STATE OF NEW HAMPSHIRE

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April 17, 2020

Debra A. Howland, Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street
Concord, New Hampshire 03301-2429

Re: DW 19-147, Hampstead Area Water Company, Inc.
Petition for Approval of Financings

Dear Ms. Howland:

In this letter, Staff of the New Hampshire Public Utilities Commission (Staff) recommends the Commission approve an assented to motion to bifurcate consideration of two loans contained in a financing petition submitted by Hampstead Area Water Company, Inc. (HAWC or Company) in the above-mentioned matter. Staff further recommends the Commission approve a financing for HAWC for an amount up to $1,204,815 from the New Hampshire Drinking Water and Groundwater Trust Fund (DWGTF) administered by the NH Department of Environmental Services (DES). A detailed narrative of the proposed financings as well as the basis for Staff's recommendations follow.

Background

On September 9, 2019, HAWC filed a petition with the Commission requesting approval of two financings related to its portion of Phase I construction of the Southern NH Regional Water Interconnection Project (Project).[1] The testimonies and attachments of HAWC's consultant, Stephen P. St. Cyr, and HAWC's President, Harold Morse, accompanied the petition.

The first loan (CIAC Tax Loan) in an amount up to $1,204,815 from the NH DWGTF is for payment of anticipated federal and state income taxes. These taxes are the result of HAWC's approved receipt of Contributions in Aid of Construction (CIAC) in

[1] The Southern NH Regional Water Interconnection Project is an initiative supported by DES to transmit water supply from Manchester Water Works to the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow. The Project has two phases. Phase I will enable a total maximum daily flow of 1 million gallons per day (MGD) to the regional systems. The current total estimate for Phase I, including HAWC's portion, is $26.9 Million. The completion of Phase I is anticipated by the end of 2020. Phase II, when completed, will enable the supply of an additional 3.13 MGD of water to the region. The current estimated cost of Phase II is $13.8 Million. There is currently no specific timeline for initiation of Phase II's construction. (See Weston & Sampson Memorandum dated January 4, 2019 included as Attachment A to Exhibit 8 of HAWC's original filing.)

the form of a $3,283,750 grant[2], also from the DWGTF, and $778,000 in estimated contributed plant from the Towns of Salem and Plaistow.[3] Each contribution will finance HAWC's portion of Phase I construction of the Project. Mr. Morse's testimony explained that a substantial portion of the planning process for the project took place prior to 2018 when the receipt of CIAC was exempt from taxation for water utilities. The enactment by Congress of the Tax Cuts and Jobs Act (TCJA) of 2017, however, removed that exemption. As such, it is now necessary for HAWC to borrow funds to pay its anticipated income tax liability on the CIAC that it will receive related to Phase I.

Even though the Company is able to borrow an amount up to $1,204,815 from the DWGTF for this purpose, HAWC's original filing estimated that it would only need to borrow $894,494 to pay its potential tax liability. Through discovery, however, HAWC now estimates that it will borrow $1,102,356 from the total approved funds.[4]

With regard to the terms of the CIAC Tax Loan, the financing will amortize over a twenty-five year period through monthly payments including interest based on a rate of 2.96%.[5] Commencing six months from the date of substantial completion of HAWC's portion of the Project, interest payments will be required for a term of six months.[6] After which point, principal and interest payments will be required for the balance of the loan term. Final procurement of the loan is first subject to Commission approval in accordance with RSA 369:1, and then approval by the Governor and Council.

The second loan (MSDC Loan) described in HAWC's initial petition is for an amount of $392,500 to finance a portion of a total $892,500 Merrimack Source Development Charge (MSDC)[7] assessed by Manchester Water Works (MWW) as a result of Phase I. HAWC's total MSDC is in accordance with an agreement dated March 29, 2019 between MWW and the Project's participants, included as Attachment C to Exhibit 8 of HAWC's original filing, which established a purchased capacity rate of $3.57 per gallon per day. The Company's purchased capacity resulting from Phase I will be 250,000 gallons per day, resulting in HAWC's calculated MSDC of $892,500 ($3.57 x 250,000 gallons per day). According to Mr. St. Cyr's testimony, a $500,000 capital contribution from the Company's shareholder will provide the necessary funding for the remaining portion of the total MSDC.

[2] See Exhibit 1 of Company's original filing.
[3] See Staff 3-10.
[4] See Staff 3-10.
[5] The Company's initial filing indicated an interest rate of 2.97%. In its response to Staff 3-1, the Company confirmed that the interest rate on the loan is actually 2.96%.
[6] See DES response to Staff Question 1(c) dated December 3, 2019.
[7] The MSDC is a capacity charge assessed by MWW as a means of developing the Merrimack River as an additional source of supply for MWW. The Commission first approved the MSDC in *Manchester Water Works*, Order No. 18,628 (April 6, 1987). For a further brief history of the MSDC and MWW's regulation by the Commission, see *Pennichuck East Utility, Inc. & Pennichuck Water Works, Inc.*, Order No. 26,076 at 2 (November 17, 2017).

Staff's discovery revealed that HAWC applied for the MSDC Loan through the DWGTF. In August 2019, the DWGTF Advisory Commission informed HAWC of its decision to defer consideration of the MSDC Loan until a later date.[8] The Company anticipates the DWGTF Commission will take this matter up again at a subsequent time, but as of this date, that has not yet occurred. In the alternative, HAWC is prepared to borrow the required funds from Pentucket Bank via the line of credit it holds with that institution at an estimated interest rate of 5.00%.[9] The Company's preference, however, is to borrow the funds from the DWGTF.[10]

Given the continued uncertainty regarding HAWC's MSDC Loan request, Staff inquired as to the Company's willingness to submit a motion to the Commission to bifurcate consideration of the two proposed loans, to which the Company agreed.[11] Consequently, on February 25, 2020, HAWC filed an Assented-to Motion to Bifurcate Consideration of the Company's proposed MSDC Loan and CIAC Tax Loan. In that motion, HAWC indicates that the Commission's consideration of the CIAC Tax Loan is most critical as it pertains to this summer's actual construction of Phase I. Further, given the current uncertainty regarding the precise terms and conditions that HAWC will obtain relative to the MSDC Loan and the fact that its consideration is not presently as critical as that of the CIAC Tax Loan, HAWC requests that the Commission consider the two financing requests separately, giving priority to the CIAC Tax Loan.

HAWC's original petition filed last September specifically requests the following of the Commission:

- Authority to accept a grant from the DWGTF in the amount of $3,283,750 for the construction of HAWC's portion of infrastructure related to Phase I of the Southern NH Regional Water Interconnection Project (Project),
- Authority to borrow an amount up to $1,204,815 from the DWGTF to pay anticipated income taxes incurred from the acceptance of CIAC,
- Authority to borrow an amount up to $392,500 from either the DWGTF or a bank to finance a portion of the total MSDC assessed by MWW to HAWC relative to the Project,
- A finding that the execution of loan documents by the Company for the purpose of consummating the two requested financings are consistent with the public good,
- A finding that the proposed amounts and uses of the proceeds of the two financings are prudent and consistent with the public interest, and
- Authority to increase rates by such amounts as to enable the Company to recover its investment and earn a reasonable rate of return on such investment.

[8] See Exhibit 1 of the Company's initial filing and Staff 1-4.
[9] See Staff 1-1.
[10] See Staff 2-3.
[11] See Staff 4-2.

On September 19, 2019, Staff informed HAWC that it would only be examining the two requests for financing contained in the filing pursuant to RSA 369:1 and RSA 369:4. Staff further stated that it would not be examining the prudency of the Company's proposed improvements, at this time, nor HAWC's request for authority to increase rates. HAWC agreed with Staff's characterization of the purpose of its filing and scope of review.[12]

Between October 2019 and January 2020, Staff propounded four rounds of discovery on the Company, to which HAWC provided responses. Staff also made inquiries of DES personnel relative to the Company's participation in Phase I of the Project and the related approved funding from the DWGTF.

Motion to Bifurcate Consideration of the Two Proposed Financings

On February 26, 2020, HAWC filed its assented to motion to bifurcate the underlying financing petition that seeks Commission approval of two distinct financings. HAWC requested that the Commission allow bifurcation of the two financings, allowing the approval of the CIAC Tax Loan, as described below, to proceed. HAWC argued that the time sensitive nature of the CIAC Tax Loan, with the upcoming construction season, and the uncertainty of the terms regarding the MSDC Loan support bifurcation. The Commission has approved a similar bifurcation of financing in the past, stating that the bifurcation "would promote the orderly and efficient conduct of the proceeding." *Pennichuck Water Works, Inc.*, Secretarial Letter, January 18, 2018, (Docket No. DW 17-183) at 1. Staff recommends the Commission approve HAWC's motion for the same reasons.

As previously stated, the terms and conditions of the proposed MSDC Loan at present remain uncertain, as is also the exact lender of these funds. That uncertainty prohibits Staff from making a recommendation to the Commission. Given the critical juncture that now exists relative to the impending commencement of Phase I construction, Staff recommends the Commission move forward with approval of the proposed CIAC Tax Loan at this time as those terms are certain and examined by Staff. Staff anticipates that once the DWGTF Advisory Commission provides a definitive answer to HAWC regarding the pending MSDC Loan, the Company will advise the Commission relative to its financing plans in this regard. Staff will then review those plans, including any updated terms and conditions of the proposed MSDC financing. Staff will then provide the Commission with its recommendation regarding the MSDC Loan at a future date.

CIAC Tax Loan

[12] See Staff 1-29.

Under RSA 369:1, public utilities engaged in business in this state may issue evidence of indebtedness payable more than twelve months after the date thereof only if the Commission finds the proposed issuance to be "consistent with the public good." Analysis of the public good involves looking beyond the actual terms of the proposed financing to the use of the funds and the effect on rates to insure protection of the public good. *Appeal of Easton*, 125 N.H. 205, 211 (1984). "[C]ertain financing related circumstances are routine, calling for more limited Commission review of the purposes and impacts of the financing, while other requests may be at the opposite end of the spectrum, calling for vastly greater exploration of the intended uses and impacts of the proposed financing." *Lakes Region Water Company, Inc.*, Order No. 25,753 (January 13, 2015) at 4-5, citing *Public Service Company of NH*, Order No. 25,050, 94 NH PUC 691, 699 (2009).

The Commission engages in a more limited review for routine financing requests. *Pennichuck Water Works, Inc.*, Order No. 26,247 at 4 (May 3, 2019). A routine request is one that "will have no discernable impact on rates or deleterious effect on capitalization, [and] in which the funds are to enable . . . investments appropriate in the ordinary course of utility operations." *Id.* In the case of the instant financing, while the resulting estimated rate increase is not *de minimus*, it is also not discernable, nor will the proposed financing have a deleterious effect on capitalization, as discussed below. As such, and consistent with other Commission-approved financings from the DWGTF, Staff reviewed HAWC's filing as a routine financing.

In its filing, HAWC avers that the CIAC Tax Loan is in the public interest because the underlying Project enables the Company to provide safe and reliable water service to its existing customers as well as consumers within the Town of Plaistow. Petition at 4. Mr. Morse, in his testimony, states that completion of the Project is beneficial to HAWC with regard to system operation and resource planning. Specifically, the Project will enable HAWC to provide stability to its two core systems relative to both regular and emergency water supply.

In its response to Staff 1-20, HAWC provided a letter from DES Commissioner Robert R. Scott in support of the Company's filing. In his letter, Commissioner Scott stated that HAWC's participation in the Project would benefit its existing customers by facilitating:

1) Increased reliability of HAWC's water supply, as some existing wells are experiencing declining yield.
2) Improved water quality by enabling HAWC to prioritize higher quality wells.
3) A reduction in system complexity by allowing HAWC to take more than half of its existing wells offline.
4) An ability to expand to address contamination and/or loss of water in private wells.

Commissioner Scott further emphasized the critical nature of the Company's participation in the Project because of the necessity to wheel the regional water supply through the HAWC water system to enable service to the Town of Plaistow. Finally, Commissioner Scott echoed the Company's arguments for approval of the financing by stating that it will support HAWC's continuing ability to provide safe and reliable service to its customers at just and reasonable rates.

With regard to the impact that Phase I will have on customer rates, HAWC estimates a resulting increase of 17.31% in its revenue requirement from existing customers.[13] This estimate, however, is inclusive of projected increases in HAWC's operating expenses resulting from Phase I of $340,000, and is after anticipated revenues from the Town of Plaistow of $88,000.

With regard to HAWC's capital structure, the Company indicates there will be a relatively small adjustment. Revised Schedule SPS-3 included in the Company's response to Staff 3-10 shows a debt/equity ratio after the completion of Phase I of 66%/34%. This is compared to the Company's projected debt/equity ratio after approval of HAWC's recent tank financing in DW 18-138 of 63%/37%.[14] While the Company's highly leveraged position remains of great concern, Staff notes the commitment made by HAWC's shareholder in DW 18-138 to make capital contributions of at least $750,000 between 2019 and 2021. Staff also notes that Mr. St. Cyr's testimony states that HAWC will file a general rate case with the Commission at the conclusion of Phase I. As such, Staff anticipates that HAWC's overall capital structure will be an issue taken up for consideration during that proceeding.

Staff recommends the Commission approve HAWC's request for financing relative to its proposed CIAC Tax Loan in an amount up to $1,204,815. Staff believes the Company has shown that it is necessary to borrow these funds to pay the anticipated income tax liability resulting from its acceptance of CIAC from Phase I. Based on DES's assertions, Staff further believes the Project, itself, appears to be appropriate and in the public good. Lastly, the terms of this financing from the DWGTF are favorable. As such, Staff believes that these terms, when compared with other possible financing options, mitigates the overall impact the Project will have on overall customer rates.

Requests for Additional Commission Approvals

[13] See Staff 3-10. HAWC's original filing projected an increase in its revenue requirement of 20.17%.
[14] Commission Order No. 26,230 (March 29, 2019) approved a financing of up to $1,020,000 from the DWGTF. That Order reported a potential debt/equity ratio projection calculated by Staff of 72%/28% upon full withdrawal of that loan and assuming a full withdrawal of HAWC's $1 Million line of credit with Pentucket Bank. HAWC's debt/equity projection contained on Schedule SPS-3 does not reflect any withdrawal on its available line of credit funds.

As stated previously, HAWC included in its petition a number of other requests for Commission approval in addition to its request for financing approval. Among these was a request for authority from the Commission to accept a grant from the DWGTF of $3,283,750 for the construction of HAWC's portion of the Phase I infrastructure. While Staff reviewed the grant funds approved for HAWC within the context of the financing requests, Staff believes that Commission approval for the receipt of those grant funds is not specifically required as it does not conflict with the terms of its tariff and the funds are not subject to repayment or considered a financing. RSA 369:1.

HAWC's petition also sought a Commission finding that the proposed amounts and uses of the proceeds of the financings are prudent and consistent with the public interest. While Staff reviewed the proposed Phase I projects anticipated for construction by HAWC within the context of the financing requests, it did not evaluate the prudency of these projects. Staff believes RSA 369:1 and RSA 369:4 do not require a prudency determination at this time and that such would be premature until the proposed plant is in service, and used and useful. *See Hampstead Area Water Company, Inc.*, Order No. 26,230 (March 29, 2019) at 9 (the Commission's approval of the loan "does not foreclose or limit our review in a future rate case of the prudency, use, and usefulness of any specific project directly or indirectly financed by this transaction. The Commission and Staff also retain the authority under RSA 374:4 to keep informed of HAWC's use of the financing independently and apart from any RSA 378:28 review").

Lastly, HAWC's petition requested Commission authority to increase its rates by such necessary amounts as to enable the Company to recover its investment and earn a reasonable rate of return on its proposed investment. Staff has not historically supported a rate increase simultaneous with a request for financing approval, as it believes such constitutes single-issue ratemaking. Staff further believes that a request to increase rates should be in conjunction with a finding that the underlying plant is prudent, in service, and used and useful.

Conclusion

Staff recommends the Commission approve HAWC's request to bifurcate consideration of the two loans originally requested for approval in its financing petition. As such, Staff further recommends the Commission approve, at this time, HAWC's proposed CIAC Tax Loan in an amount up to $1,204,815 from the DWGTF administered by DES. Staff also recommends the Commission defer consideration of the MSDC Loan of $392,500 until the actual terms and conditions associated with that loan are fully determined. If you have any further questions related to this matter, please do not hesitate to contact me.

Sincerely,

/s/ *Jayson P. Laflamme*

Jayson P. Laflamme
Assistant Director, Gas-Water Division

Attachments: Staff Discovery

cc: Service List

HAMPSTEAD AREA
WATER COMPANY, INC

54 SAWYER AVENUE, ATKINSON, NH 03811
TEL: 603.362.4299 FAX: 603.362.4936
www.hampsteadwater.com

October 28, 2019

Christopher R. Tuomala, Esq.
NH Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

RE: Hampstead Area Water Company, Inc.
DW 19-147 – Answers to Staff Data Requests - Set

Dear Attorney Tuomala:

Pursuant to NH Code PUC 203.09, please find attached, the Company's Answers to Staff Data Requests-Set1, regarding the above referenced docket.

If you have any questions, please don't hesitate to contact us.

Very truly yours,

Anthony Augeri, Esq.
General Counsel

AA/ljs
enclosures
cc: DW 19-147 Service list electronically

\\hawc02\HAWC-Data\Legal\HAWC\DW-19-147 Financing Pet for SNH Water Project\Correspondence\Letter to Attorney Tuomala with data request answers set 1.docx

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-1	**Witness: John Sullivan**

Staff 1-1

The Company's petition at paragraph 11 states, "A bank has preliminarily indicated that it would approve HAWC's request for financing for a portion of the [Merrimack Source Development Charge (MSDC)] the Company will incur subject to various terms and conditions."

a) What is the name of the bank indicated in the above statement?
b) Please describe the nature and extent of the communications between the Company and the bank regarding the proposed financing.
c) Did the Company submit either an application or pre-application to the bank regarding the proposed financing? If yes, please provide a copy of this documentation.
d) Has the bank provided a commitment letter or some other documentation relative to a preliminary commitment regarding the proposed financing? If yes, please provide a copy of this documentation.
e) Please explain why the proposed bank loan will finance only a portion of the total MSDC charges.
f) Please provide documentation in support of the anticipated terms and conditions of the proposed bank loan, i.e., interest rate of 5.00%; 20-year term consisting of monthly principal and interest payments commencing 30 days from date of closing.
g) What type of security, if any, is the bank requesting relative to the proposed loan?
h) Please describe other financing options contemplated by the Company for financing the MSDC charges and why the Company is opting for bank financing.

Response 1-1

A) Pentucket Bank
B) The bank has committed to loan to the Company $392,000 towards the MSDC through the line of credit.
C) No.
D) No.
E) Chris Morse has contributed the balance of the MSDC through additional paid in capital.
F) This has not yet been finalized with the bank.
G) This has not yet been finalized with the bank.
H) See response 1-4. Should the DWGWTF not approved the MSDC loan, The Company will purse private financing.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-2	**Witness: Charles Lanza**

Staff 1-2

Exhibit 1 indicates the NH Drinking Water and Groundwater Advisory Commission (DWGTF Commission) approved a CIAC Tax loan of $1,204,815. The Company's filing indicates that the anticipated CIAC Tax will be $894,494, or a difference of $310,321.

a) Please provide further explanation as to why the DWGTF Commission approved a loan amount of $1,204,815 rather than $894,494.
b) Please provide the calculation used by NHDES in determining a CIAC Tax loan amount of $1,204,815.

Response 1-2

a) Please see response to Staff 1-13. The CIAC tax should be $1,229,375.
b) Please see the attached Regional Water Costs summary sheet.

Regional Water Costs - DWGTF Application Update

19-Jul-19

Water System	Phase I Component		SNHRW Phase I Cost
HAWC	Chloramine Conversion (see separate breakout of costs)	$	1,240,000
	Westside Drive Pump Station	$	1,210,000
	Main St. PRV Improvements	$	575,000
	Westside Drive/Main St Contingnecy (15%)	$	258,750
	*HAWC Construction & Contingnecy Subtotal**	*$*	*3,283,750*
	Loan Requests:		
	CIAC Tax (27%)		
	HAWC Construction & Contingency (27% of above subtotal)	$	929,813
	Shannon Road Water Main (bid by Salem) CIAC Tax (27% of Value contributed to HAWC)	$	151,882
	East Road Water Main (bid by Plaistow) CIAC Tax (27% of Value contributed to HAWC)	$	123,120
	MSDC Fee	$	392,500
	Project Total	**$**	**5,041,064**
	Grant Request Total	$	3,443,750
	Loan Request Total	$	1,597,314

*Costs include engineering

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-3	**Witness: Charles Lanza**

Staff 1-3

Exhibit 1 indicates that the finalized grant agreement was scheduled to be approved by the Governor and Executive Council (G&C) at its meeting on September 18, 2019. Has the G&C approved the finalized grant agreement? If yes, please provide supporting documentation of that approval. If no, please explain.

Response 1-3

The grant agreement has been finalized. See attached.

The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Robert R. Scott, Commissioner

September 27, 2019

Via Electronic Mail

Christine Lewis Morse, Vice President
The Hampstead Area Water Company, Inc.
54 Sawyer Avenue
Atkinson, NH 03811

Subject: Drinking Water and Groundwater Trust Fund (DWGTF) # DWGT-39
Southern New Hampshire Regional Water Interconnection Project – HAWC Infrastructure
Grant Agreement Approved

Dear Ms. Morse:

The purpose of this letter is to officially notify The Hampstead Area Water Company, Inc. (HAWC) of action taken by the Governor and Executive Council. On September 18, 2019, the Governor and Executive Council authorized the approval of a Drinking Water and Groundwater Trust Fund (DWGTF) grant agreement between the Department of Environmental Services (DES) and The Hampstead Area Water Company, Inc. in the total amount of $3,283,750 under the provisions of RSA 485:F for the Southern New Hampshire Regional Water Interconnection Project – HAWC Infrastructure.

Upon receiving approval from the Governor and Council, HAWC has six (6) months from this date to submit its first request for disbursement of funds. Failure to request a disbursement shall cause the grant agreement to be declared null and void. If HAWC has advanced funds prior to the date of this grant agreement, provided they are eligible expenses, you may submit a disbursement request immediately for those expenses. Attached is the Request for Disbursement form which must be submitted with all supporting documentation. The form is also available online at Link to DWGTF forms. Each disbursement request will be paid 100% grant funds. The total reimbursement shall not exceed the grant award of $3,283,750.

Please note, plans and specifications must be submitted on all significant elements of the project; design approval and authorization must be obtained from the NHDES to advertise for bids on the project; and authorization must be received from NHDES to award the construction contract. All work must be completed by June 1, 2021.

Sincerely,

Erin Holmes, P.E., Administrator
Drinking Water and Groundwater Trust Fund
MtBE Remediation Bureau

Enclosures: Grant and Loan Agreement and Disbursement Request Form
Approved G&C Grant and Loan Agreement

Cc: Michael Juranty, P.E., MtBE Remediation Bureau Administrator, NHDES
Michael Unger, P.E., DWGB, NHDES
Harold Morse, HAWC (harold@hampsteadwater.com)
Charlie Lanza, HAWC (charlie@hampsteadwater.com)

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

August 29, 2019

His Excellency, Governor Christopher T. Sununu
and the Honorable Council
State House
Concord, New Hampshire 03301

APPROVED G & C
DATE 18Sep19
ITEM # 75

REQUESTED ACTION

Authorize the Department of Environmental Services to award a grant to The Hampstead Area Water Company, Inc. (VC# 156646-B001), of Atkinson, NH in the amount not to exceed $3,283,750 for water system capital improvements under the provisions of RSA 485:F, effective upon Governor & Council approval through June 1, 2021. 100% Drinking Water and Groundwater Trust Fund.

Funds to support this request are anticipated to be available in the following account in FY2020 upon the availability and continued appropriation of funds in the future operating budget:

	FY 2020
03-44-44-442010-3904-073-500580 Dept. Environmental Services, Drinking Water and Groundwater Trust, Grants Non-Federal	$3,283,750

EXPLANATION

The Drinking Water and Groundwater Trust Fund (Trust Fund) was created in 2016, using $276 million of MtBE trial judgement funds, as authorized by RSA 485-F. The purpose of the Trust Fund is to provide sustainable, long-term funding for the protection, preservation, and enhancement of the drinking water and groundwater resources of the state. The Trust Fund Advisory Commission was established to administer the Trust Fund and to provide guidance to the State on the use of the Trust Fund.

On August 13, 2019, the Advisory Commission voted to authorize $3,283,750 as a grant to the Hampstead Area Water Company, Inc. for payment for capital improvements including water transmission mains and associated facilities and conversion of the system's disinfection method to support the supply of drinking water from Manchester Water Works that will ultimately be delivered to downstream water systems participating in the Southern New Hampshire Regional Water Interconnection Project. This agreement has been approved by the Attorney General's Office as to form, substance and execution.

We respectfully request your approval of this item.

Robert R. Scott
Commissioner

DES Website: www.des.nh.gov
P.O. Box 95, 29 Hazen Drive, Concord, New Hampshire 03302-0095
Telephone: (603) 271-2513 • Fax: (603) 271-5171 • TDD Access: Relay NH 1-800-735-2964

Subject: The Hampstead Area Water Company, Inc.

GRANT AGREEMENT

The State of New Hampshire and the Grantee hereby mutually agree as follows:

GENERAL PROVISIONS

1. **Identification.**

1.1 State Agency Name NH Department of Environmental Services		**1.2 State Agency Address** 29 Hazen Drive, Concord, NH 03301	
1.3 Grantee Name The Hampstead Area Water Company, Inc.		**1.4 Grantee Address** 54 Sawyer Avenue, Atkinson, NH 03811	
1.5 Effective Date Upon G&C Approval	**1.6 Completion Date** June 1, 2021	**1.7 Audit Date** N/A	**1.8 Grant Limitation** $3,283,750
1.9 Grant Officer for State Agency Erin Holmes, Drinking Water & Groundwater Trust Fund, NH Department of Environmental Services		**1.10 State Agency Telephone Number** 603-271-8321	
1.11 Grantee Signature Christine Lewis Morse		**1.12 Name & Title of Grantee Signor** Christine Lewis Morse, Vice President	
1.13 Acknowledgment: State of New Hampshire **, County of** Rockingham **On** 8/28/19, **before the undersigned officer, personally appeared the person identified in block 1.12, or satisfactorily proven to be the person whose name is signed in block 1.11, and acknowledged that s/he executed this document in the capacity indicated in block 1.12.**			
1.13.1 Signature of Notary Public or Justice of the Peace ANTHONY S. AUGERI, Notary Public State of New Hampshire My Commission Expires December 6, 2023 [SEAL]			
1.13.2 Name & Title of Notary Public or Justice of the Peace Anthony S. Augeri, Asst. Secretary & General Counsel			
1.14 State Agency Signature(s)		**1.15 Name/Title of State Agency Signor(s)** Robert R. Scott, Commissioner NH Department of Environmental Services	
1.16 Approval by Attorney General (Form, Substance and Execution) **By:** [illegible] **On:** 9/3/19			
1.17 Approval by the Governor and Executive Council **By:** **On:**			

2 SCOPE OF WORK. In exchange for grant funds provided by the state of New Hampshire, acting through the agency identified in block 1.1 (hereinafter referred to as "the State"), pursuant to RSA 21-O, the Grantee identified in block 1.3 (hereinafter referred to as "the Grantee"), shall perform that work identified and more particularly described in the scope of work attached hereto as EXHIBIT A (the scope of work being referred to as "the Project").

