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Technical Memorandum

DATE: May 1, 2013

TO: Adam Khong, 0915294 BC Ltd.
Andrew Sinclair, 0915294 BC Ltd.

CC: Chris Johnston, P.Eng., Kerr Wood Leidal Associates
Mark Burger, M.A.Sc., P.Eng., Kerr Wood Leidal Associates

FROM: Wayne Wong, M.A.Sc., P.Eng., PMP, Kerr Wood Leidal Associates

RE: **BULLOCK LAKE COTTAGES**
315 ROBINSON ROAD, SALT SPRING ISLAND, B.C.
Wastewater System Assessment
Our File 2963.008-300

1. Introduction

The purpose of this study is to specifically assess the existing wastewater system at Bullock Lake Cottages located at 315 Robinson Road on Salt Spring Island in British Columbia (the Property). It is noted that the current owner of the Property, 0915294 BC Ltd. c/o Platform Properties Ltd., intends to redevelop the Property in two phases. The owner will initially commission the wastewater system to a fully operational state to provide wastewater treatment and disposal for Phase 1 of the development after obtaining land use approvals and prior to occupancy of Phase 1. Phase 1 of the development currently has 50 completed cottages; however, the Property has not been open to the public and the wastewater system is thus presently dormant. There was originally a lodge and pool facility that has been destroyed by fire. It is noted that the strategy for redevelopment of the Property includes a smaller amenity building in Phase 1 as well as potential additional cottages in Phase 2 depending on the water and sanitary capacity. It is noted that there is a caretaker on site to maintain the Property.

The existing wastewater system consists of a sanitary sewer system which collects domestic sewage from the cottages and drains by gravity to a community septic tank effluent pumping (STEP) system (consisting of two septic tanks and two pumping stations). The septic tanks provide flow equalization as well as some preliminary treatment of the wastewater. Wastewater from the STEP system is pumped to the Upflow Sludge Blanket Filtration (USBF) wastewater treatment plant. The sanitary effluent from the wastewater treatment plant is disposed through pressurized ground disposal fields. An overview drawing of the sanitary system is attached as part of the permit PE-12875 in Appendix A.

2. Regulatory Requirements

Existing Discharge Permit

The existing Discharge Permit PE-12875 was issued by the BC Ministry of Environment, Lands and Parks in 1996. This permit was for authorization to discharge effluent from a 123 unit resort condominium development with a maximum discharge rate of 95 m^3/d with effluent discharge not to exceed 10:10 mg/L BOD_5 and TSS, 25 CFU/100 mL of fecal coliform, and 10 mg/L total nitrogen. The wastewater system is intended to produce a high-quality municipal effluent resulting from advanced treatment including disinfection and nitrogen reduction.

The authorized works are for a sewage treatment plant, disinfection facilities, and two ground disposal field areas. A copy of this permit is attached in Appendix A.

The discharge permit was issued in 1996 to the original owner of the Property at 315 Robinson Road. It is noted that the Ministry of Environment has subsequently authorized an amendment of the permit to transfer the ownership of the permit to 0915294 BC Ltd. The conditions of the permit have been confirmed by the Ministry of Environment to remain valid and in effect for the Property.

0915294 BC Ltd. is conducting ongoing sampling of the receiving environment to establish a baseline of the water quality in Bullock Lake, as required by the BC Ministry of Environment prior to effluent discharge.

3. Wastewater Flows and Loads

Wastewater Flows

Indoor Usage

The BC Sewerage System Standard Practice Manual (SPM) states that for 1 and 2 bedroom residences up to 1,600 ft^2, the daily design wastewater flow rate should be 1,136 L/residence. According to the SPM, for 50 residences, this would equate to 56.8 m^3/d. However, the cottages at 315 Robinson Road are considered non-permanent secondary residences. Furthermore, water conservation measures will be implemented. Estimating the base sanitary flow using the SPM method would result in a significant over-estimation. To provide a more accurate estimate of the base sanitary flow, an alternate method was used, based on an estimate of the per-capita wastewater flow using a fixture count for the cottages.

The per-capita demand was estimated based on the fixtures within each cottage unit. High efficiency fixtures are installed throughout the cottages for faucets, toilets, and showers, and high efficiency clothes washing machines are planned. There will be no dishwashers in any of the cottages. An estimate of the per-capita demand of 155 L/cap/day was developed for the cottages in KWL technical memo "Development Water Demands and Sustainable Well Yield" dated May 1, 2013, with the assumption of 3 people per cottage during peak occupancy. 100% of the cottages are assumed to be in use during peak occupancy. The estimated peak daily flow from the 50 cottages is thus 23.3 m^3/d.

