STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAWN R. GALLAGHER
COMMISSIONER

John Lowell
Vacationland Development, Inc.
Little Ponderosa Campground
157 Wiscasset Road
Boothbay, ME 04537

May 11, 2005

RE: Permit Compliance System Tracking Number # MEU503240
Maine Waste Discharge License (WDL) Application # W003240-5J-C-R
Final License

Dear Mr. Lowell:

Enclosed please find a copy of your **final** Maine WDL which was approved by the Department of Environmental Protection. Please read the license and its attached conditions carefully. You must follow the conditions in the order to satisfy the requirements of law. Any discharge not receiving adequate treatment is in violation of State Law and is subject to enforcement action.

Any interested person aggrieved by a Department determination made pursuant to applicable regulations, may appeal the decision following the procedures described in the attached DEP FACT SHEET entitled "*Appealing a Commissioner's Licensing Decision.*"

We would like to make you aware of the fact that your monthly Discharge Monitoring Reports (DMR) may not reflect the revisions in this permitting action for several months however, you are required to report applicable test results for parameters required by this permitting action that do not appear on the DMR. Please see the attached April 2003 O&M Newsletter article regarding this matter. If you have any questions regarding the matter, please feel free to call me at 287-7658.

Sincerely,

David Silver
Division of Water Resource Regulation
Bureau of Land and Water Quality

Enc. Denise Behr, DEP/CMRO
Dave Webster, USEPA
Chris Higgins, Pollution Abatement Svcs, POB 879, Boothbay Harbor ME 04538

WDS:W003240

DMR Lag

(reprinted from April 2003 O&M Newsletter)

When the Department renews discharge permits, the parameter limits may change or parameters may be added or deleted. In some cases, it is merely the replacement of the federally issued NPDES permit with a state-issued MEPDES permit that results in different limits. When the new permit is finalized, a copy of the permit is passed to our data entry staff for coding into EPA's Permits Compliance System (PCS) database. PCS was developed in the 1970's and is not user-friendly. Entering or changing parameters can take weeks or even months. This can create a lag between the time your new permit becomes effective and the new permit limits appearing on your DMRs. If you are faced with this, it can create three different situations that have to be dealt with in different ways.

1. If the parameter was included on previous DMRs, but only the limit was changed, there will be a space for the data. Please go ahead and enter it. When the changes are made to PCS, the program will have the data and compare it to the new limit.

2. When a parameter is eliminated from monitoring in your new permit, but there is a delay in changing the DMR, you will have a space on the DMR that needs to be filled. For a parameter that has been eliminated, please enter the space on the DMR for that parameter only with "NODI-9" (No Discharge Indicator Code #9). This code means monitoring is conditional or not required this monitoring period.

3. When your new permit includes parameters for which monitoring was not previously required, and coding has not caught up on the DMRs, there will not be any space on the DMR identified for those parameters. In that case, please fill out an extra sheet of paper with the facility name and permit number, along with all of the information normally required for each parameter (parameter code, data, frequency of analysis, sample type, and number of exceedances). Each data point should be identified as monthly average, weekly average, daily max, etc. and the units of measurement such as mg/L or lb/day. Staple the extra sheet to the DMR so that the extra data stays with the DMR form. Our data entry staff cannot enter the data for the new parameters until the PCS coding catches up. When the PCS coding does catch up, our data entry staff will have the data right at hand to do the entry without having to take the extra time to seek it from your inspector or from you.

EPA is planning significant improvements for the PCS system that will be implemented in the next few years. These improvements should allow us to issue modified permits and DMRs concurrently. Until then we appreciate your assistance and patience in this effort.

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER

IN THE MATTER OF

VACATIONLAND DEVELOPMENT, INC.	)	PROTECTION AND IMPROVEMENT
BOOTHBAY, LINCOLN COUNTY, MAINE	)	OF WATERS
SURFACE WASTEWATER DISPOSAL SYSTEM	)	
#MEU503240	)	WASTE DISCHARGE LICENSE
#W003240-5J-C-R **APPROVAL**	)	**RENEWAL**

Pursuant to the provisions of 38 M.R.S.A., Section 414-A et seq., and applicable regulations, the Department of Environmental Protection (Department) has considered the application of the VACATIONLAND DEVELOPMENT, INC. ("Vacationland") with its supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

APPLICATION SUMMARY

The applicant has applied for a renewal of Waste Discharge License (WDL) #W003240-5J-B-R, which was issued on February 29, 2000 and expired on March 1, 2005. The application is for the continuing operation of a spray irrigation wastewater disposal system on a 132,400 square foot site for the treatment and seasonal disposal of sanitary wastewater, generated at a rate of 5,200 gallons per day from the Little Ponderosa Campground in Boothbay, Maine.

RENEWAL SUMMARY

The facility has been assigned number MEU503240 for license compliance tracking purposes in the Department's Permit Compliance System (PCS).

The most significant conditions imposed by this licensing action include:

1. Revising limitations and monitoring requirements for the spray fields along with certain operational constraints in order to provide consistency across similar facilities licensed by the Department;
2. Requiring the submittal of a Spray-Irrigation Performance Report as an exhibit to the application for license renewal.
3. Requiring the licensee to develop and/or maintain an up-to-date Operational and Maintenance Plan.
4. Requiring the installation of signage around the perimeter of the lagoon and spray irrigation sites.
5. Limiting the spray irrigation season to a time frame of April 15 – November 15 of each year.

CONCLUSIONS

BASED on the findings in the attached Fact Sheet dated February 28, 2005, and subject to the Conditions listed below, the Department makes the following conclusions:

1. The discharge, either by itself or in combination with other discharges, will not lower the quality of any classified body of water below such classification.

2. The discharge, either by itself or in combination with other discharges, will not lower the quality of any unclassified body of water below the classification which the Department expects to adopt in accordance with state law.

3. The provisions of the State's antidegradation policy, 38 MRSA Section 464(4)(F), will be met, in that:

   (a) Existing water uses and the level of water quality necessary to protect and maintain those existing uses will be maintained and protected;

   (b) Where high quality waters of the State constitute an outstanding national resource, that water quality will be maintained and protected;

   (c) The standards of classification of the receiving water body are met or, where the standards of classification of the receiving water body are not met, the discharge will not cause or contribute to the failure of the water body to meet the standards of classification;

   (d) Where the actual quality of any classified receiving water body exceeds the minimum standards of the next highest classification, that higher water quality will be maintained and protected; and

   (e) Where a discharge will result in lowering the existing quality of any water body, the Department has made the finding, following opportunity for public participation, that this action is necessary to achieve important economic or social benefits to the State.

4. The discharge will be subject to effluent limitations that require application of best practicable treatment.

ACTION

THEREFORE, the Department APPROVES the above noted application of VACATIONLAND DEVELOPMENT, INC. AKA LITTLE PONDEROSA CAMPGROUND to operate a surface wastewater disposal system, SUBJECT TO THE FOLLOWING CONDITIONS, and all applicable standards and regulations including:

1. Standard Conditions of Industrial Waste Discharge Licenses (Revised August 14, 1996), copy attached.

2. The attached Special Conditions, including effluent limitations and monitoring requirements.

3. This license expires five (5) years from the date of signature below.

DONE AND DATED AT AUGUSTA, MAINE, THIS 12th DAY OF May, 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____ for
Dawn Gallagher, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: December 28, 2004

Date of application acceptance: December 28, 2004

FILED
MAY 17 2005
BOARD OF ENVIRONMENTAL PROT.
STATE OF MAINE

Date filed with Board of Environmental Protection _____

This Order prepared by David Silver, BUREAU OF LAND & WATER QUALITY

Small Spray Temp Wood.doc; Vacationland 10MAY05

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning the effective date of the license and lasting through the license expiration date, the licensee is authorized to operate a surface waste water treatment and disposal system. The **LAGOON MONITORING (OUTFALL #001)** (1) shall be limited and monitored as specified below.

	Daily Maximum as specified	**Minimum Measurement Frequency** As specified	**Sample Type** as specified
Lagoon Influent Quantity (Flow—Total Gallons)	Report, Gallons	Continuous	Measure
[82220]	*[80]*	*[99/99]*	*[MS]*
Biochemical Oxygen Demand (Lagoon Effluent)	100 mg/L	2/Year(2)	Grab
[00310]	*[19]*	*[02/YR]*	*[GR]*
Total Suspended Solids (Lagoon Effluent)	100 mg/L	2/Year(2)	Grab
[00530]	*[19]*	*[02/YR]*	*[GR]*
Specific Conductance **(sampling to occur during the months of May thru October only)**	Report (umhos/cm)	1/Month(2)	Grab
[00950]	*[11]*	*[01/30]*	*[GR]*
Chloride (Total) **(sampling to occur during the months of May, August, and October only)**	Report (mg/L)	1/Month(2)	Grab
[00940]	*[19]*	*[01/30]*	*[GR]*
Nitrate-Nitrogen (Lagoon Effluent)	Report mg/L	2/Year(2)	Grab
[00620]	*[19]*	*[02/YR]*	*[GR]*

The bracketed italicized numeric values in the table above are code numbers that the Department personnel utilize to code the monthly Discharge Monitoring Reports.

Footnotes: See page 7 of this License.

Note: Lagoon Influent Quantity shall be a report flow requirement and not a specific maximum value.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

2. Application of waste water to the land via a spray irrigation system shall be limited to the time frame of April 15th – November 15th of each year. The **SPRAY IRRIGATION AREAS (SA6, SA4, AND SA2)** shall be limited and monitored as specified below.

	Monthly Total as specified	**Weekly Average** as specified	**Daily Maximum** as specified	**Minimum Measurement Frequency** as specified	**Sample Type** as specified
Application Rate (Weekly) (4) *[51125]*	---	40,725 gal/acre/week(5) (1.5 in/acre/week) *[8B]*	---	1/Week *[01/07]*	Calculate *[CA]*
Flow - Total Gallons(3) *[82220]*	Report (Gallons) *[80]*	---	---	1/Month *[01/30]*	Calculate *[CA]*

The bracketed italicized numeric values in the table above are code numbers that the Department personnel utilize to code the monthly Discharge Monitoring Reports.

