailto:ggabriel@pib.ca">ggabriel@pib.ca</a>	250-493-0048
Local Citizen	Ms.	Eleanor	Walker		250-497-5445
Local Citizen	Mr.	Ted	Lynch	<a href="mailto:tlynch@telus.net">tlynch@telus.net</a>	250-497-8263
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Local Citizen	Mr.	Sam	Hancheroff	<a href="mailto:shancher@sd53.ec.ca">shancher@sd53.ec.ca</a>	250-497-5878
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Local Citizen	Mr.	Dan	Larter	<a href="mailto:dan1_2002@hotmail.com">dan1_2002@hotmail.com</a>	250-497-7993

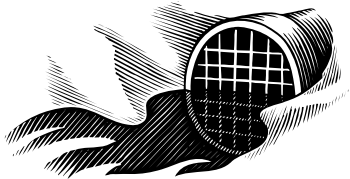
**Any questions before we move on?**

## What Is A Liquid Waste Management Plan?



## What is a Liquid Waste Management Plan (LWMP)?

- A LWMP is a plan for a local government that charts the future course of action with respect to...



- Sewage
- Stormwater, and
- other wastewaters

- The plan generally addresses...
  - Management and Collection
  - Treatment and Effluent Disposition

## What is a LWMP? ...continued

- A LWMP can also deal with...
  - Lot sizes and zoning in unsewered areas
  - Water conservation programs, and
  - Public education programs for improving septic systems performance



## What is a LWMP? ...continued

- A LWMP is a tool used to develop **cost-effective** solutions to address local liquid waste issues which allows a community to...
  - Protect public health and the environment
  - Develop strategies to minimize wastewater generation
  - Meet water conservation goals
  - Maximize use of reclaimed water, and
  - Address storm water issues





## What is a LWMP? ...continued

- Public participation is **mandatory** for the development of an effective LWMP, to ensure the Plan reflects the needs of the community, now and for the future
- This is especially important as the implementation of any recommendations will be funded by those in the Plan area



**Any questions before we move on?**

## Why Develop A LWMP?



## Why Develop a LWMP?

- Advance planning can ensure that current and **future** needs for the management of liquid wastes for the community are met
- LWMPs save both the environment and the taxpayer by creating **proactive solutions** rather than the more costly option of reacting to problems as they arise

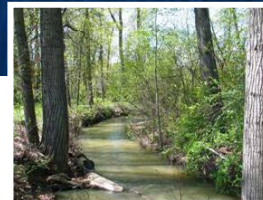
## Why Develop a LWMP?

- A LWMP provides an opportunity for ratepayers to assist in the process of selecting the best option for managing liquid wastes in their community and that can increase local support for current and future implementations
- There is a higher likelihood of obtaining grant monies for implementation of a LWMP which not only shows the community's needs, but also identifies the environmental and health benefits (We do have grant monies for the treatment plant but we have not yet procured funding for sewer service to Kaleden Lakeshore or Skaha Estates.)



**Any questions before we move on?**

**Why do we need to Amend the LWMP?**



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## **RDOS OK Falls already HAS an approved LWMP... Why do we need to amend it?**

- Existing STP is nearing capacity
- STP operation provides issues for nearby residents
- Existing effluent infiltration site nearing maximum capacity
- The Regional District and MOE have jointly made the decision that it is in the public interest that the options available be publicly reviewed using the LWMP process in a combined Stage 1 / 2 process

**Any questions before we move on?**

**How do we Amend this LWMP?**



## How are we Amending *this* LWMP?

- Identify all options
  - List identified options (2005 Strategic Study)
  - Review with AC – Any other options?
- Select the “Preferred Solution”
  - Develop options
  - AC picks “Preferred Solution(s)”
  - Public Information meeting – Confirm “Preferred Solution(s)”  
(**We are here!**)
  - Finalize combined Stage 1 / 2 report
- Develop and finalize Stage 3 report
  - RDOS Board approval
  - Ministerial Approval