Amenity Building

Peak daily wastewater flow rate from the amenity building is estimated to be 4.5 m^3/d based on a maximum capacity of 150 people, with 30 L/person/d allowance for water use based on meal service with toilet flushing assumed to be via reclaimed water through a purple pipe system. This compares well with the 30 L/person/d allowance in the SPM for banquet rooms.

Inflow and Infiltration

Variation in I&I rates within a 24-hour period is expected to be highly influenced by rainfall dependent inflow and infiltration (RDI&I), whereas the influence is more gradual with groundwater dependent inflow and infiltration (GWDI&I). In reviewing the local rainfall records from KWL FlowWorks and from historical climate data from Environment Canada, there appears to be a weak correlation between rainfall and I&I at the Property.

This weak correlation between rainfall and I&I suggests that the influence of RDI&I on the total I&I rate is small compared to GWDI&I. From the available historical data, the maximum I&I volume collected was 48 m^3 over a three-day period, with a daily average of 16 m^3/d. Since the serviced area is assumed to be 2.5 ha, the I&I rate for the Property is thus estimated to be 6,400 L/ha/d.

Phase 1 of the development is anticipated to have an estimated service area of 1.1 ha. Thus, the estimated I&I flow from Phase 1 of the development is 7 m^3/d, using the unit rate of 6,400 L/ha/d. It is noted that the wastewater collection system for both Phase 1 and 2 is generally in place in the ground. However, for Phase 1 of the redevelopment, it is understood that the collection system for Phase 2 will be physically disconnected such that I&I will be limited to the Phase 1 serviced area.

Inflow and infiltration will tend to increase over time as the age of the sewer pipe infrastructure increases. However, reduction in the inflow and infiltration rate can be achieved through regular inspection (such as closed-caption television inspection) combined with implementation of a regular maintenance program for the collection system.

Based on the foregoing, the estimated daily wastewater flow rate at the Property for Phase 1 is summarized in Table 1 below. The average daily flow rate for the 50 cottages and amenity building was developed from the projected average daily water demand as presented in the KWL technical memo "Development Water Demands and Sustainable Well Yield" dated May 1, 2013.

Table 1: Peak Daily Wastewater Flow Rate Estimate

Description	Average Daily Flow	Peak Daily Flow
Indoor Usage – Cottages	10.5 m^3/d	23.3 m^3/d
Amenity Building Usage		4.5 m^3/d
Inflow and Infiltration	7 m^3/d	7 m^3/d
Sub-total	**17.5 m^3/d**	**34.8 m^3/d**
Note: Maximum permitted effluent discharge according to permit PE- 12875 is 95 m^3/d.		

Of significance, the estimated peak wastewater flow rate is less than the maximum authorized discharge rate stipulated in Discharge Permit PE-12875 and meets the permit requirements in terms of flow quantity. It is recommended that a flow monitoring program is implemented to review the wastewater flow estimate and to refine the flow estimates at that time with monitoring data.

Wastewater Loading

An estimate of the influent loading from the 50 cottages and amenity building is presented in Table 2. Note that the addition of inflow and infiltration to the total flow will increase the hydraulic loading of wastewater but the mass loading of wastewater constituents will be based on the peak daily sanitary flow of 27.8 m^3/d from the 50 cottages and amenity building.

Table 2: Wastewater Loading Estimate

Parameter	Influent Concentration Before Treatment (1)	Influent Mass Loading to WWTP Before Treatment	Permit Requirements for Effluent Concentration	Effluent Concentration After Treatment	Effluent Mass Loading From WWTP After Treatment
BOD_5	300 mg/L	8.3 kg/d	<10 mg/L	<10 mg/L	<0.3 kg/d
Total Suspended Solids	300 mg/L	8.3 kg/d	<10 mg/L	<10 mg/L	<0.3 kg/d
Fecal Coliform	10^4 - 10^6 CFU/100 mL	N/A	<25 CFU/100 mL	<25 CFU/100 mL	N/A
Total Nitrogen	50 mg/L	1.4 kg/d	<10 mg/L	<10 mg/L	<0.3 kg/d
Total Phosphorus	10 mg/L (2)	0.3 kg/d	No requirements	<4 mg/L (3)	<0.1 kg/d

Notes:
1. The Influent concentration refers to the estimated concentration of pollutants in the collected domestic wastewater and excludes any dilution due to inflow and infiltration.
2. Assumed influent concentration of 10 mg/L based on typical domestic wastewater (Source: Metcalf and Eddy, 4th Ed.).
3. Although there are no permit requirements for total phosphorus, it is anticipated that the existing wastewater treatment system can provide an estimated 55-60% of phosphorus removal via the treatment process and soil uptake once the effluent is discharged from the tile field.