Footnotes: See page 7 of this License

Note: Spray Area SA2 has been discontinued and is no longer currently being used (however, the licensee request the opportunity to reactivate that spray area with prior notification to, and approval by the Department). Reporting of these parameters for spray area SA2 is not necessary unless the area is re-activated. The licensee shall notify the Department in the event that SA2 is intended to be used at least 30 days prior to the intended actual use. Discharge Monitoring Report (DMR) forms shall not be generated for SA2 unless the licensee notifies the Department of the intent to utilize the area. Submittal of the DMR forms for SA2 is not required at this time.

SPECIAL CONDITIONS

A. LIMITATIONS AND MONITORING REQUIREMENTS

3. During the period beginning the effective date of the license and lasting through the license expiration date, **GROUND WATER MONITORING WELLS; GWM-1 & GWM-2** shall be limited and monitored as follows:

Monitoring Parameters	**Daily Maximum as specified**	**Minimum Measurement Frequency as specified**	**Sample Type as specified**
Depth to Water Level Below Landsurface *[72019]*	Report (feet)[6] *[27]*	3/Year[7] *[03/YR]*	Measure *[MS]*
Nitrate-Nitrogen *[00620]*	10 mg/L *[19]*	2/Year[8] [02/YR]	Grab *[GR]*
Chloride (Total) *[00940]*	Report (mg/L) *[19]*	3/Year[8] *[03/YR]*	Grab *[GR]*
Specific Conductance *[00095]*	Report (umhos/cm) *[11]*	1/Month[8] *[01/30]*	Grab *[GR]*
Temperature (°F) *[00011]*	Report (°F) *[15]*	2/Year[8] [02/YR]	Grab *[GR]*
pH (Standard Units) *[00400]*	Report (S.U.) *[12]*	2/Year[8] [02/YR]	Grab *[GR]*
Total Suspended Solids *[00530]*	Report (mg/L) *[19]*	2/Year[8] *[02/YR]*	Grab *[GR]*
Inorganics (Total): Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc *[01002, 01027, 01034, 01042, 01051, 71900, 01067, 01092]*	Report ug/L *[28]*	1/5 Years[8] *[01/5Y]*	Grab *[GR]*

FOOTNOTES: - See page 7 of this license.

Notes: Specific Conductance shall be sampled 1/Month during May through October. Chloride shall be sampled 3/Year during May, August, and October.

SPECIAL CONDITIONS
A. LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

Footnotes – [Special Condition A(1), A(2) & A(3)]

Lagoon Effluent

1. Lagoon effluent shall be sampled (sampling location is the sampling port on the effluent pipe leading from the lagoon pumphouse to the spray irrigation area) and shall be representative of what is actually sprayed on the fields. Any change in sampling location must be approved by the Department in writing. Sampling and analysis must be conducted in accordance with; (a) methods approved by 40 Code of Federal Regulations (CFR) Part 136, (b) alternative methods approved by the Department in accordance with the procedures in 40 CFR Part 136, or (c) as otherwise specified by the Department.

2. Lagoon effluent shall be sampled in the months of **July and August** of each calendar year for Biochemical Oxygen Demand, Total Suspended Solids, and Nitrate-Nitrogen. All sampling shall be done in accordance with approved methods for sampling, handling and preservation (see footnote #1), with the exception of **Specific Conductance** (which are sampled monthly **May thru October**) and **Chlorides** (which are sampled three times per year **in May, August, and October**). Specific Conductance (calibrated to 25 degree C or 77 degrees F) is typically considered to be a field parameter and is generally measured in the field via instrumentation (please refer to Fact Sheet page 6 for more information on when laboratory measurements may be used). The licensee **is** required to test for Specific Conductance and Chlorides whether wastewater was disposed of via the spray-irrigation system or not. Samples that are sent out for analysis shall be analyzed by a laboratory certified by the State of Maine's Department of Human Services. The licensee is not required to test for the Biochemical Oxygen Demand, Total Suspending Solids, and Nitrate-Nitrogen during a month where no waste water was disposed of via the spray irrigation system (except for Specific Conductance and Chlorides which are required to be sampled monthly in May thru October, and in May, August, and October, respectively).

3. The licensee shall estimate the flow of waste water to the irrigation area based upon the number of hours that the pump is operated per day (e.g., timer settings) and the maximum flow rate of the pump as determined by the manufacturer's pump curves. The methodology shall be checked for calibration at least once per calendar year.

Spray-Irrigation Fields

4. A field's daily or weekly application rate is the total gallons sprayed over the applicable period of time divided by the size of the wetted area of the spray-irrigation field in acres or the size in acres of that portion of the field utilized. Note: 27,152 gallons is equivalent to one inch-acre. Weekly is defined as Sunday through Saturday.

5. For Discharge Monitoring Report (DMR) reporting purposes, the licensee shall report the highest weekly application rate for the month in the applicable box on the form and the monthly total discharge. Compliance with weekly reporting requirements must be reported for the month in which the calendar week ends.

B. LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

Footnotes – [Special Condition A(1), A(2) & A(3)] (Cont'd)

Ground water Monitoring

6. Measured to the nearest one-tenth (1/10th) of a foot as referenced from the surface of the ground at the base of the monitoring well. GWM-2, the drinking water supply for the facility, does not need to be sampled for groundwater elevation as the level in the well will vary given pumping sequences.

7. Depth to water level below land surface shall be conducted in the months of **May, August, and October** of each calendar year.

8. **Groundwater sampling shall be conducted in the months of May and October** of each calendar year (except for (i) Specific Conductance and Chlorides—see page 6 for details, and (ii) inorganics testing which shall occur in the last year of the license and results shall be submitted as an attachment to an application for renewal of the WDL). Sampling, handling and preservation shall be conducted in accordance with federally approved methods (see footnote #1). Specific conductance (calibrated to 25.0° C) is considered to be a "field" parameter and is generally to be measured in the field via instrumentation (please see Fact Sheet page). The licensee is required to test for this parameter whether wastewater was disposed of via the spray-irrigation system or not. Specific Conductance values greater than 275 umhos/cm, consistent trends approaching 275 umhos/cm or sudden spikes from previous levels shall be reported immediately to the Department, and may necessitate the need for additional ground water testing requirements.

C. TREATMENT PLANT OPERATOR

This licensing action does not require wastewater treatment plant operator certification pursuant to the Department Water Quality Rules Chapter 531. However, the DEP would like to bring to the permittee's attention, that the DEP is proposing to undertake formal rule making to classify all waste water treatment plants and the qualifications for the operators.

D. MONITORING AND REPORTING

Monitoring results obtained during the previous month (**April through November**) shall be summarized for each month and reported on separate Discharge Monitoring Report (DMR) forms provided by the Department and **postmarked on or before the thirteenth (13th) day of the month or hand-delivered to the Department's Regional Office** such that the DMR's are **received by the Department on or before the fifteenth (15th) day of the month** following the completed reporting period. A signed copy of the DMR and all other reports required herein shall be submitted to the following address:

Bureau of Land and Water Quality
Department of Environmental Protection
State House Station #17
Augusta, Maine 04333

SPECIAL CONDITIONS

E. AUTHORIZED DISCHARGES

The licensee is authorized to discharge treated sanitary wastewater only in accordance with the terms and conditions of this license and only to the existing spray irrigation areas (#SA6, SA4, SA2) and from those sources as indicated in the Waste Discharge License Application. Discharge of waste water from any other location or from sources other than those indicated on said application requires formal modification of this license. The collection, treatment or discharge of waste water which has constituents unlike that or significantly higher in strength than that of domestic waste water is prohibited without formal modification of this license.

F. NARRATIVE EFFLUENT LIMITATIONS

1. The effluent shall not contain materials in concentrations or combination that would impair the uses designated by the classification of the groundwater.
2. The effluent must not lower the quality of any classified body of water below such classification, or lower the existing quality of any body of water if the existing quality is higher than the classification.

G. NOTIFICATION REQUIREMENT

In accordance with Standard Condition #6 of this license, the licensee shall notify the Department of the any substantial change in the volume or character of pollutants being introduced into the wastewater collection and treatment system. For the purposes of this section, notice regarding substantial change shall include information on:

(a) the quality and quantity of wastewater introduced to the wastewater collection and treatment system; and,

(b) any anticipated impact caused by the change in the quantity or quality of the wastewater to be discharged from the treatment system.

H. GENERAL OPERATIONAL CONSTRAINTS

1. All waste waters shall receive pretreatment through the properly designed, operated and maintained tanks and lagoon system prior to disposal via spray irrigation.
2. The spray irrigation facilities shall be effectively maintained and operated at all times so that there is no discharge to surface waters, nor any contamination of ground waters which will render them unsatisfactory for usage as a public drinking water supply.
3. The surface waste water disposal system shall not cause lowering of the quality of the ground water, below the State Primary and Secondary Drinking Water Standards specified in the Maine State Drinking Water Regulations pursuant to Maine Law 22 M.R.S.A. § 2611. In the event groundwater monitoring indicates adverse effects, the licensee may be required to take immediate remedial action(s), which may include but are not limited to, adjustment of the irrigation schedule or application rates, a reduction of the pollutant loading, or ceasing operation of the system until the ground water attains applicable standards.

SPECIAL CONDITIONS

H. GENERAL OPERATIONAL CONSTRAINTS (CONT'D)

4. The Department shall be notified as soon as the licensee becomes aware of any threat to public health, unlicensed discharge of wastewater, or any malfunction that threatens the proper operation of the system, and action taken to repair/correct, and prevent recurrence. Any such notification shall be made in accordance with the attached Standard Conditions #4 and 5 of this license.