3 AREA COVERED. Except as otherwise specifically provided for herein, the Grantee shall perform the Project in, and with respect to, the State of New Hampshire.

4 EFFECTIVE DATE; COMPLETION OF PROJECT.

4.1 This Agreement, and all obligations of the parties hereunder, shall become effective on the date in block 1.5 or on the date of approval of this Agreement by the Governor and Council of the State of New Hampshire whichever is later (hereinafter referred to as the "Effective Date").

4.2 Except as otherwise specifically provided for herein, the Project, including all reports required by this Agreement, shall be completed in ITS entirety prior to the date in block 1.6 (hereinafter referred to as the "Completion Date").

5 GRANT AMOUNT; LIMITATION ON AMOUNT; PAYMENT.

5.1 The Grant Amount is identified and more particularly described in EXHIBIT B, attached hereto.

5.2 The manner of, and schedule of payment shall be as set forth in EXHIBIT B.

5.3 In accordance with the provisions set forth in EXHIBIT B, and in consideration of the satisfactory performance of the Project, as determined by the State, and as limited by subparagraph 5.5 of these general provisions, the State shall pay the Grantee the Grant Amount. The State shall withhold from the amount otherwise payable to the Grantee under this subparagraph 5.3 those sums required, or permitted, to be withheld pursuant to N.H. RSA 80:7 through 7-c.

5.4 The payment by the State of the Grant amount shall be the only, and the complete, compensation to the Grantee for all expenses, of whatever nature, incurred by the Grantee in the performance hereof, and shall be the only, and the complete, compensation to the Grantee for the Project. The State shall have no liabilities to the Grantee other than the Grant Amount.

5.5 Notwithstanding anything in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made, hereunder exceed the Grant limitation set forth in block 1.8 of these general provisions.

6 COMPLIANCE BY GRANTEE WITH LAWS AND REGULATIONS.

In connection with the performance of the Project, the Grantee shall comply with all statutes, laws, regulations, and orders of federal, state, county, or municipal authorities, which shall impose any obligations, or duty upon the Grantee, including the acquisition of any and all necessary permits.

7 RECORDS AND ACCOUNTS.

7.1 Between the Effective Date and the date seven (7) years after the Completion Date the Grantee shall keep detailed accounts of all expenses incurred in connection with the Project, including, but not limited to, costs of administration, transportation, insurance, telephone calls, and clerical materials and services. Such accounts shall be supported by receipts, invoices, bills and other similar documents.

7.2 Between the Effective Date and the date seven (7) years after the Completion Date, at any time during the Grantee's normal business hours, and as often as the State shall demand, the Grantee shall make available to the State all records pertaining to matters covered by this Agreement. The Grantee shall permit the State to audit, examine, and reproduce such records, and to make audits of all contracts, invoices, materials, payrolls, records or personnel, data (as that term is hereinafter defined), and other information relating to all matters covered by this Agreement. As used in this paragraph, "Grantee" includes all persons, natural or fictional, affiliated with, controlled by, or under common ownership with, the entity identified as the Grantee in block 1.3 of these general provisions.

8 PERSONNEL.

8.1 The Grantee shall, at its own expense, provide all personnel necessary to perform the Project. The Grantee warrants that all personnel engaged in the Project shall be qualified to perform such Project, and shall be properly licensed and authorized to perform such Project under all applicable laws.

8.2 The Grantee shall not hire, and it shall not permit any subcontractor, subgrantee, or other person, firm or corporation with whom it is engaged in a combined effort to perform such Project, to hire any person who has a contractual relationship with the State, or who is a State officer or employee, elected or appointed.

8.3 The Grantee officer shall be the representative of the State hereunder. In the event of any dispute hereunder, the interpretation of this Agreement by the Grantee Officer, and his/her decision on any dispute, shall be final.

9 DATA; RETENTION OF DATA; ACCESS.

9.1 As used in this Agreement, the word data shall mean all information and things developed or obtained during the performance of, or acquired or developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

9.2 Between the Effective Date and the Completion Date the Grantee shall grant to the State, or any person designated by it, unrestricted access to all data for examination, duplication, publication, translation, sale, disposal, or for any other purpose whatsoever.

9.3 No data shall be subject to copyright in the United States or any other country by anyone other than the State.

9.4 On and after the Effective Date all data, and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason, whichever shall first occur.

9.5 The State, and anyone it shall designate, shall have unrestricted authority to publish, disclose, distribute and otherwise use, in whole or in part, all data.

10 CONDITIONAL NATURE OF AGREEMENT. Notwithstanding anything in this Agreement to the contrary, all obligations of the State hereunder, including without limitation, the continuance of payments hereunder, are contingent upon the availability or continued appropriation of funds, and in no event shall the State be liable for any payments hereunder in excess of such available or appropriated funds. In the event of a reduction or termination of those funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to terminate this Agreement immediately upon giving the Grantee notice of such termination.

11 EVENT OF DEFAULT; REMEDIES.

11.1 Any one or more of the following acts or omissions of the Grantee shall constitute an event of default hereunder (hereinafter referred to as "Events of Default"):

11.1.1 failure to perform the Project satisfactorily or on schedule; or

11.1.2 failure to submit any report required hereunder; or

11.1.3 failure to maintain, or permit access to, the records required hereunder; or

11.1.4 failure to perform any of the other covenants and conditions of this Agreement.

11.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

11.2.1 give the Grantee a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice, and if the Event of Default is not timely remedied, terminate this Agreement, effective two (2) days after giving the Grantee notice of termination; and

11.2.2 give the Grantee a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the grant amount which would otherwise accrue to the Grantee during the period from the date of such notice until such time as the State determines that the Grantee has cured the Event of Default shall never be paid to the Grantee; and

11.2.3 set off against any other obligation the State may owe to the Grantee any damages the State suffers by reason of any Event of Default; and

11.2.4 treat the Agreement as breached and pursue any of its remedies at law or in equity, or both.

12 TERMINATION.

12.1 In the event of any early termination of this Agreement for any reason other than the completion of the Project, the Grantee shall deliver to the Grant Officer, not later than fifteen (15) days after the date of termination, a report ("Termination Report") describing in detail all Project Work performed, and the Grant Amount earned, to and including the date of termination.

12.2 In the event of Termination under paragraphs 10 or 12.4 of these general provisions, the approval of such a Termination Report by the State shall entitle the Grantee to receive that portion of the Grant amount earned to and including the date of termination.

12.3 In the event of Termination under paragraphs 10 or 12.4 of these general provisions, the approval of such a Termination Report by the State shall in no

Grantee Initials CLM

Date 3/28/19

event relieve the Grantee from any and all liability for damages sustained or incurred by the State as a result of the Grantee's breach of its obligations hereunder.

12 4 Notwithstanding anything in this Agreement to the contrary, either the State or except where notice default has been given to the Grantee hereunder, the Grantee, may terminate this Agreement without cause upon thirty (30) days written notice

13 **CONFLICT OF INTEREST.** No officer, member or employee of the Grantee and no representative, officer of employee of the State of New Hampshire or of the governing body of the locality or localities in which the Project is to be performed, who exercises any functions or responsibilities in the review or approval of the undertaking or carrying out of such Project, shall participate in any decision relating to this Agreement which affects his or her personal interests or the interest of any corporation, partnership, or association in which he or she is directly or indirectly interested, nor shall he or she have any personal or pecuniary interest, direct or indirect, in this Agreement or the proceeds thereof

14 **GRANTEE'S RELATION TO THE STATE.** In the performance of this Agreement the Grantee, its employees, and any subcontractor or subgrantee of the Grantee are in all respects independent contractors, and are neither agents nor employees of the State Neither the Grantee nor any of its officers, employees, agents, members, subcontractors or subgrantees, shall have authority to bind the State nor are they entitled to any of the benefits, workers' compensation or emoluments provided by the State to its employees

15. **ASSIGNMENT AND SUBCONTRACTS.** The Grantee shall not assign, or otherwise transfer any interest in this Agreement without the prior written consent of the State None of the Project Work shall be subcontracted or subgranteed by the Grantee other than as set forth in Exhibit A without the prior written consent of the State.

16 **INDEMNIFICATION.** The Grantee shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based on or resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Grantee of Subcontractor, or subgrantee or other agent of the Grantee Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State This covenant shall survive the termination of this Agreement

17 **INSURANCE AND BOND.**

17 1 The Grantee shall, at its sole expense, obtain and maintain in force, or shall require any subcontractor, subgrantee or assignee performing Project work to obtain and maintain in force, both for the benefit of the State, the following insurance

17 1 1 statutory workers' compensation and employees liability insurance for all employees engaged in the performance of the Project, and

17 1 2 comprehensive public liability insurance against all claims of bodily injuries, death or property damage, in amounts not less than $2,000,000 for bodily injury or death any one incident, and $500,000 for property damage in any one incident, and

17 2 The policies described in subparagraph 18 1 of this paragraph shall be the standard form employed in the State of New Hampshire, issued by underwriters acceptable to the State, and authorized to do business in the State of New Hampshire Each policy shall contain a clause prohibiting cancellation of modification of the policy earlier than ten (10) days after written notice the of has been received by the State

18 **WAIVER OF BREACH.** No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event, or any subsequent Event No express waiver of any Event of Default shall be deemed a waiver of any provisions hereof No such failure or waiver shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other default on the part of the Grantee

19 **NOTICE.** Any notice by a party hereto the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses first above given

20 **AMENDMENT.** This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Council of the State of New Hampshire

21 **CONSTRUCTION OF AGREEMENT AND TERMS.** This Agreement shall be construed in accordance with the law of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assignees. The captions and contents of the "subject" blank are used only as a matter of convenience, and are not to be considered a part of this Agreement or to be used in determining the intent of the parties hereto

22 **THIRD PARTIES.** The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit

23 **ENTIRE AGREEMENT.** This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the parties, and supersedes all prior Agreements and understandings relating hereto

Grantee Initials CLBA
Date 5/28/19

EXHIBIT A
SCOPE OF SERVICES

The Hampstead Area Water Company, Inc.:

The Hampstead Area Water Company, Inc. (HAWC) will use the grant funds to complete water system improvements directly related to and necessitated by the Southern New Hampshire Regional Water Interconnection Project (Southern NH Project). Grant funds will cover eligible construction phase costs including engineering, construction and land easement costs for the following tasks:

- Conversion of nine (9) existing well systems from chlorine to chloramine disinfection for compatibility with water received from Salem, delivered to HAWC as part of the Southern NH Project.
- Construction of a new pumping station on Westside Drive in Salem.
- Drinking water system improvements to the existing Main Street pressure reducing valve station in Atkinson.

EXHIBIT B
BUDGET & PAYMENT METHOD

The NHDES shall pay to the Grantee the total reimbursable program costs in accordance with the following requirements:

Reimbursement requests for program costs shall be made no more than once per calendar month by the Grantee using the Drinking Water and Groundwater Trust Disbursement form as supplied by the NHDES, which shall be completed and signed by the Grantee. The disbursement form shall be accompanied by proper supporting documentation based upon direct costs. The Grantee will maintain adequate documentation to substantiate all Program related costs. All work shall be performed to the satisfaction of the NHDES before payment is made.

Each disbursement request will be paid 100% of eligible expenses as grant funds not to exceed $3,283,750 of DWGTF grant funds.

EXHIBIT C
SPECIAL PROVISIONS

1. Changes to the Scope of Services require NHDES approval in advance. Work must be completed and request for reimbursement must be made by the completion date listed on the grant agreement (section 1.6).

Grantee Initials CLM
Date 9/28/18

TO: Christine Lewis Morse
Hampstead Area Water Company, Inc.
54 Sawyer Avenue
Atkinson, NH 03811

CONSENT IN LIEU OF SPECIAL MEETING OF THE BOARD OF DIRECTORS

WHEREAS, New Hampshire RSA 293-A:8.21 and the Hampstead Area Water Company, Inc. (Corporation) Bylaws provide for the taking by written consent of any action which may otherwise be taken by vote of the Corporation's Board of Directors (Directors); and

WHEREAS, the Corporation Directors deem the actions as set forth in the following Votes to require prompt action; and

WHEREAS, it is not convenient to call a Directors' Meeting;

NOW, THEREFORE, in lieu of a regular Directors' Meeting each member of the Directors, by execution of this Consent, hereby consents to the following action:

VOTE: That the Vice President of the Corporation, Christine Lewis Morse, is authorized to enter into a grant agreement on behalf of the Corporation to accept an award of up to $3,283,750 in grant funds from the Drinking Groundwater Trust Fund as part of the Southern New Hampshire Regional Water Interconnection Project; and is authorized to execute and deliver all documents necessary that are required to complete this transaction.

Date: August 28, 2019

Christine Lewis Morse, Director

ATTEST:

Anthony S. Augeri, Assistant Secretary

\\HAWC02\HAWC-Data\Legal\HAWC\aBusiness\Corporate\Annual Meetings\Special Meeting of BofD - DWGTF grant agreement vote 08-28-19.docx

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 08/20/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Patrick Payette ARM	
Brown & Brown of New Hampshire 309 Daniel Webster Highway Merrimack NH 03054	PHONE (A/C, No, Ext): (603) 424-9901	FAX (A/C, No): (866) 848-1223
	E-MAIL ADDRESS: ppayette@bbnhins.com	
	INSURER(S) AFFORDING COVERAGE	NAIC #
	INSURER A: Acadia Insurance Company	31325
	INSURER B: Union Insurance Company	25844
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

INSURED
Hampstead Area Water Company, Inc. 54 Sawyer Avenue Atkinson NH 03811

COVERAGES **CERTIFICATE NUMBER: 19-20** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR GEN'L AGGREGATE LIMIT APPLIES PER ☐ POLICY ☐ PRO-JECT ☐ LOC ☐ OTHER:	Y		CPA5253763	04/15/2019	09/01/2020	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☐ HIRED AUTOS ONLY ☐ SCHEDULED AUTOS ☐ NON-OWNED AUTOS ONLY			CAA5253784	04/15/2019	09/01/2020	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) Uninsured motorist	$ 1,000,000 $ $ $ $ 1,000,000
A	☒ UMBRELLA LIAB ☐ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☒ RETENTION $ 10,000			CUA5253785	04/15/2019	09/01/2020	EACH OCCURRENCE AGGREGATE	$ 2,000,000 $ 2,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: Y If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		WCA5253766 (NH)	04/15/2019	09/01/2020	☒ PER STATUTE ☐ OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 500,000 $ 500,000 $ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Christine Lewis Morse is excluded under Workers Compensation.

General Liability additional insured provided when required by written contract for ongoing operations

CERTIFICATE HOLDER

State of New Hampshire Dept of Environmental Services
29 Hazen Drive
Concord NH 03301

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Julie Bernier

State of New Hampshire
Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that THE HAMPSTEAD AREA WATER COMPANY, INC. is a New Hampshire Profit Corporation registered to transact business in New Hampshire on April 05, 1989. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: 140553
Certificate Number: 0004428406

IN TESTIMONY WHEREOF,
I hereto set my hand and cause to be affixed
the Seal of the State of New Hampshire,
this 5th day of March A.D. 2019.

William M. Gardner
Secretary of State

Business Information

Business Details

Business Name:	THE HAMPSTEAD AREA WATER COMPANY, INC.	Business ID:	140553
Business Type:	Domestic Profit Corporation	Business Status:	Good Standing
Business Creation Date:	04/05/1989	Name in State of Incorporation:	Not Available
Date of Formation in Jurisdiction:	04/05/1989		
Principal Office Address:	54 SAWYER AVENUE, ATKINSON, NH, 03811, USA	Mailing Address:	54 Sawyer Ave, Atkinson, NH, 03811, USA
Citizenship / State of Incorporation:	Domestic/New Hampshire		
		Last Annual Report Year:	2019
		Next Report Year:	2020
Duration:	Perpetual		
Business Email:	aaugeri@lewisbuilders.com	Phone #:	NONE
Notification Email:	aaugeri@lewisbuilders.com	Fiscal Year End Date:	NONE

Principal Purpose

S.No	NAICS Code	NAICS Subcode
1	Utilities	Water Supply and Irrigation Systems
2	OTHER / DEAL IN WATER SYSTEMS; COMMUNITY & PUBLIC	

Page 1 of 1, records 1 to 2 of 2

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-4	**Witness: Charles Lanza and John Sullivan**

Staff 1-4

Exhibit 1 states, ". . . the [DWGTF] Commission has deferred the decision to award Merrimack Source Development Charge (MSDC) loan request for $392,500 until a later date."

a) Please provide the explanation as to why the DWGTF Commission is deferring its decision regarding the MSDC loan request until a later date.
b) What does the Company anticipate as the likelihood of the DWGTF Commission of eventually granting approval for the MSDC loan request?
c) Please describe the subsequent process for obtaining eventual DWGTF Commission approval for its MSDC loan request. Will the Company need to reapply for these funds? Please explain.
d) Please explain why the Company appears to be seeking to procure an alternative financing source for the MSDC.
e) If the DWGTF Commission subsequently approves awarding the MSDC loan to the Company, will HAWC cease its pursuit of an alternative financing source? Please explain.

Response 1-4

a) The Commission tabled a number of items including the MSDC loan request as the meeting ran over allotted time for the agenda.
b) The Company does not know what the likelihood is of the Commission granting the loan request.
c) Our understanding is that the item will be on the agenda of the November or December meeting.
d) The Company is seeking "alternative financing source for the MSDC" in the event that DWGTF are not approved.
e) Yes

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-5	**Witness: Charles Lanza**

Staff 1-5

Exhibit 2 regarding the Westside Drive Booster Station and Treatment Facility Project Cost includes a $60,000 amount recorded in Account 339, Miscellaneous, that is noted as "Past HAWC Costs to be Reimbursed under this contract." Please provide further explanation as to nature of these prior costs incurred by HAWC.

Response 1-5

These costs relate to miscellaneous technical, engineering, and administrative tasks performed over the past two years that DES asked the Company to request reimbursement under this project rather than the Atkinson Tank Project.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-6	**Witness: Charles Lanza**

Staff 1-6

Mr. St. Cyr's Testimony on Page 3, Lines 1-5 indicates that HAWC's Phase I construction costs will be funded by the DWGTF grant of $3,283,750. Please explain how those grant funds will be disbursed to the Company, i.e., will these funds be disbursed prior to construction or, as the various components of the Phase I construction are completed or, after the Phase I construction is fully completed, etc.

Response 1-6

Grant funds will be reimbursed to the Company on a monthly basis as work is completed under each portion of the project. There are up to four separate HAWC contracts that are under construction or will be put out to bid and as work is completed monthly disbursement requests are submitted to HAWC by the General Contractor for each contract. HAWC's engineer reviews these disbursement requests and if they are in order HAWC pays the General Contractor and HAWC requests reimbursement from DES on a monthly basis.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-7	**Witness: John Sullivan**

Staff 1-7

Mr. St. Cyr's Testimony on Page 3, Lines 8-12 indicates that the total MSDC charge owed by HAWC is $892,500 and that $392,500 of this amount is to be financed by a loan with the remaining $500,000 to be contributed by the shareholder.

a) Please explain how the total MSDC charge owed by HAWC of $892,500 was calculated. (Please provide supporting calculations, as necessary.)
b) Please explain why it was determined that $392,500 of the total MSDC charge is to be financed by a loan and that the remaining $500,000 is to be financed by a capital contribution by the shareholder.

Response 1-7

a) This was a charge set by Manchester Water Works. $3.57 times the contracted gallons per day (250,000).
b) The owner has contributed substantial sums of money to the Company over the last few years. $500,000 is the amount she has available to contribute.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-8	**Witness: Charles Lanza**

Staff 1-8

Mr. St. Cyr's Testimony on Page 3, Line 21 states, concerning the DWGTF financing of $894,494 for the CIAC Tax, "The length of the loan is 25 years. The interest rate is 2.97%." Please provide documentation from NHDES in support of these terms.

Response 1-8

Per the DWGTF Advisory Commission Rules for Construction Projects, "The Commission will establish loan rates the first Thursday in August each year based on the 11 G.O. Bond Index published weekly by Bond Buyer." The rate was set using the August 1, 2019 index and is 2.96%. The loan term will be set in the original loan agreement that will be drafted after NHDES receives the applicant's Final Application. A loan in the amount of $1,204,815 for the CIAC tax was approved as described in NHDES's letter to HAWC dated August 16, 2019, attached, and will be subject to the rate established on August 1, 2019.

Link to Commission rules: https://www4.des.state.nh.us/nh-dwg-trust/wp-content/uploads/2019/03/DWGTF-Commission-Construction-Rules-adopted-Mar11_2019.pdf

NEW HAMPSHIRE DRINKING WATER
&GROUNDWATER TRUST FUND

August 16, 2019

Harold Morse, President
Hampstead Area Water Company, Inc.
54 Sawyer Avenue
Atkinson, NH 03811

Subject: **Southern New Hampshire Regional Water Interconnection Project – HAWC Infrastructure**

Dear Mr. Morse,

On August 13, 2019, the NH Drinking Water and Groundwater Advisory Commission (Commission) authorized an award of $4,488,565 in grant and loan funds to The Hampstead Area Water Company, Inc. (HAWC) for payment of the construction of drinking water infrastructure improvements necessary for HAWC to accept and transmit project water to downstream water systems participating in the Southern NH Regional Water Interconnection Project and for payment of the Federal Contribution in Aid of Construction (CIAC) tax. This letter is also to inform you that the Commission has deferred the decision to award Merrimack Source Development Charge (MSDC) loan request for $392,500 until a later date. The New Hampshire Department of Environmental Services will follow-up with HAWC with any additional information regarding the MSDC loan request when it becomes available.

The project descriptions and respective award amounts are provided below:

Project Description	Funding Award Amount
Construction related costs including conversion of treatment systems from chlorine to chloramine	**$3,283,750 grant funds**
CIAC Tax	**$1,204,815 loan funds**

It is our understanding that entering into a grant agreement and obtaining Governor and Executive Council approval for the grant award described above is time critical due to the need to bid the project in early fall. The next step is for you to submit a final application. The documents are listed on the enclosed checklist and available online at: Link to Final Application Forms. The documents for the loan are also listed on the website at the link above. As the loan is not a time critical item and will require approval by the Public Utilities Commission, NHDES recommends immediate submittal of the final application for the grant and will process the grant and loan awards separately.

Erin.Holmes@des.nh.gov | (603) 271-8321
https://www4.des.state.nh.us/nh-dwg-trust/

Once the final application for the grant has been submitted, HAWC will enter into a grant agreement which must be approved by the Governor and Executive Council. The final application must be submitted at your earliest convenience but no later than **August 22, 2019** in order to meet the September 4, 2019 closing for the September 18, 2019 Governor and Executive Council meeting.

Please note, the final application requires a Certificate of Vote of Authorization to enter into this agreement. If you do not have the authority to accept the grant award, we encourage you to move forward at this time and provide us the anticipated award date. Any non-construction project related work that has been completed may be eligible for reimbursement once the funding agreement is in place and approved by the Governor and Executive Council.

If you have any questions, please contact me at 603-271-8321 or at erin.holmes@des.nh.gov.

Sincerely,

Erin Holmes, P.E.
Drinking Water and Groundwater Trust Fund Administrator
MtBE Remediation Bureau

Attachments: Final Application Checklist

Cc: Michael Juranty, P.E., MtBE Remediation Bureau Administrator, NHDES
Michael Unger, P.E., DWGB, NHDES
Charlie Lanza, HAWC (Charlie@Hampsteadwater.com)

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-9	**Witness: Charles Lanza and John Sullivan**

Staff 1-9

Mr. St. Cyr's Testimony on Page 7, Lines 8-10 indicates that the Company's Operation and Maintenance Expense pro forma adjustment of $200,000 consists of $372,000 in additional purchased water expense less $172,000 in reduced expenses from "turning off some wells."

a) Please explain how the additional purchased water expense of $372,000 was determined. (Please provide supporting calculations, as necessary.)
b) Please explain how the $172,000 in reduced expenses from "turning off some wells" was determined. (Please provide supporting calculations, as necessary.)
c) Please provide further explanation regarding what is specifically meant when the Company states that it will be "turning off some wells", i.e., will the disconnection of these wells be temporary or permanent?
d) Please indicate the specific wells that are anticipated to be disconnected as a result of the Phase I improvements.

Response 1-9

a) This was determined by multiplying 250,000 gallons per day from Salem at $3.05 per 100 cubic foot for 365 days.
b) The $172,000 was established by reducing well expenses by 50%, power purchased by 50%, pumping expenses by 25%, and treatment expenses by 25%.
c) Nine existing pumping and treatment stations in Atkinson and Hampstead will be converted to chloramines under the SNHRWP. The remaining stations will remain active sources; However, they will not provide water on a regular basis into the system until they have been converted to chloramines. Some stations will be converted on an as needed basis over time and some will be abandoned entirely. This will be determined as we better understand the operations and costs associated with the chloramines.
d) See response (c).

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-10	**Witness: John Sullivan**

Staff 1-10

Mr. St. Cyr's Testimony on Page 8, Lines 7-9 states, "The Company's owner has made significant equity contribution[s] in recent years including $500,000 in 2019."

a) Please clarify whether the owner's $500,000 equity contribution in 2019 was for the MSDC charge owed by HAWC, as described in the filing, or was a separate and distinct equity infusion from that anticipated relative to the MSDC charge.
b) Please indicate the owner's equity contributions made in each of the past 5 years (2014 – 2018).

Response 1-10

A) This question is unclear. The owner, as requested by the PUC, has agreed to contribute money to HAWC to help lower the debt to equity ratio. The $500,000 is part of that commitment.
B) 2014 - $0
C) 2015 - $150,000
D) 2016 - $500,000
E) 2017 - $400,000
F) 2018 - $400,000

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-11	**Witness: John Sullivan**

Staff 1-11

Mr. St. Cyr's Testimony on Page 8, Lines 9-12, with regard to increasing the equity component of the Company's overall capital structure, makes no mention of future anticipated equity infusions by the shareholder in order to achieve a more balanced capital structure. In Order No. 26,195 (11/28/18), the Commission mandated that HAWC move closer to an actual 55% debt and 45% equity capital structure prior to its next rate case filing. Further, in Order Nos. 26,218 (2/1/19) and 26,230 (3/29/19), the Commission expressed its expectation that HAWC's shareholder would make "meaningful and appropriate equity infusions" in order to move the Company towards the balanced capital structure mandated in Order No. 26,195. In light of the anticipated capital structure after Phase I of 64% debt and 36% equity calculated on Schedule SPS-3 of Exhibit 4, please indicate what further equity infusions the Commission may expect to see made by the shareholder prior to the filing of the Company's next rate case.