The advanced secondary wastewater treatment provided by the USBF system is expected to provide adequate treatment of the wastewater to meet the permit requirements. The expected effluent loading based on the permit requirements is also shown in Table 2.

4. Wastewater Treatment and Disposal

The wastewater treatment plant consists of a USBF system with anoxic, aeration, and sludge holding tanks that collectively provide secondary treatment. An ultraviolet (UV) system is included which provides disinfection of the effluent. Sand filters are included that provide polishing of the effluent to meet the discharge permit requirements. This treatment system can generally be classified as an advanced secondary wastewater system and produces a high quality effluent that can be categorized as similar to a Class 'A' municipal wastewater effluent. Of interest, Class A municipal wastewater is considered acceptable for discharge through non-potable water systems such as purple pipe systems. It is anticipated that the toilet fixtures in the new amenity building and newly constructed buildings in Phase 2 will use this non-potable water by way of a purple pipe system.

It is noted that the waste biosolids from the USBF treatment system will be stored in a sludge holding tank and will require periodic pumping out for final disposal.

Effluent disposal is to ground through a tile field system. The tile field disperses the effluent into the soil, and the soil provides some additional physical, chemical, and biological treatment of the effluent.

AquaTerra Consultants completed a hydrogeological assessment in January 1996 which reviewed available data on nitrogen and phosphorus discharge into Bullock Lake. AquaTerra concluded that "...tertiary level treatment systems that utilize nitrogen and phosphorus reduction devices are predicted to result in an immeasurable increase of the concentrations of these compounds and should be in place." The wastewater treatment processes

and effluent ground disposal system will work together to minimize the amount of nitrogen and phosphorus discharged into the receiving environment.

It is anticipated that a comprehensive design review of the wastewater collection, treatment, and disposal systems will be conducted prior to operation in order to ensure the requirements stipulated by the BC Ministry of Environment for wastewater treatment and disposal are met.

5. Conclusions and Recommendations

1. An estimate of the wastewater flows, including peak sanitary flow from 50 cottages, peak sanitary flow from a proposed amenity building, and an allowance for inflow and infiltration is 34.8 m^3/d.
2. Of significance, the estimated wastewater flow rate in Phase 1 is under the maximum authorized discharge rate stipulated in Discharge Permit PE-12875. It is recommended that a flow monitoring program is implemented prior to occupancy to review the wastewater flow estimate and to refine the estimates with real data after land use approval is obtained.
3. The wastewater treatment plant consists of a USBF system with anoxic, aeration, and sludge holding tanks that collectively provide secondary treatment. An ultraviolet (UV) system is included which provides disinfection of the effluent. Sand filters are included that provide polishing of the effluent to meet the discharge permit requirements. This treatment system can generally be classified as an advanced secondary wastewater system and produces a high quality effluent that can be categorized as similar to a Class 'A' municipal wastewater effluent.
4. Effluent disposal is to ground through a tile field system. The tile field disperses the effluent into the soil, and the soil provides additional physical, chemical, and biological treatment of the effluent.
5. AquaTerra Consultants completed a hydrogeological assessment in January 1996 which reviewed available data on nitrogen and phosphorus discharge into Bullock Lake. AquaTerra concluded that "...tertiary level treatment systems that utilize nitrogen and phosphorus reduction devices are predicted to result in an immeasurable increase of the concentrations of these compounds and should be in place." The wastewater treatment processes and effluent ground disposal system will work together to minimize the amount of nitrogen and phosphorus discharged into the receiving environment.
6. A comprehensive design review of the wastewater collection, treatment, and disposal systems will be conducted prior to operation in order to satisfy the requirements stipulated by the BC Ministry of Environment.

KERR WOOD LEIDAL ASSOCIATES LTD.

Prepared by:

May 1, 2013

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
W. T. WONG
36503

Wayne Wong, M.A.Sc., P.Eng., PMP
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Reviewed by:

May 1, 2013

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WW/am
Encl.