5. The licensee shall maintain a file on the location of all system components and relevant features. Each component shall be mapped and field located sufficiently to allow adequate inspections and monitoring by both the licensee and the Department. Septic tanks shall be accessible for inspections and pumping. Risers shall be installed as necessary.

6. All system components including collection pipes, tanks, manholes, pumps, pumping stations, spray disposal fields, and monitoring wells shall be identified and referenced by a unique identifier (alphabetic, numeric or alpha-numeric) in all logs and reports.

I. SPRAY IRRIGATION OPERATIONAL CONSTRAINTS

1. Suitable vegetative cover shall be maintained. Waste water may not be applied to areas without sufficient vegetation or ground cover as to prevent erosion or surface water runoff outside the designated boundaries of the spray fields.

2. At least 10 inches of separation from the ground surface to the ground water table must be present prior to spraying.

3. There shall be no ponding within the spray area or runoff outside the designated spray field boundaries as a result of operation of the spray system.

4. No waste water shall be applied to the site following a rainfall accumulation exceeding 1.0 inches within the previous 24-hour period. **A rain gauge shall be located on site to monitor daily precipitation**. The licensee shall also manage application rates by taking into consideration the forecast for rain events in the 48-hour period in the future.

5. No waste water shall be applied where there is snow present on the surface of the ground.

6. No waste water shall be applied when there is frost within the upper 10 inches of the soil profile.

7. No traffic or equipment shall be allowed in the spray-irrigation field except where installation occurs or where normal operations and maintenance is performed.

SPECIAL CONDITIONS

S. GROUND WATER MONITORING WELLS AND WATER QUALITY MONITORING PLAN DETAILS

1. **By July 15, 2005 (PCS Event 22099), the licensee shall submit to the Department for review and approval a revised groundwater quality monitoring plan.** The licensee shall utilize the guidelines as outlined in an attachment to the Fact Sheet of this license entitled "Water Quality Monitoring Plan Details".
2. All monitoring wells shall be equipped with a cap and lock to limit access and shall be maintained in a secured state at all times.
3. The Department reserves the right to require increasing the depth and or relocating any of the groundwater monitoring well if the well is perennially dry or is determined not to be representative of groundwater conditions.

T. REOPENING OF PERMIT MODIFICATIONS

Upon evaluation of any required test results, results of inspections and/or reporting required by the Special Conditions of this licensing action, additional site specific or any other pertinent information or test results obtained during the term of this license, the Department may, at anytime and with notice to the licensee, modify this license to require additional monitoring, inspections and/or reporting based on the new information.

SPECIAL CONDITIONS

O. INSPECTIONS AND MAINTENANCE

The licensee shall periodically inspect all system components to ensure the facility is being operated and maintained in accordance with the design of the system. Maintenance logs shall be maintained for each major system component including pumps, pump stations, septic tanks, lagoons, spray apparatus, and pipes. At a minimum, the logs shall include the specific location of the maintenance, the date of maintenance, type of maintenance performed, names or person performing the maintenance, and other relevant system observations.

P. SUBMITTAL OF SPRAY IRRIGATION PERFORMANCE REPORT

As an exhibit to the next application for license renewal, the licensee shall submit to the Department a report of the treatment system's performance covering the previous four calendar years. (**PCS code 90199**). The report shall be dated and signed by the operator in responsible charge of the system.

The report shall include, but is not necessarily limited to, an updated source description, an updated schematic and narrative of the treatment system and distribution system, a soils monitoring report, a summary of the past performance demonstrating compliance with all terms and conditions of the effective license, a description of any proposed changes in the overall system or operation of the system, and if applicable, proposed changes in the effective license.

Q. OPERATIONS AND MAINTENANCE (O & M) PLAN AND SITE PLAN

This facility shall have a current written comprehensive Operation & Maintenance (O&M) Plan. The plan shall provide a systematic approach by which the licensee shall at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the licensee to achieve compliance with the conditions of this permit.

By December 31 of each year, or within 90 days of any process changes or minor equipment upgrades, the licensee shall evaluate and modify the O&M Plan including site plan(s) and schematic(s) for the waste water treatment facility to ensure that it is up-to-date. The O&M Plan shall be kept on-site at all times and made available to Department and EPA personnel upon request.

Within 90 days of completion of new and or substantial upgrades of the waste water treatment facility, the licensee shall submit the updated O&M Plan to their Department inspector for review and comment.

R. PUBLIC ACCESS TO LAND APPLICATION SITES AND SIGNAGE

Public access to the land application sites shall be controlled during the season of active site use. Such controls shall include the posting of signs showing the activities being conducted at each site. The licensee shall install signs measuring at least 8 ½" x 11" around the perimeter of the lagoon and spray irrigation site that inform the general public that the area is being used to dispose of sanitary waste waters. Each sign must be placed such that at least two other signs (one left, one right) may be seen from any one posted sign. The signs must be constructed of materials that are weather resistant. The licensee must walk the perimeter of the lagoon and spray site prior to the beginning of each spray season and make any necessary repairs to the signage to comply with this condition.

SPECIAL CONDITIONS

J. SPRAY IRRIGATION OPERATIONAL PROCEDURES, LOGS AND REPORTS

1. **Each day prior to irrigating**, the licensee shall visually inspect the spray irrigation site to determine if the soil moisture conditions are appropriate for spraying and all the operational constraints listed in Special Condition G above are met.

2. The licensee shall at all times maintain in good working order and operate at maximum efficiency all waste water collection, treatment and/or control facilities. **Within one hour after start-up of the spray-irrigation system**, the licensee shall walk the spray irrigation site (and maintenance staff will also periodically monitor the spray equipment throughout the day) to check the system for leakage in the piping system and determine if individual spray heads and pump(s) are functioning as designed, and verify that application rates are appropriate for the existing site conditions. Should significant malfunctions or leaks be detected, the licensee must shut down the malfunctioning portion of the spray system and make necessary repairs before resuming operation of the spray system. . The licensee shall cease irrigation if ponding or runoff is observed outside the designated boundaries of the spray field(s).

3. The licensee shall maintain a daily log of all spray irrigation operations which records, the date, weather and soil conditions, rainfall, lagoon freeboard (top of lagoon to the water surface), areas irrigated, volume sprayed (gallons), application rates (daily and hourly), and other relevant observations/comments from daily inspections. The log shall be in accordance with the format of the "*Monthly Operations Log*" provided as Attachment "A" of this license.

   Weekly spray application rates shall be reported in accordance with the format of the "*Spray Application Report by Week*" provided as Attachment "B" of this license. The daily operational logs and weekly spray application reports for each month shall be submitted to the Department as an attachment to the monthly Discharge Monitoring Reports (DMR's). Copies will also be maintained on site for Department review and for license operation maintenance purposes.

K. VEGETATION MANAGEMENT

1. The licensee shall remove grasses and other vegetation such as shrubs and trees if necessary so as not to impair the operation of the spray-irrigation system, ensure uniform distribution of waste water over the desired application area and to optimize nutrient uptake and removal.

2. The vegetative buffer zones along the perimeter of the site shall be maintained to maximize vegetation and forest canopy density in order to minimize off-site drift of spray.

SPECIAL CONDITIONS

L. LAGOON MAINTENANCE

1. The banks of the lagoon shall be inspected weekly during the operating season and properly maintained. There shall be no overflow through or over the banks. Any signs of leaks, destructive animal activity or soil erosion of the berms shall be repaired immediately.

2. Maintenance of the banks of the lagoon shall be conducted to keep them free of woody vegetation and other vegetation that may be detrimental to the integrity of the berm and or lagoon liner. Certain mature pines located on a portion of the berm have been determined to not be detrimental and may remain in place.

3. The waters within the lagoon shall be kept free of all vegetation (i.e. grasses, reeds, cattails, etc.) that hinders the operation of the lagoon.

4. The lagoon shall be dredged as necessary to maintain the proper operating depths that will provide best practicable treatment of the wastewater. All material removed from the lagoon(s) shall be properly disposed of in accordance with all applicable State and Federal rules and regulations.

5. The licensee shall maintain the lagoon freeboard at design levels or at least two (2) feet whichever is greater. The lagoon shall be operated in such a way as to balance the disposal of waste water via spray irrigation, including the necessary storage capacity for precipitation, to ensure that design freeboard levels are maintained.

M. SEPTIC TANKS

1. The four septic treatment tanks and other holding or treatment tanks shall be regularly inspected (at least once per calendar year) and maintained to ensure that they are providing best practicable treatment.

2. Tank contents should be removed whenever the sludge and scum occupies one-third of the tank's liquid capacity or whenever levels approach maximum design capacity whichever is less. Following pumping, the tanks shall be checked for damage at key joints and the inlet and outlet baffles, and repaired promptly if damaged. The licensee shall keep a pumping log including the date of pumping, quantity of material removed, name and number of licensed contractor, pumping frequency and other relevant observations.

N. DISPOSAL OF SEPTAGE WASTE IN WASTE WATER TREATMENT FACILITY

The licensee is prohibited from accepting septage for disposal into any part or parts of the waste water disposal system. Septage shall mean any waste, refuse, effluent, sludge or other material removed from a septic tank, cesspool, vault privy or similar source which concentrates wastes or to which chemicals have been added. Dumping may only occur for those vehicles doing business at the facility, at a designated location and access to this location shall be controlled at all times.

