

The State of New Hampshire **DES Department of Environmental Services**

Robert R. Scott, Commissioner



December 15, 2021

Thomas Mason Jr. Lakes Region Water Company Inc. 420 Gove Wentworth Hwy PO Box 389 Moultonborough, NH 03254

SUBJECT: Paradise Shores PWS 1612010 Sanitary Survey 2021

Dear Mr. Mason:

On September 9, 2021, the New Hampshire Department of Environmental Services (NHDES) performed a sanitary survey on the Paradise Shores water system (PSh) in Moultonborough. The purpose of the survey is to review the capacity of the water system's sources, treatment, distribution, and management to continually produce safe drinking water. We would like to thank you and Justin Benes, primary operator, for your assistance in conducting this survey.

SUMMARY

In general, PSh appears to be operated in a professional manner and the operator is very knowledgeable of the components of the water system and water industry practices. Water quality monitoring records show that the system is in compliance with all current water quality standards, including action levels for lead and copper. However, frequent monthly positive total coliform has been repetitive and there was a recent positive E.Coli leading to a boil water order in September 2021.

This sanitary survey did not identify any significant deficiencies. The following is a list of issues that we recommend the managers of the water system consider to maintain compliance, and continue to provide an acceptable level of service to the system's customers:

- 1. Initiate planning to determine the best method to maintain a safe supply of drinking water year round.
- 2. Locate, develop, and permit an additional drinking water source to maintain a sufficient supply to meet demand.
- 3. Develop plans to provide a second connection to the Suissevale portion of the system.
- 4. Develop and maintain an Asset Management Program (AMP) to achieve and maintain the desired level of service at the lowest appropriate cost to customers.
- 5. Install security fencing, cameras, and/or alarms at the wells and storage tank site.
- 6. Maintain proper cross connection control on all services and high hazard devices in the system.

A more descriptive discussion on each of these issues is included below under "Recommendations".

SYSTEM DESCRIPTION

General

PSh provides domestic water to approximately 415 service connections in the Balmoral development and a service connection to Property Owners Association of Suissevale (POASI) which serves approximately

400 homes for a total population served of 2,040 people. The reported average daily use in the summer months can reach up to 120,000 gallons per day (gpd). The reported average usage for the remainder of the year ranges from 57,000 to 100,000 gpd. DES recognizes that most of the homes in Balmoral and POSI are seasonal homes and the peak usage occurs during the summer months, especially around the holiday weekends.

In general, PSh is comprised of four bedrock wells (BRW), two well control houses, one water storage tank, and associated distribution piping and appurtenances.

Source	DES Data Base 1612010	Well Depth (ft)	Approved Yield (gpm)	Current Sustainable Yield (gpm)	Installed
BRW 5	006	552	75	35	1990
BRW 6	007	650	36.5	5	1993
BRW 2	008	940	40	40	2007
BRW 3	010	740	40	40	2009
TOTAL CAPACITY (details below)			115,200 (gpd)		

Water Sources

The water sources are summarized as follows:

BRW 5 and 6 are accessed via a cross country dirt path off of Paradise Drive. These wells are remote from the control house. BRW 5 has an approved capacity of 75 gallons per minute (gpm), however, the operator has indicated that the well has declined in yield and the current estimated yield of the well is approximately 35 gpm. Similarly, BRW 6 has an estimated capacity of 36 gpm, but the reported yield during the summer months can get as low as 5 gpm. A new pump for BRW 5 was installed in 2018.

The other wells serving Paradise Shores are located on the north side of Route 109. The Mt. Roberts Wells No. 2 (BRW 2) and No. 4 (BRW 4) have the same permitted production volume of 57,599 gpd. Additionally, the permitted production volume from this well field is permitted not exceed 57,600 gallons in any 24-hour period. These wells are remote from the control house.

Based on sustainable yields of the wells, the total capacity of 115,200 gpd does not meet the reported maximum day demand of 120,000 gpd. PSh reports that they have hired a consultant to research locations of a new well. Allegedly, the Property Owners Association of Suissevale (POASI) may be investigating the potential to develop its own water supply and no longer be reliant on Paradise Shores for water supply. If Paradise Shores no longer serves POASI, then it appears that the current capacity may sufficiently meet the demand for the water system.

Neither the well sites nor the well control houses have any security gates or fencing.