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Revision History

Revision #	Date	Status	Revision	Author
0	Jan. 22, 2013	Draft	Draft Report	WW
1	Apr.16, 2013	Draft	Revised Draft Report	WW
2	Apr.29, 2013	Draft	Revised Draft Report	WW
3	May.1, 2013	Final	Final Report	WW

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Province of
British Columbia

MINISTRY OF
ENVIRONMENT,
LANDS AND PARKS

BC Environment

Vancouver Island Region
Environmental Protection
2569 Kenworth Road
Nanaimo, British Columbia
V9T 4P7
Telephone: (604) 751-3100
Fax: (604) 751-3103

Date: AUG 21 1996

File: PE-12875

REGISTERED MAIL

Saltspring Island Village Resort Inc.
8th Fl 1285 Broadway W
Vancouver BC V6H 3X8

Dear Permittee:

Enclosed is Permit PE-12875 issued under the provisions of the *Waste Management Act.* Your attention is respectfully directed to the conditions outlined in the permit. An annual permit fee will be determined according to the Waste Management Permit Fees Regulation.

This permit does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority shall rest with the permittee. This permit is issued pursuant to the provisions of the Waste Management Act to ensure compliance with Section 34(3) of that statute, which makes it an offence to discharge waste without proper authorization. It is also the responsibility of the permittee to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This permit may be appealed by persons who consider themselves aggrieved by this decision in accordance with Part 5 of the Waste Management Act. Written notice of intent to appeal must be received by the Regional Waste Manager within twenty-one (21) days.

This permit has been issued with the understanding that at the completion of any appeal proceedings and upon the establishment of the Saltspring Island Village Resort Inc. as a local service area for sewers by the Capital Regional District, the permit will be transferred to the Capital Regional District in accordance with subsection 2.16 of the permit. Failure to effect this transfer before discharge commences or by a date agreed to by the Regional Waste Manager, may result in amendments to the authorized rate of discharge and/or the authorized works.

Administration of this permit will be carried out by staff from our Regional office located at 2569 Kenworth Road, Nanaimo, British Columbia, V9T 4P7 (telephone

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751-3100). Plans, data and reports pertinent to the permit are to be submitted to the Regional Waste Manager at this address.

Yours truly,

J. O. Finnie, P.Eng.
Assistant Regional Waste Manager
Vancouver Island Region

Enclosure

PROVINCE OF
BRITISH COLUMBIA

Environmental Protection
2569 Kenworth Road
Nanaimo
British Columbia, V9T 4P7
Telephone: (604) 751-3100

MINISTRY OF ENVIRONMENT,
LANDS AND PARKS

PERMIT
PE-12875

Under the Provisions of the Waste Management Act

Saltspring Island Village Resort Inc.

8th Floor, 1285 West Broadway

Vancouver, British Columbia

V6H 3X8

is authorized to discharge effluent to the land from a resort condominium development located near Ganges, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the Waste Management Act and may result in prosecution.

1. AUTHORIZED DISCHARGES

1.1 This subsection applies to the discharge of effluent from a **123 UNIT RESORT CONDOMINIUM DEVELOPMENT**. The site reference number for this discharge is E223522.

1.1.1 The maximum authorized rate of discharge is 95 m^3/d.

1.1.2 The characteristics of the discharge shall not exceed:

5-Day Biochemical Oxygen Demand	-	10 mg/L
Total Suspended Solids	-	10 mg/L
Fecal Coliform	-	25 CFU/100 mL
Total Nitrogen	-	10 mg/L

1.1.3 The authorized works are a sewage treatment plant, disinfection facilities, two ground disposal field areas each having the capacity for 1050 m of disposal pipe, two ground disposal fields each having 577 m of disposal pipe, groundwater intercepter cutoff and infiltration trenches, treated wastewater recycling facilities for toilet flushing, and related appurtenances approximately located as shown on attached Site Plan A.

Date Issued: AUG 2 1 1996
Date Amended:
(most recent)

J.O. Finnie, P. Eng.
Assistant Regional Waste Manager

1.1.4 The authorized works must be complete and in operation when discharge commences.

1.1.5 The location of the facilities from which the discharge originates and the location of the point of discharge is Lots 1-5, Section 7, Range 3, East North Saltspring Island, Cowichan District, Plan VIP 52850.

