

Household Survey

Included with this newsletter is a questionnaire in which we seek current information about development on your property, characteristics of your drinking water, drinking water source and method of septic disposal. The Regional District will appreciate your response to this survey, as it will greatly aid the Liquid Waste Management project.

Advisory Committees

The development of the Liquid Waste Management Plan is assisted by a Technical Advisory Committee, comprised of representatives of a number of government agencies, and a Public Advisory Committee (PAC), comprised of residents of Lakelse Lake and Jackpine Flats. Members of the PAC have been appointed by the Regional Board and have been selected to provide a voice to different interests and neighbourhoods in the plan area. Current members are:

Ian Maxwell - Lakelse Watershed Society
Norm Frank - Catt Point Residents
Ernie Kuehne - DL 6263 Residents
John Rowlands - Snowy Owl Bay Residents
Alan Mohler - Mount Layton Hotsprings
Michael Bowen-Colthurst - Water Lily Bay Resort
Alan Lanctot - Lakelse Community Association
Rick Olson - Catt Point
Bob Park - Mailbox Point/Beam Station Drive
Sharon Almgren - Northwest Hydro Association
Jackpine Flats Community Association representative - Vacant (currently being appointed)

The RDKS would like to thank Steve Westby for his contribution to Stage 1 of the LWMP. Additional interest from Jackpine Flats residents is welcome. Please contact the RDKS for further information.

Jackpine Flats Groundwater Monitoring

One of the recommendations of the Stage 1 study was to develop good systems for information management. Information is being collected by a number of government agencies related to the issues of water quality and septic disposal. This includes property information held by the Regional District and others, groundwater quality testing data collected under the auspices of the BC Ministry of Environment and percolation test results held by the Northern Health Authority.

The Regional District is endeavouring to consolidate, augment and map this information so that trends in water quality can be determined over time and assist government agencies to make good decisions to protect water quality, and maintain human and environmental health.

During this summer, employees of the Regional District will be visiting properties in Jackpine Flats equipped with a Global Positioning System (GPS) collecting information on the location of water wells, septic fields, barns and corrals. This information will be mapped by the Regional District and other data such as well logs, water quality information and percolation rates will be attached to each property. You will be contacted in advance prior to the Regional District entering your property. Your cooperation with this important data collection exercise will be greatly appreciated.



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Lakelse Lake/Jackpine Flats Liquid Waste Management Plan

The Lakelse Lake/Jackpine Flats LWMP is an examination into the effects on surface and groundwater that may be occurring due to human habitation. The Regional District has commenced Stage 2 of this process. Stage 1 was to identify key waste management issues, determine the magnitude of any public health or environmental issues, and briefly describe solutions available to improve environmental conditions. Those solutions may be through engineering (a community sewer), land use planning (amend minimum lot size in a zoning bylaw), regulation (mandatory septic tank pumping), or public information (distribute brochures on septic tank and field maintenance).

In this newsletter recommendations of the Stage 1 studies are presented and tasks to be undertaken by the Regional District in Stage 2 are described. In addition, the LWMP studies are occurring as other government agencies and community groups study other aspects of the environmental situation at Lakelse Lake and Jackpine Flats. For example, the Elodea weed issue and concern with salmon populations are paramount. In this newsletter, a brief description is provided of Ministry of Environment commissioned research into the source of E Coli using DNA sampling.

A household survey is included with this bulletin, and your participation is greatly appreciated.

The Regional District of Kitimat-Stikine is conducting a Liquid Waste Management Plan (LWMP) for the combined Lakelse Lake/Jackpine Flats area. There are concerns about human-based sewage pollution causing impacts on the ground and surface waters in the study area. The quality of Lakelse Lake water is important because of the recreation, fish, wildlife values, and also because some of the study area residents are using the lake as a source of drinking water. The concerns regarding the Jackpine Flats area include the potential for pollution of drinking water wells and the creeks in the area (Williams Creek and Sockeye Creek) that flow into Lakelse Lake.

Nearly all of the LWMP area is served by septic tank systems. Around the Lake, some of these systems are in areas of high ground water, are too close to the Lake, or are in the floodplain. In the Jackpine Flats area the soils are very coarse and the percolation rates very fast, thus leading to the potential that insufficient treatment of the septic tank effluent occurs prior to it reaching the groundwater. Since all groundwater in the area migrates toward Lakelse Lake, the concern is, unless steps are taken, there may be a strong potential to negatively impact the lake water quality, e.g. high fecal coliform counts, fish toxicity and/or nutrients like phosphorus stimulating an already burgeoning *Elodea Canadensis* water weed problem.