Monthly Operations Log **Attachment A** **(Month/Year) _____)**

WDL # W003240-5J-C-R; Fields #_____Weekly Application Rate: 40,725 gallons/acre (1.5 inches)

	A	B	C	D	E	F	G	H	I	J	K
Day	DATE	PRECIP Inches	TEMP	WEATHER	WIND-Direction Speed	Soil Moisture	Quanity-Total Gallons Pumped	Name of Field(s) Used	Acres Sprayed (Sum of Col H x Area of Each Field)	Gallons/Acre (inches) (Col G divided by I)	Total Inches
	1										
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
	10										
	11										
	12										
	13										
	14										
	15										
	16										
	17										
	18										
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	21										
	22										
	23										
	24										
	25										
	26										
	27										
	28										
	29										
	30										
	31										
Monthly Total =											

Spray Application Report by Week **Attachment B** **Facility Name_____;**

WDL # W003240-5J-C-R; (Month _____, Year _____) Weekly Application Rate 40,725 gallons/acre (1.5 inches)

Field Name/#	Effective Spray Area (Acres)	Weekly Limit (Gallons/Acre)	Actual Spray Application Rates (Gallons per Acre)					Number of Exceptions to Weekly Limit	Monthly Average
			Week 1	Week 2	Week 3	Week 4	Week 5		

Note: 1 acre-inch is equivalent to 27,150 gallons of liquid
27,150 gallons per acre is equivalent to 1.0 inch

Total Number of Exceptions	

A spray-field's weekly application rate if the total gallons sprayed (Sunday through Saturday) divided by the size of the spray-field in acres or the size in acres of that portion of the spray field utilized.

Signature of Responsible Official: _____, Date _____

Depth to Groundwater (Tenths of Feet) **Attachment C** (Month _____, Year _____)

Facility NameVacationLand Development, Inc. (Little Ponderosa Campground); WDL #W003240-5J-C-R;

Field Name/#	Monitoring Location	4. Depth to Groundwater (Measured From Ground Surface in Tenths of Feet)					Number of Exceptions	Monthly Average Depth
		Week 1	Week 2	Week 3	Week 4	Week 5		
						Total Number of Exceptions		

Note: Special Condition G of the License requires that a depth of 10 inches from the ground surface to the groundwater table must be present prior to spraying.

Signature of Responsible Offical: _____, Date _____

MAINE WASTE DISCHARGE LICENSE

FACT SHEET

Date: February 28, 2005

PERMIT COMPLIANCE TRACKING SYSTEM NUMBER: **MEU503240**
LICENSE NUMBER: **W003240-5J-C-R**

NAME AND MAILING ADDRESS OF APPLICANT:

Little Ponderosa Campground
159 Wiscasset Road
Boothbay, ME 04537

COUNTY: **Lincoln County**

NAME AND ADDRESS OF FACILITY:

Wiscasset Road
Boothbay, Maine

RECEIVING WATER/ CLASSIFICATION: **Groundwater /Class GW-A**

COGNIZANT OFFICIAL AND TELEPHONE NUMBER: **Jon Lowell, Manager**
207-633-2700

1. APPLICATION SUMMARY:

Application: The applicant has applied for a renewal of Waste Discharge License (WDL) #W003240-5J-B-R, which was issued on February 29, 2000 and expired on March 1, 2005. The application is for the continuing operation of a spray irrigation wastewater disposal system on a 132,800 square foot site for the treatment and seasonal disposal of sanitary wastewater, generated at a rate of 5,200 gallons per day from the Little Ponderosa Campground in Boothbay, Maine.

a. History: Recent Department licensing actions include the following:

October 16, 1985	-	The Department issued WDL #W003240-41-A-R which authorized the disposal of secondary treated sanitary waste waters via a subsurface waste water disposal system at the Little Ponderosa Campground in Boothbay.
February 29, 2000	-	The Department issued WDL #W003240-5J-B-R which renewed authorization to operate the surface wastewater disposal system.
December 28, 2004	-	Application for renewal was submitted to the Department for processing.

b. Source Description:

The Little Ponderosa Campground has 96 sites available for overnight camping. Sources generating waste waters at the campground include 37 sites with sewer hookups for recreational vehicles, one central bath house building, one central laundry building and a main office building. The licensee has indicated that the original design for the sizing of the waste water treatment facility was based on a water usage rate of 64 gallons per site per day. Current water usage has been reduced to approximately 48 gallons per site per day as a result of installation of (1) flow conservation nozzles and meters on all shower units (2) water saving toilets, and (3) sewer hookups at 37 campsites.

c. Waste Water Treatment (Spray-Irrigation):

The surface waste water disposal system commenced operation in 1977. Waste waters generated from the campground receive primary treatment via four on-site septic (one 4,000 gallon capacity, and three 1,000 gallon capacity) tanks. The large tank is pumped of solids annually and the smaller three tanks are pumped of solids every two years. The supernatant from the four tanks is conveyed to the treatment lagoon via three small pump stations.

The original secondary treatment system was sized based on waste water flows calculated from metered water usage per site in 1977 (64 gallons per site) multiplied by a number of site-nights (6,460 in 1977) per season. Site-nights are defined as the number of times campsites are occupied over a given period of time such as a camping season, generally between Memorial Day weekend through Labor Day weekend. The total waste water flows calculated were increased by 25% to account for future expansion of the campground by 20 sites. The treatment lagoon was sized to have a working volume equal to the total waste water flows generated during an entire camping season (or in this case for approximately 500,000 gallons).

c. Waste Water Treatment (Spray-Irrigation) (Cont'd)

The original secondary waste water treatment system consisted of one large treatment lagoon that measures 250 by 110 feet and four feet deep (from the bottom of the lagoon to the top of the berm) and has an 80 day average detention time. The secondary treated waste water is conveyed to the spray irrigation area by a pump station with a 1.5 inch diameter force main. The main spray site (area #6) consists of six spray nozzles, each nozzle capable of spraying a circular area 84 feet in diameter and covering 5,540 square feet or 33,200 square feet for all six nozzles. The six nozzles are located in a mature stand of softwoods just south of the treatment lagoon (understory vegetation has been removed to facilitate proper spray distribution).

The waste water treatment system was modified from the original design in 1999 and the treatment lagoon was divided into three cells (designated cell "A", "B", and "C" by the licensee) to provide a higher level of process control. Waste water generated by the campsites, laundry facility, bath facility, and main office still receive primary treatment via the four septic tanks and had been conveyed to the treatment lagoon cell "A" via the three pump stations. Treatment cell "A" was approximately 200 by 100 feet, four feet deep with two-3 HP floating aerators. Treated waste water from lagoon cell "A" had been transferred to cell "B" by gravity after the water in cell "A" reached a specified level. Cell "B" had a coarse-bubble diffused aeration system for additional biological treatment. The waste water was then transferred by gravity to cell "C" for final settling before being conveyed to the spray irrigation system for land application. In November 2001, the berms associated with cells B and C were removed and the lagoon system restored to the original design configuration of one cell in order to ease maintenance of the lagoons. There are now two floating aerators (each powered by a 2-hp motor) within the lagoon basin to enhance biological treatment of the wastewater.

To provide for additional flexibility in the spray irrigation system, the licensee has added six new spray nozzles (for a total of twelve distribution heads) in two of the three available spray areas. One area contains four of the new spray heads and the other area contains two new spray heads for an additional 66,400 square feet. All three spray areas are located under a well distributed stand of mature softwood in somewater poorly drained silty clay soils with mottling within 12-16 inches of the surface. Historic operation of the spray system indicates that the soils have the capacity to attenuate pollutants in the sanitary waste waters if the prescribed application rate is followed.

2. CONDITIONS OF THE LICENSE

Maine law, 38 M.R.S.A. Section 414-A, requires that the effluent limitations prescribed for discharges, including, but not limited to, effluent toxicity, require application of best practicable treatment (BPT), be consistent with applicable state law, and ensure that the receiving waters attain the State water quality standards as described in Maine's Water Classification System.

3. RECEIVING WATER QUALITY STANDARDS

Maine law, 38 M.R.S.A § 470 indicates the groundwater at the point of discharge is classified as Class GW-A receiving waters. Maine law, 38 M.R.S.A., §465-C describes the standards for Class GW-A waters as the highest classification of groundwater and shall be of such quality that it can be used for public water supplies. These waters shall be free of radioactive matter or any matter that imparts color, turbidity, taste or odor which would impair the usage of these waters, other than occurring from natural phenomena.

4. TREATMENT

Slow-rate land-irrigation treatment is an environmentally sound and appropriate technology for best practicable treatment and disposal of sanitary wastewater. The soils and vegetation within the irrigation area will provide adequate filtration and absorption to preserve the integrity of the soil, and both the surface and groundwater quality in the area.

5. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Lagoon Effluent:

This licensing action is establishing twice per year (**July and August**) monitoring requirements for *Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS) and Nitrate-Nitrogen and monthly testing for Specific Conductance, Chlorides as specified in the Special Conditions.* Lagoon effluent as it exits the lagoon to be sprayed is also tested. Monitoring for these parameters yields an indication of the effectiveness of the lagoon treatment process and the condition of the wastewater being applied. Lagoon influent flow is also required to be monitored and reported on DMR sheets to be submitted to the Department in order to calculate the lagoon mass balance and to properly manage lagoon volumes.

Monitoring for these parameters is required to adequately characterize the wastewater in the lagoon so that an evaluation (that will include monitoring parameters and other required data) can be conducted. The assessment is due to concerns about the structural integrity of the lagoon that is currently in place.

Spray Irrigation Application Rates (Weekly, Daily)

The weekly maximum rate 40,725 gallons per acre (1.5 inches/week) is a conversion of the previous licensing actions weekly limits and is based on the characteristics of the in-situ soils. The previously established daily maximum rate of 0.75 inches per day is being suspended in this licensing action as sufficient other safety factors have been incorporated in the standard operating limitations (see WDL section F: General Operational Constraints) against hydraulically overloading a spray area on any one given day.

	License Limit	Equivalent Inches	Based on total spray area of 3.0 acres**
Application Rate (weekly)	40,725 gallons/acre	1.5 inches	122,175 gallons per week

** Twelve spray heads with a radius of 84 feet each
Note: 1 acre-inch is equivalent to 27, 150 gallons

Regardless of the calculated rate, the system operator shall monitor each waste application to verify adequate infiltration of the waste into the soil and an irrigation cycle should be stopped if runoff or ponding start to occur.