2. GENERAL REQUIREMENTS

2.1 Maintenance of Works

The permittee shall inspect the pollution control works regularly and maintain them in good working order. Notify the Regional Waste Manager of any malfunction of these works.

2.2 Emergency Procedures

In the event of an emergency or condition beyond the control of the permittee which prevents continuing operation of the approved method of pollution control, the permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

2.3 Bypasses

The discharge of effluent which has bypassed the designated treatment works is prohibited unless the approval of the Regional Waste Manager is obtained and confirmed in writing.

2.4 Process Modifications

The permittee shall notify the Regional Waste Manager prior to implementing changes to any process that may affect the quality and/or quantity of the discharge.

2.5 Groundwater Observation Facilities

The permittee shall install observation ports on at least two drainage pipe runs in each ground disposal field. The number, location and structural details of these facilities require the approval of the Regional Waste Manager.

J.O. Finnie, P. Eng.
Assistant Regional Waste Manager

2.6 Sludge Wasting and Disposal

Sludge wasted from the treatment plant shall be disposed of to a site and in a manner approved by the Regional Waste Manager.

2.7 Ground Disposal Field Operation

The permittee shall alternate the use of the ground disposal fields. The alternating period requires the approval of the Regional Waste Manager.

2.8 Standby Facilities

The permittee shall set aside a standby area equivalent to 50% of the total authorized ground disposal field area. The standby area is to be held in reserve for future use as a ground disposal field and is to be maintained free of any permanent structures.

2.9 Effluent Surfacing Prevention

The permittee shall prevent the surfacing of effluent between the disposal field and Bullock Lake.

2.10 Plans - New Works

Plans and specifications of the works authorized in Subsection 1.1.3 shall be submitted to the Regional Waste Manager and the manager's approval obtained before construction commences. The works shall be constructed in accordance with such plans.

2.11 Posting of Security

The permittee shall post security with the Minister of Finance and Corporate Relations in the amount of $150,000 in a form acceptable to the Regional Waste Manager prior to commencing discharge. The security may be applied at the discretion of the Regional Waste Manager under the provisions of the Waste Management Act to correct any inadequacy of the works as it relates to their construction, operation and maintenance.

J.O. Finnie, P. Eng.
Assistant Regional Waste Manager

The permittee may request the return of security provided title of the works has been transferred to a municipal authority, to be responsible as owners for the operation and maintenance of the said works. Granting of the request is at the discretion of the Regional Waste Manager. As a condition of transfer of the title of the works, the municipal authority may require that a portion or all of the security be retained for a period of time.

2.12 Public Education

The permittee shall prepare a report with information on the following:

(a) The authorized works and related appurtenances;

(b) the requirements of this permit;

(c) why water conserving devices are required and why garburaters, dishwashers, and in-suite laundry facilities are prohibited in the development;

(d) a source control program which includes descriptions of the deleterious effects of household hazardous waste (hhw) on the treatment works and the receiving environment, what alternatives are available for use in place of hhw, and recommended methods of hhw management.

The report shall be submitted to the Regional Waste Manager before discharge commences, for approval, and a copy of the approved report shall be provided to each member of the development.

2.13 Contingency Plan

The permittee shall develop and maintain an up to date contingency plan outlining actions to be taken in the event of an emergency including, but not restricted to, a spill, surfacing of effluent, failure of the treatment works, or power outage. The contingency plan shall be submitted to the Regional Waste Manager before discharge commences.

All spills to the environment (as defined in the spill Reporting Regulation) shall be reported immediately in accordance with the Spill Reporting Regulation. Notification shall be via the Provincial Emergency Program.

2.14 Effluent Upgrading

Based on receiving environment monitoring data and/or other information obtained in connection with this discharge, the permittee may be required to provide additional treatment facilities.

2.15 Sewer Connection

The discharge authorized by Subsection 1.1 of this permit is subject to connection to a municipal sewerage system when such facilities become available.

2.16 Permit Transfer

Subject to the approval of the Regional Waste Manager, the permittee shall, if requested by a municipal authority, transfer any or all of the following to the municipal authority:

(a) The responsibility for operation and maintenance of the authorized works and related appurtenances;

(b) title of the authorized works and related appurtenances, and the land on which they are located;

(c) this permit.

2.17 Facility Classification and Operator Certification

The permittee shall have the works authorized by this permit classified (and the classification shall be maintained) by the "Environmental Operators Certification Program Society" (Society). The works shall be operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Regional Waste Manager. In addition, the Regional Waste Manager shall be notified of the classification level of the facility and certification level of the operators, and changes of operators and/or operator certification levels within 30 days of any change.