Treatment, Pumps, Pumping Facilities, and Controls

Water from BRW 5 and BRW 6 flow through a common transmission water main and into the well house. The wells are operated based on storage tank level, 110/130 feet on/off, but BRW 6 operates every hour of every day during the high demand summer season. The control house is a single story at grade block building housing a meter, a sample tap, a 50 gallon welltrol pressure tank, and a single booster pump. This booster pump provides boosted pressure water to the adjacent store and about a dozen homes in the

area. There is no treatment in the well house, but a tap is available for emergency disinfection. A connection for emergency generator is available at this well house.

BRW 2 and BRW 4 are piped separately into a single story wood frame structure housing water meters and valving for each well along with a sample tap. An automatic flow restrictor is installed for each well to limit withdrawal of each well to 40 gpm. These wells alternate pumping every 24 hours and operate based on storage tank level, 120/130 feet on/off.

A SCADA system monitors alarm conditions for power outage and low and high flows.

Finish Water Storage

Water from BRW 2 and BRW 4 flow from the Mt. Roberts well control building directly into the storage tank. Water from BRW 5 and BRW 6 flows into the distribution system and water not utilized flows into the storage tank. The tank has two compartments and each can be valved off for periodic maintenance. The piping inside each compartment provides flow inlet at one end and outlet at the opposite end to reduce stagnant water. The tank roof is above ground and made of finish concrete with three hatches per compartment for access.

The water storage tanks are summarized as follows:

Storage Tank	Туре	Capacity (mg)	Installed	Last Inspected
Route 109	Buried Concrete w/ two compartments	0.325	2009	2020

Distribution System

The distribution system in the Balmoral area is comprised of 6-inch asbestos cement pipe (30%) with the remainder PVC pipe built in the 1970's. Piping within POASI is mostly 2, 3, and 4-inch PVC constructed in the 1980's. Water provided to the POASI area is via a single 4-inch HDPE cross country main with a master meter at this connection. None of the homes in POASI have individual meters. According to the operator, responsibility and maintenance of the distribution system is by POASI. However, POASI hires PSh's operator to maintain their distribution system.

There is currently no system flushing being performed in either area due to a lack of water supply. There are blowoffs located on Myrtle Drive, which is a dead end area. System pressure ranges from 40-105 psi with pressure reducing valves located in homes within the high pressure areas. All of the customers in the Balmoral area have water meters. According to the operator, at least 10% of the meters are being replaced each year. Billing occurs quarterly.

<u>Water System Management and Operations / Monitoring, Reporting, and Data Verification</u> Water usage is monitored via a SCADA system which provides real-time data. There is currently no GIS mapping or asset management program (AMP) in place at PSh.

Water quality monitoring records show that the system is in compliance with water quality standards, however, either an investigation into frequent positive coliform monthly samples may be necessary if PSh does not begin full-time chlorination to address any concerns.

The system should also become familiar with the upcoming revised lead and copper rule. An inventory of service line materials, both public and private side, will be required upon promulgation of the rule.

Staffing and Operator Certification

The PSW required to retain an operator certified at the grade I treatment and grade I distribution level. The following certified operator is listed in our records:

Operator	Certificate No.	Treatment Level	Distribution Level
Justin Benes	2094	2	2

ACKNOWLEDGEMENTS

- 1. We commend PSh in looking for another well site for additional supply. This is a critical effort to maintain a sufficient supply of drinking water for your customers.
- 2. Replacing the BRW 5 pump was a positive endeavor to maintain a critical system existing asset.

RECOMMENDATIONS

Below are areas where improvements or operating adjustments are recommended, some of which could lead to significant deficiencies in the future if not addressed:

Water System Management and Operations / Monitoring, Reporting, and Data Verification

1. Monthly bacteria samples have identified positive coliform fairly regularly, 13 times in the past 32 months. The operator has indicated that the trend appears to identify times of high use as a potential culprit of this. If accurate, DES recommends that the system is flushed prior to high demand periods. Flushing is generally recommended twice annually by the American Water Works Association (AWWA) and most systems flush in the spring and the fall. Water supply may need to be addressed prior to implementing this recommendation however, so another alternative should be sought, at least in the interim. In addition to flushing, maintenance and exercising of valves throughout the distribution system is important.

Indoor samples or sampling stations, instead of outdoor spigots could be considered for your monthly bacteria sampling. This may not be the issue, especially considering the amount of positive coliform samples that have been reported, but DES has had experience with outdoor spigots being an issue in the past.