Lagoon Levels (freeboard)

The amount of freeboard space between the lagoon or pond surface elevation and the lowest point in the top of the respective berm is being measured to prevent overtopping of the berms and to evaluate facility operation for managing flows and annual precipitation.

Groundwater Monitoring Wells

Good geologic science typically requires a minimum of three monitoring wells for monitoring wastewater disposal (spray-irrigation) systems. One well is typically installed upgradient from the lagoon to monitor ambient groundwater conditions, one well installed downgradient from the lagoon to monitor lagoon leakage, and one well installed downgradient from the spray field to monitor effects on the groundwater from the spray operation. In certain instances the Department may conclude that fewer monitoring wells are necessary. In the case of Little Ponderosa Campground the Department has found that (1) the effluent has been consistently treated to a high degree; and (2) the on-site soils are relatively efficient at attenuating pollutant given the limited hydraulic load. During a site inspection in May 2004, Department personnel found that the on-site groundwater monitoring well southerly of the lagoon had not provide representative samples of the groundwater conditions in the recent past. The Department finds that groundwater monitoring wells must provide samples that are representative of the ground water in the vicinity.

The drinking water supply well for the campground serves as the upgradient (or background level) well (GMW-2). There is an additional on-site monitoring well located southerly of the lagoon that has been installed to the depth of 56 inches (GMW-1). During a site inspection in May 2004, Department personnel found that GMW-1 did not appear to provide representative samples of the groundwater conditions in that vicinity. Past data from Little Ponderosa Campground's discharge monitoring reports from 2002-2004 also indicate that GMW-l has been for the most part perennially dry. Due to the irregularity of the GMW-1 data, this licensing action is establishing monthly (May through October) monitoring requirements for Specific Conductance from GMW-1.

Furthermore, if during 2005, Little Ponderosa Campground finds that they are not able to collect six consecutive months of groundwater samples from GMW-1 (May through October) due to insufficient water in the monitoring well, the Department will require that Little Ponderosa Campground either increase the depth of the existing 56-inch monitoring well or relocate this groundwater monitoring well to an area mutually approved by the Department and Little Ponderosa Campground, downgradient of the lagoon.

The Department is also requiring the Little Ponderosa Campground provide a copy of the well logs for GMW-1 and GMW-2 by July 31, 2005.

Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) –The daily maximum limit of 100 mg/L is a Department best professional judgement of best practical treatment (BPT) for surface waste water disposal (spray irrigation) systems. The limits are common for all licenses issued by the Department for surface waste water disposal system designed to treat sanitary waste waters.

pH – The daily maximum limit of 6.0 to 8.5 Standard Units had been established as a lagoon effluent limitation and a report requirement in ground water monitoring well GMW-1 in the previous licensing action. This licensing action is suspending the requirement for testing pH in the lagoon effluent but is carrying forward the report requirement in the groundwater monitoring wells.

Nitrate-Nitrogen – Nitrogen compounds are by-products of the biological breakdown of ammonia and is inherent in domestic-like sanitary waste waters. Tracking nitrogen concentration is important in determining the effectiveness of the treatment process and elevated N-concentration is a human health concerns in drinking water supplies.

Chlorides – Chlorides are inherent in domestic sanitary waste waters and are very mobile in soils. Chloride is considered a good screening parameter as variability in the concentration level in groundwater is an indication that the soils may not be providing the level of treatment desired and that the spray irrigation application rate may need adjustment. This licensing action is requiring a report value to be provided on Discharge Monitoring Report sheets to be submitted to the Department. According to the National Secondary Drinking Water Maximum Contaminant Level standard, Chlorides have a secondary level limitation of 250 mg/L.

Specific Conductance, and Temperature are generally considered "field" parameters meaning that they are measured directly in the field via instrumentation and does not require laboratory analysis. However, in certain instances, Specific Conductance samples may be preserved and forwarded to a laboratory for evaluation. These parameters are considered a surveillance level monitoring parameter that is used as an early-warning indicator of potential groundwater contamination.

6. SYSTEM CALIBRATION

Discharge rates, application rates and uniformity of application change over time as equipment gets older and components wear, or if the system is operated differently from the assumed design. Operating below design pressure greatly reduces the coverage diameter and application uniformity (resulting in increased ponding). For these reasons, the licensee should field calibrate their equipment on a regular basis to ensure proper application and uniformity, and when operating conditions are changed from the design.

Calibration involves collecting and measuring flow at several locations in the application area (typically a grid pattern of containers with uniform diameters). Rain gauges work best because they already have a graduated scale from which to read the application amount without having to perform additional calculations.

6. SYSTEM CALIBRATION (CONT'D)

An attachment to this Fact Sheet entitled "*Example Spray-Irrigation Field Calibration Report Form*" is provided as an aid to the licensee in the re-calibration process. It is recommended that this form or similar form be submitted to the Department Compliance Inspector shortly after re-licensing and annually thereafter, or whenever operating conditions are changed from the assumed design.

7. DISCHARGE IMPACT ON RECEIVING WATER QUALITY

As licensed, the Department has determined the existing water uses will be maintained and protected and the discharge will not cause or contribute to the failure of the water body to meet standards for Class GW-A classification.

8. PUBLIC COMMENTS

Public notice of this application was made in the Boothbay Register, a newspaper with circulation in the area of the proposed discharge on or about December 2, 2004. The Department receives public comments on an application until the date a final agency action is taken on that application. Those persons receiving copies of draft licenses shall have at least 30 days in which to submit comments on the draft or to request a public hearing, pursuant to Chapter 522 of the Department's rules.

9. DEPARTMENT CONTACTS:

Additional information concerning this licensing action may be obtained from and written comments should be sent to:

David Silver
Division of Water Resource Regulation
Bureau of Land and Water Quality
Department of Environmental Protection
17 State House Station
Augusta, Maine 04333-0017
Telephone (207) 287-3901

10. RESPONSE TO COMMENTS

During the period of January 4, 2005 and final Department action, the Department solicited comments on the proposed draft Maine Waste Discharge License to be issued to Vacationland Development, Inc. for the proposed discharge. The Department did not receive comments from the licensee, state or federal agencies or interested parties that resulted in any substantive change(s) in the terms and conditions of the license. Therefore, the Department has not prepared a Response to Comments section as part of this licensing action.

Water Quality Monitoring Plan Details Attachment to the Fact Sheet
Bureau of Land & Water Quality, Div. of Environmental Assessment

For projects required to monitor the quality and/or levels of surfacewater or groundwater, a water quality monitoring plan/protocol document must be provided as a separate manual, for ease-of-reference by the applicant, consultants, and the Department. This manual must be prepared, signed, and dated by a professional qualified in water chemistry interpretation (and when groundwater flow interpretations and monitoring well selection are conducted to prepare the plan, endorsed by a Certified Geologist), and must in-clude the following, at a minimum:

1. Identification/summary of all monitoring points (e.g. monitoring wells, lysimeters, springs, etc.) to be used for measurement of water levels or for water quality analysis. Monitoring points must have an assigned identification symbol (alpha/numeric), and, where appropriate, elevation referenced to an es-tablished, permanent benchmark. Include a map showing all monitoring points.

2. Outline of the monitoring frequency at each monitoring point, by the number of sampling/analysis events per year (e.g. quarterly, etc.) and by month (e.g. April, September, etc.).

3. Provision for obtaining adequate data on background water quality and/or levels, and for using a statistically-valid method for determining a significant increase in parameter concentrations (e.g. contamination levels, but not necessarily MCL's/MEG's). At a minimum, determination of background water quality or levels must consist of quarterly sampling/analysis for 1 year.

4. List of parameters to be analyzed, including references to the laboratory analysis methods to be utilized for each parameter, detection limits for each analysis method, and the MCL's/MEG's for all applicable parameters. All monitoring must include field parameters (conductivity, temperature, pH, and TDS), in addition to parameters specific to the monitoring program objectives.

5. Identification of the qualified personnel to take water level measurements and water quality analysis samples. These tasks should not be done by the applicant or employee of the applicant, but if proposed, then item 6 below must be addressed.

6. Written certification from a qualified expert that personnel to conduct monitoring are or will be adequately trained to properly collect measurements and/or samples by approved methods and protocols.

7. Description of the equipment and methods to be employed for water level measurement and/or water quality analysis sample-taking.

8. Description of the quality assurance/quality control and chain-of-custody protocols to be followed for water quality sampling, preservation, storage, transport, and laboratory analysis.

9. Provision for a professional qualified in water chemistry or groundwater flow interpretation to summarize, evaluate, and provide recommendations on the monitoring results that is submitted annually to the Department, unless a problem is evident, in which case the Department is to be notified immediately. Annual reports must include historical, as well as the most recent year's monitoring data for each monitoring point, which is presented in a tabular format. Reports must be signed/dated by the professional responsible for their preparation.

10. A provision that, if water levels or water quality monitoring results indicate adverse effects are occurring as a result of the project activity, then an evaluation will be made by a qualified professional and an appropriate remedial action/mitigation plan will be developed and submitted to the Department for re-view and approval.

Example Spray Irrigation Field Calibration Report Form
Attachment to the Fact Sheet

Background Data

Describe the reasons for system re-calibration (example annual calibration or change in operating conditions). When there has been a change in operating conditions list the specific changes such as new components (pumps, spray heads, size or type of pipes, etc.) or previously approved design changes.

Describe the current method for estimating the flow of wastewater to the irrigation area, ie, meter or pump calibration data. When using pump calibration data list the estimated flow rate of the pump for the existing site conditions (example gallons per minute). Also note the assumed diameter of coverage for the individual spray heads and the resulting area of application (acreage). Based on this information what is the assumed application rate in inches per hour and gallons per acre. Note: 1 acre-inch equals 27,150 gallons.