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The LWMP process is a three-stage process. Stage 1 has been completed. It focused on identifying the problems and developing a list of potential solutions that should be considered in greater detail in Stage 2. Six technical memoranda (TM) were written for and reviewed by Technical and Public Advisory Committees (TAC and PAC). Based on the results of these TMs and a Public Open House, as well as public presentations in the Spring of 2004, Stage 2 of this Lakelse Lake/ Jackpine Flats LWMP will be addressing several issues.

A summary report of Stage 2, the Technical Memoranda and the Ministry's water sampling program can be found on the Regional District website at www.rdks.bc.ca.

For the complete study area, the Stage 2 action items include:

- Assist the Ministry of Environment in investigating the source of the fecal contamination (DNA testing).
- Compare current water levels to historical records to determine if observations of higher water levels are valid and suggest potential impact on the water quality parameters.
- Review of the current zoning bylaws for the study area in light of a potential need to increase the minimum lot size to the 3000 m² range (from 1700 m²) to sustainably accommodate on-site septic tank disposal systems and control permitted uses.
- Investigate the development of a program to identify and map well and septic tank disposal field locations in order to avoid health problems due to groundwater contamination.

- Investigate procedures that will deal with non-compliant/failed septic systems to ensure that they will be brought back into compliance, either through replacement of the existing septic tank system, upgrading the level of treatment or connection to a "cluster"-type treatment system serving several homes.
- Investigate the development of an educational program regarding the location, construction, care and maintenance of septic tank systems and the protection of drinking water well heads from contamination.
- Investigate a water quality monitoring and data management program that can be used to track water quality in the study area in order to identify the need for either improved wastewater treatment or alternative water supply systems, as required.
- Investigate the need for an on-going septic tank monitoring and maintenance management program for existing and future septic tank systems in the study area.
- Further investigate the connection between *Elodea canadensis*, silt, iron and/or phosphorus and the potential need to limit phosphorus loadings to Lakelse Lake from septic tanks in the Lakelse Lake and Jackpine Flats areas.
- Further investigate alternative liquid waste management technologies, such as those used at lakefront properties in Ontario.

For the Lakelse Lake West area, the Stage 2 action items are:

- Investigate septic tank system floodplain and setback encroachments.
- Investigate wastewater treatment and disposal options for areas of Lakelse Lake

West that are encroaching on or are in the 1 in 200 year floodplain.

For the Lakelse Lake East area, the recommendations are:

- Investigate septic tank system floodplain and setback encroachments.
- Further investigate on-site versus cluster wastewater treatment options.
- Further investigate potable water supply options if required, as well as the alternative of supplying residents with a bottled water service.
- Complete the investigation of the water/wastewater treatment situation in the Provincial Park campground.
- Investigation of the opportunities to partner with private establishments and/or the Provincial Park in any potential water supply and/or wastewater treatment developments on the east side of Lakelse Lake.

For the Jackpine Flats area, the Stage 2 action items include:

- Review the current septic tank disposal field trench design to confirm its effectiveness in slowing the natural percolation rates and providing adequate treatment.
- Develop a viable strategy to deal with the older "grandfathered" septic systems that do not have the "slow drain" disposal fields.
- Review the need for a community water system in the event that monitoring identifies groundwater contamination and retrofitting "grandfathered" septic systems would be too expensive to implement as a means of protecting the groundwater from fecal contamination.

The results of these tasks will be recorded in technical memoranda that will be reviewed by the TAC and PAC committees. Once a draft Stage 2 report has been developed and reviewed, it will be presented to the public in early 2006 at a Public Information meeting.

Bacterial Source Tracking

The BC Ministry of Environment (formerly Ministry of Water, Land and Air Protection) has been sampling surface waters at Lakelse Lake for nutrients and bacterial pathogens such as *E. coli*. The species from which these pathogens originate is presently unknown. Speculation is that they could be any of a number sources such as human, beaver or waterfowl, or a combination of sources.

To address this concern and to assist with developing good management practices to protect human and the natural environment, the Ministry entered into an agreement with the University of Victoria for a Bacterial Source Tracking Study. Fecal samples from local animals have been collected in order to develop a DNA library. This information will be compared with DNA of *E. Coli* found in water samples collected in the Lakelse area.