Full-time chlorination of the system should also be discussed as an option to help eliminate issues with total coliform samples. The Mt. Roberts well house already has the space to add a chlorination tap, storage, and feed system. The BRW 5 and 6 well house however, is only setup for emergency chlorination. Chlorinating at the Mt. Roberts well house could be discussed.

Water Sources

2. Current system demand (approximately 120,000 gpd maximum) can exceed the combined pumping and permitted capacity of the four wells (115,200 gpd). DES previously issued approval of the two Mt. Roberts wells under the small community well siting program in recognition of the fact that POASI is considering developing, to some extent, its own water sources. In the event POASI develops its own water supply wells (in part or in whole) then the current production volumes approved for the Mt. Roberts wellfield may sufficiently meet the required capacity for the water system. If POASI does not develop additional water supply and remains fully reliant on PSh to meet its full water demand, then the system needs to develop additional capacity on the order of 100,800 gpd (70 gpm) more than what is currently available for the water system. The value is based on DES' current understanding of potential full buildout demand from both Balmoral and POASI.

Distribution System

3. If POASI continues to be served by PSh, then the water system should construct a redundant connection to the POASI distribution piping to ensure reliability and service.

Water System Management and Operation

4. Developing an AMP will help PSh get the most value from each of your assets and have the financial resources to rehabilitate and replace them when necessary. Asset management helps a system make critical decisions about how to achieve and maintain the desired level of service at the lowest appropriate cost to customers. We recommend the development of an AMP, which can also include GIS mapping of your system. Feel free to contact Luis Adorno at Luis.S.Adorno@des.nh.gov or 603-271-2472 at any time for support with your Asset Management program. January 7, 2022 is the next deadline for this program, which is currently offering 100% grant.

Water Sources

5. The well sites and storage tank lack physically or instrumentational tools to prevent public access. DES has source water protection grants that are available for security fencing, postings, or cameras that could help fortify the well sites. The storage tank is not covered under this grant program, but is also a critical piece of infrastructure that should be protected. Audio alarms or operator alarm notification of intrusion into the well houses and tank hatches are also a good measure for protection. We recommend that PSh investigate the possible upgrades that will help protect this public water supply.

Distribution System

6. DES recognizes that Paradise Shores serves almost all single family residential homes. Despite a total population of greater than 1,000 people, DES does not require a formal cross connection program be adopted. However, we do suggest that you require backflow devices on any high hazard services within the distribution system and ensure those devices are properly tested. Also, we encourage installation of residential dual check valves on all residential services.

If you have any questions regarding this sanitary survey, please contact me at 603-271-1746 or Randal.A.Suozzo@des.nh.gov.

Sincerely:

Paul A. Sum

Randal A. Suozzo, P.E. Drinking Water and Groundwater Bureau

ec. Justin Benes, primary operator

February 15, 2022 File No. P00354

Tom Mason, President Lakes Region Water Company 420 Governor Wentworth Highway Moultonborough, New Hampshire 03254 lrh2oserv@yahoo.com

Re: <u>Revised</u> Proposal for New Well Siting, Paradise Shores (Balmoral) Community Water System Moultonborough, New Hampshire

Dear Tom:

Nobis Engineering, Inc. (Nobis) is pleased to present the Lakes Region Water Company (LRWC) with this revised proposal for professional hydrogeologic services to select potential new well locations on Moultonborough Tax Map 72, Lot 95 (owned by LRWC) off Meadow Glen Drive (Meadow Glen Site). The new well(s) will be intended to serve the Paradise Shores (Balmoral) Community Water System (PSCWS, New Hampshire Department of Environmental Services [NHDES] Public Water System Id # 1612010) in Moultonborough, New Hampshire. Thank you for showing me the site this fall. The study will also include a preliminary assessment of well potential on Tax Map 74, Lot 11 (owned by Vern Richardson and possibly for sale), adjacent to the Site on the west (Richardson property).

Note: This proposal is revised from a proposal submitted in January 2022 which covered both Balmoral (and Richardson property) and similar work for the Far Echo Harbor water system. Per our conversation on February 14, 2021, the proposal is revised to omit the work at Far Echo Harbor for the time being.

OBJECTIVES AND APPROACH

The overall project objective is to increase the water supply available for PSCWS to augment the yield of existing sources in times of high demand and/or increase the water supply available for PSCWS to allow expansion of the water system and add additional customers.