System Calibration

Describe or attach illustrations of the system calibration procedure, ie, grid layout or rain gauge or other uniform containers.

List the actual radius of spray coverage of the individual spray heads as measured during the field calibration and note any application uniformity problems such as noticeable ponding or uneven applications.

Calculate the acreage of the application based on the actual radius of coverage measured in the field. Show calculations.

Example: (27,150 gallons/acre/week)(1.5 inch/week)(1.3 acres) = 52,942 gallons/week

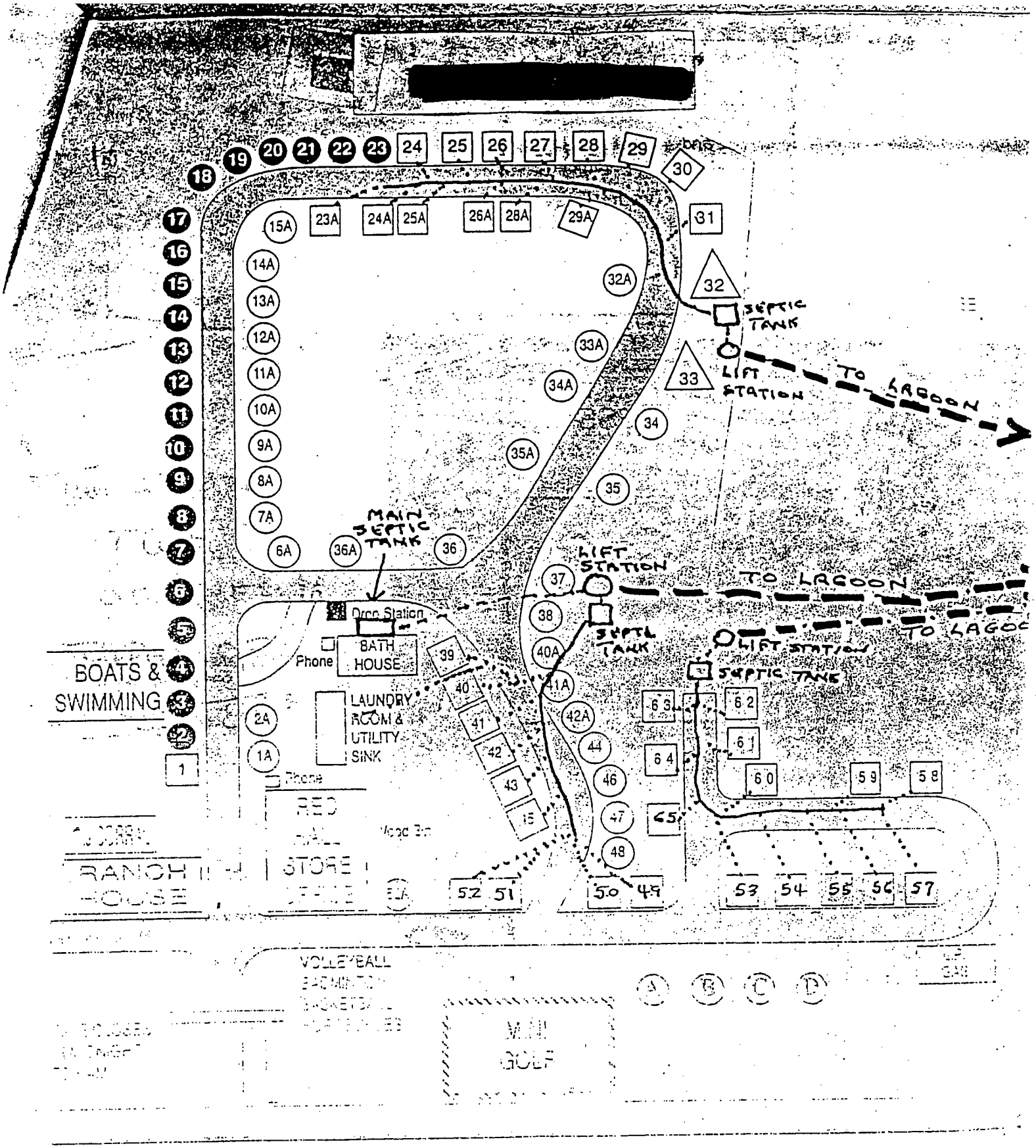
Calculate the estimated hourly application rate in inches per hour and gallons per acre obtained during the above calibration. Show calculations.

New Calibration Data

What changes to the estimates of wastewater flow are proposed, if any and why? And are the licensed application rates satisfied?

Any adjustments to improve uniformity of spray applications?

Submitted by: Signature of Operator in Responsible Charge	On Date:
Reviewed by: Signature of Operator in Responsible Charge	On Date:

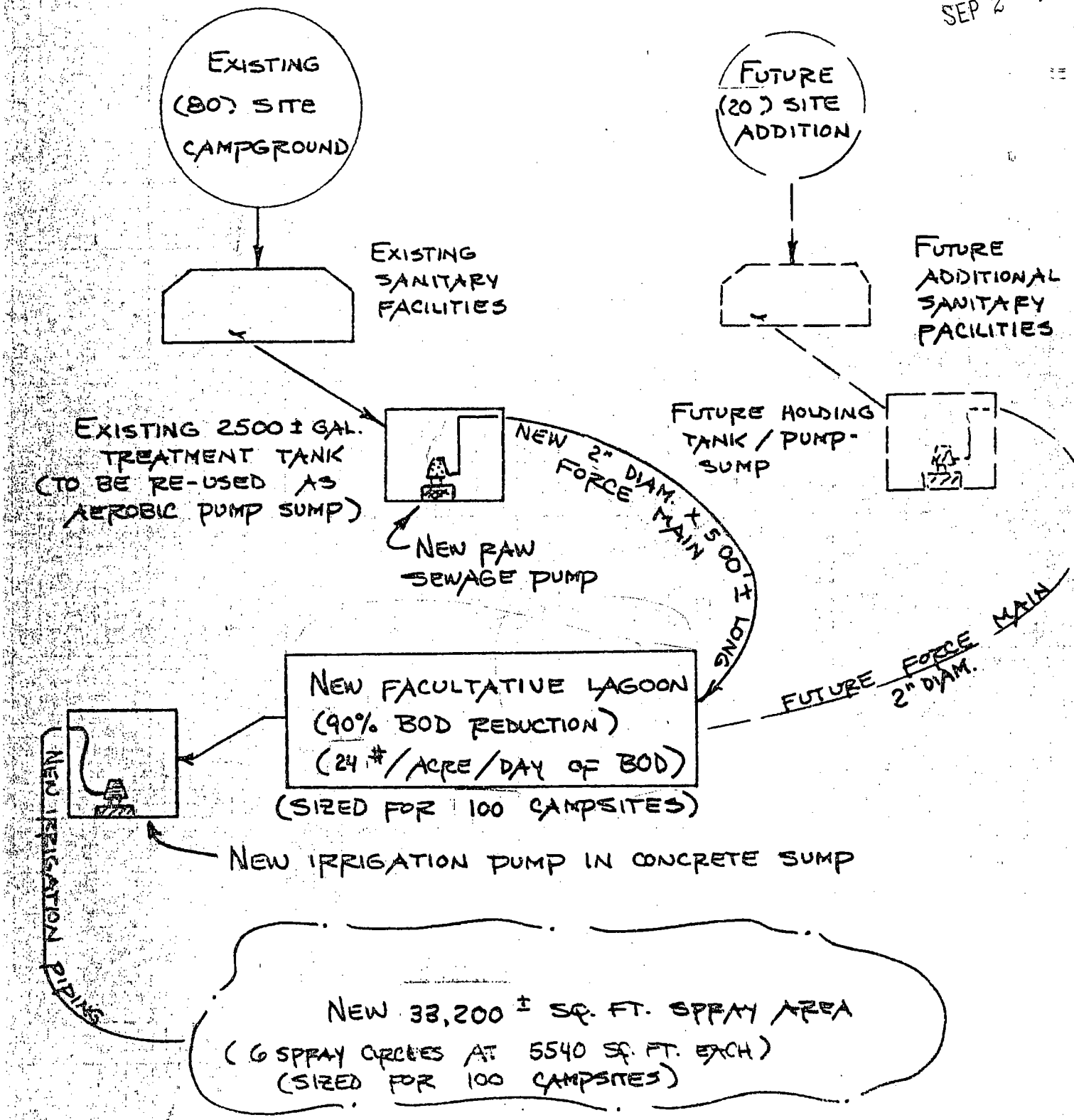


NOTE - ALL THE SITE NUMBERS THAT ARE DISPLAYED AS SQUARES ☐ ARE THE ONES THAT HAVE A SEWER HOOKUP

THE LIFT STATION BEHIND SITE # 37 HAS TWO PUM
IN IT THAT ARE ALTERNATED - REASON IS TWO FOL
1) BECAUSE THE BATHOUSE + LAUNDRY GOES INTO THIS ONE - SUBSTATI
MORE VOLUME
2) IF HAD PUMP FAILURE CAN'T REALISTICALLY CLOSE THE
THE OTHERS WE CAN