Response 1-11

On 3/26/19 HAWC sent a letter to the PUC for docket DW 18-138 stating HAWC's shareholder committing a total of $750,000 as paid in capital over the next 3 years.

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-12	**Witness: Stephen St. Cyr**

Staff 1-12

Mr. St. Cyr's Testimony on Page 10, Lines 1-2 states, ". . . HAWC's payments of the MSDC fees are being treated as "wells" and being recovered [over] 30 years." Please explain why the MSDC fees should not be recorded as a Deferred Asset and amortized over the period of the MSDC Agreement (until 12/31/58) included as Attachment C to Exhibit 8.

Response 1-12

Response: HAWC did consider recording the MSDC as a Deferred Asset. As long as the Deferred Asset is reflected in rate base, then either way is probably okay with HAWC. HAWC did consider various depreciation / amortization periods including shorter ones associated with certain commitments for certain periods of time. In the end, it decided that 30 years was appropriate since it was treating the MSDC fees as source of water similar to wells.

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-13	**Witness: Stephen St. Cyr**

Staff 1-13

The Major Assumptions page of Exhibit 4 indicates that the anticipated CIAC Tax is calculated as follows: $3,283,750 x 27.24% = $894,494. However, based on the formula contained in the Company's CIAC Tax tariff amendment docket, DW 19-136, it appears the calculated CIAC Tax should be $1,229,375 (($3,283,750 ÷ (1 - 0.2724)) - $3,283,750). Please explain.

Response 1-13

The CIAC Tax should be $1,229,375 as per the CIAC tariff amendment docket.

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-14	**Witness: Stephen St. Cyr**

Staff 1-14

The Revenue Requirement calculation contained on Schedule SPS-5 of Exhibit 4 does not appear to reflect any allocation to the Town of Plaistow for a portion of the additional investment and O&M Expenses related to Phase I. Please explain.

Response 1-14

The primary purposes of SPS-5 is to calculate the additional revenue requirement in order to demonstrate that the Company will have the cash resources to pay the loans. Some portion of the additional investment and related O&M expenses will be factored into the amount that HAWC charges the Town of Plaistow and such amount will reduce the additional revenue requirement.

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-15	**Witness: Stephen St. Cyr**

Staff 1-15

Regarding the Weighted Average Cost of Capital calculation on Schedule SPS-6 of Exhibit 4:

a) Please provide the calculations for the respective interest expense amounts included on this schedule, i.e., State of NH - $26,312 and Bank Loan - $19,359.
b) Please provide the calculations for the respective amortization of finance cost amounts included on this schedule, i.e., State of NH - $250 and Bank Loan - $165.

Response 1-15

a) See attached page 1 of loan amortization schedules for State of NH and bank loans.
b) It appears as though the Company underestimated the amortization of the finance costs amounts. The amortization should be as follows:
$10,000 x .695% = $6,950 / 25 years = $278
$10,000 x .305% = $3,050 + $5,000 = $8,050 / 20 years = $402.50.

Loan Amortization Schedule

	Enter values
Loan amount	$ 894,494.00
Annual interest rate	2.97 %
Loan period in years	25
Number of payments per year	12
Start date of loan	1/1/2021
Optional extra payments	

	Loan summary
Scheduled payment	$ 4,227.85
Scheduled number of payments	300
Actual number of payments	300
Total early payments	$ -
Total interest	$ 373,860.28

Lender name: DGTF loan for CIAC Tax

$24,499.42

$26,234.76

Pmt. No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
1	2/1/2021	$ 894,494.00	$ 4,227.85	$ -	$ 4,227.85	$ 2,013.97	$ 2,213.87	$ 892,480.03	$ 2,213.87
2	3/1/2021	$ 892,480.03	$ 4,227.85	$ -	$ 4,227.85	$ 2,018.96	$ 2,208.89	$ 890,461.07	$ 4,422.76
3	4/1/2021	$ 890,461.07	$ 4,227.85	$ -	$ 4,227.85	$ 2,023.96	$ 2,203.89	$ 888,437.11	$ 6,626.65
4	5/1/2021	$ 888,437.11	$ 4,227.85	$ -	$ 4,227.85	$ 2,028.97	$ 2,198.88	$ 886,408.14	$ 8,825.53
5	6/1/2021	$ 886,408.14	$ 4,227.85	$ -	$ 4,227.85	$ 2,033.99	$ 2,193.86	$ 884,374.16	$ 11,019.39
6	7/1/2021	$ 884,374.16	$ 4,227.85	$ -	$ 4,227.85	$ 2,039.02	$ 2,188.83	$ 882,335.13	$ 13,208.22
7	8/1/2021	$ 882,335.13	$ 4,227.85	$ -	$ 4,227.85	$ 2,044.07	$ 2,183.78	$ 880,291.07	$ 15,392.00
8	9/1/2021	$ 880,291.07	$ 4,227.85	$ -	$ 4,227.85	$ 2,049.13	$ 2,178.72	$ 878,241.94	$ 17,570.72
9	10/1/2021	$ 878,241.94	$ 4,227.85	$ -	$ 4,227.85	$ 2,054.20	$ 2,173.65	$ 876,187.74	$ 19,744.37
10	11/1/2021	$ 876,187.74	$ 4,227.85	$ -	$ 4,227.85	$ 2,059.28	$ 2,168.56	$ 874,128.46	$ 21,912.93
11	12/1/2021	$ 874,128.46	$ 4,227.85	$ -	$ 4,227.85	$ 2,064.38	$ 2,163.47	$ 872,064.08	$ 24,076.40
12	1/1/2022	$ 872,064.08	$ 4,227.85	$ -	$ 4,227.85	$ 2,069.49	$ 2,158.36	$ 869,994.59	$ 26,234.76
13	2/1/2022	$ 869,994.59	$ 4,227.85	$ -	$ 4,227.85	$ 2,074.61	$ 2,153.24	$ 867,919.98	$ 28,388.00
14	3/1/2022	$ 867,919.98	$ 4,227.85	$ -	$ 4,227.85	$ 2,079.75	$ 2,148.10	$ 865,840.23	$ 30,536.10
15	4/1/2022	$ 865,840.23	$ 4,227.85	$ -	$ 4,227.85	$ 2,084.89	$ 2,142.95	$ 863,755.34	$ 32,679.05
16	5/1/2022	$ 863,755.34	$ 4,227.85	$ -	$ 4,227.85	$ 2,090.05	$ 2,137.79	$ 861,665.29	$ 34,816.85
17	6/1/2022	$ 861,665.29	$ 4,227.85	$ -	$ 4,227.85	$ 2,095.23	$ 2,132.62	$ 859,570.06	$ 36,949.47
18	7/1/2022	$ 859,570.06	$ 4,227.85	$ -	$ 4,227.85	$ 2,100.41	$ 2,127.44	$ 857,469.65	$ 39,076.90
19	8/1/2022	$ 857,469.65	$ 4,227.85	$ -	$ 4,227.85	$ 2,105.61	$ 2,122.24	$ 855,364.04	$ 41,199.14
20	9/1/2022	$ 855,364.04	$ 4,227.85	$ -	$ 4,227.85	$ 2,110.82	$ 2,117.03	$ 853,253.22	$ 43,316.17
21	10/1/2022	$ 853,253.22	$ 4,227.85	$ -	$ 4,227.85	$ 2,116.05	$ 2,111.80	$ 851,137.17	$ 45,427.97
22	11/1/2022	$ 851,137.17	$ 4,227.85	$ -	$ 4,227.85	$ 2,121.28	$ 2,106.56	$ 849,015.89	$ 47,534.53
23	12/1/2022	$ 849,015.89	$ 4,227.85	$ -	$ 4,227.85	$ 2,126.53	$ 2,101.31	$ 846,889.35	$ 49,635.85
24	1/1/2023	$ 846,889.35	$ 4,227.85	$ -	$ 4,227.85	$ 2,131.80	$ 2,096.05	$ 844,757.56	$ 51,731.90
25	2/1/2023	$ 844,757.56	$ 4,227.85	$ -	$ 4,227.85	$ 2,137.07	$ 2,090.77	$ 842,620.49	$ 53,822.67
26	3/1/2023	$ 842,620.49	$ 4,227.85	$ -	$ 4,227.85	$ 2,142.36	$ 2,085.49	$ 840,478.12	$ 55,908.16
27	4/1/2023	$ 840,478.12	$ 4,227.85	$ -	$ 4,227.85	$ 2,147.66	$ 2,080.18	$ 838,330.46	$ 57,988.34
28	5/1/2023	$ 838,330.46	$ 4,227.85	$ -	$ 4,227.85	$ 2,152.98	$ 2,074.87	$ 836,177.48	$ 60,063.21
29	6/1/2023	$ 836,177.48	$ 4,227.85	$ -	$ 4,227.85	$ 2,158.31	$ 2,069.54	$ 834,019.17	$ 62,132.75
30	7/1/2023	$ 834,019.17	$ 4,227.85	$ -	$ 4,227.85	$ 2,163.65	$ 2,064.20	$ 831,855.52	$ 64,196.95
31	8/1/2023	$ 831,855.52	$ 4,227.85	$ -	$ 4,227.85	$ 2,169.01	$ 2,058.84	$ 829,686.52	$ 66,255.79
32	9/1/2023	$ 829,686.52	$ 4,227.85	$ -	$ 4,227.85	$ 2,174.37	$ 2,053.47	$ 827,512.14	$ 68,309.26
33	10/1/2023	$ 827,512.14	$ 4,227.85	$ -	$ 4,227.85	$ 2,179.76	$ 2,048.09	$ 825,332.39	$ 70,357.36

Staff 1-15 Attachment A Pg 1 of 2

Loan Amortization Schedule

	Enter values
Loan amount	$ 392,500.00
Annual interest rate	5.00 %
Loan period in years	20
Number of payments per year	12
Start date of loan	1/1/2021
Optional extra payments	

Lender name: ~~DCU~~ Loan for ~~CIAC Tax~~

	Loan summary
Scheduled payment	$ 2,590.33
Scheduled number of payments	240
Actual number of payments	240
Total early payments	$ -
Total interest	$ 229,178.31

$11,725.19

$19,358.71

Pmt. No.	Payment Date	Beginning Balance	Scheduled Payment	Extra Payment	Total Payment	Principal	Interest	Ending Balance	Cumulative Interest
1	2/1/2021	$ 392,500.00	$ 2,590.33	$ -	$ 2,590.33	$ 954.91	$ 1,635.42	$ 391,545.09	$ 1,635.42
2	3/1/2021	$ 391,545.09	$ 2,590.33	$ -	$ 2,590.33	$ 958.89	$ 1,631.44	$ 390,586.20	$ 3,266.85
3	4/1/2021	$ 390,586.20	$ 2,590.33	$ -	$ 2,590.33	$ 962.88	$ 1,627.44	$ 389,623.32	$ 4,894.30
4	5/1/2021	$ 389,623.32	$ 2,590.33	$ -	$ 2,590.33	$ 966.90	$ 1,623.43	$ 388,656.42	$ 6,517.73
5	6/1/2021	$ 388,656.42	$ 2,590.33	$ -	$ 2,590.33	$ 970.92	$ 1,619.40	$ 387,685.50	$ 8,137.13
6	7/1/2021	$ 387,685.50	$ 2,590.33	$ -	$ 2,590.33	$ 974.97	$ 1,615.36	$ 386,710.53	$ 9,752.49
7	8/1/2021	$ 386,710.53	$ 2,590.33	$ -	$ 2,590.33	$ 979.03	$ 1,611.29	$ 385,731.50	$ 11,363.78
8	9/1/2021	$ 385,731.50	$ 2,590.33	$ -	$ 2,590.33	$ 983.11	$ 1,607.21	$ 384,748.38	$ 12,970.99
9	10/1/2021	$ 384,748.38	$ 2,590.33	$ -	$ 2,590.33	$ 987.21	$ 1,603.12	$ 383,761.18	$ 14,574.11
10	11/1/2021	$ 383,761.18	$ 2,590.33	$ -	$ 2,590.33	$ 991.32	$ 1,599.00	$ 382,769.85	$ 16,173.12
11	12/1/2021	$ 382,769.85	$ 2,590.33	$ -	$ 2,590.33	$ 995.45	$ 1,594.87	$ 381,774.40	$ 17,767.99
12	1/1/2022	$ 381,774.40	$ 2,590.33	$ -	$ 2,590.33	$ 999.60	$ 1,590.73	$ 380,774.80	$ 19,358.72
13	2/1/2022	$ 380,774.80	$ 2,590.33	$ -	$ 2,590.33	$ 1,003.76	$ 1,586.56	$ 379,771.04	$ 20,945.28
14	3/1/2022	$ 379,771.04	$ 2,590.33	$ -	$ 2,590.33	$ 1,007.95	$ 1,582.38	$ 378,763.09	$ 22,527.66
15	4/1/2022	$ 378,763.09	$ 2,590.33	$ -	$ 2,590.33	$ 1,012.15	$ 1,578.18	$ 377,750.94	$ 24,105.84
16	5/1/2022	$ 377,750.94	$ 2,590.33	$ -	$ 2,590.33	$ 1,016.36	$ 1,573.96	$ 376,734.58	$ 25,679.80
17	6/1/2022	$ 376,734.58	$ 2,590.33	$ -	$ 2,590.33	$ 1,020.60	$ 1,569.73	$ 375,713.98	$ 27,249.53
18	7/1/2022	$ 375,713.98	$ 2,590.33	$ -	$ 2,590.33	$ 1,024.85	$ 1,565.47	$ 374,689.13	$ 28,815.00
19	8/1/2022	$ 374,689.13	$ 2,590.33	$ -	$ 2,590.33	$ 1,029.12	$ 1,561.20	$ 373,660.01	$ 30,376.21
20	9/1/2022	$ 373,660.01	$ 2,590.33	$ -	$ 2,590.33	$ 1,033.41	$ 1,556.92	$ 372,626.60	$ 31,933.12
21	10/1/2022	$ 372,626.60	$ 2,590.33	$ -	$ 2,590.33	$ 1,037.72	$ 1,552.61	$ 371,588.88	$ 33,485.74
22	11/1/2022	$ 371,588.88	$ 2,590.33	$ -	$ 2,590.33	$ 1,042.04	$ 1,548.29	$ 370,546.84	$ 35,034.02
23	12/1/2022	$ 370,546.84	$ 2,590.33	$ -	$ 2,590.33	$ 1,046.38	$ 1,543.95	$ 369,500.46	$ 36,577.97
24	1/1/2023	$ 369,500.46	$ 2,590.33	$ -	$ 2,590.33	$ 1,050.74	$ 1,539.59	$ 368,449.72	$ 38,117.55
25	2/1/2023	$ 368,449.72	$ 2,590.33	$ -	$ 2,590.33	$ 1,055.12	$ 1,535.21	$ 367,394.60	$ 39,652.76
26	3/1/2023	$ 367,394.60	$ 2,590.33	$ -	$ 2,590.33	$ 1,059.52	$ 1,530.81	$ 366,335.09	$ 41,183.57
27	4/1/2023	$ 366,335.09	$ 2,590.33	$ -	$ 2,590.33	$ 1,063.93	$ 1,526.40	$ 365,271.16	$ 42,709.97
28	5/1/2023	$ 365,271.16	$ 2,590.33	$ -	$ 2,590.33	$ 1,068.36	$ 1,521.96	$ 364,202.79	$ 44,231.93
29	6/1/2023	$ 364,202.79	$ 2,590.33	$ -	$ 2,590.33	$ 1,072.81	$ 1,517.51	$ 363,129.98	$ 45,749.44
30	7/1/2023	$ 363,129.98	$ 2,590.33	$ -	$ 2,590.33	$ 1,077.28	$ 1,513.04	$ 362,052.70	$ 47,262.48
31	8/1/2023	$ 362,052.70	$ 2,590.33	$ -	$ 2,590.33	$ 1,081.77	$ 1,508.55	$ 360,970.92	$ 48,771.04
32	9/1/2023	$ 360,970.92	$ 2,590.33	$ -	$ 2,590.33	$ 1,086.28	$ 1,504.05	$ 359,884.64	$ 50,275.08
33	10/1/2023	$ 359,884.64	$ 2,590.33	$ -	$ 2,590.33	$ 1,090.81	$ 1,499.52	$ 358,793.83	$ 51,774.60

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-16	**Witness: John Sullivan**

Staff 1-16

Schedule SPS-12 of Exhibit 4 includes a $6,000 estimate for costs incurred by Lewis Builders Development. Please provide further explanation regarding the nature of these anticipated costs.

Response 1-16

These costs include the time of Charlie Lanza, Anthony Augeri, John Sullivan and other related staff members to prepare this petition, attend hearings, answer data requests, etc.

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-17	**Witness: Charles Lanza**

Staff 1-17

Mr. Morse's Testimony on Page 2, Line 8 states that the MSDC is "levied by NHDES." Please provide further explanation as to why the MSDC applicable to HAWC is being levied by NHDES instead of Manchester Water Works directly.

Response 1-17

This was incorrectly stated. The MSDC is levied by Manchester Water Works per the Southern NH Interconnect Agreement.

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-18	**Witness: Charles Lanza and John Sullivan**

Staff 1-18

Mr. Morse's Testimony on Page 2, Lines 10-12 states, "The Company seeks expedited approval of this Petition in order to qualify for low-interest financing which is available for a limited time period." However, the letter dated 8/16/19 from the DWGTF Commission provided as Exhibit 1 states, ". . . the loan is not a time critical item and will require approval by the Public Utilities Commission . . ."

a) Please indicate the approximate timeframe for when a Commission order needs to be issued relative to the proposed financings.
b) Please explain the process and remaining approvals that need to be obtained before the Company can close on the proposed DWGTF financing relative to the CIAC Tax.
c) Please explain the remaining process in order for the Company close on the Bank financing relative to the MSDC.

Response 1-18

a) Please see NHDES's following response "The statement in the letter was letting the award recipient know that NHDES set a deadline of August 22, 2019 for the Final Grant Application in order to move quickly getting the grant approved by the Governor and Executive Council in order to proceed with bidding and construction of the project. The loan was not "critical" at that moment to the grant approval process or to meeting the project's construction schedule. NHDES anticipated processing the grant and loan separately because the loan needed to go through the PUC approval process, and we wanted to make that clear in the letter. This is not a contradiction to Mr. Morse's testimony and only applies to NHDES' internal processing".
b) Following PUC approval, the applicant will need to submit a Final Loan Application, and NHDES will process it as they do all other loan agreements that must be approved by the Governor and Executive Council.
c) In order for the bank to provide firm terms on the loan, the bank needs us to provide them with a solid timetable as to when we will be receiving PUC approval.

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Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-19	**Witness: Charles Lanza**

Staff 1-19

Mr. Morse's Testimony on Page 2, Lines 19-20 states, regarding the DWGTF loan, "The payment of principal and interest based on a 25-year amortization will be due monthly beginning 30 days from the date of closing." Please provide documentation from NHDES in support of these terms.

Response 1-19

The original loan agreement will include a scheduled completion date and indicate when repayment will begin. In accordance with Administrative Rules for the DWGTF, Administrative Procedures for Grants and Loans From the Drinking Water and Groundwater Trust Fund, Env-Dw 1300 (effective October 23, 2019), Sections Env-Dw 1304.12(c)(3)(a) and 1304.12(c)(3)(b), interest repayments begin 6 months after the scheduled completion date or substantial completion date, and principal and interest repayments will begin one year after the scheduled completion date or substantial completion date, whichever is earlier.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-20	**Witness: Charles Lanza**

Staff 1-20

Please provide correspondence from NHDES that specifically addresses the following:

a) A description of the benefits to HAWC's existing customers that will result from HAWC's overall participation in the Southern NH Regional Water Initiative (SNHRWI) project as well as from the specific completion of Phase I of that project.
b) An explanation as to why HAWC's participation in the SNHRWI project is crucial to the overall success of the project. (See Petition, Page 4, Paragraph 14)

Response 1-20

a) See attached.
b) See attached.

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

October 25, 2019

Debra A. Howland, Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: DW-19-147 Hampstead Area Water Company Southern New Hampshire Regional Water Project

Dear Ms. Howland:

The New Hampshire Department of Environmental Services (NHDES) is writing this letter of support for the Hampstead Area Water Company's (HAWC) Petition for approval of financing for costs directly related to and necessitated by the Southern New Hampshire Regional Water Project.

The Southern New Hampshire Regional Water Project (SNHRWP) seeks to use Manchester Water Works as a supplemental source of supply for water systems serving the Towns of Windham, Salem, Atkinson, Hampstead and Plaistow. HAWC water users and rate payers will realize the following benefits as a result of the additional supply capacity provided by the SNHRWP.

1. Increased reliability of water supply. Some existing wells are experiencing declining yields.
2. Improved water quality by allowing HAWC to prioritize higher quality wells. Some wells have experienced increasing concentrations of regulated contaminants such as arsenic, radium, and alpha particles. HAWC will be able to serve a safer product to customers by taking their lowest quality wells offline and blending in regional water.
3. Reduction in system complexity by allowing HAWC to take up to ten of its existing 19 wells offline.
4. Ability to expand to address contamination and/or loss of water in private wells.

HAWC's participation in the SNHRWP is critical because the regional water supply must be wheeled through the HAWC water system in order to serve the Town of Plaistow. The Town of Plaistow has no alternative source of water supply.

Please note that the New Hampshire Drinking Water and Ground Water Trust Fund (the Trust Fund) is providing a grant for HAWC's construction costs necessitated by and solely related to the SNHRWP. In addition, costs HAWC will incur as a result of the SNHRWP, including but not limited to, operation and maintenance, bulk water purchase and tax liabilities will be offset in part by wholesale water sales to the Town of Plaistow. In view of the foregoing, NHDES believes that

HAWC's Petition is in the best interests of its customers as it will enable the company to continue to provide safe and reliable service at just and reasonable rates, and to play a critical role in the SNHRWP.

In summary, NHDES supports HAWC's request for financing for costs directly related to and necessitated by the Southern New Hampshire Regional Water Project.

Sincerely,

Robert R. Scott

cc: Charlie Lanza, General Manager, HAWC

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-21	**Witness: Charles Lanza**

Staff 1-21

The Cover Letter to the Cost of Service Study (COSS) (Exhibit 7) states that Raftelis also was engaged to, "Calculate a cost justified volumetric rate that Salem can assess [HAWC] for providing wholesale water wheeling services." Please provide a copy of that report.

Response 1-21

We have requested the information sought in this request from Raftelis and will forward any response as soon as it is received.

Weston & Sampson

100 International Drive, Suite 152, Portsmouth, NH 03801
Tel: 603.431.3937

November 30, 2018

Michael Unger, P.E.
Water Engineer, Drinking Water and Groundwater Trust Fund
Drinking Water and Groundwater Bureau | NHDES
29 Hazen Drive
Concord, NH 03302

Re: Southern NH Regional Water Main Initiative (SNHRWI)
Cost of Service Study – HAWC

Dear Mike:

We are pleased to submit this report to the New Hampshire Department of Environmental Services (DES) for the Cost of Service Study (COSS) performed for the Hampstead Area Water Company (HAWC) on behalf the SNHRWI project. The proposed SNHRWI project includes the potential connection of water systems maintained by Manchester Water Works (MWW), HAWC, and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

DES initiated the COSS to determine the cost to each community for supplying water to adjacent communities as part of the SNHRWI project. The existing water system operations for HAWC were examined to determine how and why costs are incurred. Developing this understanding allowed for a proper allocation of future costs to HAWC to distribute water to adjacent communities.

Per our work scope and budget dated August 17, 2018 we have completed the draft COSS for HAWC with the assistance of Raftelis Financial Consultants. We wish to acknowledge the assistance of DES and HAWC staff with gathering background information for the project. The cooperation was essential to the completion of the report and is sincerely appreciated.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Jeffrey W. McClure, P.E.
Senior Associate

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SOUTHERN NEW HAMPSHIRE

REGIONAL WATER INITIATIVE

Cost of Service Study – Hampstead Area Water Company

Draft Report / November 30, 2018

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

RAFTELIS

November 30, 2018

Mr. Jeffery W. McClure, P.E.
Senior Associate
Weston & Sampson
100 International Drive, Suite 152
Portsmouth, NH 03801

Subject: Southern New Hampshire Regional Water Initiative Cost of Service Study – Hampstead Area Water Company

Dear Mr. McClure,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Draft Cost of Service Report to Weston & Sampson for the New Hampshire Department of Environmental Services' project, the Southern New Hampshire Regional Water Initiative (SNHRWI).

The major objectives of the study include the following:

- Develop a cost of service methodology and model to appropriately functionalize, allocate, and distribute costs in order to understand the cost of wheeling, or providing bulk wholesale water, from one community to another;
- Utilizing said methodology and model, the following scenarios were to be analyzed:
    - Calculate a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

This draft report summarizes the key findings and recommendations related to the development of the cost of service analyses for HAWC. We expect this initial report will result in further discussions with all stakeholders and that some modifications may be necessary to finalize a set of methodologies and rates that all agree to. It has been a pleasure working with you, and we look forward to continuing our work with you to finalize this important project for the region.

Sincerely,

Dave Fox
Manager

1.1. Background

In late 2018, Raftelis was contracted by Weston & Sampson to perform wholesale water cost of service studies for the Southern New Hampshire Regional Water Initiative (SNHRWI), directed by the New Hampshire Department of Environmental Services (DES). The proposed SNHRWI includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

1.1.1. OBJECTIVES OF THE STUDY

Raftelis was engaged with the primary objective of develop a cost of service-based rate study for developing wholesale, or wheeling, rates for water transported through the region's transmission systems of the SNHRWI. This report serves to summarize our findings, results, and recommendations for wheeling charge calculations for the Hampstead Area Water Company (HAWC) portion of the SNHRWI.

The charges to be calculated through this study include developing a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

1.2. Wholesale Cost of Service Methodology

Based on the objectives for this study and our understanding of the SNHRWI proposed system, Raftelis determined that the most appropriate methodology for calculating a wheeling rate is to use the Utility Approach to rate setting. The Utility Approach to rate setting is consistent with industry standards and guidelines for determining wholesale rates and charges and is recommended by the American Water Works Association. The Utility Approach to rate setting focuses on three primary cost components:

- A proportionate share of the annual depreciation expense associated with the assets that provide service to wholesale customers;
- A rate of return applied to the utility's investment in these assets; and
- A proportionate share of the operating and maintenance (O&M) expenses related to these assets.