The specific objectives of the work covered in this proposal include:

- Conduct preliminary assessment of bedrock well potential for the Meadow Glen Site (Tax Map 72, Lot 95);
- Conduct preliminary assessment of bedrock well potential for the Richardson property to the west (Tax Map 74, Lot 11) and provide opinion to LRWC;
- Conduct detailed exploration including geophysics across potential target areas identified in the preliminary assessment and stake recommended drilling location(s) in the Meadow Glen Site;
- Optional -- Conduct geophysics and well siting on Richardson property (at additional cost);

Nobis proposes to conduct the work in phases. The results of each phase will determine the scope of work and cost for the next phase. Based on present information, it is not possible to forecast the exact scope or schedule of any but the first phase. However, we provide likely cost ranges for Phase 2 in this proposal so the Phase 2 work can be done almost immediately after Phase 1 if LRWC wishes.

Phase 1: Preliminary Assessment of Well Potential and Favorable Areas for Drilling – This will be done on the Meadow Glen Site and the Richardson property to the west.

Phase 2: Detailed Exploration and Well Siting – Detailed exploration and well siting, including geophysics on the Glen Meadow Site. The Richardson property can be added for additional cost.

Future Phases (Not included in present proposal) -

- Drilling oversight Nobis can either subcontract the driller or work alongside a driller contracted by LRWC;
- Pumping test Nobis will work with LRWC and/or driller;
- Permitting Nobis will prepare the required reports for NHDES permitting.

SCOPE OF WORK

<u>PHASE 1: PRELIMINARY ASSESSMENT OF WELL POTENTIAL AND FAVORABLE AREAS</u> <u>FOR DRILLING</u>

Task 1100: Background Assessment and GIS Maps

Nobis will obtain available information and mapping from the NH GRANIT GIS database; NHDES One Stop database; Town of Moultonborough; and from LRWC. Nobis will prepare working maps of bedrock geology, overburden geology, soils, wetlands, and tax lots for the Glen Meadow Site and surrounding area.

Task 1200: Photolineament Survey

Nobis will obtain at least three sets of air photographs or other images that cover both sites; Nobis will examine the images stereoscopically and interpret lineaments that may represent bedrock fracture zones. Nobis will digitize the interpreted lineaments and prepare working maps showing the lineaments that are found in or near both sites. Evidence of fracture zones that may be associated with the Ossipee Mountain and Red Hill ring dike complexes will be of special interest if found.

Task 1300: Site Walk and Bedrock Fracture Mapping

Nobis will conduct a site walk on the Meadow Glen site and the Richardson property (if LRWC obtains permission from the owner). During the site walk, we will look for access routes for drilling rigs and areas where required setbacks from septic systems, surface water, etc. cannot be met. We will also look for any contamination threats and will do "windshield surveys" of the immediate areas around favorable zones or potential well sites, noting any contamination threats. In addition, Nobis will search NHDES One Stop database for records of potential sources of contamination such as underground storage tanks, hazardous waste sites, etc.

Nobis will measure fractures on any bedrock outcrops encountered. We will compare this information with the photolineament results to see if the lineament orientations coincide with fracture orientations.

Task 1400: Favorable Zones Map, Meeting to Explain Results, and Project Management

In addition to project management, this task includes informal communication with LRWC. Nobis will prepare a map showing favorable areas warranting geophysical surveys within the Meadow Glen Site and the Richardson property. Nobis will also submit copies of the maps prepared under Task 1100 and scans of the airphotos with interpreted lineaments.

Nobis does not plan to submit a Phase 1 report but proposes an in-person or Zoom meeting to go over the results and discuss specific steps for Phase 2. Likely Phase 2 tasks and cost ranges are provided below. Upon your request, we will prepare a written Phase 1 report at additional cost.

PHASE 2: DETAILED EXPLORATION AND WELL SITING

Task 2100: Geophysical Surveys

Nobis will retain a subcontracted geophysical firm, Geophysical Applications, Inc. of Holliston, Massachusetts to conduct geophysical surveys across favorable zones in the Meadow Glen Site. Optionally, if potential fracture zones are found on the Richardson property and permission for us to access that property is obtained by LRWC, we may extend survey lines from the Meadow Glen Site onto the Richardson property or conduct separate surveys on that property.