TREATMENT SCHEMATIC
LITTLE PONDEROSA CAMPGROUND, BOOTHBAY, MAINE

SEP 2 1977



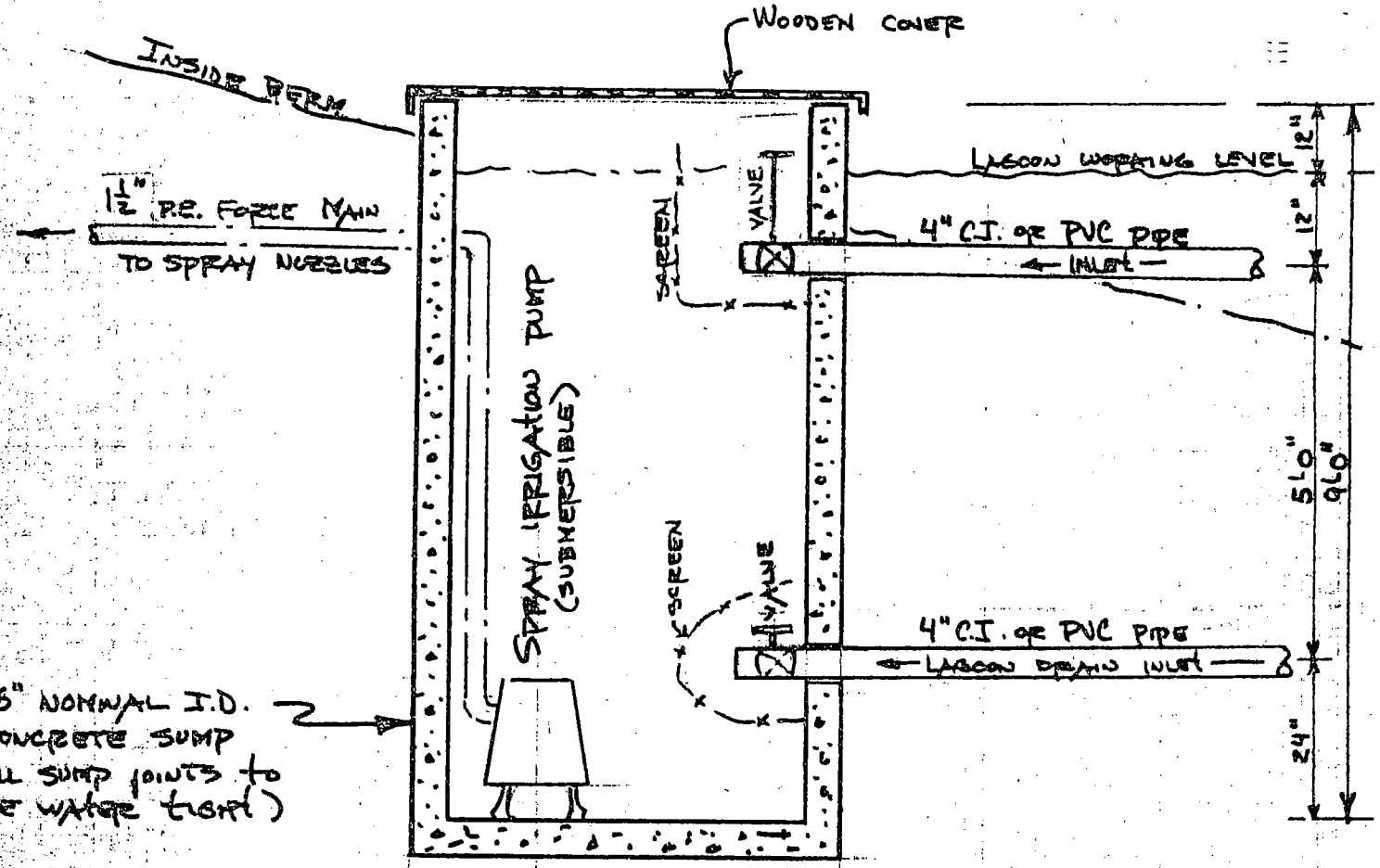
PRL

8-30-77

LAGOON DISCHARGE PUMP

LITTLE PONDEROSA CAMPGROUND, BOOTHBAY, MAINE

SEP 2 1977



Note: Upper 4" inlet to extend approx. 18' into lagoon & to be supported 12" below normal lagoon working water level. Both ends of upper inlet to be screened (max. opening size 1/16") to prevent solids from entering sump.

Lower 4" inlet (lagoon drain) to extend approx. 40' into lagoon and to be supported approx. 6" above lagoon floor. Lagoon floor to be sloped from all sides to the lagoon drain inlet. Screen both ends of lower inlet also.

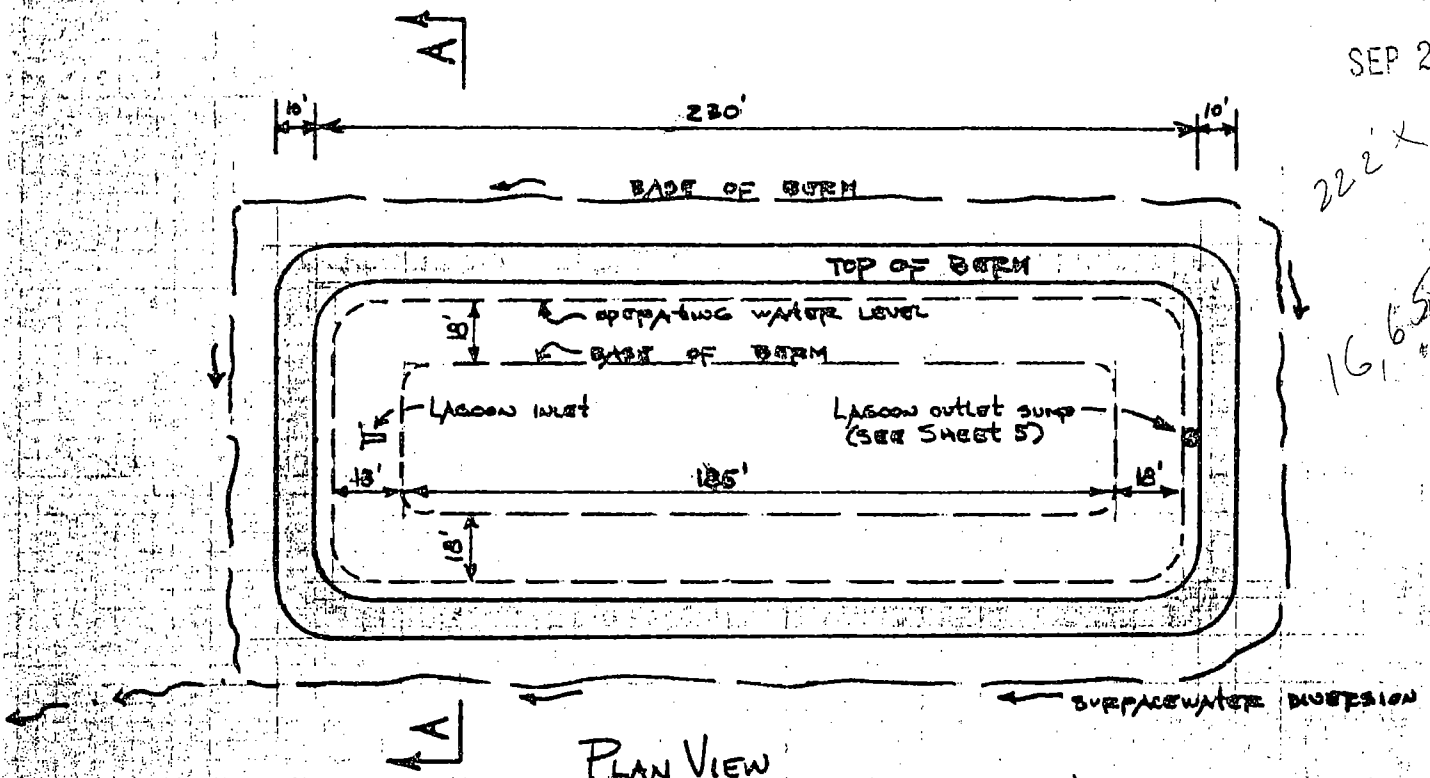
BY: PRL 8-30-77

LAGOON DETAILS

LITTLE PONDEROSA CAMPGROUND, BOOTHBAY, MAINE

SEP 2 1977

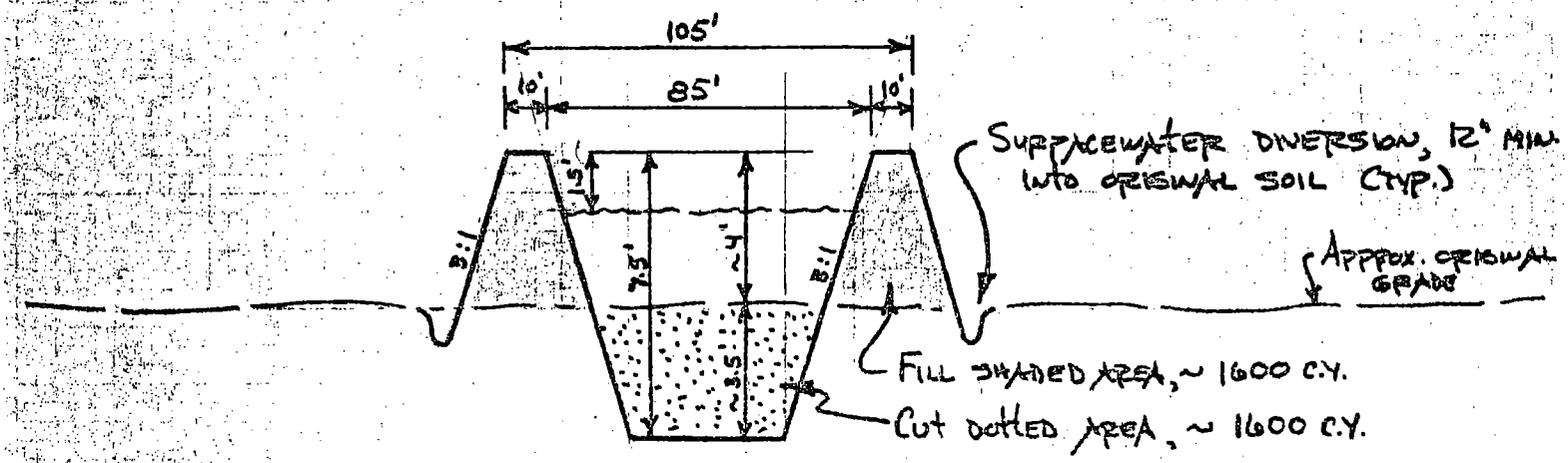
222' X 75' = 16,650 ft² AREA



PLAN VIEW

SCALE: 1" = 50'

Note: LAGOON WORKING VOLUME EQUALS 439,000 GAL., EQUALS ANNUAL TREATMENT VOLUME.