**Any questions before we move on?**

**OK Falls sewage treatment today**

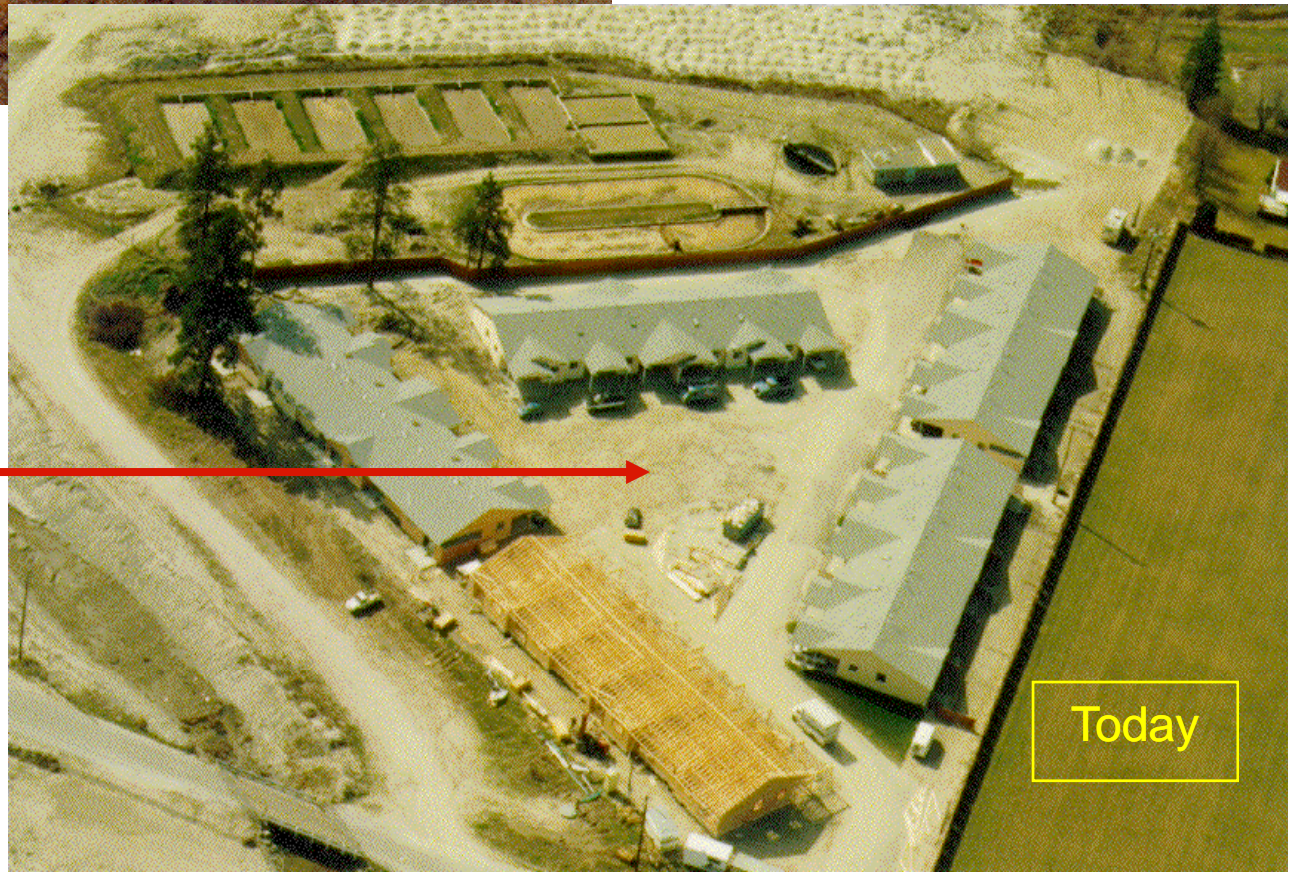






Originally

Seniors  
residential  
complex



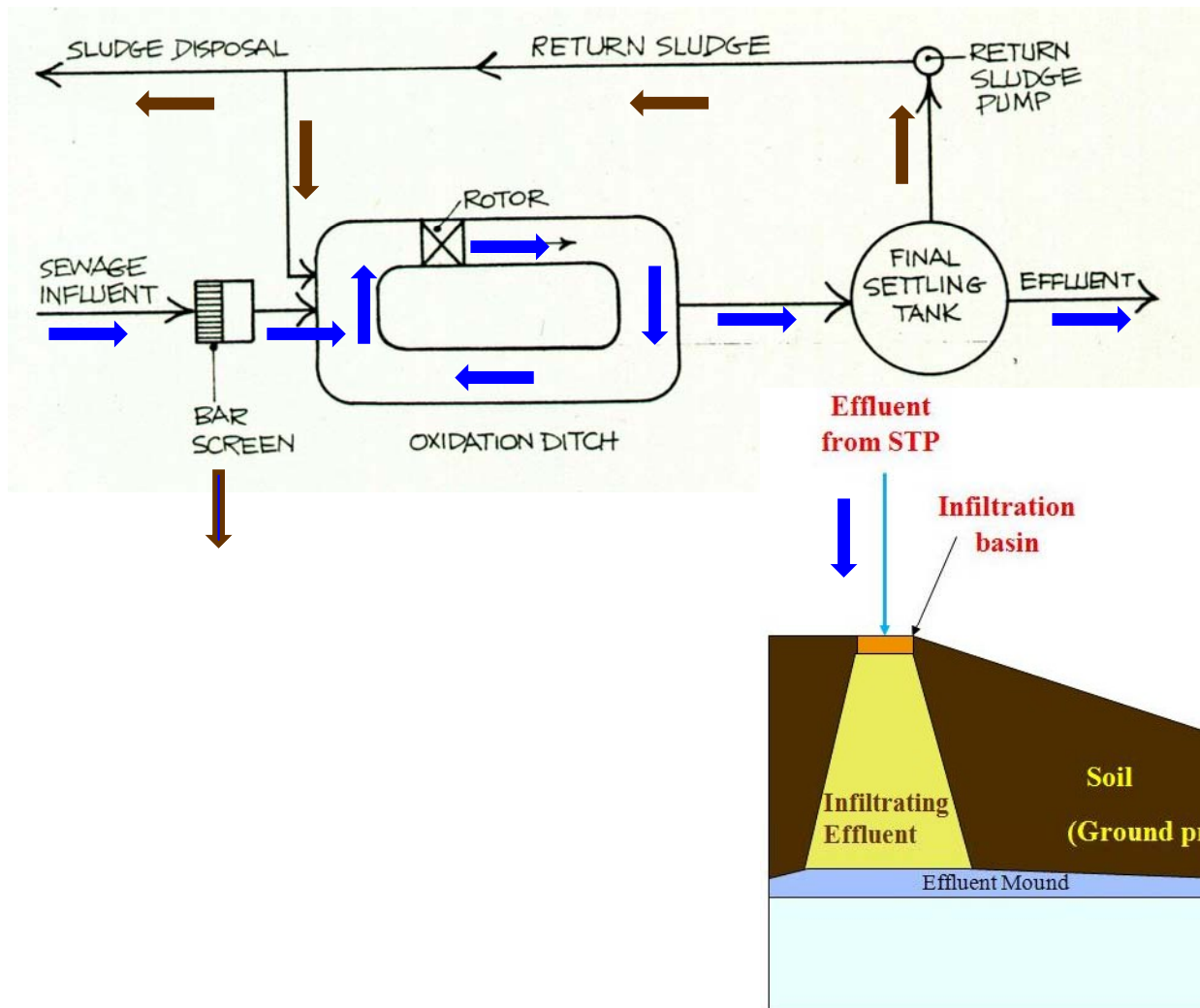
Today



## OK Falls Sewage Treatment Today

- Secondary sewage treatment plant
  - Plant removes solids and BOD (but not nutrients)
- Effluent disposal to Rapid Infiltration (RI) basins
  - Ground polishes effluent and removes nutrients

## OK Falls Sewage Treatment Today



Any questions before we move on?