Task 2200: Well Siting and Client Site Walk

Nobis will stake potential drilling targets at Paradise Shores (Meadow Glen Site and possibly Richardson property) based on the results of Phase 1 and Phase 2. Nobis will walk the sites with LRWC and show our recommended drilling locations.

Task 2300: Letter Report and Project Management

Nobis will submit a letter report with maps showing recommended drilling locations, geophysical survey lines, property boundaries, and other key results. Nobis will provide brief descriptions of each location with pros/cons and rankings. The rankings will be based on technical results, compliance with NHDES Rules, and practical considerations such as proximity to power, accessibility, etc. The report will also include recommendations for next steps for drilling and permitting. Project management is also covered in this task, as well as communication with LRWC throughout. Nobis will also open lines of communication with NHDES, but only with approval from LRWC.

BUDGET

Our estimated fee for the scope items in Phases 1 and 2 as described above is as follows:

Scope	Fee Structure	Fee	
Phase 1: Preliminary Assessment			
Task 1100: Background Assessment and	Time & Evnance	\$400	
GIS Maps	Time & Expense	φ000	
Task 1200: Photolineament Survey	Time & Expense	\$1,200	
Task 1300: Site Walk and Fracture	Time & Expanse	\$700	
Mapping	Time & Expense	\$700	
Task 1400: Favorable Zones Map,	Time & Evnance	¢200	
Meeting, and Project Management	Time & Expense	<i>\$</i> 8000	
Total, Phase 1	Time & Expense	\$3300	
Phase 2: Detailed Exploration & Well			
<u>Siting</u>			
Task 2100: Geophysical Surveys	Time & Expense	\$12,000 - \$15,000	
Task 2200: Well Siting and Client Site	Time & Evnance	¢000	
Walk	T time & Expense	\$ <i>7</i> 00	
Task 2300: Letter Report and Project	Time & Evnence	¢2,000	
Management	T time & Expense	\$2,000	
Total, Phase 2	Time & Expense	\$14,900 - \$17,900	
Total, Phases 1 and 2		\$18,200 - \$21,200	

Additional work will not be performed without prior written direction and consent from LRWC.

The following is a summary of assumptions and budget notes:

Phase 1: Preliminary Assessment – Nobis assumes the following:

- The budgets for the Phase 1 tasks include the Meadow Glen site and the Richardson property.
- If we do not walk the Richardson property, cost for Task 1300 will be slightly less.

• Nobis assumes that LRWC will obtain permission for us to access any properties under consideration.

Phase 2: Detailed Exploration and Well Siting – Nobis assumes the following:

- Task 2100 assumes that geophysical surveys will be done in the winter and will include magnetic and very low frequency (VLF) surveys. (Another useful survey type is resistivity, but this does not work well in the snow; if this is needed, we would have to wait till spring.)
- Task 2100 presents a price range the low end of the range is for 2 days of geophysical surveys, at the Meadow Glen site only. The high end of the range assumes we also do geophysics on the Richardson property; this scenario covers a total of 3 days in the field.
- Task 2100 assumes that brush cutting and flagging is allowed on the properties for geophysics.

Phase 3: Well Drilling Oversight – Nobis typically provides full or partial coverage of the well drilling; preliminary sampling is also recommended. Coverage for Far Echo Harbor can be added upon request.

Phase 4: Pumping Test(s) and Permitting – The costs will depend on several factors including how many new wells for one of both of the water systems (Paradise Shores; Far Echo Harbor) will be tested for potential approval and connection to the systems.

Nobis requests a retainer of half of Phase 1 \$1,675 prior to commencement of work. The retainer will be deducted from the final invoice for Phase 2 (or Phase 1 if only Phase 1 is authorized).

Progress payment of fees will be billed on a monthly basis in accordance with the attached Schedule of Fees. Our payment terms are net 30 days. You will be notified if conditions require a change to the scope of services and budget estimate. This proposal is valid for 30 days from the date of issue.

SCHEDULE

Nobis is prepared to begin work on this project upon receipt of this signed proposal and receipt of the \$1,675.00 retainer.

- Nobis understands that water supply needs may be urgent. The proposed work can be done in the winter, though the geophysical surveys may be subject to delay due to snowstorms, bitter cold, or the ability to carry the instruments along the survey lines.
- Nobis is prepared to complete Phase 1 within one month of receiving the signed contract and retainer; acceleration of the schedule can be done on request. Completion of Phase 2 is weather dependent, but Nobis and our subcontractor will make an effort to accomplish the geophysical surveys as quickly as possible during the winter and early spring of 2022 if requested. If well locations are needed quickly, we may stake the sites in the field as soon as we receive data from the subcontractor and prior to completing the final report.