CROSS SECTION A-A

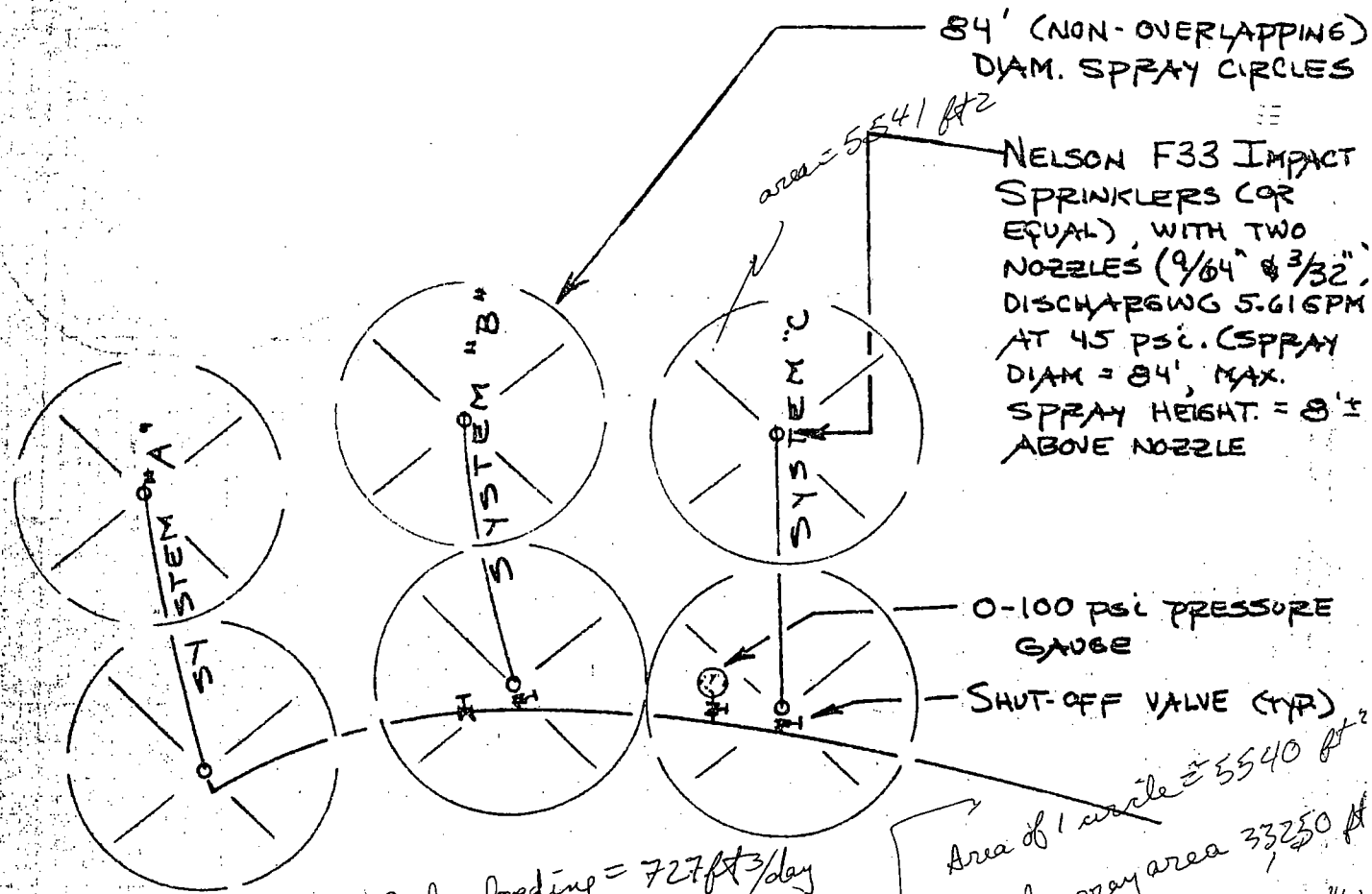
SCALES: HORIZ: 1" = 50'
VERT: 1" = 5'

BY: PRL 8-30-77

SEP 2

SPRAY IRRIGATION SCHEMATIC

LITTLE PONDEROSA CAMPGROUND, BOOTHBAY, MAINE



Daily loading = 727 ft³/day
daily cladding over entire area = 0.013 ft/day

Area of 1 circle = 5540 ft²
Total spray area 33,250 ft
Total annual effluent load = 2410 k gal
= 548 12 ft³

PIPE SPECIFICATIONS

IRRIGATION PIPING SHALL BE 100 PSI BLACK POLYETHYLENE PIPE, 1½" DIAM EXCEPT THAT 1" DIAM. MAY BE USED ON ANY LATERAL WITH ONLY (1) SPRINKLER.

PRESSURE REQUIREMENTS

40 TO 50 PSI SHALL BE AVAILABLE AT EACH SPRINKLER IN OPERATION; ONLY 2 SPRINKLERS SHALL OPERATE AT ONE TIME.

OPERATIONAL PLAN

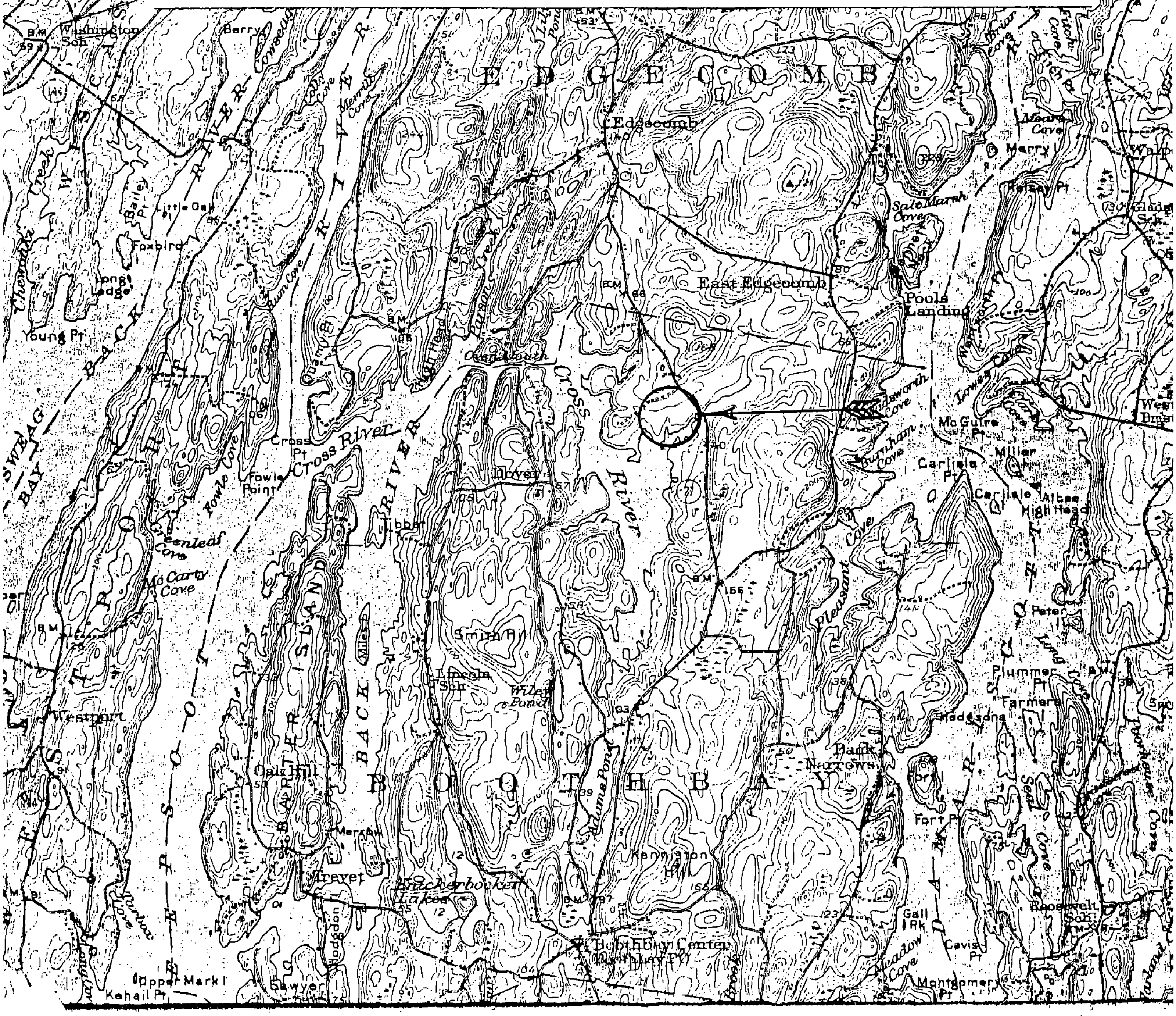
SYSTEMS A, B & C SHALL EACH OPERATE 7.5 HRS./DAY, 2 DAYS/WK. FOR A TOTAL OF 90 NOZZLE-HRS./WK. (A, B, C, A, B, C, —, A, B, C ETC.)

NO SCALE

BY: PRL 8-30-77

LOT LOCATION MAP FOR LITTLE PONDEROSA CAMPGROUND, BOOTHBAY, MAINE

SEP 2 1977
SEP 2 1977
DAMAR

ILLUSTRATED ON BOOTHBAY 15-MINUTE QUADRANGLE.

BY: PRL LIN. MAR ASSOCIATES 9-21-76