The aforementioned components were developed utilizing a test year of calendar year 2017, which complete and audited data is present. In addition to audited 2017 data, expected and measurable changes to accommodate the proposed SNHRWI operations were added in for a complete measure of the cost of service. It should be noted that it was assumed that Salem's purchases from Salem, of approximately 250,000 gallons per day, will be assessed at a rate of $3.09 per one hundred cubic feet (Ccf), which is draft and contingent on the finalizing of our similar report to Salem which presented the calculation of wholesale rates for HAWC as well as the Town of Windham. Table 1 presents the test year full cost components for HAWC. These cost components will be utilized later in this report to demonstrate the functionalization, allocation, and distribution required to provide wheeling services only.

Table 1: Test Year Costs

Source of Supply	$	399,702
Pumping Expenses		284,516
Water Treatment Expenses		170,729
Transmission and Distribution Expense		83,991
Customer Accounts Expense		113,121
Administrative and General Expenses		504,818
MSDC Charges		64,070
Additional Support		55,000
Chloramine Conversion (for 20 stations)		66,367
Shannon Road Booster Station		11,593
Rate of Return		453,727
Taxes Other Than Income		67,002
Income Taxes		131,581
CIAC		(84,376)
Depreciation		185,088

Once the test year costs were developed, a cost of service analysis, utilizing the aforementioned Utility Approach, was performed. The basic principle in the establishment of cost of service rates is to achieve general fairness in the recovery of costs from various classes of customers. The approach used in this study is based on the principles endorsed by the American Water Works Association (AWWA); which allows DES and the SNHRWI communities to demonstrate rates have not been set in an arbitrary or capricious manner and one class of customer is not subsidizing another to an unjustifiable extent. Costs have been allocated between customer classes based on their estimated demand requirements and recognizing the different costs associated with serving different customer classes.

These costs were allocated proportionately to water customers based on how they use the system. The appropriate level of detail required for a cost of service analysis is contingent on system characteristics, and the accuracy and availability of data necessary to support the analysis. Based on discussions with HAWC staff, it was determined that water cost components should be allocated into functional components consistent with the most significant cost causative characteristics of the customer base. The water components included source of supply, treatment, transmission, distribution, storage, meters, fire protection, billing (customer service), and administration support. Summarizing this allocation process, costs were grouped into three categories: General Water, Fire Service, and Customer Service. Table 2 presents the allocation of test year costs into these categories.

Table 2: Test Year Costs by General Function

Source of Supply	$ 397,703	$ 1,999	$ -
Pumping Expenses	283,093	1,423	-
Water Treatment Expenses	169,875	854	-
Transmission and Distribution Expense	34,113	2,252	47,626
Customer Accounts Expense	-	-	113,121
Administrative and General Expenses	424,553	3,132	77,133
MSDC Charges	63,750	320	-
Additional Support	46,255	341	8,404
Chloramine Conversion (for 20 stations)	55,815	412	10,140
Shannon Road Booster Station	9,750	72	1,771
Rate of Return	350,564	5,802	97,361
Taxes Other Than Income	123,361	2,042	34,261
Income Taxes	101,664	1,682	28,235
CIAC	(165,169)	(2,733)	(45,872)
Depreciation	386,679	6,399	107,392

The aforementioned functional Fire Service and Customer Service costs were then discarded from the remainder of the analysis, as these costs are typically not recovered through wholesale rates. The general water functional costs that remained were then allocated to their cost components in accordance with how facilities are designed. Water cost components allocations included base, extra-capacity, and categories reflecting costs that are explicitly incurred for retail-only or wholesale-only service. Specifically, water cost components related to the functional aspects of the system including water source of supply, treatment, transmission and distribution, and storage were assigned based on a base-extra capacity cost allocation approach. This approach allocates a portion of these costs to serving a base demand and peak demand. Reasonable allocation factors were determined for each of these components, and are consistent with industry standards and practices and utilized flow data from HAWC's customer demand characteristics and water production facilities. A summary of this process is presented in Table 3.

Table 3: Test Year Costs by Cost Component

Source of Supply	$ 10,226	$ 12,499	$ 374,978	$ -
Pumping Expenses	127,392	155,701	-	-
Water Treatment Expenses	-	-	-	169,875
Transmission and Distribution Expense	21,668	12,445	-	-
Customer Accounts Expense	-	-	-	-
Administrative and General Expenses	132,649	150,436	-	141,468
MSDC Charges	-	-	63,750	-
Additional Support	20,815	25,440	-	-
Chloramine Conversion (for 20 stations)	25,117	30,698	-	-
Shannon Road Booster Station	4,388	5,363	-	-
Rate of Return	190,404	140,282	-	19,878
Taxes Other Than Income	67,002	49,364	-	6,995
Income Taxes	55,217	40,682	-	5,765
CIAC	(89,709)	(66,094)	-	(9,366)
Depreciation	210,019	154,734	-	21,926

Similar to how Fire Service and Customer Service costs were discarded, so were extra capacity and retail-only costs. These costs are typically incurred to only provide service to retail customers, and hence should be excluded from costs to be recovered from wholesale rates. These remaining costs were then distributed to wholesale only customers by utilizing projected wholesale flows as a percentage of total projected water productions and purchases. A similar process was completed for HAWC's calculated non-operating expenses such as its depreciation and rate of return.

The following table (Table 4) presents the final rate calculation that HAWC could assess the Town of Plaistow.

Table 4: Calculation of Wholesale Rate (per Ccf)

Cost of Service		
Operating Expenses	$	221,019
Rate of Return		128,405
Depreciation		52,380
Other Non-Operating		32,321
Total: Cost of Service	$	434,125
Estimated Flow (Ccf)		121,992

APPENDIX A:

FULL COST OF SERVICE ALLOCATIONS

Operations and Maintenance Expense		Functional Category	Functional Categories: General Water	Fire Service	Customer Service
Source of Supply					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Operation Labor and Expenses	4,832	General Water	99.5%	0.5%	0.0%
Purchased Water	376,863	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	23	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ 1,677	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	4,647	General Water	99.5%	0.5%	0.0%
Maintenance of Collecting and Impounding Reservoirs	-	General Water	99.5%	0.5%	0.0%
Maintenance of Lake, River, and Other Intakes	-	General Water	99.5%	0.5%	0.0%
Maintenance of Wells and Springs	11,660	General Water	99.5%	0.5%	0.0%
Maintenance of Infiltration Galleries and Tunnels	-	General Water	99.5%	0.5%	0.0%
Maintenance of Supply Mains	-	General Water	99.5%	0.5%	0.0%
Maintenance of Miscellaneous Water Source Plant	-	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply	$ 399,702		$ 397,703	$ 1,999	$ -
Pumping Expenses					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Fuel for Power Production	-	General Water	99.5%	0.5%	0.0%
Power Production Labor and Expenses	-	General Water	99.5%	0.5%	0.0%
Fuel or Power Purchased for Pumping	177,913	General Water	99.5%	0.5%	0.0%
Pumping Labor and Expenses	23,050	General Water	99.5%	0.5%	0.0%
Expenses Transferred-Credit	-	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	16,254	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	31,112	General Water	99.5%	0.5%	0.0%
Maintenance of Power Production Equipment	-	General Water	99.5%	0.5%	0.0%
Maintenance of Pumping Equipment	36,187	General Water	99.5%	0.5%	0.0%
Subtotal: Pumping Expenses	$ 284,516		$ 283,093	$ 1,423	$ -
Water Treatment Expenses					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Chemicals	10,961	General Water	99.5%	0.5%	0.0%
Operation Labor and Expenses	149,034	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	-	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	-	General Water	99.5%	0.5%	0.0%
Maintenance of Water Treatment Equipment	10,734	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment Expenses	$ 170,729		$ 169,875	$ 854	$ -
Transmission and Distribution Expense					
Operations					
Operation Supervision and Engineering	$ -	T&D Supervision	40.6%	2.7%	56.7%
Storage Facilities Expenses	-	General Water	99.5%	0.5%	0.0%
Transmission and Distribution Lines Expenses	13,300	General Water	99.5%	0.5%	0.0%
Meter Expenses	16,564	Customer Service	0.0%	0.0%	100.0%
Customer Installations Expenses	1,228	Customer Service	0.0%	0.0%	100.0%
Miscellaneous Expenses	2,138	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ -	T&D Supervision	40.6%	2.7%	56.7%
Maintenance of Structures and Improvements	-	General Water	99.5%	0.5%	0.0%
Maintenance of Distribution Reservoirs and Standpipes	7,026	Storage	100.0%	0.0%	0.0%
Maintenance of Transmission and Distribution Mains	11,774	General Water	99.5%	0.5%	0.0%
Maintenance of Fire Mains	-	Hydrants	0.5%	99.5%	0.0%
Maintenance of Services	23,035	Customer Service	0.0%	0.0%	100.0%
Maintenance of Meters	6,799	Customer Service	0.0%	0.0%	100.0%
Maintenance of Hydrants	2,127	Hydrants	0.5%	99.5%	0.0%
Maintenance of Miscellenous Equipment	-	T&D Supervision	40.6%	2.7%	56.7%
Subtotal: Transmission and Distribution Expense	$ 83,991		$ 34,113	$ 2,252	$ 47,626

Customer Accounts Expense					
Operations					
Supervision	$ -	Customer Service	0.0%	0.0%	100.0%
Meter Reading Expenses	12,787	Customer Service	0.0%	0.0%	100.0%
Customer Records and Collection Expenses	100,334	Customer Service	0.0%	0.0%	100.0%
Uncollectible Accounts	-	Customer Service	0.0%	0.0%	100.0%
Miscellaneous Customer Accounts Expenses	-	Customer Service	0.0%	0.0%	100.0%
Subtotal: Customer Accounts Expense	$ 113,121		$ -	$ -	$ 113,121
Sales Expenses					
Operations					
Sales Expenses	$ -	General Water	99.5%	0.5%	0.0%
Subtotal: Sales Expenses	$ -		$ -	$ -	$ -
Administrative and General Expenses					
Operations					
Administrative and General Salaries	$ 16,542	Total O&M	84.1%	0.6%	15.3%
Office Supplies and Other Expenses	46,764	Total O&M	84.1%	0.6%	15.3%
Administrative Expenses Transferred-Cr.	-	Total O&M	84.1%	0.6%	15.3%
Outside Services Employed	259,165	Total O&M	84.1%	0.6%	15.3%
Property Insurance	-	Total O&M	84.1%	0.6%	15.3%
Injuries and Damages	35,731	Total O&M	84.1%	0.6%	15.3%
Employee Pension and Benefits	85,838	Total O&M	84.1%	0.6%	15.3%
Franchise Requirements	5,520	Total O&M	84.1%	0.6%	15.3%
Regulatory Commission Expenses	6,408	Total O&M	84.1%	0.6%	15.3%
Duplicate Charges Cr.	-	Total O&M	84.1%	0.6%	15.3%
Miscellaneous Expenses	31,950	Total O&M	84.1%	0.6%	15.3%
General Rents	16,900	Total O&M	84.1%	0.6%	15.3%
Maintenance					
Maintenance of General Plant	$ -	Total O&M	84.1%	0.6%	15.3%
Subtotal: Administrative and General Expenses	$ 504,818		$ 424,553	$ 3,132	$ 77,133
MSDC Charges					
Annual Expense	$ 64,070	General Water	99.5%	0.5%	0.0%
Subtotal: MSDC Charges	$ 64,070		$ 63,750	$ 320	$ -
Additional Support					
FTE to support new water flows and chloramination	$ 55,000	Total O&M	84.1%	0.6%	15.3%
Subtotal: Additional Support	$ 55,000		$ 46,255	$ 341	$ 8,404
Chloramine Conversion (for 20 stations)					
Chloramine Pump Package System	$ 14,000	Total O&M	84.1%	0.6%	15.3%
Ammonia Analyzer	15,200	Total O&M	84.1%	0.6%	15.3%
Chlorine cost	5,990	Total O&M	84.1%	0.6%	15.3%
Ammonia cost	10,837	Total O&M	84.1%	0.6%	15.3%
Pump House Updates	20,000	Total O&M	84.1%	0.6%	15.3%
Electricity for chemical system only	340	Total O&M	84.1%	0.6%	15.3%
Subtotal: Chloramine Conversion (for 20 stations)	$ 66,367		$ 55,815	$ 412	$ 10,140
Shannon Road Booster Station					
Pumps	$ 3,500	Total O&M	84.1%	0.6%	15.3%
Mag-meter	833	Total O&M	84.1%	0.6%	15.3%
SCADA Monitoring & Equipment	1,500	Total O&M	84.1%	0.6%	15.3%
Electricity	5,760	Total O&M	84.1%	0.6%	15.3%
Subtotal: Shannon Road Booster Station	$ 11,593		$ 9,750	$ 72	$ 1,771
Contingency					
	$ -	Total O&M	84.1%	0.6%	15.3%
Subtotal: Contingency	$ -		$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 1,753,907**		**$ 1,484,908**	**$ 10,804**	**$ 258,195**
Plant in Service					
Intangible Plan					
Intangible Plant - Franchise	$ 36,583	Plant Investment	77.3%	1.3%	21.5%
Subtotal: Intangible Plan	$ 36,583		$ 28,265	$ 468	$ 7,850
Source of Supply and Pumping					
Land and Land Rights	$ 76,185	General Water	99.5%	0.5%	0.0%
Stuctures & Improvements	1,276,644	General Water	99.5%	0.5%	0.0%
Wells & Springs	921,763	General Water	99.5%	0.5%	0.0%
Supply Mains	106,525	General Water	99.5%	0.5%	0.0%
Pumping Equipment	1,656,980	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply and Pumping	$ 4,038,098		$ 4,017,907	$ 20,190	$ -

Water Treatment					
Water Treatment Equipment	$ 735,971	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment	$ 735,971		$ 732,291	$ 3,680	$ -
Transmission & Distribution					
Distribution Reservoirs & Standpipes	$ 1,665,952	Storage	100.0%	0.0%	0.0%
T&D Mains	6,240,925	General Water	99.5%	0.5%	0.0%
Services	2,250,484	Customer Service	0.0%	0.0%	100.0%
Meters and Meter Installations	1,340,115	Customer Service	0.0%	0.0%	100.0%
Hydrants	158,156	Hydrants	0.5%	99.5%	0.0%
Other	303,311	General Water	99.5%	0.5%	0.0%
Subtotal: Transmission & Distribution	$ 11,958,942		$ 8,178,258	$ 190,087	$ 3,590,598
General Plant					
Office Furniture and Equipment	$ 1,420	Plant Investment	77.3%	1.3%	21.5%
Transportation Equipment	153,990	Plant Investment	77.3%	1.3%	21.5%
Tools, Shop and Garage Equipment	3,975	Plant Investment	77.3%	1.3%	21.5%
Computer Equipment	97,088	Plant Investment	77.3%	1.3%	21.5%
Subtotal: General Plant	$ 256,473		$ 198,159	$ 3,279	$ 55,034
Total: Plant in Service	**$ 17,026,067**		**$ 13,154,881**	**$ 217,704**	**$ 3,653,483**
Depreciation					
Intangible Plan					
Intangible Plant - Franchise	$ 915	Depreciation	72.4%	0.9%	26.7%
Subtotal: Intangible Plan	$ 915		$ 662	$ 9	$ 244
Source of Supply and Pumping					
Land and Land Rights	$ 1,905	General Water	99.5%	0.5%	0.0%
Stuctures & Improvements	31,074	General Water	99.5%	0.5%	0.0%
Wells & Springs	29,303	General Water	99.5%	0.5%	0.0%
Supply Mains	1,530	General Water	99.5%	0.5%	0.0%
Pumping Equipment	64,129	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply and Pumping	$ 127,941		$ 127,301	$ 640	$ -
Water Treatment					
Water Treatment Equipment	$ 31,316	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment	$ 31,316		$ 31,159	$ 157	$ -
Transmission & Distribution					
Distribution Reservoirs & Standpipes	$ 36,760	Storage	100.0%	0.0%	0.0%
T&D Mains	129,952	General Water	99.5%	0.5%	0.0%
Services	51,959	Customer Service	0.0%	0.0%	100.0%
Meters and Meter Installations	76,485	Customer Service	0.0%	0.0%	100.0%
Hydrants	3,019	Hydrants	0.5%	99.5%	0.0%
Other	24,428	General Water	99.5%	0.5%	0.0%
Subtotal: Transmission & Distribution	$ 322,604		$ 190,384	$ 3,776	$ 128,444
General Plant					
Office Furniture and Equipment	$ -	Depreciation	72.4%	0.9%	26.7%
Transportation Equipment	12,731	Depreciation	72.4%	0.9%	26.7%
Tools, Shop and Garage Equipment	205	Depreciation	72.4%	0.9%	26.7%
Computer Equipment	4,759	Depreciation	72.4%	0.9%	26.7%
Subtotal: General Plant	$ 17,695		$ 12,810	$ 168	$ 4,717
Total: Depreciation	**$ 500,470**		**$ 362,317**	**$ 4,748**	**$ 133,405**
Taxes					
Taxes Other Than Income					
Utility Property Tax	$ 30,274	Plant Investment	77.3%	1.3%	21.5%
Real Estate	129,390	Plant Investment	77.3%	1.3%	21.5%
Subtotal: Taxes Other Than Income	$ 159,664		$ 123,361	$ 2,042	$ 34,261
Income Taxes					
Business Enterprise Tax	$ 131,581	General Water	99.5%	0.5%	0.0%
Subtotal: Income Taxes	$ 131,581		$ 130,923	$ 658	$ -
Total: Taxes	**$ 291,245**		**$ 254,284**	**$ 2,699**	**$ 34,261**
Amortization					
CIAC	$ (216,489)	Plant Investment	77.3%	1.3%	21.5%
Other	2,715	Plant Investment	77.3%	1.3%	21.5%
Total: Amortization	**$ (213,774)**		**$ (165,169)**	**$ (2,733)**	**$ (45,872)**
Return					
Estimate	$ 453,727	Plant Investment	77.3%	1.3%	21.5%
Total: Return	**$ 453,727**		**$ 350,564**	**$ 5,802**	**$ 97,361**

O&M Expenses			Water Cost Drivers			
			Base	Extra Capacity	Wholesale Only	Retail Only
Source of Supply						
Operations						
Operation Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Operation Labor and Expenses	4,808	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Purchased Water	374,978	Purchased Water	0.00%	0.00%	100.00%	0.00%
Miscellaneous Expenses	23	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Rents	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ 1,669	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Structures and Improvements	4,624	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Collecting and Impounding Reservoirs	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Lake, River, and Other Intakes	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Wells and Springs	11,602	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Infiltration Galleries and Tunnels	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Supply Mains	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Miscellaneous Water Source Plant	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Source of Supply	$ 397,703		$ 10,226	$ 12,499	$ 374,978	$ -
Pumping Expenses						
Operations						
Operation Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Fuel for Power Production	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Power Production Labor and Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Fuel or Power Purchased for Pumping	177,023	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Pumping Labor and Expenses	22,935	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Expenses Transferred-Credit	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Miscellaneous Expenses	16,173	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Rents	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Structures and Improvements	30,956	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Power Production Equipment	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Pumping Equipment	36,006	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Pumping Expenses	$ 283,093		$ 127,392	$ 155,701	$ -	$ -
Water Treatment Expenses						
Operations						
Operation Supervision and Engineering	$ -	Treatment	0.00%	0.00%	0.00%	100.00%
Chemicals	10,906	Treatment	0.00%	0.00%	0.00%	100.00%
Operation Labor and Expenses	148,289	Treatment	0.00%	0.00%	0.00%	100.00%
Miscellaneous Expenses	-	Treatment	0.00%	0.00%	0.00%	100.00%
Rents	-	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance						
Operation Supervision and Engineering	$ -	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance of Structures and Improvements	-	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance of Water Treatment Equipment	10,680	Treatment	0.00%	0.00%	0.00%	100.00%
Subtotal: Water Treatment Expenses	$ 169,875		$ -	$ -	$ -	$ 169,875
Transmission and Distribution Expense						
Operations						
Operation Supervision and Engineering	$ -	T&D Mains	63.52%	36.48%	0.00%	0.00%
Storage Facilities Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Transmission and Distribution Lines Expenses	13,234	T&D Mains	63.52%	36.48%	0.00%	0.00%
Meter Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Customer Installations Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Miscellaneous Expenses	2,127	T&D Mains	63.52%	36.48%	0.00%	0.00%
Rents	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ -	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Structures and Improvements	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Distribution Reservoirs and Standpipes	7,026	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Transmission and Distribution Mains	11,715	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Fire Mains	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Services	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Meters	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Hydrants	11	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Miscellenous Equipment	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Subtotal: Transmission and Distribution Expense	$ 34,113		$ 21,668	$ 12,445	$ -	$ -
Customer Accounts Expense						
Operations						
Supervision	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Meter Reading Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Customer Records and Collection Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Uncollectible Accounts	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Miscellaneous Customer Accounts Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Customer Accounts Expense	$ -		$ -	$ -	$ -	$ -
Sales Expenses						
Operations						
Sales Expenses	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Sales Expenses	$ -		$ -	$ -	$ -	$ -

Administrative and General Expenses						
Operations						
Administrative and General Salaries	$ 13,912	Total O&M	31.24%	35.43%	0.00%	33.32%
Office Supplies and Other Expenses	39,329	Total O&M	31.24%	35.43%	0.00%	33.32%
Administrative Expenses Transferred-Cr.	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Outside Services Employed	217,959	Total O&M	31.24%	35.43%	0.00%	33.32%
Property Insurance	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Injuries and Damages	30,050	Total O&M	31.24%	35.43%	0.00%	33.32%
Employee Pension and Benefits	72,190	Total O&M	31.24%	35.43%	0.00%	33.32%
Franchise Requirements	4,642	Total O&M	31.24%	35.43%	0.00%	33.32%
Regulatory Commission Expenses	5,389	Total O&M	31.24%	35.43%	0.00%	33.32%
Duplicate Charges Cr.	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Miscellaneous Expenses	26,870	Total O&M	31.24%	35.43%	0.00%	33.32%
General Rents	14,213	Total O&M	31.24%	35.43%	0.00%	33.32%
Maintenance						
Maintenance of General Plant	$ -	Total O&M	31.24%	35.43%	0.00%	33.32%
Subtotal: Administrative and General Expenses	$ 424,553		$ 132,649	$ 150,436	$ -	$ 141,468
MSDC Charges						
Annual Expense	$ 63,750	Purchased Water	0.00%	0.00%	100.00%	0.00%
Subtotal: MSDC Charges	$ 63,750		$ -	$ -	$ 63,750	$ -
Additional Support						
FTE to support new water flows and chloramination	$ 46,255	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Additional Support	$ 46,255		$ 20,815	$ 25,440	$ -	$ -
Chloramine Conversion (for 20 stations)						
Chloramine Pump Package System	$ 11,774	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Ammonia Analyzer	12,783	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Chlorine cost	5,037	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Ammonia cost	9,114	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Pump House Updates	16,820	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Electricity for chemical system only	286	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Chloramine Conversion (for 20 stations)	$ 55,815		$ 25,117	$ 30,698	$ -	$ -
Shannon Road Booster Station						
Pumps	$ 2,944	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Mag-meter	701	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
SCADA Monitoring & Equipment	1,262	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Electricity	4,844	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Shannon Road Booster Station	$ 9,750		$ 4,388	$ 5,363	$ -	$ -
Contingency						
	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Contingency	$ -		$ -	$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 1,484,908**		**$ 342,254**	**$ 392,582**	**$ 438,728**	**$ 311,343**
Check	$ -					
Plant in Service						
Intangible Plan						
Intangible Plant - Franchise	$ 28,265	Plant Investment	54.3%	40.0%	0.0%	5.7%
Subtotal: Intangible Plan	$ 28,265		$ 15,352	$ 11,311	$ -	$ 1,603
Source of Supply and Pumping						
Land and Land Rights	$ 75,804	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Stuctures & Improvements	1,270,261	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Wells & Springs	917,154	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Supply Mains	105,993	T&D Mains	63.5%	36.5%	0.0%	0.0%
Pumping Equipment	1,648,695	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Source of Supply and Pumping	$ 4,017,907		$ 1,827,687	$ 2,190,220	$ -	$ -
Water Treatment						
Water Treatment Equipment	$ 732,291	Treatment	0.0%	0.0%	0.0%	100.0%
Subtotal: Water Treatment	$ 732,291		$ -	$ -	$ -	$ 732,291
Transmission & Distribution						
Distribution Reservoirs & Standpipes	$ 1,665,952	T&D Mains	63.5%	36.5%	0.0%	0.0%
T&D Mains	6,209,720	T&D Mains	63.5%	36.5%	0.0%	0.0%
Services	-	Treatment	0.0%	0.0%	0.0%	100.0%
Meters and Meter Installations	-	Treatment	0.0%	0.0%	0.0%	100.0%
Hydrants	791	Treatment	0.0%	0.0%	0.0%	100.0%
Other	301,794	T&D Mains	63.5%	36.5%	0.0%	0.0%
Subtotal: Transmission & Distribution	$ 8,178,258		$ 5,194,229	$ 2,983,238	$ -	$ 791
General Plant						
Office Furniture and Equipment	$ 1,097	Plant Investment	54.3%	40.0%	0.0%	5.7%
Transportation Equipment	118,977	Plant Investment	54.3%	40.0%	0.0%	5.7%
Tools, Shop and Garage Equipment	3,071	Plant Investment	54.3%	40.0%	0.0%	5.7%
Computer Equipment	75,013	Plant Investment	54.3%	40.0%	0.0%	5.7%
Subtotal: General Plant	$ 198,159		$ 107,627	$ 79,295	$ -	$ 11,236
Total: Plant in Service	**$ 13,154,881**		**$ 7,144,895**	**$ 5,264,065**	**$ -**	**$ 745,921**

Depreciation						
Intangible Plan						
Intangible Plant - Franchise	$ 662	Depreciation	51.1%	40.0%	0.0%	8.9%
Subtotal: Intangible Plan	$ 662		$ 338	$ 265	$ -	$ 59
Source of Supply and Pumping						
Land and Land Rights	$ 1,895	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Stuctures & Improvements	30,919	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Wells & Springs	29,156	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Supply Mains	1,523	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Pumping Equipment	63,809	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Source of Supply and Pumping	$ 127,301		$ 57,285	$ 70,016	$ -	$ -
Water Treatment						
Water Treatment Equipment	$ 31,159	Treatment	0.0%	0.0%	0.0%	100.0%
Subtotal: Water Treatment	$ 31,159		$ -	$ -	$ -	$ 31,159
Transmission & Distribution						
Distribution Reservoirs & Standpipes	$ 36,760	T&D Mains	63.5%	36.5%	0.0%	0.0%
T&D Mains	129,303	T&D Mains	63.5%	36.5%	0.0%	0.0%
Services	-	Treatment	0.0%	0.0%	0.0%	100.0%
Meters and Meter Installations	-	Treatment	0.0%	0.0%	0.0%	100.0%
Hydrants	15	Treatment	0.0%	0.0%	0.0%	100.0%
Other	24,306	T&D Mains	63.5%	36.5%	0.0%	0.0%
Subtotal: Transmission & Distribution	$ 190,384		$ 120,920	$ 69,449	$ -	$ 15
General Plant						
Office Furniture and Equipment	$ -	Depreciation	51.1%	40.0%	0.0%	8.9%
Transportation Equipment	9,217	Depreciation	51.1%	40.0%	0.0%	8.9%
Tools, Shop and Garage Equipment	148	Depreciation	51.1%	40.0%	0.0%	8.9%
Computer Equipment	3,445	Depreciation	51.1%	40.0%	0.0%	8.9%
Subtotal: General Plant	$ 12,810		$ 6,544	$ 5,122	$ -	$ 1,145
Total: Depreciation	**$ 362,317**		**$ 185,088**	**$ 144,851**	**$ -**	**$ 32,378**
Taxes						
Taxes Other Than Income						
Utility Property Tax	$ 23,391	Plant Investment	54.3%	40.0%	0.0%	5.7%
Real Estate	99,971	Plant Investment	54.3%	40.0%	0.0%	5.7%
Subtotal: Taxes Other Than Income	$ 123,361		$ 67,002	$ 49,364	$ -	$ 6,995
Income Taxes						
Business Enterprise Tax	$ 130,923	Total O&M	31.2%	35.4%	0.0%	33.3%
Subtotal: Income Taxes	$ 130,923		$ 40,906	$ 46,391	$ -	$ 43,626
Total: Taxes	**$ 254,284**		**$ 107,908**	**$ 95,756**	**$ -**	**$ 50,621**
Amortization						
CIAC	$ (167,266)	Depreciation	51.1%	40.0%	0.0%	8.9%
Other	2,098	Depreciation	51.1%	40.0%	0.0%	8.9%
Total: Amortization	**$ (165,169)**		**$ (84,376)**	**$ (66,033)**	**$ -**	**$ (14,760)**
Return						
Estimate	$ 350,564	Plant Investment	54.3%	40.0%	0.0%	5.7%
Total: Return	**$ 350,564**		**$ 190,404**	**$ 140,282**	**$ -**	**$ 19,878**

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-22	**Witness: John Sullivan**

Staff 1-22

Table 1 and Appendix A of the COSS (Exhibit 7) contains a number of costs that were not derived from the Company's 2017 Annual Report. For each of the following charges not derived from the Company's 2017 Annual Report, please provide a detailed explanation regarding how they were determined. (Please provide the individual supporting calculations, as necessary.)

a)	Source of Supply – Purchased Water	$373,213
b)	MSDC Charges	64,070
c)	Additional Support – FTE to support new water flows and chloramination	55,000
d)	Chloramine Conversion (for 20 stations)	66,367
e)	Shannon Road Booster Station	11,593
f)	Rate of Return	499,547
g)	Income Taxes (Business Enterprise Tax)	144,869

Response 1-22

All these numbers were determined by the consultant hired by DES to do the Cost of Service Study.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-23	**Witness: John Sullivan**

Staff 1-23

Appendix A of the COSS (Exhibit 7) indicates an amount relative to the Company's Distribution Reservoirs and Standpipes fixed asset account of $2,795,608. The Company's 2017 Annual Report, however, indicates an amount of $1,665,952 for Distribution Reservoirs and Standpipes (See Schedule F-8, Line 27); a difference of $1,129,656. Please explain this difference.