TERMS AND CONDITIONS

We will perform these services in accordance with the attached Statement of Terms and Conditions. Please note that Article 12.0 of our Terms and Conditions includes a "Limitation of Liability" clause by which you agree to limit our liability for any damages arising out of our professional negligence to \$50,000 or our fees, whichever is greater. You may request an increase to this limitation by making the request in writing and by paying an additional fee. This proposal is valid for 30 days from the date of issue.

We look forward to working with you on this project. Thank you for the opportunity to be of service. If you require additional information, please do not hesitate to contact us at (603) 224–4182.

Sincerely,

NOBIS GROUP®

James H. Vernon, Ph.D., P.G. Senior Hydrogeologist

Jennifer Lambert, P. G. Director of Environmental Services

Cc: Leah Valladares, Utility Finance Manager, Lakes Region Water Company

Attachments:

Schedule of Fees Terms and Conditions

ACCEPTANCE

This proposed contract for services and its attachment are hereby accepted by the Lakes Region Water Company (LRWC), as evidenced by the signature below, and such a person so executing the same on behalf of LRWC does hereby warrant full authority to act for, in the name of, and on behalf of LRWC. This proposed contract is valid for 30 days from the date of issue.

Note: You can choose to sign Phase 1 only or both Phases. For the fastest execution, both phases should be signed now, with the understanding that the Phase 2 costs here assume that Phase 2 costs may be adjusted based on Phase 1 results. The costs below represent the high end of the ranges discussed in this proposal above and will be reduced as may be appropriate if some of the tasks (i.e. geophysics) are performed at only one of the sites.

For Paradise Shores, Phase 1 (Preliminary Assessment):

Tasks 1100 - 1400: \$3,300

Signature _____

For Lakes Region Water Company

Title______

For Paradise Shores, Phase 2 (Detailed Exploration and Well Siting):

Tasks 2100 - 2300: \$17,900

Signature

For Lakes Region Water Company

Date

Date

Title_____

Please indicate your acceptance by signing and returning <u>one</u> copy of this proposal.

2021 SCHEDULE OF FEES

Labor Rates

Principal	\$250.00
Senior Project Manager/LSP I - IV	\$150.00 - \$230.00
Project Manager/LSP I - III	\$140.00 - \$180.00
Senior Project Engineer/Geologist/Scientist I - III	\$130.00 - \$165.00
Project Engineer I – IV	\$100.00 - \$145.00
Project Geologist/Scientist I - IV	\$ 95.00 - \$135.00
Staff Engineer/Geologist/Scientist I - III	\$ 75.00 - \$110.00
Technician I - III	\$ 60.00 - \$ 95.00
Project Coordinator	\$ 95.00 - \$125.00
Clerical	\$ 65.00 - \$ 75.00

Reimbursable Expenses

Report Materials	At Cost
Travel, Field, and Miscellaneous Services	Cost Plus 15%
Subcontracted Services	Cost Plus 15%
Technology Fee	3% of Total Labor Cost

Notes:

1. Fees charged to the project will be in accordance with these rates for all work performed.

2. Fee Schedule effective through March 25, 2022.

Field Equipment Rates

Photoionization Detector (PID)	\$ 100.00 / day
4-Gas Meter	\$ 120.00 / day
Water Level Meter	\$ 18.00 / day
Interface Probe	\$ 30.00 / day
pH, Conductivity and Temperature Meter	\$ 23.00 / day
Dissolved Oxygen Meter	\$ 34.50 / day
Oxidation Reduction Potential (ORP) Meter	\$ 33.00 / day
Metal Detector	\$ 20.00 / day
Air Sampling Pump	\$100.00 / day
Data Logger Pressure Transducer	\$115.00 / day
Disposable Bailers	\$ 13.00 / each
Field Supplies	\$ 30.00 / day
Groundwater Sampling Filter	\$ 24.00 / each
Groundwater Sampling Pump	\$ 46.00 / day
Low-flow sampling systems	\$201.25 / day
Hand Auger	\$ 17.25 / day
Survey Equipment	\$45.00 / half-day
Multi-Channel Data Logger	\$287.50 / day
Hand-Held GPS Unit	\$ 33.00 / day
Trimble GPS Unit	\$135.00 / day
Turbidity Meter	\$ 17.00 / day
Water Quality Meter	\$115.00 / day