## The AC's *Preferred Solutions*



## The *Preferred Solutions*

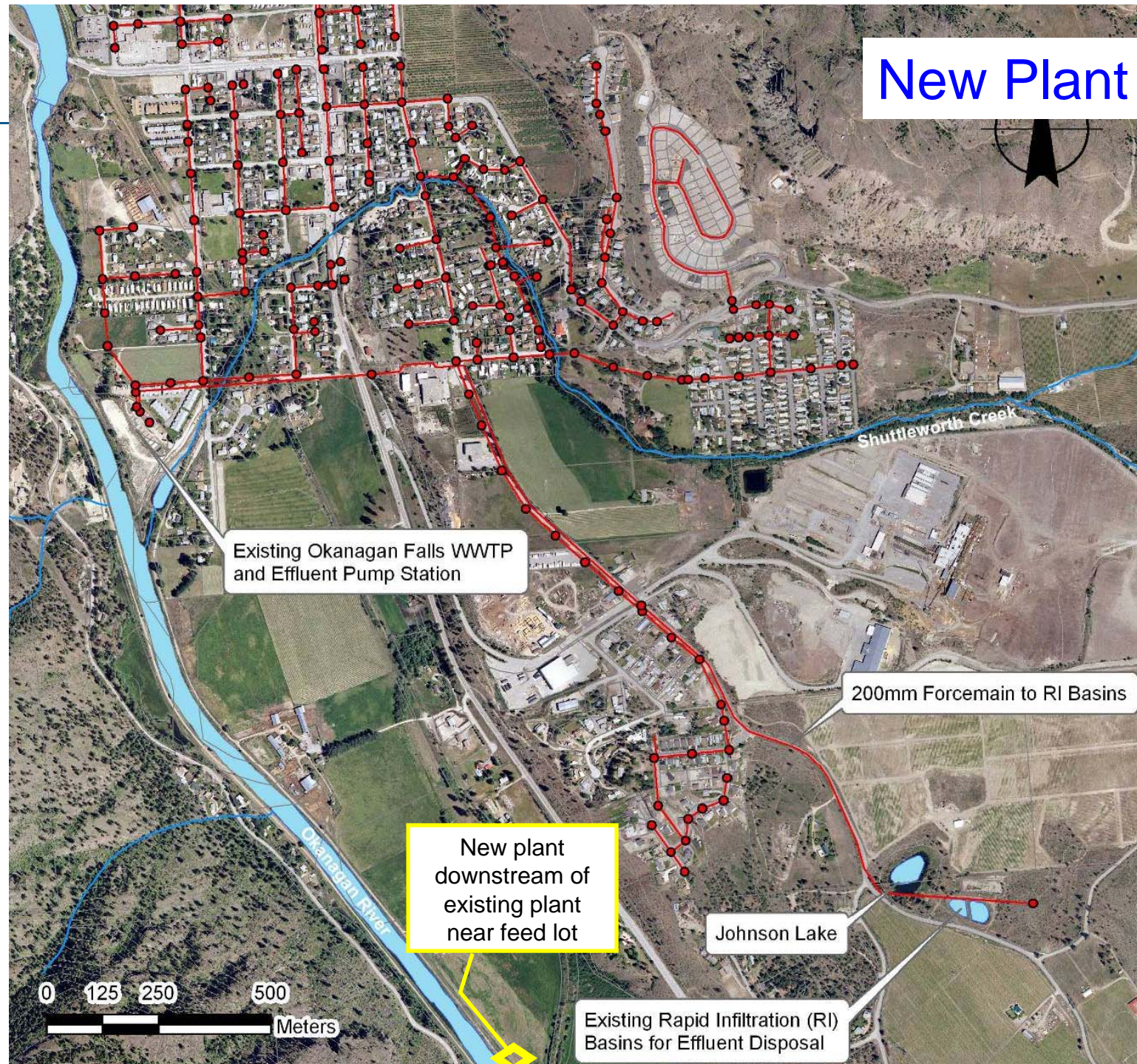
- The 2005 Strategic Review recommendations, as supported by the majority of the residents of OK Falls, Kaleden and Skaha Estates were accepted by the AC as part of their ***Preferred Solution*** for the management of wastewater (STP Process and plant relocation)
- The non-Strategic Review ***Preferred Solutions*** were selected by the AC from the identified options
- Public confirmation is now needed to ensure that the AC's ***Preferred Solutions*** are supported by the general public