Response 1-23

We have requested the information sought in this request from Raftelis and will forward any response as soon as it is received.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-24	**Witness: John Sullivan**

Staff 1-24

Table 4 of the COSS (Exhibit 7) contains the calculation of the wholesale rate that the Company could assess the Town of Plaistow.

a) For each of the Cost of Service components contained in Table 4, please provide a detailed explanation regarding how that component was derived from Table 3. See below. (Please provide the individual supporting calculations, as necessary.

i. Operating Expenses
$201,917

ii. Rate of Return 141,372

iii. Depreciation 52,380

iv. Other Non-Operating 85,516

b) Please explain how the calculated rate per ccf of $3.94 calculated on Table 4 relates to the rate indicated in Exhibit 8, Page 12 of 26, which states, "HAWC shall charge Plaistow 54 cents more per Ccf than HAWC is being charged by Salem."

Response 1-24

These calculations were made by the consultant DES hired to do the Cost of Service Study.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-25	**Witness: Charles Lanza**

Staff 1-25

Exhibit 8, Page 10 of 26 states, "Salem will charge HAWC 50 cents more per Ccf than the combined rates charged to Salem by MWW and Derry for water usage."

a) When is it anticipated that this rate will go into effect and be charged to HAWC?
b) Please explain how this rate was determined. Please provide all necessary supporting calculations.
c) Please indicate the anticipated actual rate per ccf that will be charged by Salem to HAWC.

Response 1-25

a) The anticipated date for this to go into effect is 6/15/2020.
b) This was determined based on the Raftellis Cost of Service Study (COSS).
c) Per the SIA agreement Salem will be billing HAWC 50 cents more per Ccf than the combined rates charged to Salem by MWW and Derry for water usage.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-26	**Witness: Charles Lanza and Stephen St. Cyr**

Staff 1-26

Exhibit 8, Page 12 of 26 states, "HAWC shall charge Plaistow 54 cents more per Ccf than HAWC is charged by Salem."

a) When is it anticipated that this rate will go into effect and be charged by HAWC?
b) Is it the Company's intention to file for approval of this rate with the Commission, in accordance with its statutory authority to establish just and reasonable rates, before it is actually charged to the Town of Plaistow? If yes, please indicate when this filing will occur. If no, please explain.
c) Staff's position is that it will not be examining approval of those rates, and any other rates contained in the proposed contract, in the current docket. Staff will review the contract but consider it merely for illustrative purposes. As indicated above, approval of those rates should be filed in an additional docket. Does the Company agree with Staff's position? Please explain.
d) Please explain how this rate was determined. Please provide all necessary supporting calculations.
e) Please indicate the anticipated actual rate per ccf that will be charged by HAWC to Plaistow.

Response 1-26

a) The Company does not anticipate selling water to Plaistow until sometime in 2021.
b) Yes. At this point, HAWC anticipates filing a rate case in 2020 based on a 2019 pro forma test year.
c) Yes.
d) The rate was determined by Raftelis in its Final Report dated June 27, 2019 entitled Southern New Hampshire Regional Water Initiative Cost of Service Study – HAWC. See Exhibit 7 to Petition.
e) The anticipated calculated rate per ccf is $3.94.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-27	**Witness: Charles Lanza**

Staff 1-27

Regarding Exhibit 8, Attachment B relative to the Disinfection Study Report, dated January 7, 2019, please provide a brief narrative regarding the Chloramine Conversion project to be undertaken by the Company. Within that narrative, please specifically describe the following:

a) The necessity for this project within the context of the overall SNHRWI Project.
b) A description of the treatment option that will be established in the HAWC systems under Phase I to address this issue.
c) The other alternatives that were considered relative to addressing this issue, and their approximate costs.
d) The reasons why HAWC chose the treatment option that it did over other alternative treatment options.

Response 1-27

a) Under the Disinfection Study Report it was determined that the Company's water chemistry was not compatible with the water systems upstream including Manchester, Derry and Salem. In order for the Company to participate in the project and gain a long-term viable source of water it was ultimately determined that the Company would have to convert its core system to chloramines to be compatible with the water coming from the North.
b) The treatment option that will be established in the HAWC core system to address the disinfection compatibility issue is converting from chlorine disinfection to chloramine disinfection.
c) See the referenced Disinfection Study Report. There were several options considered including destruction of chloramines and filtration of the chloramines. Aside from conversion to chloramines all other options were determined to be cost prohibitive from a long term O&M standpoint.
d) See responses A-C.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-28	**Witness: Charles Lanza**

Staff 1-28

Regarding Exhibit 8, Attachment C, MSDC Agreement on Page 4 of 13, it appears that the MSDC rate to be charged to all water recipients is $3.57 per gallon per day. Please provide a detailed explanation regarding how this rate was established.

Response 1-28

Please review Attachment C, item #8 of the MSDC grant agreement. Manchester Water Works established the rate of $3.57 in 2018, and the MSDC grant agreement extended this rate to the water recipients through June 30, 2019.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 1
ANSWERS

Date request received: 10/11/2019	**Date of Response: 10/28/2019**
Staff 1-29	**Witness: Stephen St. Cyr**

Staff 1-29

Regarding Petition for Approval, Page 5, and Staff Email Dated September 19, 2019
In Staff's email to the Company, as attached, Staff indicated that it had reviewed HAWC's petition and determined that it would be examining the filing as two requests for financings, in the amounts of $1,204,815.00 and $392,500.00, pursuant to RSA 369:1 and RSA 369:4. Staff further indicated that it would not be examining the prudency of the proposed improvements to be made with the approved financings, nor would it be examining authorization for HAWC to increase its rates to cover its investments and earn a reasonable rate of return.

a) Please indicate if the Company agrees to Staff's characterization of HAWC's filing. If not, please supplement the record with further argument and documentation to support those requests.
b) Please provide justification as to why the separate proposed financings are "consistent with the public good," pursuant to RSA 369:1 and RSA 369:4, and should be approved by the Commission. Please provide Commission precedent for this argument. N.H. Code Admin. Rules Puc 203.05(a)(3).

Response 1-29

a) HAWC agrees.
b) The State of NH loan to pay the CIAC Tax is in the public interest and consistent with the public good because it provides the two core systems with access to needed water supply for both regular and emergency supply allowing HAWC to provide safe and reliable drinking water to its customers. Similarly, the bank loan to pay a portion of the MWW MSDC fees is in the public interest and consistent with the public good because it provides the two core systems with access to needed water supply for both regular and emergency supply allowing HAWC to provide safe and reliable drinking water to its customers. Both financings should be approved by the Commission.

HAMPSTEAD AREA
WATER COMPANY, INC

54 SAWYER AVENUE, ATKINSON, NH 03811
TEL: 603.362.4299 FAX: 603.362.4936
www.hampsteadwater.com

December 9, 2019

Christopher R. Tuomala, Esq.
NH Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

RE: Hampstead Area Water Company, Inc.
DW 19-147 – Answers to Staff Data Requests - Set

Dear Attorney Tuomala:

Pursuant to NH Code PUC 203.09, please find attached, the Company's Answers to Staff Data Requests-Set2, regarding the above referenced docket.

If you have any questions, please don't hesitate to contact us.

Very truly yours,

Anthony Augeri, Esq.
General Counsel

AA/ljs
enclosures
cc: DW 19-147 Service list electronically

\\hawc02\HAWC-Data\Legal\HAWC\DW-19-147 Financing Pet for SNH Water Project\Correspondence\Letter to Atty Tuomala with data request answers set 2 12-9-19.docx

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 2
ANSWERS

Date request received: 11/25/2019	**Date of Response: 12/09/2019**
Staff 2-1	**Witness: Charles Lanza and Stephen St. Cyr**

Staff 2-1

Reference Company response to Staff 1-2, Exhibit 1-2 – Regional Water Cost Summary Sheet:

a) The Project Total indicated on Exhibit 1-2 appears to actually sum to an amount of $4,881,065 instead of $5,041,064; a difference of approximately $160,000. Please explain.

b) Exhibit 1-2 indicates that one of HAWC's Phase I Components is a "Westside Drive / Main St Contingency [sic] (15%)" for $258,750.
   i. Please provide further explanation regarding this project or line item as listed on Exhibit 1-2.
   ii. The Company's original filing indicates that HAWC will be undertaking a main replacement project on Shannon Road for the same estimated cost of $258,750 (See Exhibit 2, Page 3 and Schedules SPS-8, 9, and 10.) Please clarify whether the project indicated in the Company's filing (Shannon Road) for $258,750 is one and the same as the item indicated on Exhibit 1-2 (Westside Drive / Main St Contingency) for the same amount.

c) The HAWC Construction & Contingency CIAC Tax line item indicated on Exhibit 1-2 as $929,813 actually calculates to an amount of $886,613 ($3,283,750 @ 27%); a difference of $43,200. Please explain. (Note: $43,200 ÷ 27% = $160,000. See (a))

d) Exhibit 1-2 indicates a CIAC Tax amount of $151,882 relative to the "Shannon Road Water Main (bid by Salem)" project:
   i. It appears this would indicate that the Town of Salem will be undertaking this project at a cost of $562,526 ($151,882 ÷ 27%) and then contributing it to HAWC. Please clarify and explain this project as it pertains to HAWC.
   ii. Please confirm that HAWC will be responsible for paying the CIAC Tax if this project is, in fact, intended to be a contribution from the Town of Salem.
   iii. The Company's original filing appears to indicate that HAWC (not the Town of Salem) will be responsible for the construction of the Shannon Road project for an estimated cost of $258,750 (See Exhibit 2, Page 3 and Schedules SPS-8, 9, and 10.) Please clarify and explain.

e) Exhibit 1-2 indicates a CIAC Tax amount of $123,120 relative to an "East Road Water Main (bid by Plaistow)" project. It would appear this indicates that the Town of Plaistow will be undertaking this project at a cost of $456,000 ($123,120 ÷ 27%) and then contributing it to HAWC.
   i. Please confirm and explain.

ii. Please confirm that HAWC will be responsible for paying the CIAC Tax if this project is, in fact, intended to be a contribution from the Town of Plaistow.

Response 2-1:

a) There is an error in the 1-2 Exhibit. The correct Cost Refinement is attached. The Project Total is $4,847,227.

b) (i) This line item is a contingency for a portion of the SNHRWP that HAWC will own and operate. Our Engineering consultant, Weston and Sampson carried 15% for unforeseen items related to the Main St. PRV Improvements and Westside Drive Pump Station. See attached for the updated Exhibit 1-2.

(ii) This is in error. The $258,750 is as noted in b(i) above. The Shannon Rd. costs are estimated based on the percentage of the project that HAWC will own which is approximately 65% of the total of $752,542.50. There was also a 15% contingency added on the $752,542.50.

c) Per our engineering Consultant this was a calculation error. See the revised Exhibit 1-2 dated 11/27/19. The total is $891,677 ($3,292,750 x 27.08%).

d) (i) Approximately 65% of the Shannon Road Water Project water mains are being contributed to the Company by the Town of Salem as part of SNHRWP. The revised CIAC Tax is $149,285 is as follows: ((752542.5*0.65*1.15)-(752542.5*0.65*1.15)/25*0.5)*0.2708 Where project cost is $752,542.50 65% is the percentage of the contract amount to be provided to HAWC from Salem. 25 years is the tax depreciable life, 15% is the percentage of contingency included in calculation. 27.08% is the percent estimated to incur a CIAC tax liability.

(ii) HAWC is the party receiving the contributed plant. Therefore, HAWC believes it is responsible for any CIAC Tax under the current law.

(iii) The Shannon Rd. project is nearing completion and was completed by the Town of Salem. The portion of the Shannon Rd. project being contributed to HAWC is estimated at $562,526. Exhibit 2 incorrectly stated the Project Cost of $258,750. The $258,750 is contingency for the Westside Dr. and PRV projects.

e) (i) The Shannon Rd. project is nearing completion and was completed by the Town of Salem. The portion of the Shannon Rd. project being contributed to HAWC is estimated at $562,526. Exhibit 2 incorrectly stated the Project Cost of $258,750. The $258,750 is contingency for the Westside Dr. and PRV projects.

(ii) HAWC is the party receiving the contributed plant. Therefore, HAWC believes it is responsible for any CIAC Tax under current tax law.

Regional Water Costs - DWGTF Application Update Weston & Sampson Exhibit 2-1
27-Nov-19

Water System	Phase I Component		SNHRW Phase I Cost
HAWC	Chloramine Conversion (see separate breakout of costs)	$	1,240,000
	Westside Drive Pump Station	$	1,210,000
	Main St. PRV Improvements	$	575,000
	Westside Drive/Main St Contingnecy (15%)	$	267,750
	*HAWC Construction & Contingnecy Subtotal**	*$*	*3,292,750*
	Loan Requests:		
	CIAC Tax (27.08%)		
	HAWC Construction & Contingency (based on above subtotal)	$	891,677
	Shannon Road Water Main (bid by Salem)	$	149,285
	East Road Water Main (bid by Plaistow)	$	121,015
	MSDC Fee	$	392,500
	Project Total	**$**	**4,847,227**
	Grant Request Total	$	3,292,750
	Loan Request Total	$	1,554,477

EXHIBIT 2

CHLORAMINES CONVERSION

PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$0.00
304	Pump House and Site Work	$473,333.33
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$246,666.61
320	Water Treatment (filters etc.)	$396,666.66
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains i. 4", 3", and 2" piping	$123,333.40
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters 50 customers x $350 per customer	$
335	Hydrants x $3,500.00 per hydrant (includes installation)	$0.00
339	Miscellaneous (not otherwise included)	$0.00
Total		$1,240,000.00

MAIN ST. PRESSURE REDUCING STATION PROJECT

PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$0.00
304	Pump House and Site Work	$310,000.00
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$250,000.00
320	Water Treatment (filters etc.)	$0.00
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains i. 12", 8", and 6" piping	$15,000.00
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters	$
335	Hydrants x $3,500.00 per hydrant (includes installation)	$0.00
339	Miscellaneous (not otherwise included)	$0.00
Total		$575,000.00

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SHANNON RD. WATERMAIN PROJECT

PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$0.00
304	Pump House and Site Work	$0.00
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$0.00
320	Water Treatment (filters etc.)	$0.00
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains i. 12", 8", and 6" piping	$542,526.00
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters	$
335	Hydrants (includes installation)	$20,000.00
339	Miscellaneous (not otherwise included)	$0.00
Total		$562,526.00

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WESTSIDE DR. BOOSTER STATION & TREATMENT FACILITY
PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$20,000.00
304	Pump House and Site Work	$475,000.00
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$390,000.00
320	Water Treatment (filters etc.)	$250,000.00
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains i. 4", 3", and 2" piping	$15,000.00
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters	$
335	Hydrants x $3,500.00 per hydrant (includes installation)	$0.00
339	Miscellaneous (not otherwise included)	$60,000*
Total		$1,210,000.00

*Past HAWC Costs to be Reimbursed under this contract

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DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 2
ANSWERS

Date request received: 11/25/2019	**Date of Response: 12/09/2019**
Staff 2-2	**Witness: Charles Lanza and Stephen St. Cyr**

Staff 2-2

Reference Company responses to Staff 1-2 and 1-13: Based on the Company's response to Staff 1-5 in DW 19-136, it now appears the CIAC Tax amount should be $1,139,113, as follows: (($3,283,750 – [$3,283,750 x (1/25) x .5]) ÷ (1 – 0.2724)) - $3,283,750 = $1,139,113.

a) Please indicate if the Company concurs.
b) Please explain how this will affect the proposed CIAC Tax financing from the DWGTF.

Response 2-2:

a) Staff 1-5 in DW 19-136 assumes Plant is being contributed and the Developer is paying the CIAC Tax. In this case, DWGTF is contributing cash and is not paying the CIAC Tax. DWGTF may loan the company the money for the CIAC Tax but it is not being contributed as CIAC. In DW 19-136, the calculation for CIAC Tax does not include depreciation when Land or Cash is being contributed. Based on this, the CIAC tax would be $3,292,750 x 27.08% = $891,677

b) Based on the Company's response to 2-2-b, there will be no effect to the proposed CIAC Tax financing from DWGTF. Please note. The grant letter from DWGTF shows a total grant of $3,283,750 which is $9,000 less than our above calculations. Since many of our construction costs were budgeted estimates, we believe the $9,000 difference will be incorporated in the contractual contingencies.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 2
ANSWERS

Date request received: 11/25/2019	**Date of Response: 12/09/2019**
Staff 2-3	**Witness: John Sullivan, Charles Lanza and Stephen St. Cyr**

Staff 2-3

Reference Company responses to Staff 1-1, 1-4, and 1-18: Based on the Company's responses, it appears HAWC's proposed financing with Pentucket Bank is tentative until, at least, the DWGTF Commission makes a final determination relative to the MSDC portion of the requested financing.

a) Please confirm and/or explain.
b) Given the current tentative nature of the proposed Pentucket loan, please explain why it would be in the public interest for the Commission to grant approval for this financing in accordance with RSA 369 at this time.
c) Has the DWGTF Commission established a firm date in either November or December for its consideration of the proposed MSDC financing? If yes, please provide that date.

Response 2-3:

a) You are correct.

b) It is the Company's intent to pursue the State loan for any CIAC tax incurred. The State has yet to make a determination on whether or not they will loan the funds to the Company. As such, the Company is prepared to borrow the funds from Pentucket Bank if the State does not do so. It is in the public interest for the project and the related financing to go forward. HAWC's ability to access water from Manchester provides long term security of safe and adequate water supply.

c) At this time, there is no firm date in December for consideration of the MSDC financing.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 2
ANSWERS

Date request received: 11/25/2019	**Date of Response: 12/09/2019**
Staff 2-4	**Witness: Charles Lanza**

Staff 2-4

Reference Company response to Staff 1-5: Based on the Company's response, should not the $60,000 amount be recorded as part of the cost of the Atkinson Tank project instead of the Westside Drive Booster Station and Treatment Facility project. Please confirm and/or explain.

Response 2-4:

The company had requested reimbursement under the Atkinson Tank Project and DES advised the Company to request them under H1 Westside Contract.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 2
ANSWERS

Date request received: 11/25/2019	**Date of Response: 12/09/2019**
Staff 2-5	**Witness: John Sullivan**

Staff 2-5

Reference Company response to Staff 1-10:

a) Please confirm that the shareholder's $500,000 equity contribution made in 2019 pertained to the MSDC charge.
b) Did the shareholder make any other equity contributions to the Company in 2019?
c) Does the Company anticipate that the shareholder will make any further equity contributions during the remainder of 2019?

Response 2-5:

a) The $500,000 is part of the shareholder's commitment to contribute a total of $750,000 over the next 3 years in Additional Paid in Capital.

b) No

c) Not determined at this time.

SOUTHERN NEW HAMPSHIRE
REGIONAL WATER INITIATIVE

Cost of Service Study – Town of Salem

Final Report / June 27, 2019

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

RAFTELIS

June 27, 2019

Mr. Jeffery W. McClure, P.E.
Senior Associate
Weston & Sampson
100 International Drive, Suite 152
Portsmouth, NH 03801

Subject: Southern New Hampshire Regional Water Initiative Cost of Service Study – Town of Salem

Dear Mr. McClure,

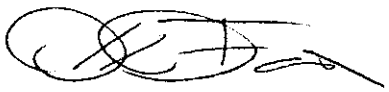
Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Cost of Service Report to Weston & Sampson for the New Hampshire Department of Environmental Services' project, the Southern New Hampshire Regional Water Initiative (SNHRWI).

The major objectives of the study include the following:

- Develop a cost of service methodology and model to appropriately functionalize, allocate, and distribute costs in order to understand the cost of wheeling, or providing bulk wholesale water, from one community to another;
- Utilizing said methodology and model, the following scenarios were to be analyzed:
    - Calculate a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

This draft report summarizes the key findings and recommendations related to the development of the cost of service analyses for the Town of Salem. We expect this initial report will result in further discussions with all stakeholders and that some modifications may be necessary to finalize a set of methodologies and rates that all agree to. It has been a pleasure working with you, and we look forward to continuing our work with you to finalize this important project for the region.

Sincerely,



Dave Fox
Manager

1.1. Background

In late 2018, Raftelis was contracted by Weston & Sampson to perform wholesale water cost of service studies for the Southern New Hampshire Regional Water Initiative (SNHRWI), directed by the New Hampshire Department of Environmental Services (DES). The proposed SNHRWI includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

1.1.1. OBJECTIVES OF THE STUDY

Raftelis was engaged with the primary objective of develop a cost of service-based rate study for developing wholesale, or wheeling, rates for water transported through the region's transmission systems of the SNHRWI. This report serves to summarize our findings, results, and recommendations for wheeling charge calculations for the Town of Salem's portion of the SNHRWI.

The charges to be calculated through this study include the following:

- Develop a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
- Develop a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services.

1.2. Wholesale Cost of Service Methodology

Based on the objectives for this study and our understanding of the SNHRWI proposed system, Raftelis determined that the most appropriate methodology for calculating a wheeling rate is to use the Utility Approach to rate setting. The Utility Approach to rate setting is consistent with industry standards and guidelines for determining wholesale rates and charges and is recommended by the American Water Works Association. The Utility Approach to rate setting focuses on three primary cost components:

- A proportionate share of the annual depreciation expense associated with the assets that provide service to wholesale customers;
- A rate of return applied to the utility's investment in these assets; and
- A proportionate share of the operating and maintenance (O&M) expenses related to these assets.

The aforementioned components were developed utilizing a test year of calendar year 2017, which complete and audited data is present. In addition to audited 2017 data, expected and measurable changes to accommodate the proposed SNHRWI operations were added in for a complete measure of the cost of service. It should be noted that it was assumed that Salem's purchases from Derry, of approximately 300,000 gallons per day, will be assessed at a rate of $2.55 per one hundred cubic feet (Ccf). Table 1 presents the test year full cost components for Salem. These cost components will be utilized later in this report to demonstrate the functionalization, allocation, and distribution required to provide wheeling services only.

Table 1: Test Year Costs

Cost Component	Test Year
Operational	$ 1,060,852
Buildings	58,371
Capital Projects	586,669
Administrative and General Expenses	1,377,480
MSDC Charges	76,885
Additional Support	57,500
Metering Building @ Derry Town Line	22,716
Metering Pit on Route 111 for Salem to PEU	2,333
Metering Building at Salem Town Line	4,103
Rate of Return	716,143
Depreciation	25,590

Once the test year costs were developed, a cost of service analysis, utilizing the aforementioned Utility Approach, was performed. The basic principle in the establishment of cost of service rates is to achieve general fairness in the recovery of costs from various classes of customers. The approach used in this study is based on the principles endorsed by the American Water Works Association (AWWA); which allows DES and the SNHRWI communities to demonstrate rates have not been set in an arbitrary or capricious manner and one class of customer is not subsidizing another to an unjustifiable extent. Costs have been allocated between customer classes based on their estimated demand requirements and recognizing the different costs associated with serving different customer classes.

These costs were allocated proportionately to water customers based on how they use the system. The appropriate level of detail required for a cost of service analysis is contingent on system characteristics, and the accuracy and availability of data necessary to support the analysis. Based on discussions with Town Staff, it was determined that water cost components should be allocated into functional components consistent with the most significant cost causative characteristics of the customer base. The water components included source of supply, treatment, transmission, distribution, storage, meters, fire protection, billing (customer service), and administration support. Summarizing this allocation process, costs were grouped into three categories: General Water, Fire Service, and Customer Service. Table 2 presents the allocation of test year costs into these categories.