6340 South Fiddlers Green Circle Greenwood Village, CO 80111 800-542-8072 www.cobank.com

$(Confidential) \\ \underline{DRAFT}$

December 12, 2022

Mr. Thomas Mason, President and CEO Lakes Region Water Company, Inc. Moultonborough, NH 03254

RE: Non-Binding Summary of Terms and Conditions - Confidential

Dear Mr. Mason:

This Non-Binding Summary of Terms and Conditions (this "Summary") is being presented to Lakes Region Water Company, Inc. by CoBank, ACB ("CoBank" or "Lender") for information and discussion purposes only. This Summary is neither a commitment nor an offer to extend credit and does not create any obligation on the part of CoBank. This Summary is intended to provide a summary of the primary terms and conditions of the proposed transaction between CoBank and the Company; however, this Summary does not contain all of the terms and conditions applicable to a credit facility provided by CoBank and ultimately contained in any loan documentation. CoBank's decision to extend credit to the Company is contingent upon completion to CoBank's satisfaction of all necessary due diligence, receipt of internal credit approvals, and the preparation of final documentation in form and substance satisfactory to CoBank. All figures, terms, and conditions are subject to change at any time. A commitment by CoBank will exist only if a formal, written commitment letter or definitive loan documents are prepared and executed by CoBank and the Company, and not otherwise. This Summary is strictly confidential and may not be released to or discussed with any third party without the prior written consent of CoBank

Borrower:	Lakes Region Water Company, Inc. ("Company")
Lender:	CoBank, ACB
Type of Credit Facilities:	A \$863,000 multiple advance, senior secured, amortizing term loan (the "Loan").
Purpose:	To fund capital projects primarily for a new well and closing costs.
Availability Date:	Available for up to 12 months from the Closing Date. Repayments and prepayments of the Loan may not be reborrowed.
Closing Date:	Shall be the date of execution and delivery of definitive loan documents and satisfaction or waiver of all condition precedent to the Loan, to occur no later than June 30, 2023.

Loan Maturity Date:	The Loan will terminate and all amounts owing thereunder shall be due up to 20 years from the Availability Date (the "Loan Maturity Date").
Interest:	The Company will pay interest on the outstanding principal balance of the Loan in accordance with one or more of the following interest rate options, as selected by the Company:
	<u>Weekly Quoted Variable Rate Option</u> : At a rate per annum equal at all times to the rate of interest established by CoBank on the first business day of each week. The rate established by CoBank shall be effective until the first business day of the next week. Each change in the rate shall be applicable to all balances subject to this option and information about the
	Quoted Rate Option . At a fixed rate per annum to be quoted by CoBank in its sole discretion in each instance. Under this option, rates may be fixed on such balances and for such periods, as may be agreeable to CoBank in its sole discretion in each instance, provided that (1) such interest period shall not exceed the Loan Maturity Date; (2) the minimum fixed period shall be 365 days; (3) amounts may be fixed in increments of \$100,000.00 or multiples thereof; and (4) the maximum number of fixes in place at any one time shall be 5.
	At any one time, there may be no more than five portions of the Loan accruing interest pursuant to any fixed rate option. The Quoted Rate Option shall not be available during a default or event of default for advances, rollovers or repricings.
	The loan documents will include standard protective provisions for such matters as increased costs, funding losses, illegality, changes in law and temporary or permanent unavailability of a benchmark.
Interest Payments:	Interest shall be calculated on the actual number of days each advance is outstanding on the basis of a year consisting of 360 days and shall be payable monthly in arrears by the 20th day of the following month.
Default Interest:	Upon the occurrence and during the continuance of an event of default, a default rate of interest shall apply in an amount equal to 2% above the interest rate then in effect. Such interest will be payable on demand.
Unused Commitment Fee:	.25% on the undrawn portion of the Loan (which fee shall be calculated on an actual/360 day basis and payable monthly in arrears and on the date the Loan expires or is terminated).
Principal Repayment:	Consecutive monthly installments of principal, payable on the 20 th day of each month, with the first installment due on the 20 th day of the month following the Availability Date, and the last installment due on the Loan Maturity Date. The amount of each installment shall be the same principal amount that would be due and payable if the loan was payable in level installments of principal and interest and such schedule was calculated utilizing the rate of interest applicable at the time of amortization based upon a 20 year, mortgage style amortization schedule.