## The *Preferred Solutions*

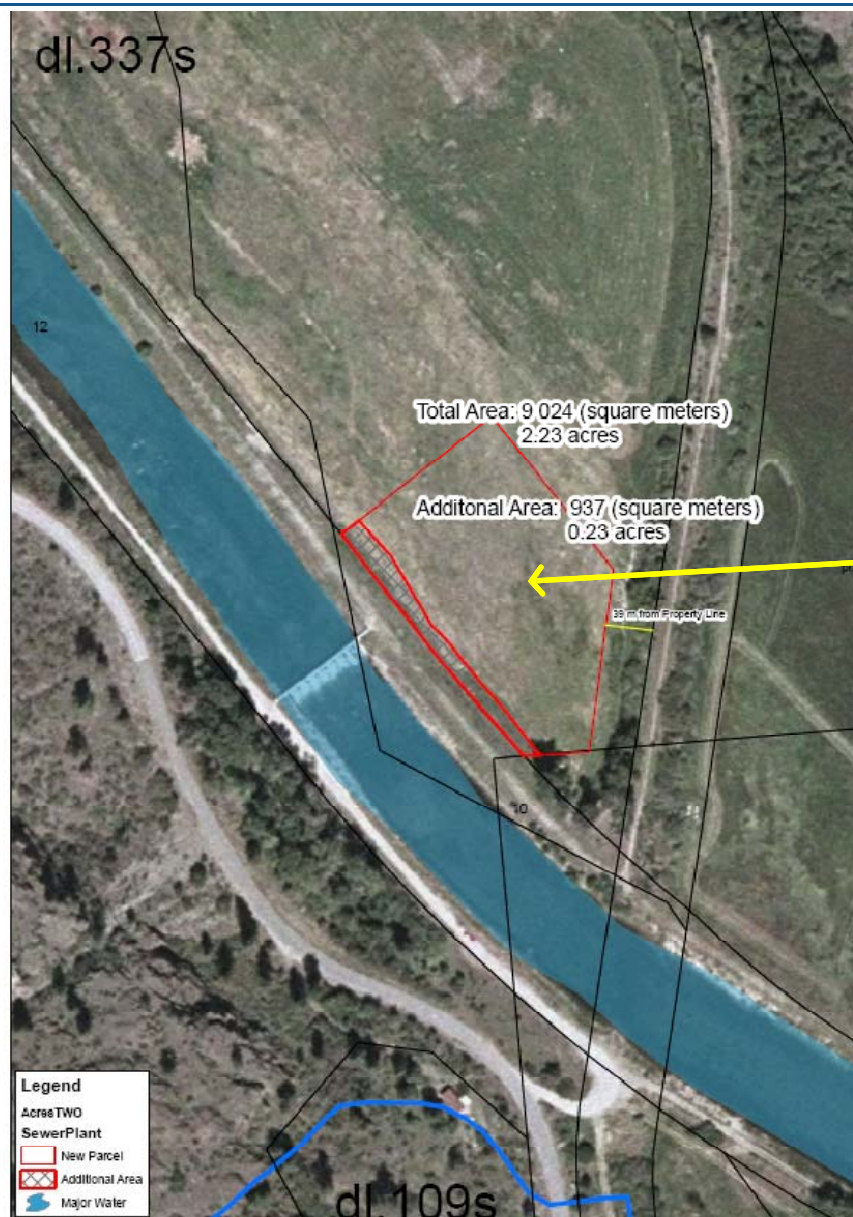
- AC reaffirmed the Strategic Review recommendations as part of their ***Preferred Solution***
  - Treatment plant process to be advanced Biological Nutrient Removal process, and
  - Plant to be relocated south of town
    - Land purchased, rezoned and removed from ALR by the RDOS on the strength of public support for the *2005 Strategic Review*
    - The new plant will be sized to handle sewage from OK Falls, Kaleden Lakeshore area and Skaha Estates