Table 2: Test Year Costs by General Function

Cost Component	General Water	Fire Service	Customer Service
Operational	$ 1,000,494	$ 27,102	$ 33,256
Buildings	58,079	292	-
Capital Projects	583,736	2,933	-
Administrative and General Expenses	1,326,138	24,489	26,853
MSDC Charges	76,500	384	-
Additional Support	57,213	288	-
Metering Building @ Derry Town Line	22,602	114	-
Metering Pit on Route 111 for Salem to PEU	2,322	12	-
Metering Building at Salem Town Line	4,083	21	-

The aforementioned functional Fire Service and Customer Service costs were then discarded from the remainder of the analysis, as these costs are typically not recovered through wholesale rates. The general water functional costs that remained were then allocated to their cost components in accordance with how facilities are designed. Water cost components allocations included base, extra-capacity, and categories reflecting costs

that are explicitly incurred for retail-only or wholesale-only service. Specifically, water cost components related to the functional aspects of the system including water source of supply, treatment, transmission and distribution, and storage were assigned based on a base-extra capacity cost allocation approach. This approach allocates a portion of these costs to serving a base demand and peak demand. Reasonable allocation factors were determined for each of these components, and are consistent with industry standards and practices and utilized flow data from the Town's customer demand characteristics and water production facilities. A summary of this process is presented in Table 3.

Table 3: Test Year Costs by Cost Component

Operational	$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings	19,360	-	-	38,719
Capital Projects	262,681	321,055	-	-
Administrative and General Expenses	759,533	566,604	-	-
MSDC Charges	-	-	-	76,500
Additional Support	25,746	31,467	-	-
Metering Building @ Derry Town Line	10,171	12,431	-	-
Metering Pit on Route 111	1,045	1,277	-	-
Metering Building at Salem Town Line	1,837	2,246	-	-

Similar to how Fire Service and Customer Service costs were discarded, so were extra capacity and retail-only costs. These costs are typically incurred to only provide service to retail customers, and hence should be excluded from costs to be recovered from wholesale rates. These remaining costs were then distributed to wholesale only customers by utilizing projected wholesale flows as a percentage of total projected water productions and purchases. A similar process was completed for Salem's calculated depreciation and rate of return.

Finally, since Salem will be providing wholesale wheeling services to both HAWC and Windham, a determination must be made on whether the calculated wholesale rates should be different, or if both entities should be assessed the same wholesale rate, making the assumption that all customers classified as wholesale would fit into the same class. In the case of the dynamics of how Salem's system will be utilized by Windham and HAWC, it was determined that Windham will utilize much less of Salem's core system. Due to this, many of Salem's core system assets and costs were excluded from the calculation of Windham's rate for wheeling service.

The following table (Table 4) presents the final rate calculations for HAWC and Windham.

Table 4: Calculation of Wholesale Rate (per Ccf)

Cost of Service		
Operating Expenses	$ 332,960	$ 225,062
Rate of Return	36,948	29,558
Depreciation	2,393	1,915
Total: Cost of Service	$ 372,301	$ 256,535
Estimated Flow (Ccf)	121,992	97,594

APPENDIX A:

FULL COST OF SERVICE ALLOCATIONS

Operations and Maintenance Expense		Functional Category	Functional Categories: General Water	Fire Service	Customer Service
Operational					
Small Tools & Equipment	$ 10,829	General Water	99.5%	0.5%	0.0%
Gas & Oil	21,714	General Water	99.5%	0.5%	0.0%
Gravel/Sand	12,084	General Water	99.5%	0.5%	0.0%
Resurfacing	26,559	General Water	99.5%	0.5%	0.0%
Chemicals	62,016	General Water	99.5%	0.5%	0.0%
Tubing and Parts	33,256	Customer Service	0.0%	0.0%	100.0%
Safety	1,132	General Water	99.5%	0.5%	0.0%
Contracted Services	132,116	General Water	99.5%	0.5%	0.0%
Water Samples/Lab Services	51,858	General Water	99.5%	0.5%	0.0%
Purchase of Water	373,295	General Water	99.5%	0.5%	0.0%
Meters/Replacement	-	Customer Service	0.0%	0.0%	100.0%
Hydrants	22,186	Hydrants	0.5%	99.5%	0.0%
Pipe Replacement	16,478	General Water	99.5%	0.5%	0.0%
Electricity	174,405	General Water	99.5%	0.5%	0.0%
Other Utilities	122,189	General Water	99.5%	0.5%	0.0%
Equipment	-	General Water	99.5%	0.5%	0.0%
Water Department Equipment	735	General Water	99.5%	0.5%	0.0%
Subtotal: Operational	$ 1,060,852		$ 1,000,494	$ 27,102	$ 33,256
Buildings					
Cleaning Services	$ 4,080	General Water	99.5%	0.5%	0.0%
Building Maintenance	30,654	General Water	99.5%	0.5%	0.0%
Heat	23,637	General Water	99.5%	0.5%	0.0%
Subtotal: Buildings	$ 58,371		$ 58,079	$ 292	$ -
Capital Projects					
Engineering Services	$ 16,854	General Water	99.5%	0.5%	0.0%
Building Improvements	51,595	General Water	99.5%	0.5%	0.0%
Water - Vehicles	51,595	General Water	99.5%	0.5%	0.0%
Improvements	60,624	General Water	99.5%	0.5%	0.0%
DBA Projects	406,000	General Water	99.5%	0.5%	0.0%
Subtotal: Capital Projects	$ 586,669		$ 583,736	$ 2,933	$ -
Special Articles					
Engineering Services	$ -	General Water	99.5%	0.5%	0.0%
Water Improvements	-	General Water	99.5%	0.5%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -
Administrative and General Expenses					
Regular Pay	$ 494,653	Total O&M	96.3%	1.8%	1.9%
Temporary Pay	51,054	Total O&M	96.3%	1.8%	1.9%
Overtime Pay	76,276	Total O&M	96.3%	1.8%	1.9%
Employee Retirement Benefits	947	Total O&M	96.3%	1.8%	1.9%
Stand-By Pay	7,110	Total O&M	96.3%	1.8%	1.9%
Retirement	71,852	Total O&M	96.3%	1.8%	1.9%
Disability Insurance	4,556	Total O&M	96.3%	1.8%	1.9%
Workers' Compensation	23,316	Total O&M	96.3%	1.8%	1.9%
FICA-Social Security	46,243	Total O&M	96.3%	1.8%	1.9%
Health Insurance	208,048	Total O&M	96.3%	1.8%	1.9%
Unemployment Compensation	681	Total O&M	96.3%	1.8%	1.9%
Life Insurance	1,931	Total O&M	96.3%	1.8%	1.9%
Dental Insurance	7,384	Total O&M	96.3%	1.8%	1.9%
Clothing Allowance	6,268	Total O&M	96.3%	1.8%	1.9%
Office Supplies	537	Total O&M	96.3%	1.8%	1.9%
Legal Services	10,616	Total O&M	96.3%	1.8%	1.9%
Audit	2,602	Total O&M	96.3%	1.8%	1.9%
Membership & Publications	1,430	Total O&M	96.3%	1.8%	1.9%
Printing and Binding	5,485	Total O&M	96.3%	1.8%	1.9%
Medical Exams/Hiring Expenses	344	Total O&M	96.3%	1.8%	1.9%
Food	4,110	Total O&M	96.3%	1.8%	1.9%
Equipment Rental	26,034	Total O&M	96.3%	1.8%	1.9%
Telephone	30,392	Total O&M	96.3%	1.8%	1.9%
Postage	26,802	Total O&M	96.3%	1.8%	1.9%
Meetings and Training	4,840	Total O&M	96.3%	1.8%	1.9%
Radio Maintenance	90	Total O&M	96.3%	1.8%	1.9%
Vehicle Maintenance	13,987	Total O&M	96.3%	1.8%	1.9%
General Liability	18,903	Total O&M	96.3%	1.8%	1.9%
Fleet Insurance	5,034	Total O&M	96.3%	1.8%	1.9%
Administrative Service Charge	210,477	Total O&M	96.3%	1.8%	1.9%
Property Insurance	14,723	Total O&M	96.3%	1.8%	1.9%
Recording Fees	340	Total O&M	96.3%	1.8%	1.9%
Office Furniture & Equipment	416	Total O&M	96.3%	1.8%	1.9%
Subtotal: Administrative and General Expenses	$ 1,377,480		$ 1,326,138	$ 24,489	$ 26,853

MSDC Charges					
Annual Expense	$ 76,885	General Water	99.5%	0.5%	0.0%
Subtotal: MSDC Charges	$ 76,885		$ 76,500	$ 384	$ -
Additional Support					
FTE for support of new water flows	$ 30,000	General Water	99.5%	0.5%	0.0%
FTE for additional admin support	27,500	General Water	99.5%	0.5%	0.0%
Subtotal: Additional Support	$ 57,500		$ 57,213	$ 288	$ -
Metering Building @ Derry Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Chemical Bulk Tank	3,000	General Water	99.5%	0.5%	0.0%
Chem Metering Pump (NaOH)	200	General Water	99.5%	0.5%	0.0%
Chemicals (NaOH)	4,058	General Water	99.5%	0.5%	0.0%
Chloramine Pump Package System	1,500	General Water	99.5%	0.5%	0.0%
Ammonia Analyzer	760	General Water	99.5%	0.5%	0.0%
Chemicals (Chlorine)	3,225	General Water	99.5%	0.5%	0.0%
Chemicals (Ammonia)	5,835	General Water	99.5%	0.5%	0.0%
Mag-meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Electricity	204	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,716		$ 22,602	$ 114	$ -
Metering Pit on Route 111 for Salem to PEU					
Mag Meter	$ 833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,333		$ 2,322	$ 12	$ -
Metering Building at Salem Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Mag Meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring	1,500	General Water	99.5%	0.5%	0.0%
Electricity	170	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,103		$ 4,083	$ 21	$ -
Contingency	$ -	General Water	99.5%	0.5%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 3,170,024**		**$ 3,054,666**	**$ 55,249**	**$ 60,109**

O&M Expenses			Water Cost Drivers			
			Base	Extra Cap.	Wholesale	Retail
Operational						
Small Tools & Equipment	$ 10,775	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gas & Oil	21,605	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gravel/Sand	12,023	T&D Mains	62.3%	37.7%	0.0%	0.0%
Resurfacing	26,426	T&D Mains	62.3%	37.7%	0.0%	0.0%
Chemicals	61,706	Treatment	33.3%	0.0%	0.0%	66.7%
Tubing and Parts	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Safety	1,126	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Contracted Services	131,455	T&D Mains	62.3%	37.7%	0.0%	0.0%
Water Samples/Lab Services	51,598	Treatment	33.3%	0.0%	0.0%	66.7%
Purchase of Water	371,429	Purchased Water	0.0%	0.0%	100.0%	0.0%
Meters/Replacement	-	Treatment	33.3%	0.0%	0.0%	66.7%
Hydrants	111	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Pipe Replacement	16,395	T&D Mains	62.3%	37.7%	0.0%	0.0%
Electricity	173,533	Treatment	33.3%	0.0%	0.0%	66.7%
Other Utilities	121,578	Treatment	33.3%	0.0%	0.0%	66.7%
Equipment	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Department Equipment	731	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Operational	$ 1,000,494		$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings						
Cleaning Services	$ 4,059	Treatment	33.3%	0.0%	0.0%	66.7%
Building Maintenance	30,501	Treatment	33.3%	0.0%	0.0%	66.7%
Heat	23,519	Treatment	33.3%	0.0%	0.0%	66.7%
Subtotal: Buildings	$ 58,079		$ 19,360	$ -	$ -	$ 38,719
Capital Projects						
Engineering Services	$ 16,770	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Building Improvements	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water - Vehicles	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Improvements	60,321	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
DBA Projects	403,970	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Capital Projects	$ 583,736		$ 262,681	$ 321,055	$ -	$ -
Special Articles						
Engineering Services	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Improvements	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -	$ -
Administrative and General Expenses						
Regular Pay	$ 476,216	Total O&M	57.3%	42.7%	0.0%	0.0%
Temporary Pay	49,151	Total O&M	57.3%	42.7%	0.0%	0.0%
Overtime Pay	73,433	Total O&M	57.3%	42.7%	0.0%	0.0%
Employee Retirement Benefits	912	Total O&M	57.3%	42.7%	0.0%	0.0%
Stand-By Pay	6,845	Total O&M	57.3%	42.7%	0.0%	0.0%
Retirement	69,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Disability Insurance	4,387	Total O&M	57.3%	42.7%	0.0%	0.0%
Workers' Compensation	22,447	Total O&M	57.3%	42.7%	0.0%	0.0%
FICA-Social Security	44,519	Total O&M	57.3%	42.7%	0.0%	0.0%
Health Insurance	200,294	Total O&M	57.3%	42.7%	0.0%	0.0%
Unemployment Compensation	656	Total O&M	57.3%	42.7%	0.0%	0.0%
Life Insurance	1,859	Total O&M	57.3%	42.7%	0.0%	0.0%
Dental Insurance	7,109	Total O&M	57.3%	42.7%	0.0%	0.0%
Clothing Allowance	6,035	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Supplies	517	Total O&M	57.3%	42.7%	0.0%	0.0%
Legal Services	10,221	Total O&M	57.3%	42.7%	0.0%	0.0%
Audit	2,505	Total O&M	57.3%	42.7%	0.0%	0.0%
Membership & Publications	1,377	Total O&M	57.3%	42.7%	0.0%	0.0%
Printing and Binding	5,280	Total O&M	57.3%	42.7%	0.0%	0.0%
Medical Exams/Hiring Expenses	331	Total O&M	57.3%	42.7%	0.0%	0.0%
Food	3,957	Total O&M	57.3%	42.7%	0.0%	0.0%
Equipment Rental	25,063	Total O&M	57.3%	42.7%	0.0%	0.0%
Telephone	29,259	Total O&M	57.3%	42.7%	0.0%	0.0%
Postage	25,803	Total O&M	57.3%	42.7%	0.0%	0.0%
Meetings and Training	4,659	Total O&M	57.3%	42.7%	0.0%	0.0%
Radio Maintenance	86	Total O&M	57.3%	42.7%	0.0%	0.0%
Vehicle Maintenance	13,466	Total O&M	57.3%	42.7%	0.0%	0.0%
General Liability	18,198	Total O&M	57.3%	42.7%	0.0%	0.0%
Fleet Insurance	4,847	Total O&M	57.3%	42.7%	0.0%	0.0%
Administrative Service Charge	202,632	Total O&M	57.3%	42.7%	0.0%	0.0%
Property Insurance	14,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Recording Fees	327	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Furniture & Equipment	401	Total O&M	57.3%	42.7%	0.0%	0.0%
Subtotal: Administrative and General Expenses	$ 1,326,138		$ 759,533	$ 566,604	$ -	$ -

MSDC Charges						
Annual Exepense	$ 76,500	Retail Only	0.0%	0.0%	0.0%	100.0%
Subtotal: MSDC Charges	$ 76,500		$ -	$ -	$ -	$ 76,500
Additional Support						
FTE for support of new water flows	$ 29,850	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
FTE for additional admin support	27,363	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Additional Support	$ 57,213		$ 25,746	$ 31,467	$ -	$ -
Metering Building @ Derry Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemical Bulk Tank	2,985	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chem Metering Pump (NaOH)	199	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (NaOH)	4,038	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chloramine Pump Package System	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Ammonia Analyzer	756	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Chlorine)	3,209	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Ammonia)	5,806	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag-meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	203	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,602		$ 10,171	$ 12,431	$ -	$ -
Metering Pit on Route 111 for Salem to PEU						
Mag Meter	$ 829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,322		$ 1,045	$ 1,277	$ -	$ -
Metering Building at Salem Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag Meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	169	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,083		$ 1,837	$ 2,246	$ -	$ -
Contingency						
	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 3,131,166**		**$ 1,348,097**	**$ 1,024,144**	**$ 371,429**	**$ 387,497**

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 2
ANSWERS

Date request received: 11/25/2019	**Date of Response: 12/09/2019**
Staff 2-6	**Witness: Charles Lanza**

Staff 2-6

Reference Company response to Staff 1-21:

a) The column headings and totals for the tables contained in the copy of the Raftelis report provided in the Company's response are illegible. Please provide a copy of that report with legible table column headings and totals.

b) The COSS for the Town of Salem dated November 30, 2018 appears to be a "draft" report. Did Raftelis subsequently issue a final report? If yes, please provide a copy of that report with legible table column headings and totals.

c) If the Company's response to (b) is in the affirmative, will that report affect the rate that Salem will ultimately charge HAWC? Please explain. Will the Southern NH Project Agreement (Exhibit 8) be amended? Please explain.

Response 2-6:

a) See Attached.

b) Yes, see attached.

c) Per the SIA, Salem will charge HAWC $0.50 cents more per CCF than the combined rates charged to Salem by MWW and Derry for water usage. This calculates to $3.05 per CCF. The draft report called for the charge to be $3.09.

SOUTHERN NEW HAMPSHIRE
REGIONAL WATER INITIATIVE

Cost of Service Study – Hampstead Area Water Company

Final Report / June 27, 2019

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

RAFTELIS

June 27, 2019

Mr. Jeffery W. McClure, P.E.
Senior Associate
Weston & Sampson
100 International Drive, Suite 152
Portsmouth, NH 03801

Subject: Southern New Hampshire Regional Water Initiative Cost of Service Study – Hampstead Area Water Company

Dear Mr. McClure,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Cost of Service Report to Weston & Sampson for the New Hampshire Department of Environmental Services' project, the Southern New Hampshire Regional Water Initiative (SNHRWI).

The major objectives of the study include the following:

- Develop a cost of service methodology and model to appropriately functionalize, allocate, and distribute costs in order to understand the cost of wheeling, or providing bulk wholesale water, from one community to another;
- Utilizing said methodology and model, the following scenarios were to be analyzed:
    - Calculate a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

This draft report summarizes the key findings and recommendations related to the development of the cost of service analyses for HAWC. We expect this initial report will result in further discussions with all stakeholders and that some modifications may be necessary to finalize a set of methodologies and rates that all agree to. It has been a pleasure working with you, and we look forward to continuing our work with you to finalize this important project for the region.

Sincerely,

Dave Fox
Manager

1.1. Background

In late 2018, Raftelis was contracted by Weston & Sampson to perform wholesale water cost of service studies for the Southern New Hampshire Regional Water Initiative (SNHRWI), directed by the New Hampshire Department of Environmental Services (DES). The proposed SNHRWI includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

1.1.1. OBJECTIVES OF THE STUDY

Raftelis was engaged with the primary objective of develop a cost of service-based rate study for developing wholesale, or wheeling, rates for water transported through the region's transmission systems of the SNHRWI. This report serves to summarize our findings, results, and recommendations for wheeling charge calculations for the Hampstead Area Water Company (HAWC) portion of the SNHRWI.

The charges to be calculated through this study include developing a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

1.2. Wholesale Cost of Service Methodology

Based on the objectives for this study and our understanding of the SNHRWI proposed system, Raftelis determined that the most appropriate methodology for calculating a wheeling rate is to use the Utility Approach to rate setting. The Utility Approach to rate setting is consistent with industry standards and guidelines for determining wholesale rates and charges and is recommended by the American Water Works Association. The Utility Approach to rate setting focuses on three primary cost components:

- A proportionate share of the annual depreciation expense associated with the assets that provide service to wholesale customers;
- A rate of return applied to the utility's investment in these assets; and
- A proportionate share of the operating and maintenance (O&M) expenses related to these assets.

The aforementioned components were developed utilizing a test year of calendar year 2017, which complete and audited data is present. In addition to audited 2017 data, expected and measurable changes to accommodate the proposed SNHRWI operations were added in for a complete measure of the cost of service. It should be noted that it was assumed that Salem's purchases from Salem, of approximately 250,000 gallons per day, will be assessed at a rate of $3.06 per one hundred cubic feet (Ccf), which is draft and contingent on the finalizing of our similar report to Salem which presented the calculation of wholesale rates for HAWC as well as the Town of Windham. Table 1 presents the test year full cost components for HAWC. These cost components will be utilized later in this report to demonstrate the functionalization, allocation, and distribution required to provide wheeling services only.

Table 1: Test Year Costs

Cost Component		Cost
Source of Supply	$	396,052
Pumping Expenses		284,516
Water Treatment Expenses		170,729
Transmission and Distribution Expense		83,991
Customer Accounts Expense		113,121
Administrative and General Expenses		504,818
MSDC Charges		64,070
Additional Support		55,000
Chloramine Conversion (for 20 stations)		66,367
Shannon Road Booster Station		11,593
Rate of Return		499,547
Taxes Other Than Income		159,664
Income Taxes		144,869
CIAC		219,204
Depreciation		500,470

Once the test year costs were developed, a cost of service analysis, utilizing the aforementioned Utility Approach, was performed. The basic principle in the establishment of cost of service rates is to achieve general fairness in the recovery of costs from various classes of customers. The approach used in this study is based on the principles endorsed by the American Water Works Association (AWWA); which allows DES and the SNHRWI communities to demonstrate rates have not been set in an arbitrary or capricious manner and one class of customer is not subsidizing another to an unjustifiable extent. Costs have been allocated between customer classes based on their estimated demand requirements and recognizing the different costs associated with serving different customer classes.

These costs were allocated proportionately to water customers based on how they use the system. The appropriate level of detail required for a cost of service analysis is contingent on system characteristics, and the accuracy and availability of data necessary to support the analysis. Based on discussions with HAWC staff, it was determined that water cost components should be allocated into functional components consistent with the most significant cost causative characteristics of the customer base. The water components included source of supply, treatment, transmission, distribution, storage, meters, fire protection, billing (customer service), and administration support. Summarizing this allocation process, costs were grouped into three categories: General Water, Fire Service, and Customer Service. Table 2 presents the allocation of test year costs into these categories.

Table 2: Test Year Costs by General Function

Source of Supply	$ 394,071	$ 1,980	$ -
Pumping Expenses	283,093	1,423	-
Water Treatment Expenses	169,875	854	-
Transmission and Distribution Expense	34,113	2,252	47,626
Customer Accounts Expense	-	-	113,121
Administrative and General Expenses	424,283	3,134	77,401
MSDC Charges	63,750	320	-
Additional Support	46,226	341	8,433
Chloramine Conversion (for 20 stations)	55,779	412	10,176
Shannon Road Booster Station	9,744	72	1,778
Rate of Return	393,149	5,984	100,415
Taxes Other Than Income	125,657	1,912	32,094
Income Taxes	114,013	1,735	29,120
CIAC	172,516	2,626	44,062
Depreciation	393,875	5,995	100,600

The aforementioned functional Fire Service and Customer Service costs were then discarded from the remainder of the analysis, as these costs are typically not recovered through wholesale rates. The general water functional costs that remained were then allocated to their cost components in accordance with how facilities are designed. Water cost components allocations included base, extra-capacity, and categories reflecting costs that are explicitly incurred for retail-only or wholesale-only service. Specifically, water cost components related to the functional aspects of the system including water source of supply, treatment, transmission and distribution, and storage were assigned based on a base-extra capacity cost allocation approach. This approach allocates a portion of these costs to serving a base demand and peak demand. Reasonable allocation factors were determined for each of these components, and are consistent with industry standards and practices and utilized flow data from HAWC's customer demand characteristics and water production facilities. A summary of this process is presented in Table 3.

Table 3: Test Year Costs by Cost Component

Source of Supply	$ 10,226	$ 12,499	$ 371,346	$ -
Pumping Expenses	127,392	155,701	-	-
Water Treatment Expenses	-	-	-	169,875
Transmission and Distribution Expense	21,668	12,445	-	-
Customer Accounts Expense	-	-	-	-
Administrative and General Expenses	132,565	150,340	-	141,378
MSDC Charges	-	-	-	63,750
Additional Support	20,802	25,424	-	-
Chloramine Conversion (for 20 stations)	25,101	30,679	-	-
Shannon Road Booster Station	4,385	5,359	-	-
Rate of Return	216,442	156,206	-	20,501
Taxes Other Than Income	69,179	49,926	-	6,553
Income Taxes	62,768	45,300	-	5,945
CIAC	94,976	68,544	-	8,996
Depreciation	216,841	156,495	-	20,539

Similar to how Fire Service and Customer Service costs were discarded, so were extra capacity and retail-only costs. These costs are typically incurred to only provide service to retail customers, and hence should be excluded from costs to be recovered from wholesale rates. These remaining costs were then distributed to wholesale only customers by utilizing projected wholesale flows as a percentage of total projected water productions and purchases. A similar process was completed for HAWC's calculated non-operating expenses such as its depreciation and rate of return.

The following table (Table 4) presents the final rate calculation that HAWC could assess the Town of Plaistow.