Alternatively, the works authorized by this permit shall be operated and maintained by persons who the permittee can demonstrate to the satisfaction of the Director, are qualified in the safe and proper operation of the facility for the protection of the environment.

Date Issued: AUG 21 1996
Date Amended:
(most recent)

J.O. Finnie, P. Eng.
Assistant Regional Waste Manager

2.18 Stormwater Management

For the design and construction of the development, it is recommended that the Permittee adopt best management practices for stormwater runoff. The Permittee is directed to the publication "Urban Runoff Quality Control Guidelines for British Columbia," June 1992, in the regard. Copies of this publication are available from the Municipal Waste Reduction Branch, Environmental Protection Division, BC Environment, 4th Floor, 777 Broughton Street, Victoria, British Columbia, V8V 1X4.

3. MONITORING AND REPORTING REQUIREMENTS

3.1 Discharge Monitoring

3.1.1 Flow Measurement

Provide and maintain a suitable flow measuring device and record once per month the effluent volume discharged over a 24-hour period.

3.1.2 Sampling and Analysis

The permittee shall install a suitable sampling facility and obtain a grab sample of the effluent once per month for the first year of discharge and once every three months thereafter.

Obtain analyses of the sample for the following:

5-Day Biochemical Oxygen Demand
Total Suspended Solids
Total Nitrogen
Fecal Coliform Bacteria

3.2 Receiving Environment Monitoring

Commencing at least one year prior to the start of discharge, a receiving environment monitoring program shall be carried out by the permittee. The program shall consist of quarterly sampling for pH, specific conductance, total nitrogen, nitrate nitrogen (as N), and fecal coliform bacteria at the following locations:

(a) Resort Wells,

(b) Two groundwater wells located downgradient and in the same aquifer as the discharge.

(c) Surface water site as may be required by the Regional Waste Manager.

The specific groundwater sampling locations shall be established in consultation with the Regional Waste Manager. The structural details of the groundwater wells require the approval of the Regional Waste Manager.

3.3 Monitoring Procedures

3.3.1 Sampling and Analytical Procedures

Sampling and flow measurement shall be carried out in accordance with the procedures described in "Field Criteria for Sampling Effluents and Receiving Waters", April 1989, or by suitable alternative procedures as authorized by the Regional Waste Manager.

Copies of the above manual are available from the Environmental Protection Division, Ministry of Environment, Lands and Parks, 777 Broughton Street, Victoria, British Columbia, V8V 1X4, at a cost of $20, and are also available for inspection at all Environmental Protection offices.

Analyses are to be carried out in accordance with procedures described in the latest version of "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials (March 1994 Permittee Edition)", or by suitable alternative procedures as authorized by the Regional Waste Manager.

Date Issued: AUG 2 1 1996
Date Amended:
(most recent)

J.O. Finnie, P. Eng.
Assistant Regional Waste Manager

Copies of the above manual may be purchased from Queens Printer Publications Centre, 2nd Floor, 563 Superior Street, Victoria, British Columbia, V8V 4R6 (1-800-663-6105). A copy of the manual is also available for inspection at all Environmental Protection offices.

3.4 Reporting

Maintain data of analyses and flow measurements for inspection and every three months submit the data, suitably tabulated, to the Regional Waste Manager for the previous quarter.

Based on the results of the monitoring program, the permittee monitoring requirements may be extended or altered by the Regional Waste Manager.