# New Plant site







New STP location

Sewer Plant Location

1:1,250



**Note:** Architectural consideration will be given to aesthetically pleasing building design that will be in harmony with the farming characteristics of the neighbourhood.









## What will it cost?

Sewage Treatment Plant Cost Breakdown						
OK Falls (Cost per connection)	Sewage Treatment	Total Cost per Connection	Annual Cost per Connection with no grants*	Annual Cost per Connection with \$6.25M Grant	Annual O&M Cost + Capital Reserve per Connection	Total Annual Cost per Connection
<b>Capital Cost, OK Falls Alone</b>	<b>\$ 10,149,300</b>	\$ 8,185	\$ 680	\$ 243	\$ 395	\$ 639

\* Annual cost is calculated as being amortized over 20 years at 5.3% interest.

**Note:** The annual cost to those connected to the system **INCLUDES** the O&M cost. The capital cost portion amount will drop when Kaleden Lakeshore and Skaha Estates are serviced as more people will be paying for the plant cost.

## The *Preferred Solution* (Continued)

- AC reaffirmed support for Kaleden & Skaha Estates citizens desire for sewer service
  - Sewer service to be provided to Kaleden Lakeshore, and
  - Sewer service to be provided to Skaha Estates

With the proviso that:

- 2/3 Infrastructure grant funding is available, and
- 18% OBWB capital works grant funding is available

**Note:** The Kaleden Lakeshore area and Skaha Estates are NOT included at this time in the project. Costs will need to be updated and another grant application submitted when this portion of the project is ready to proceed.



## **The *Preferred Solution* (Continued)**

Effluent returned to the environment by:

- Enhanced wetlands beside Okanagan River,
  - Awaiting comment from Federal Environment Canada
- Reclaimed water irrigation of Keogan Park,
  - Minimal cost as is adjacent to pipeline to RI Basins
- Outfall to Okanagan River Channel, and
  - For surplus effluent
- Existing Rapid Infiltration Basins
  - Emergency use and to provide water for Johnson Lake

## The *Preferred Solution* (Continued)

### Education Programs and Bylaws:

- Develop and implement a water conservation strategy,
  - Public Education Program
  - Water Conservation Bylaws
- Develop and implement a sewer use strategy, and
  - sewer use educational program
  - *Sewer Use Bylaw* (Prohibited substances)
- Septic Tank strategy
  - Public Education Program



Any questions before we move on?

## LWMP Overview summary



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## LWMP Overview Summary

- A LWMP is a tool which allows the citizens of a community to understand the issues in their community, with respect to wastewater, and assists them in selecting the best option for the resolution of those issues
- A LWMP belongs to the community which developed it
- The job of the consultant and Regional District staff is to ASSIST in developing the LWMP, by providing clear, understandable, technical and cost information

## What Can I Do?

The Advisory Committee has been working closely with RDOS and AECOM Staff to understand all the liquid waste issues and develop affordable solutions that will protect both public health and the environment and that also reflect the desires of the people that live here.

We need your input!

**Please complete the questionnaire!**