Table 4: Calculation of Wholesale Rate (per Ccf)

Cost of Service		
Operating Expenses	$	201,917
Rate of Return		141,372
Depreciation		52,380
Other Non-Operating		85,516
Total: Cost of Service	$	481,185
Estimated Flow (Ccf)		121,992

APPENDIX A:

FULL COST OF SERVICE ALLOCATIONS

Operations and Maintenance Expense		Functional Category	Functional Categories		
			General Water	Fire Service	Customer Service
Source of Supply					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Operation Labor and Expenses	4,832	General Water	99.5%	0.5%	0.0%
Purchased Water	373,213	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	23	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ 1,677	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	4,647	General Water	99.5%	0.5%	0.0%
Maintenance of Collecting and Impounding Reservoirs	-	General Water	99.5%	0.5%	0.0%
Maintenance of Lake, River, and Other Intakes	-	General Water	99.5%	0.5%	0.0%
Maintenance of Wells and Springs	11,660	General Water	99.5%	0.5%	0.0%
Maintenance of Infiltration Galleries and Tunnels	-	General Water	99.5%	0.5%	0.0%
Maintenance of Supply Mains	-	General Water	99.5%	0.5%	0.0%
Maintenance of Miscellaneous Water Source Plant	-	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply	$ 396,052		$ 394,071	$ 1,980	$ -
Pumping Expenses					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Fuel for Power Production	-	General Water	99.5%	0.5%	0.0%
Power Production Labor and Expenses	-	General Water	99.5%	0.5%	0.0%
Fuel or Power Purchased for Pumping	177,913	General Water	99.5%	0.5%	0.0%
Pumping Labor and Expenses	23,050	General Water	99.5%	0.5%	0.0%
Expenses Transferred-Credit	-	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	16,254	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	31,112	General Water	99.5%	0.5%	0.0%
Maintenance of Power Production Equipment	-	General Water	99.5%	0.5%	0.0%
Maintenance of Pumping Equipment	36,187	General Water	99.5%	0.5%	0.0%
Subtotal: Pumping Expenses	$ 284,516		$ 283,093	$ 1,423	$ -
Water Treatment Expenses					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Chemicals	10,961	General Water	99.5%	0.5%	0.0%
Operation Labor and Expenses	149,034	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	-	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	-	General Water	99.5%	0.5%	0.0%
Maintenance of Water Treatment Equipment	10,734	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment Expenses	$ 170,729		$ 169,875	$ 854	$ -
Transmission and Distribution Expense					
Operations					
Operation Supervision and Engineering	$ -	T&D Supervision	40.6%	2.7%	56.7%
Storage Facilities Expenses	-	General Water	99.5%	0.5%	0.0%
Transmission and Distribution Lines Expenses	13,300	General Water	99.5%	0.5%	0.0%
Meter Expenses	16,564	Customer Service	0.0%	0.0%	100.0%
Customer Installations Expenses	1,228	Customer Service	0.0%	0.0%	100.0%
Miscellaneous Expenses	2,138	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ -	T&D Supervision	40.6%	2.7%	56.7%
Maintenance of Structures and Improvements	-	General Water	99.5%	0.5%	0.0%
Maintenance of Distribution Reservoirs and Standpipes	7,026	Storage	100.0%	0.0%	0.0%
Maintenance of Transmission and Distribution Mains	11,774	General Water	99.5%	0.5%	0.0%
Maintenance of Fire Mains	-	Hydrants	0.5%	99.5%	0.0%
Maintenance of Services	23,035	Customer Service	0.0%	0.0%	100.0%
Maintenance of Meters	6,799	Customer Service	0.0%	0.0%	100.0%
Maintenance of Hydrants	2,127	Hydrants	0.5%	99.5%	0.0%
Maintenance of Miscellenous Equipment	-	T&D Supervision	40.6%	2.7%	56.7%
Subtotal: Transmission and Distribution Expense	$ 83,991		$ 34,113	$ 2,252	$ 47,626

Customer Accounts Expense					
Operations					
Supervision	$ -	Customer Service	0.0%	0.0%	100.0%
Meter Reading Expenses	12,787	Customer Service	0.0%	0.0%	100.0%
Customer Records and Collection Expenses	100,334	Customer Service	0.0%	0.0%	100.0%
Uncollectible Accounts	-	Customer Service	0.0%	0.0%	100.0%
Miscellaneous Customer Accounts Expenses	-	Customer Service	0.0%	0.0%	100.0%
Subtotal: Customer Accounts Expense	$ 113,121		$ -	$ -	$ 113,121
Sales Expenses					
Operations					
Sales Expenses	$ -	General Water	99.5%	0.5%	0.0%
Subtotal: Sales Expenses	$ -		$ -	$ -	$ -
Administrative and General Expenses					
Operations					
Administrative and General Salaries	$ 16,542	Total O&M	84.0%	0.6%	15.3%
Office Supplies and Other Expenses	46,764	Total O&M	84.0%	0.6%	15.3%
Administrative Expenses Transferred-Cr.	-	Total O&M	84.0%	0.6%	15.3%
Outside Services Employed	259,165	Total O&M	84.0%	0.6%	15.3%
Property Insurance	-	Total O&M	84.0%	0.6%	15.3%
Injuries and Damages	35,731	Total O&M	84.0%	0.6%	15.3%
Employee Pension and Benefits	85,838	Total O&M	84.0%	0.6%	15.3%
Franchise Requirements	5,520	Total O&M	84.0%	0.6%	15.3%
Regulatory Commission Expenses	6,408	Total O&M	84.0%	0.6%	15.3%
Duplicate Charges Cr.	-	Total O&M	84.0%	0.6%	15.3%
Miscellaneous Expenses	31,950	Total O&M	84.0%	0.6%	15.3%
General Rents	16,900	Total O&M	84.0%	0.6%	15.3%
Maintenance					
Maintenance of General Plant	$ -	Total O&M	84.0%	0.6%	15.3%
Subtotal: Administrative and General Expenses	$ 504,818		$ 424,283	$ 3,134	$ 77,401
MSDC Charges					
Annual Expense	$ 64,070	General Water	99.5%	0.5%	0.0%
Subtotal: MSDC Charges	$ 64,070		$ 63,750	$ 320	$ -
Additional Support					
FTE to support new water flows and chloramination	$ 55,000	Total O&M	84.0%	0.6%	15.3%
Subtotal: Additional Support	$ 55,000		$ 46,226	$ 341	$ 8,433
Chloramine Conversion (for 20 stations)					
Chloramine Pump Package System	$ 14,000	Total O&M	84.0%	0.6%	15.3%
Ammonia Analyzer	15,200	Total O&M	84.0%	0.6%	15.3%
Chlorine cost	5,990	Total O&M	84.0%	0.6%	15.3%
Ammonia cost	10,837	Total O&M	84.0%	0.6%	15.3%
Pump House Updates	20,000	Total O&M	84.0%	0.6%	15.3%
Electricity for chemical system only	340	Total O&M	84.0%	0.6%	15.3%
Subtotal: Chloramine Conversion (for 20 stations)	$ 66,367		$ 55,779	$ 412	$ 10,176
Shannon Road Booster Station					
Pumps	$ 3,500	Total O&M	84.0%	0.6%	15.3%
Mag-meter	833	Total O&M	84.0%	0.6%	15.3%
SCADA Monitoring & Equipment	1,500	Total O&M	84.0%	0.6%	15.3%
Electricity	5,760	Total O&M	84.0%	0.6%	15.3%
Subtotal: Shannon Road Booster Station	$ 11,593		$ 9,744	$ 72	$ 1,778
Contingency					
	$ -	Total O&M	84.0%	0.6%	15.3%
Subtotal: Contingency	$ -		$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 1,750,257**		**$ 1,480,934**	**$ 10,789**	**$ 258,534**
	$ 12.87				
Plant in Service					
Intangible Plan					
Intangible Plant - Franchise	$ 36,583	Plant Investment	78.7%	1.2%	20.1%
Subtotal: Intangible Plan	$ 36,583		$ 28,791	$ 438	$ 7,354
Source of Supply and Pumping					
Land and Land Rights	$ 76,185	General Water	99.5%	0.5%	0.0%
Stuctures & Improvements	1,276,644	General Water	99.5%	0.5%	0.0%
Wells & Springs	921,763	General Water	99.5%	0.5%	0.0%
Supply Mains	106,525	General Water	99.5%	0.5%	0.0%
Pumping Equipment	1,656,980	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply and Pumping	$ 4,038,098		$ 4,017,907	$ 20,190	$ -

Water Treatment					
Water Treatment Equipment	$ 735,971	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment	$ 735,971		$ 732,291	$ 3,680	$ -
Transmission & Distribution					
Distribution Reservoirs & Standpipes	$ 2,795,608	Storage	100.0%	0.0%	0.0%
T&D Mains	6,240,925	General Water	99.5%	0.5%	0.0%
Services	2,250,484	Customer Service	0.0%	0.0%	100.0%
Meters and Meter Installations	1,340,115	Customer Service	0.0%	0.0%	100.0%
Hydrants	158,156	Hydrants	0.5%	99.5%	0.0%
Other	303,311	General Water	99.5%	0.5%	0.0%
Subtotal: Transmission & Distribution	$ 13,088,598		$ 9,307,914	$ 190,087	$ 3,590,598
General Plant					
Office Furniture and Equipment	$ 1,420	Plant Investment	78.7%	1.2%	20.1%
Transportation Equipment	153,990	Plant Investment	78.7%	1.2%	20.1%
Tools, Shop and Garage Equipment	3,975	Plant Investment	78.7%	1.2%	20.1%
Computer Equipment	97,088	Plant Investment	78.7%	1.2%	20.1%
Subtotal: General Plant	$ 256,473		$ 201,847	$ 3,072	$ 51,554
Total: Plant in Service	**$ 18,155,723**		**$ 14,288,750**	**$ 217,467**	**$ 3,649,506**
Depreciation					
Intangible Plan					
Intangible Plant - Franchise	$ 915	Depreciation	72.4%	0.9%	26.7%
Subtotal: Intangible Plan	$ 915		$ 662	$ 9	$ 244
Source of Supply and Pumping					
Land and Land Rights	$ 1,905	General Water	99.5%	0.5%	0.0%
Stuctures & Improvements	31,074	General Water	99.5%	0.5%	0.0%
Wells & Springs	29,303	General Water	99.5%	0.5%	0.0%
Supply Mains	1,530	General Water	99.5%	0.5%	0.0%
Pumping Equipment	64,129	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply and Pumping	$ 127,941		$ 127,301	$ 640	$ -
Water Treatment					
Water Treatment Equipment	$ 31,316	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment	$ 31,316		$ 31,159	$ 157	$ -
Transmission & Distribution					
Distribution Reservoirs & Standpipes	$ 36,760	Storage	100.0%	0.0%	0.0%
T&D Mains	129,952	General Water	99.5%	0.5%	0.0%
Services	51,959	Customer Service	0.0%	0.0%	100.0%
Meters and Meter Installations	76,485	Customer Service	0.0%	0.0%	100.0%
Hydrants	3,019	Hydrants	0.5%	99.5%	0.0%
Other	24,428	General Water	99.5%	0.5%	0.0%
Subtotal: Transmission & Distribution	$ 322,604		$ 190,384	$ 3,776	$ 128,444
General Plant					
Office Furniture and Equipment	$ -	Depreciation	72.4%	0.9%	26.7%
Transportation Equipment	12,731	Depreciation	72.4%	0.9%	26.7%
Tools, Shop and Garage Equipment	205	Depreciation	72.4%	0.9%	26.7%
Computer Equipment	4,759	Depreciation	72.4%	0.9%	26.7%
Subtotal: General Plant	$ 17,695		$ 12,810	$ 168	$ 4,717
Total: Depreciation	**$ 500,470**		**$ 362,317**	**$ 4,748**	**$ 133,405**
Taxes					
Taxes Other Than Income					
Utility Property Tax	$ 30,274	Plant Investment	78.7%	1.2%	20.1%
Real Estate	129,390	Plant Investment	78.7%	1.2%	20.1%
Subtotal: Taxes Other Than Income	$ 159,664		$ 125,657	$ 1,912	$ 32,094
Income Taxes					
Business Enterprise Tax	$ 144,869	General Water	99.5%	0.5%	0.0%
Subtotal: Income Taxes	$ 144,869		$ 144,144	$ 724	$ -
Total: Taxes	**$ 304,533**		**$ 269,802**	**$ 2,637**	**$ 32,094**
Amortization					
CIAC	$ 216,489	Plant Investment	78.7%	1.2%	20.1%
Other	2,715	Plant Investment	78.7%	1.2%	20.1%
Total: Amortization	**$ 219,204**		**$ 172,516**	**$ 2,626**	**$ 44,062**
Return					
Estimate	$ 499,547	Plant Investment	78.7%	1.2%	20.1%
Total: Return	**$ 499,547**		**$ 393,149**	**$ 5,984**	**$ 100,415**

O&M Expenses			Water Cost Drivers			
			Base	Extra Capacity	Wholesale Only	Retail Only
Source of Supply						
Operations						
Operation Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Operation Labor and Expenses	4,808	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Purchased Water	371,346	Purchased Water	0.00%	0.00%	100.00%	0.00%
Miscellaneous Expenses	23	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Rents	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ 1,669	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Structures and Improvements	4,624	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Collecting and Impounding Reservoirs	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Lake, River, and Other Intakes	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Wells and Springs	11,602	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Infiltration Galleries and Tunnels	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Supply Mains	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Miscellaneous Water Source Plant	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Source of Supply	$ 394,071		$ 10,226	$ 12,499	$ 371,346	$ -
Pumping Expenses						
Operations						
Operation Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Fuel for Power Production	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Power Production Labor and Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Fuel or Power Purchased for Pumping	177,023	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Pumping Labor and Expenses	22,935	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Expenses Transferred-Credit	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Miscellaneous Expenses	16,173	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Rents	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Structures and Improvements	30,956	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Power Production Equipment	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Pumping Equipment	36,006	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Pumping Expenses	$ 283,093		$ 127,392	$ 155,701	$ -	$ -
Water Treatment Expenses						
Operations						
Operation Supervision and Engineering	$ -	Treatment	0.00%	0.00%	0.00%	100.00%
Chemicals	10,906	Treatment	0.00%	0.00%	0.00%	100.00%
Operation Labor and Expenses	148,289	Treatment	0.00%	0.00%	0.00%	100.00%
Miscellaneous Expenses	-	Treatment	0.00%	0.00%	0.00%	100.00%
Rents	-	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance						
Operation Supervision and Engineering	$ -	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance of Structures and Improvements	-	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance of Water Treatment Equipment	10,680	Treatment	0.00%	0.00%	0.00%	100.00%
Subtotal: Water Treatment Expenses	$ 169,875		$ -	$ -	$ -	$ 169,875
Transmission and Distribution Expense						
Operations						
Operation Supervision and Engineering	$ -	T&D Mains	63.52%	36.48%	0.00%	0.00%
Storage Facilities Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Transmission and Distribution Lines Expenses	13,234	T&D Mains	63.52%	36.48%	0.00%	0.00%
Meter Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Customer Installations Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Miscellaneous Expenses	2,127	T&D Mains	63.52%	36.48%	0.00%	0.00%
Rents	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ -	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Structures and Improvements	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Distribution Reservoirs and Standpipes	7,026	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Transmission and Distribution Mains	11,715	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Fire Mains	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Services	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Meters	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Hydrants	11	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Miscellenous Equipment	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Subtotal: Transmission and Distribution Expense	$ 34,113		$ 21,668	$ 12,445	$ -	$ -
Customer Accounts Expense						
Operations						
Supervision	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Meter Reading Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Customer Records and Collection Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Uncollectible Accounts	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Miscellaneous Customer Accounts Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Customer Accounts Expense	$ -		$ -	$ -	$ -	$ -
Sales Expenses						
Operations						
Sales Expenses	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Sales Expenses	$ -		$ -	$ -	$ -	$ -

Administrative and General Expenses						
Operations						
Administrative and General Salaries	$ 13,903	Total O&M	31.24%	35.43%	0.00%	33.32%
Office Supplies and Other Expenses	39,304	Total O&M	31.24%	35.43%	0.00%	33.32%
Administrative Expenses Transferred-Cr.	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Outside Services Employed	217,820	Total O&M	31.24%	35.43%	0.00%	33.32%
Property Insurance	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Injuries and Damages	30,031	Total O&M	31.24%	35.43%	0.00%	33.32%
Employee Pension and Benefits	72,144	Total O&M	31.24%	35.43%	0.00%	33.32%
Franchise Requirements	4,639	Total O&M	31.24%	35.43%	0.00%	33.32%
Regulatory Commission Expenses	5,386	Total O&M	31.24%	35.43%	0.00%	33.32%
Duplicate Charges Cr.	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Miscellaneous Expenses	26,853	Total O&M	31.24%	35.43%	0.00%	33.32%
General Rents	14,204	Total O&M	31.24%	35.43%	0.00%	33.32%
Maintenance						
Maintenance of General Plant	$ -	Total O&M	31.24%	35.43%	0.00%	33.32%
Subtotal: Administrative and General Expenses	$ 424,283		$ 132,565	$ 150,340	$ -	$ 141,378
MSDC Charges						
Annual Expense	$ 63,750	Treatment	0.00%	0.00%	0.00%	100.00%
Subtotal: MSDC Charges	$ 63,750		$ -	$ -	$ -	$ 63,750
Additional Support						
FTE to support new water flows and chloramination	$ 46,226	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Additional Support	$ 46,226		$ 20,802	$ 25,424	$ -	$ -
Chloramine Conversion (for 20 stations)						
Chloramine Pump Package System	$ 11,767	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Ammonia Analyzer	12,775	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Chlorine cost	5,034	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Ammonia cost	9,108	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Pump House Updates	16,809	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Electricity for chemical system only	286	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Chloramine Conversion (for 20 stations)	$ 55,779		$ 25,101	$ 30,679	$ -	$ -
Shannon Road Booster Station						
Pumps	$ 2,942	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Mag-meter	700	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
SCADA Monitoring & Equipment	1,261	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Electricity	4,841	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Shannon Road Booster Station	$ 9,744		$ 4,385	$ 5,359	$ -	$ -
Contingency						
	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Contingency	$ -		$ -	$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 1,480,934**		**$ 342,138**	**$ 392,447**	**$ 371,346**	**$ 375,003**
Check	$ -					
Plant in Service						
Intangible Plan						
Intangible Plant - Franchise	$ 28,791	Plant Investment	55.1%	39.7%	0.0%	5.2%
Subtotal: Intangible Plan	$ 28,791		$ 15,851	$ 11,439	$ -	$ 1,501
Source of Supply and Pumping						
Land and Land Rights	$ 75,804	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Stuctures & Improvements	1,270,261	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Wells & Springs	917,154	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Supply Mains	105,993	T&D Mains	63.5%	36.5%	0.0%	0.0%
Pumping Equipment	1,648,695	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Source of Supply and Pumping	$ 4,017,907		$ 1,827,687	$ 2,190,220	$ -	$ -
Water Treatment						
Water Treatment Equipment	$ 732,291	Treatment	0.0%	0.0%	0.0%	100.0%
Subtotal: Water Treatment	$ 732,291		$ -	$ -	$ -	$ 732,291
Transmission & Distribution						
Distribution Reservoirs & Standpipes	$ 2,795,608	T&D Mains	63.5%	36.5%	0.0%	0.0%
T&D Mains	6,209,720	T&D Mains	63.5%	36.5%	0.0%	0.0%
Services	-	Treatment	0.0%	0.0%	0.0%	100.0%
Meters and Meter Installations	-	Treatment	0.0%	0.0%	0.0%	100.0%
Hydrants	791	Treatment	0.0%	0.0%	0.0%	100.0%
Other	301,794	T&D Mains	63.5%	36.5%	0.0%	0.0%
Subtotal: Transmission & Distribution	$ 9,307,914		$ 5,911,773	$ 3,395,350	$ -	$ 791
General Plant						
Office Furniture and Equipment	$ 1,118	Plant Investment	55.1%	39.7%	0.0%	5.2%
Transportation Equipment	121,192	Plant Investment	55.1%	39.7%	0.0%	5.2%
Tools, Shop and Garage Equipment	3,128	Plant Investment	55.1%	39.7%	0.0%	5.2%
Computer Equipment	76,409	Plant Investment	55.1%	39.7%	0.0%	5.2%
Subtotal: General Plant	$ 201,847		$ 111,123	$ 80,198	$ -	$ 10,526
Total: Plant in Service	**$ 14,288,750**		**$ 7,866,434**	**$ 5,677,208**	**$ -**	**$ 745,109**

Depreciation						
Intangible Plan						
Intangible Plant - Franchise	$ 662	Depreciation	51.1%	40.0%	0.0%	8.9%
Subtotal: Intangible Plan	$ 662		$ 338	$ 265	$ -	$ 59
Source of Supply and Pumping						
Land and Land Rights	$ 1,895	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Stuctures & Improvements	30,919	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Wells & Springs	29,156	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Supply Mains	1,523	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Pumping Equipment	63,809	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Source of Supply and Pumping	$ 127,301		$ 57,285	$ 70,016	$ -	$ -
Water Treatment						
Water Treatment Equipment	$ 31,159	Treatment	0.0%	0.0%	0.0%	100.0%
Subtotal: Water Treatment	$ 31,159		$ -	$ -	$ -	$ 31,159
Transmission & Distribution						
Distribution Reservoirs & Standpipes	$ 36,760	T&D Mains	63.5%	36.5%	0.0%	0.0%
T&D Mains	129,303	T&D Mains	63.5%	36.5%	0.0%	0.0%
Services	-	Treatment	0.0%	0.0%	0.0%	100.0%
Meters and Meter Installations	-	Treatment	0.0%	0.0%	0.0%	100.0%
Hydrants	15	Treatment	0.0%	0.0%	0.0%	100.0%
Other	24,306	T&D Mains	63.5%	36.5%	0.0%	0.0%
Subtotal: Transmission & Distribution	$ 190,384		$ 120,920	$ 69,449	$ -	$ 15
General Plant						
Office Furniture and Equipment	$ -	Depreciation	51.1%	40.0%	0.0%	8.9%
Transportation Equipment	9,217	Depreciation	51.1%	40.0%	0.0%	8.9%
Tools, Shop and Garage Equipment	148	Depreciation	51.1%	40.0%	0.0%	8.9%
Computer Equipment	3,445	Depreciation	51.1%	40.0%	0.0%	8.9%
Subtotal: General Plant	$ 12,810		$ 6,544	$ 5,122	$ -	$ 1,145
Total: Depreciation	**$ 362,317**		**$ 185,088**	**$ 144,851**	**$ -**	**$ 32,378**
Taxes						
Taxes Other Than Income						
Utility Property Tax	$ 23,826	Plant Investment	55.1%	39.7%	0.0%	5.2%
Real Estate	101,831	Plant Investment	55.1%	39.7%	0.0%	5.2%
Subtotal: Taxes Other Than Income	$ 125,657		$ 69,179	$ 49,926	$ -	$ 6,553
Income Taxes						
Business Enterprise Tax	$ 144,144	Total O&M	31.2%	35.4%	0.0%	33.3%
Subtotal: Income Taxes	$ 144,144		$ 45,037	$ 51,076	$ -	$ 48,031
Total: Taxes	**$ 269,802**		**$ 114,216**	**$ 101,002**	**$ -**	**$ 54,584**
Amortization						
CIAC	$ 170,379	Depreciation	51.1%	40.0%	0.0%	8.9%
Other	2,137	Depreciation	51.1%	40.0%	0.0%	8.9%
Total: Amortization	**$ 172,516**		**$ 88,129**	**$ 68,970**	**$ -**	**$ 15,417**
Return						
Estimate	$ 393,149	Plant Investment	55.1%	39.7%	0.0%	5.2%
Total: Return	**$ 393,149**		**$ 216,442**	**$ 156,206**	**$ -**	**$ 20,501**

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 2
ANSWERS

Date request received: 11/25/2019	**Date of Response: 12/09/2019**
Staff 2-7	**Witness: Charles Lanza**

Staff 2-7

Reference Company response to Staff 1-26:

a) The column headings and totals for the tables contained in the copy of the Raftelis report provided in the Company's response are illegible. Please provide a copy of that report with legible table column headings and totals.

b) The COSS for HAWC dated November 30, 2018 appears to be a "draft" report, yet the Company indicates the rate that it will charge the Town of Plaistow is based on that draft report. Will that rate be updated as a result of the final report dated June 27, 2019 included in the Company's filing as Exhibit 7? Please explain. Will the Southern NH Project Agreement (Exhibit 8) be amended? Please explain.

Response 2-7:

a) See attached

b) The rate cannot be updated without an amended SIA. The Company plans on requesting that the SIA be amended to reflect the Final COSS.

Weston & Sampson

100 International Drive, Suite 152, Portsmouth, NH 03801
Tel: 603.431.3937

November 30, 2018

Michael Unger, P.E.
Water Engineer, Drinking Water and Groundwater Trust Fund
Drinking Water and Groundwater Bureau | NHDES
29 Hazen Drive
Concord, NH 03302

Re: **Southern NH Regional Water Main Initiative (SNHRWI)**
Cost of Service Study – Town of Salem

Dear Mike:

We are pleased to submit this report to the New Hampshire Department of Environmental Services (DES) for the Cost of Service Study (COSS) performed for the town of Salem on behalf the SNHRWI project. The proposed SNHRWI project includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

DES initiated the COSS to determine the cost to each community for supplying water to adjacent communities as part of the SNHRWI project. The existing water system operations for town of Salem were examined to determine how and why costs are incurred. Developing this understanding allowed for a proper allocation of future costs to the town of Salem to distribute water to adjacent communities.

Per our work scope and budget dated August 17, 2018 we have completed the draft COSS for the town of Salem with the assistance of Raftelis Financial Consultants. We wish to acknowledge the assistance of DES and town of Salem staff with gathering background information for the project. The cooperation was essential to the completion of the report and is sincerely appreciated.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Jeffrey W. McClure, P.E.
Senior Associate

SOUTHERN NEW HAMPSHIRE
REGIONAL WATER INITIATIVE

Cost of Service Study – Town of Salem

Draft Report / November 30, 2018

November 30, 2018

Mr. Jeffery W. McClure, P.E.
Senior Associate
Weston & Sampson
100 International Drive, Suite 152
Portsmouth, NH 03801

Subject: Southern New Hampshire Regional Water Initiative Cost of Service Study – Town of Salem

Dear Mr. McClure,

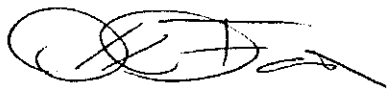
Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Draft Cost of Service Report to Weston & Sampson for the New Hampshire Department of Environmental Services' project, the Southern New Hampshire Regional Water Initiative (SNHRWI).

The major objectives of the study include the following:

- Develop a cost of service methodology and model to appropriately functionalize, allocate, and distribute costs in order to understand the cost of wheeling, or providing bulk wholesale water, from one community to another;
- Utilizing said methodology and model, the following scenarios were to be analyzed:
    - Calculate a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

This draft report summarizes the key findings and recommendations related to the development of the cost of service analyses for the Town of Salem. We expect this initial report will result in further discussions with all stakeholders and that some modifications may be necessary to finalize a set of methodologies and rates that all agree to. It has been a pleasure working with you, and we look forward to continuing our work with you to finalize this important project for the region.

Sincerely,



Dave Fox
Manager

1.1. Background

In late 2018, Raftelis was contracted by Weston & Sampson to perform wholesale water cost of service studies for the Southern New Hampshire Regional Water Initiative (SNHRWI), directed by the New Hampshire Department of Environmental Services (DES). The proposed SNHRWI includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

1.1.1. OBJECTIVES OF THE STUDY

Raftelis was engaged with the primary objective of develop a cost of service-based rate study for developing wholesale, or wheeling, rates for water transported through the region's transmission systems of the SNHRWI. This report serves to summarize our findings, results, and recommendations for wheeling charge calculations for the Town of Salem's portion of the SNHRWI.

The charges to be calculated through this study include the following:

- Develop a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
- Develop a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services.

1.2. Wholesale Cost of Service Methodology

Based on the objectives for this study and our understanding of the SNHRWI proposed system, Raftelis determined that the most appropriate methodology for calculating a wheeling rate is to use the Utility Approach to rate setting. The Utility Approach to rate setting is consistent with industry standards and guidelines for determining wholesale rates and charges and is recommended by the American Water Works Association. The Utility Approach to rate setting focuses on three primary cost components:

- A proportionate share of the annual depreciation expense associated with the assets that provide service to wholesale customers;
- A rate of return applied to the utility's investment in these assets; and
- A proportionate share of the operating and maintenance (O&M) expenses related to these assets.