Prepayment:	Any prepayment of any portion of the Loan accruing interest pursuant to Quoted Rate Option prior to the last day of the applicable interest period will be subject to a surcharge equal to the greater of (a) the sum of: (i) the present value of any funding losses sustained by CoBank as a result of such prepayment, plus (ii) a per annum yield of .5% of the amount repaid for the period such amount was scheduled to have been outstanding at such fixed rate, or (b) \$300.
Collateral:	The Company's obligations under the Loan will be secured by a statutory first lien on all equity that the Company may now own or hereafter acquire or be allocated in CoBank.
	In addition, the Company's obligations under the Loan will be secured by a perfected priority lien on and security interest in all real and personal, tangible and intangible, present and future assets of the Company, including the stock of Company, subject only to those exceptions approved by CoBank.
	The Company will execute and record or file, as applicable, such deeds of trust, mortgages, security agreements, financing statements, and such other instruments and documents as CoBank may require to enable CoBank to obtain, perfect, and maintain a lien on the collateral described above. Also, Company will provide to CoBank with such evidence of title (in a form to be determined by CoBank) subject only to those exceptions approved by CoBank. Company will not grant a lien on assets or revenues to any other creditor excepting for typical purchase money obligations and standard exemptions.
Documentation:	Any commitment issued by CoBank would be subject to the negotiation, execution, delivery, and, where appropriate, recording of loan and loan related documentation (including exhibits, opinions, and security documentation) satisfactory to CoBank and its counsel in its or their sole discretion. In addition, all other matters whatsoever relating to the credit or the closing thereof must be approved by CoBank and its counsel in its or their sole discretion. Without limiting the foregoing, the loan documentation shall include conditions precedent, representations and warranties, covenants, events of default, remedies upon default, and various miscellaneous provisions.
Representations	
and Warranties:	Customary for credit facilities of this type, including without limitation: corporate existence, compliance with loan documents, laws, grants and contractual obligations; no conflict with organization documents, law, grants or contractual obligations; title to property; solvency; receipt of all governmental or regulatory approvals; and binding and enforceable loan documents.
Conditions Precedent to Closing:	Approval of the proposed debt by the New Hampshire PUC.

Financial Covenants:	Financial Covenants:
	• "Debt Service Coverage Ratio" As per the existing Loan Agreement.
	• "Total Debt to Total Capitalization Ratio" As per the existing Loan Agreement.
Affirmative Covenants:	As per the existing loan agreement.
Negative Covenants:	As per the existing loan agreement.
Reporting Requirements:	As per the existing loan agreement
Expenses and Indemnification:	The Company will pay all out-of-pocket costs and expenses of CoBank related to the negotiation, drafting, execution and administration of all loans. Typical expenses include without limitation due diligence expenses, legal fees and expenses, filing fees, lien search fees, appraisal fees, mortgage fees, title insurance and collateral inspection fees. The foregoing fees and expenses shall be due and payable regardless of whether the loans described herein close.
	The Company will pay, and hold CoBank and its officers, directors, employees, agents, and attorneys (the " <u>Indemnitees</u> ") harmless from and against, any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, and claims of any kind or nature whatsoever that may be imposed on, incurred by, or asserted against the Indemnitees as a result of its being a party to the credit agreement, except with respect to liabilities arising from the gross negligence or willful misconduct of that Indemnitee as determined by a final non appealable judgment of a court of competent jurisdiction.
Defaults:	As per the existing loan agreement.
Patronage:	At the sole discretion of CoBank's Board of Directors, each year eligible customers may qualify under CoBank's patronage plan for patronage certificates and distributions. CoBank reserves the right to sell, assign and/or participate in credit facilities discussed hereunder on a non- patronage basis. The required capital purchase is \$1,000 due at closing.
Assignment:	The Loan and the proceeds thereof are not assignable by the Company to any other person or entity without CoBank's prior written consent.
Governing Law:	The loan documents will be governed by and construed in accordance with the laws of the State of Colorado. The Company will submit to the nonexclusive jurisdiction and venue of the federal and state courts of the State of Colorado and will waive any rights to a trial by jury in

respect of any litigation arising out of or in connection with this financing.