AUG 2 1 1996

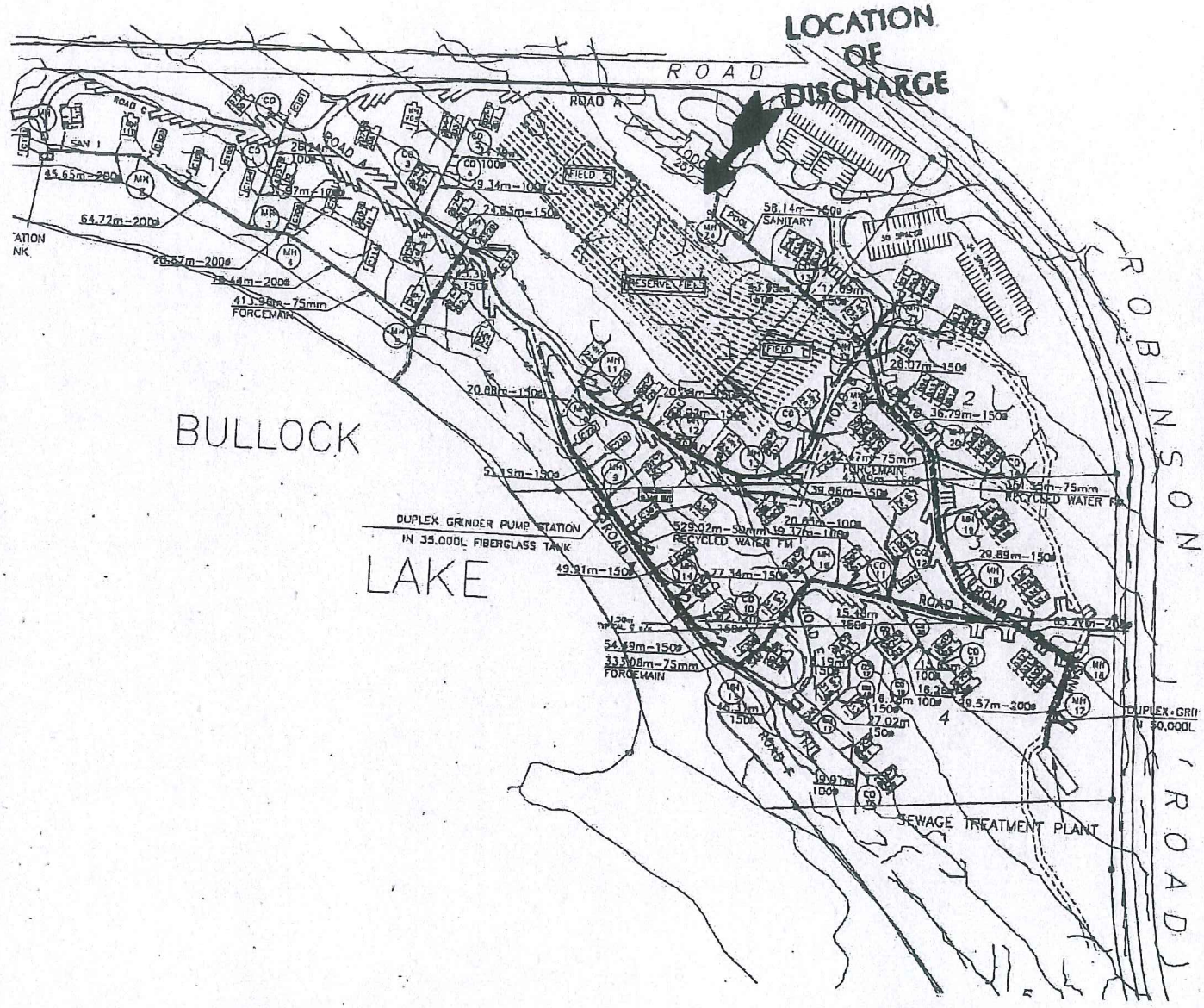
Date Issued:
Date Amended:
(most recent)

J.O. Finnie, P. Eng.
Assistant Regional Waste Manager

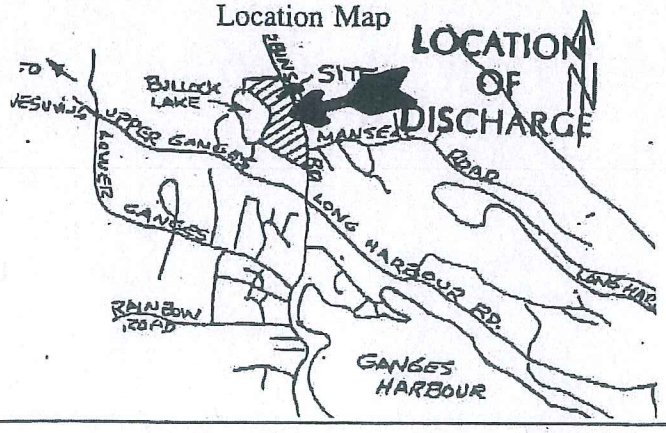
PROVINCE OF
BRITISH COLUMBIA

Environmental Protection

SITE PLAN A



Location Map



Scale: N.T.S.

Permit: PE12875

Date: AUG 21 1996

J.O. Finnie, P.Eng.
Assistant Regional Waste Manager