The aforementioned components were developed utilizing a test year of calendar year 2017, which complete and audited data is present. In addition to audited 2017 data, expected and measurable changes to accommodate the proposed SNHRWI operations were added in for a complete measure of the cost of service. It should be noted that it was assumed that Salem's purchases from Derry, of approximately 300,000 gallons per day, will be assessed at a rate of $2.55 per one hundred cubic feet (Ccf). Table 1 presents the test year full cost components for Salem. These cost components will be utilized later in this report to demonstrate the functionalization, allocation, and distribution required to provide wheeling services only.

Table 1: Test Year Costs

Operational	$ 1,060,852
Buildings	58,371
Capital Projects	586,669
Administrative and General Expenses	1,377,480
MSDC Charges	76,885
Additional Support	57,500
Metering Building @ Derry Town Line	22,716
Metering Pit on Route 111 for Salem to PEU	2,333
Metering Building at Salem Town Line	4,103
Rate of Return	716,143
Depreciation	25,590

Once the test year costs were developed, a cost of service analysis, utilizing the aforementioned Utility Approach, was performed. The basic principle in the establishment of cost of service rates is to achieve general fairness in the recovery of costs from various classes of customers. The approach used in this study is based on the principles endorsed by the American Water Works Association (AWWA); which allows DES and the SNHRWI communities to demonstrate rates have not been set in an arbitrary or capricious manner and one class of customer is not subsidizing another to an unjustifiable extent. Costs have been allocated between customer classes based on their estimated demand requirements and recognizing the different costs associated with serving different customer classes.

These costs were allocated proportionately to water customers based on how they use the system. The appropriate level of detail required for a cost of service analysis is contingent on system characteristics, and the accuracy and availability of data necessary to support the analysis. Based on discussions with Town Staff, it was determined that water cost components should be allocated into functional components consistent with the most significant cost causative characteristics of the customer base. The water components included source of supply, treatment, transmission, distribution, storage, meters, fire protection, billing (customer service), and administration support. Summarizing this allocation process, costs were grouped into three categories: General Water, Fire Service, and Customer Service. Table 2 presents the allocation of test year costs into these categories.

Table 2: Test Year Costs by General Function

Operational	$ 1,000,494	$ 27,102	$ 33,256
Buildings	58,079	292	-
Capital Projects	583,736	2,933	-
Administrative and General Expenses	1,326,138	24,489	26,853
MSDC Charges	76,500	384	-
Additional Support	57,213	288	-
Metering Building @ Derry Town Line	22,602	114	-
Metering Pit on Route 111 for Salem to PEU	2,322	12	-
Metering Building at Salem Town Line	4,083	21	-

The aforementioned functional Fire Service and Customer Service costs were then discarded from the remainder of the analysis, as these costs are typically not recovered through wholesale rates. The general water functional costs that remained were then allocated to their cost components in accordance with how facilities are designed. Water cost components allocations included base, extra-capacity, and categories reflecting costs

that are explicitly incurred for retail-only or wholesale-only service. Specifically, water cost components related to the functional aspects of the system including water source of supply, treatment, transmission and distribution, and storage were assigned based on a base-extra capacity cost allocation approach. This approach allocates a portion of these costs to serving a base demand and peak demand. Reasonable allocation factors were determined for each of these components, and are consistent with industry standards and practices and utilized flow data from the Town's customer demand characteristics and water production facilities. A summary of this process is presented in Table 3.

Table 3: Test Year Costs by Cost Component

Operational	$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings	19,360	-	-	38,719
Capital Projects	262,681	321,055	-	-
Administrative and General Expenses	759,533	566,604	-	-
MSDC Charges	47,685	28,815	-	-
Additional Support	25,746	31,467	-	-
Metering Building @ Derry Town Line	10,171	12,431	-	-
Metering Pit on Route 111	1,045	1,277	-	-
Metering Building at Salem Town Line	1,837	2,246	-	-

Similar to how Fire Service and Customer Service costs were discarded, so were extra capacity and retail-only costs. These costs are typically incurred to only provide service to retail customers, and hence should be excluded from costs to be recovered from wholesale rates. These remaining costs were then distributed to wholesale only customers by utilizing projected wholesale flows as a percentage of total projected water productions and purchases. A similar process was completed for Salem's calculated depreciation and rate of return.

Finally, since Salem will be providing wholesale wheeling services to both HAWC and Windham, a determination must be made on whether the calculated wholesale rates should be different, or if both entities should be assessed the same wholesale rate, making the assumption that all customers classified as wholesale would fit into the same class. In the case of the dynamics of how Salem's system will be utilized by Windham and HAWC, it was determined that Windham will utilize much less of Salem's core system. Due to this, many of Salem's core system assets and costs were excluded from the calculation of Windham's rate for wheeling service.

The following table (Table 4) presents the final rate calculations for HAWC and Windham.

Table 4: Calculation of Wholesale Rate (per Ccf)

Cost of Service		
Operating Expenses	$ 337,439	$ 228,645
Rate of Return	36,948	29,558
Depreciation	2,393	1,915
Total: Cost of Service	$ 376,780	$ 260,118
Estimated Flow (Ccf)	121,992	97,594

APPENDIX A:

FULL COST OF SERVICE ALLOCATIONS

Operations and Maintenance Expense		Functional Category	Functional Categories: General Water	Fire Service	Customer Service
Operational					
Small Tools & Equipment	$ 10,829	General Water	99.5%	0.5%	0.0%
Gas & Oil	21,714	General Water	99.5%	0.5%	0.0%
Gravel/Sand	12,084	General Water	99.5%	0.5%	0.0%
Resurfacing	26,559	General Water	99.5%	0.5%	0.0%
Chemicals	62,016	General Water	99.5%	0.5%	0.0%
Tubing and Parts	33,256	Customer Service	0.0%	0.0%	100.0%
Safety	1,132	General Water	99.5%	0.5%	0.0%
Contracted Services	132,116	General Water	99.5%	0.5%	0.0%
Water Samples/Lab Services	51,858	General Water	99.5%	0.5%	0.0%
Purchase of Water	373,295	General Water	99.5%	0.5%	0.0%
Meters/Replacement	-	Customer Service	0.0%	0.0%	100.0%
Hydrants	22,186	Hydrants	0.5%	99.5%	0.0%
Pipe Replacement	16,478	General Water	99.5%	0.5%	0.0%
Electricity	174,405	General Water	99.5%	0.5%	0.0%
Other Utilities	122,189	General Water	99.5%	0.5%	0.0%
Equipment	-	General Water	99.5%	0.5%	0.0%
Water Department Equipment	735	General Water	99.5%	0.5%	0.0%
Subtotal: Operational	$ 1,060,852		$ 1,000,494	$ 27,102	$ 33,256
Buildings					
Cleaning Services	$ 4,080	General Water	99.5%	0.5%	0.0%
Building Maintenance	30,654	General Water	99.5%	0.5%	0.0%
Heat	23,637	General Water	99.5%	0.5%	0.0%
Subtotal: Buildings	$ 58,371		$ 58,079	$ 292	$ -
Capital Projects					
Engineering Services	$ 16,854	General Water	99.5%	0.5%	0.0%
Building Improvements	51,595	General Water	99.5%	0.5%	0.0%
Water - Vehicles	51,595	General Water	99.5%	0.5%	0.0%
Improvements	60,624	General Water	99.5%	0.5%	0.0%
DBA Projects	406,000	General Water	99.5%	0.5%	0.0%
Subtotal: Capital Projects	$ 586,669		$ 583,736	$ 2,933	$ -
Special Articles					
Engineering Services	$ -	General Water	99.5%	0.5%	0.0%
Water Improvements	-	General Water	99.5%	0.5%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -
Administrative and General Expenses					
Regular Pay	$ 494,653	Total O&M	96.3%	1.8%	1.9%
Temporary Pay	51,054	Total O&M	96.3%	1.8%	1.9%
Overtime Pay	76,276	Total O&M	96.3%	1.8%	1.9%
Employee Retirement Benefits	947	Total O&M	96.3%	1.8%	1.9%
Stand-By Pay	7,110	Total O&M	96.3%	1.8%	1.9%
Retirement	71,852	Total O&M	96.3%	1.8%	1.9%
Disability Insurance	4,556	Total O&M	96.3%	1.8%	1.9%
Workers' Compensation	23,316	Total O&M	96.3%	1.8%	1.9%
FICA-Social Security	46,243	Total O&M	96.3%	1.8%	1.9%
Health Insurance	208,048	Total O&M	96.3%	1.8%	1.9%
Unemployment Compensation	681	Total O&M	96.3%	1.8%	1.9%
Life Insurance	1,931	Total O&M	96.3%	1.8%	1.9%
Dental Insurance	7,384	Total O&M	96.3%	1.8%	1.9%
Clothing Allowance	6,268	Total O&M	96.3%	1.8%	1.9%
Office Supplies	537	Total O&M	96.3%	1.8%	1.9%
Legal Services	10,616	Total O&M	96.3%	1.8%	1.9%
Audit	2,602	Total O&M	96.3%	1.8%	1.9%
Membership & Publications	1,430	Total O&M	96.3%	1.8%	1.9%
Printing and Binding	5,485	Total O&M	96.3%	1.8%	1.9%
Medical Exams/Hiring Expenses	344	Total O&M	96.3%	1.8%	1.9%
Food	4,110	Total O&M	96.3%	1.8%	1.9%
Equipment Rental	26,034	Total O&M	96.3%	1.8%	1.9%
Telephone	30,392	Total O&M	96.3%	1.8%	1.9%
Postage	26,802	Total O&M	96.3%	1.8%	1.9%
Meetings and Training	4,840	Total O&M	96.3%	1.8%	1.9%
Radio Maintenance	90	Total O&M	96.3%	1.8%	1.9%
Vehicle Maintenance	13,987	Total O&M	96.3%	1.8%	1.9%
General Liability	18,903	Total O&M	96.3%	1.8%	1.9%
Fleet Insurance	5,034	Total O&M	96.3%	1.8%	1.9%
Administrative Service Charge	210,477	Total O&M	96.3%	1.8%	1.9%
Property Insurance	14,723	Total O&M	96.3%	1.8%	1.9%
Recording Fees	340	Total O&M	96.3%	1.8%	1.9%
Office Furniture & Equipment	416	Total O&M	96.3%	1.8%	1.9%
Subtotal: Administrative and General Expenses	$ 1,377,480		$ 1,326,138	$ 24,489	$ 26,853

MSDC Charges					
Annual Expense	$ 76,885	General Water	99.5%	0.5%	0.0%
Subtotal: MSDC Charges	$ 76,885		$ 76,500	$ 384	$ -
Additional Support					
FTE for support of new water flows	$ 30,000	General Water	99.5%	0.5%	0.0%
FTE for additional admin support	27,500	General Water	99.5%	0.5%	0.0%
Subtotal: Additional Support	$ 57,500		$ 57,213	$ 288	$ -
Metering Building @ Derry Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Chemical Bulk Tank	3,000	General Water	99.5%	0.5%	0.0%
Chem Metering Pump (NaOH)	200	General Water	99.5%	0.5%	0.0%
Chemicals (NaOH)	4,058	General Water	99.5%	0.5%	0.0%
Chloramine Pump Package System	1,500	General Water	99.5%	0.5%	0.0%
Ammonia Analyzer	760	General Water	99.5%	0.5%	0.0%
Chemicals (Chlorine)	3,225	General Water	99.5%	0.5%	0.0%
Chemicals (Ammonia)	5,835	General Water	99.5%	0.5%	0.0%
Mag-meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Electricity	204	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,716		$ 22,602	$ 114	$ -
Metering Pit on Route 111 for Salem to PEU					
Mag Meter	$ 833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,333		$ 2,322	$ 12	$ -
Metering Building at Salem Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Mag Meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring	1,500	General Water	99.5%	0.5%	0.0%
Electricity	170	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,103		$ 4,083	$ 21	$ -
Contingency	$ -	General Water	99.5%	0.5%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 3,170,024**		**$ 3,054,666**	**$ 55,249**	**$ 60,109**

O&M Expenses			Water Cost Drivers			
			Base	Extra Cap.	Wholesale	Retail
Operational						
Small Tools & Equipment	$ 10,775	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gas & Oil	21,605	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gravel/Sand	12,023	T&D Mains	62.3%	37.7%	0.0%	0.0%
Resurfacing	26,426	T&D Mains	62.3%	37.7%	0.0%	0.0%
Chemicals	61,706	Treatment	33.3%	0.0%	0.0%	66.7%
Tubing and Parts	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Safety	1,126	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Contracted Services	131,455	T&D Mains	62.3%	37.7%	0.0%	0.0%
Water Samples/Lab Services	51,598	Treatment	33.3%	0.0%	0.0%	66.7%
Purchase of Water	371,429	Purchased Water	0.0%	0.0%	100.0%	0.0%
Meters/Replacement	-	Treatment	33.3%	0.0%	0.0%	66.7%
Hydrants	111	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Pipe Replacement	16,395	T&D Mains	62.3%	37.7%	0.0%	0.0%
Electricity	173,533	Treatment	33.3%	0.0%	0.0%	66.7%
Other Utilities	121,578	Treatment	33.3%	0.0%	0.0%	66.7%
Equipment	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Department Equipment	731	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Operational	$ 1,000,494		$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings						
Cleaning Services	$ 4,059	Treatment	33.3%	0.0%	0.0%	66.7%
Building Maintenance	30,501	Treatment	33.3%	0.0%	0.0%	66.7%
Heat	23,519	Treatment	33.3%	0.0%	0.0%	66.7%
Subtotal: Buildings	$ 58,079		$ 19,360	$ -	$ -	$ 38,719
Capital Projects						
Engineering Services	$ 16,770	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Building Improvements	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water - Vehicles	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Improvements	60,321	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
DBA Projects	403,970	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Capital Projects	$ 583,736		$ 262,681	$ 321,055	$ -	$ -
Special Articles						
Engineering Services	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Improvements	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -	$ -
Administrative and General Expenses						
Regular Pay	$ 476,216	Total O&M	57.3%	42.7%	0.0%	0.0%
Temporary Pay	49,151	Total O&M	57.3%	42.7%	0.0%	0.0%
Overtime Pay	73,433	Total O&M	57.3%	42.7%	0.0%	0.0%
Employee Retirement Benefits	912	Total O&M	57.3%	42.7%	0.0%	0.0%
Stand-By Pay	6,845	Total O&M	57.3%	42.7%	0.0%	0.0%
Retirement	69,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Disability Insurance	4,387	Total O&M	57.3%	42.7%	0.0%	0.0%
Workers' Compensation	22,447	Total O&M	57.3%	42.7%	0.0%	0.0%
FICA-Social Security	44,519	Total O&M	57.3%	42.7%	0.0%	0.0%
Health Insurance	200,294	Total O&M	57.3%	42.7%	0.0%	0.0%
Unemployment Compensation	656	Total O&M	57.3%	42.7%	0.0%	0.0%
Life Insurance	1,859	Total O&M	57.3%	42.7%	0.0%	0.0%
Dental Insurance	7,109	Total O&M	57.3%	42.7%	0.0%	0.0%
Clothing Allowance	6,035	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Supplies	517	Total O&M	57.3%	42.7%	0.0%	0.0%
Legal Services	10,221	Total O&M	57.3%	42.7%	0.0%	0.0%
Audit	2,505	Total O&M	57.3%	42.7%	0.0%	0.0%
Membership & Publications	1,377	Total O&M	57.3%	42.7%	0.0%	0.0%
Printing and Binding	5,280	Total O&M	57.3%	42.7%	0.0%	0.0%
Medical Exams/Hiring Expenses	331	Total O&M	57.3%	42.7%	0.0%	0.0%
Food	3,957	Total O&M	57.3%	42.7%	0.0%	0.0%
Equipment Rental	25,063	Total O&M	57.3%	42.7%	0.0%	0.0%
Telephone	29,259	Total O&M	57.3%	42.7%	0.0%	0.0%
Postage	25,803	Total O&M	57.3%	42.7%	0.0%	0.0%
Meetings and Training	4,659	Total O&M	57.3%	42.7%	0.0%	0.0%
Radio Maintenance	86	Total O&M	57.3%	42.7%	0.0%	0.0%
Vehicle Maintenance	13,466	Total O&M	57.3%	42.7%	0.0%	0.0%
General Liability	18,198	Total O&M	57.3%	42.7%	0.0%	0.0%
Fleet Insurance	4,847	Total O&M	57.3%	42.7%	0.0%	0.0%
Administrative Service Charge	202,632	Total O&M	57.3%	42.7%	0.0%	0.0%
Property Insurance	14,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Recording Fees	327	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Furniture & Equipment	401	Total O&M	57.3%	42.7%	0.0%	0.0%
Subtotal: Administrative and General Expenses	$ 1,326,138		$ 759,533	$ 566,604	$ -	$ -

MSDC Charges						
Annual Expense	$ 76,500	T&D Mains	62.3%	37.7%	0.0%	0.0%
Subtotal: MSDC Charges	$ 76,500		$ 47,685	$ 28,815	$ -	$ -
Additional Support						
FTE for support of new water flows	$ 29,850	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
FTE for additional admin support	27,363	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Additional Support	$ 57,213		$ 25,746	$ 31,467	$ -	$ -
Metering Building @ Derry Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemical Bulk Tank	2,985	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chem Metering Pump (NaOH)	199	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (NaOH)	4,038	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chloramine Pump Package System	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Ammonia Analyzer	756	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Chlorine)	3,209	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Ammonia)	5,806	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag-meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	203	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,602		$ 10,171	$ 12,431	$ -	$ -
Metering Pit on Route 111 for Salem to PEU						
Mag Meter	$ 829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,322		$ 1,045	$ 1,277	$ -	$ -
Metering Building at Salem Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag Meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	169	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,083		$ 1,837	$ 2,246	$ -	$ -
Contingency						
	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 3,131,166**		**$ 1,395,782**	**$ 1,052,959**	**$ 371,429**	**$ 310,996**

SOUTHERN NEW HAMPSHIRE

REGIONAL WATER INITIATIVE

Cost of Service Study – Hampstead Area Water Company

Final Report / June 27, 2019

June 27, 2019

Mr. Jeffery W. McClure, P.E.
Senior Associate
Weston & Sampson
100 International Drive, Suite 152
Portsmouth, NH 03801

Subject: Southern New Hampshire Regional Water Initiative Cost of Service Study – Hampstead Area Water Company

Dear Mr. McClure,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Cost of Service Report to Weston & Sampson for the New Hampshire Department of Environmental Services' project, the Southern New Hampshire Regional Water Initiative (SNHRWI).

The major objectives of the study include the following:

- Develop a cost of service methodology and model to appropriately functionalize, allocate, and distribute costs in order to understand the cost of wheeling, or providing bulk wholesale water, from one community to another;
- Utilizing said methodology and model, the following scenarios were to be analyzed:
    - Calculate a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services;
    - Calculate a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

This draft report summarizes the key findings and recommendations related to the development of the cost of service analyses for HAWC. We expect this initial report will result in further discussions with all stakeholders and that some modifications may be necessary to finalize a set of methodologies and rates that all agree to. It has been a pleasure working with you, and we look forward to continuing our work with you to finalize this important project for the region.

Sincerely,

Dave Fox
Manager

1.1. Background

In late 2018, Raftelis was contracted by Weston & Sampson to perform wholesale water cost of service studies for the Southern New Hampshire Regional Water Initiative (SNHRWI), directed by the New Hampshire Department of Environmental Services (DES). The proposed SNHRWI includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

1.1.1. OBJECTIVES OF THE STUDY

Raftelis was engaged with the primary objective of develop a cost of service-based rate study for developing wholesale, or wheeling, rates for water transported through the region's transmission systems of the SNHRWI. This report serves to summarize our findings, results, and recommendations for wheeling charge calculations for the Hampstead Area Water Company (HAWC) portion of the SNHRWI.

The charges to be calculated through this study include developing a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

1.2. Wholesale Cost of Service Methodology

Based on the objectives for this study and our understanding of the SNHRWI proposed system, Raftelis determined that the most appropriate methodology for calculating a wheeling rate is to use the Utility Approach to rate setting. The Utility Approach to rate setting is consistent with industry standards and guidelines for determining wholesale rates and charges and is recommended by the American Water Works Association. The Utility Approach to rate setting focuses on three primary cost components:

- A proportionate share of the annual depreciation expense associated with the assets that provide service to wholesale customers;
- A rate of return applied to the utility's investment in these assets; and
- A proportionate share of the operating and maintenance (O&M) expenses related to these assets.

The aforementioned components were developed utilizing a test year of calendar year 2017, which complete and audited data is present. In addition to audited 2017 data, expected and measurable changes to accommodate the proposed SNHRWI operations were added in for a complete measure of the cost of service. It should be noted that it was assumed that Salem's purchases from Salem, of approximately 250,000 gallons per day, will be assessed at a rate of $3.06 per one hundred cubic feet (Ccf), which is draft and contingent on the finalizing of our similar report to Salem which presented the calculation of wholesale rates for HAWC as well as the Town of Windham. Table 1 presents the test year full cost components for HAWC. These cost components will be utilized later in this report to demonstrate the functionalization, allocation, and distribution required to provide wheeling services only.

Table 1: Test Year Costs

Cost Component	Test Year
Source of Supply	$ 396,052
Pumping Expenses	284,516
Water Treatment Expenses	170,729
Transmission and Distribution Expense	83,991
Customer Accounts Expense	113,121
Administrative and General Expenses	504,818
MSDC Charges	64,070
Additional Support	55,000
Chloramine Conversion (for 20 stations)	66,367
Shannon Road Booster Station	11,593
Rate of Return	499,547
Taxes Other Than Income	159,664
Income Taxes	144,869
CIAC	219,204
Depreciation	500,470
Total	**$ 3,274,011**

Once the test year costs were developed, a cost of service analysis, utilizing the aforementioned Utility Approach, was performed. The basic principle in the establishment of cost of service rates is to achieve general fairness in the recovery of costs from various classes of customers. The approach used in this study is based on the principles endorsed by the American Water Works Association (AWWA); which allows DES and the SNHRWI communities to demonstrate rates have not been set in an arbitrary or capricious manner and one class of customer is not subsidizing another to an unjustifiable extent. Costs have been allocated between customer classes based on their estimated demand requirements and recognizing the different costs associated with serving different customer classes.

These costs were allocated proportionately to water customers based on how they use the system. The appropriate level of detail required for a cost of service analysis is contingent on system characteristics, and the accuracy and availability of data necessary to support the analysis. Based on discussions with HAWC staff, it was determined that water cost components should be allocated into functional components consistent with the most significant cost causative characteristics of the customer base. The water components included source of supply, treatment, transmission, distribution, storage, meters, fire protection, billing (customer service), and administration support. Summarizing this allocation process, costs were grouped into three categories: General Water, Fire Service, and Customer Service. Table 2 presents the allocation of test year costs into these categories.

Table 2: Test Year Costs by General Function

Cost Component	General Water	Fire Service	Customer Service
Source of Supply	$ 394,071	$ 1,980	$ -
Pumping Expenses	283,093	1,423	-
Water Treatment Expenses	169,875	854	-
Transmission and Distribution Expense	34,113	2,252	47,626
Customer Accounts Expense	-	-	113,121
Administrative and General Expenses	424,283	3,134	77,401
MSDC Charges	63,750	320	-
Additional Support	46,226	341	8,433
Chloramine Conversion (for 20 stations)	55,779	412	10,176
Shannon Road Booster Station	9,744	72	1,778
Rate of Return	393,149	5,984	100,415
Taxes Other Than Income	125,657	1,912	32,094
Income Taxes	114,013	1,735	29,120
CIAC	172,516	2,626	44,062
Depreciation	393,875	5,995	100,600
Total	**$ 2,680,145**	**$ 29,040**	**$ 564,826**

The aforementioned functional Fire Service and Customer Service costs were then discarded from the remainder of the analysis, as these costs are typically not recovered through wholesale rates. The general water functional costs that remained were then allocated to their cost components in accordance with how facilities are designed. Water cost components allocations included base, extra-capacity, and categories reflecting costs that are explicitly incurred for retail-only or wholesale-only service. Specifically, water cost components related to the functional aspects of the system including water source of supply, treatment, transmission and distribution, and storage were assigned based on a base-extra capacity cost allocation approach. This approach allocates a portion of these costs to serving a base demand and peak demand. Reasonable allocation factors were determined for each of these components, and are consistent with industry standards and practices and utilized flow data from HAWC's customer demand characteristics and water production facilities. A summary of this process is presented in Table 3.

Table 3: Test Year Costs by Cost Component

Cost Component	Base	Extra Capacity	Wholesale-only	Retail-only
Source of Supply	$ 10,226	$ 12,499	$ 371,346	$ -
Pumping Expenses	127,392	155,701	-	-
Water Treatment Expenses	-	-	-	169,875
Transmission and Distribution Expense	21,668	12,445	-	-
Customer Accounts Expense	-	-	-	-
Administrative and General Expenses	132,565	150,340	-	141,378
MSDC Charges	-	-	-	63,750
Additional Support	20,802	25,424	-	-
Chloramine Conversion (for 20 stations)	25,101	30,679	-	-
Shannon Road Booster Station	4,385	5,359	-	-
Rate of Return	216,442	156,206	-	20,501
Taxes Other Than Income	69,179	49,926	-	6,553
Income Taxes	62,768	45,300	-	5,945
CIAC	94,976	68,544	-	8,996
Depreciation	216,841	156,495	-	20,539
Total	**$ 1,002,343**	**$ 868,917**	**$ 371,346**	**$ 437,538**

Similar to how Fire Service and Customer Service costs were discarded, so were extra capacity and retail-only costs. These costs are typically incurred to only provide service to retail customers, and hence should be excluded from costs to be recovered from wholesale rates. These remaining costs were then distributed to wholesale only customers by utilizing projected wholesale flows as a percentage of total projected water productions and purchases. A similar process was completed for HAWC's calculated non-operating expenses such as its depreciation and rate of return.

The following table (Table 4) presents the final rate calculation that HAWC could assess the Town of Plaistow.

Table 4: Calculation of Wholesale Rate (per Ccf)

	Plaistow	
Cost of Service		
Operating Expenses	$	201,917
Rate of Return		141,372
Depreciation		52,380
Other Non-Operating		85,516
Total: Cost of Service	$	481,185
Estimated Flow (Ccf)		121,992
Calculated Rate per Ccf	**$**	**3.94**

APPENDIX A:

FULL COST OF SERVICE ALLOCATIONS

Operations and Maintenance Expense		Functional Category	Functional Categories		
			General Water	Fire Service	Customer Service
Source of Supply					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Operation Labor and Expenses	4,832	General Water	99.5%	0.5%	0.0%
Purchased Water	373,213	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	23	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ 1,677	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	4,647	General Water	99.5%	0.5%	0.0%
Maintenance of Collecting and Impounding Reservoirs	-	General Water	99.5%	0.5%	0.0%
Maintenance of Lake, River, and Other Intakes	-	General Water	99.5%	0.5%	0.0%
Maintenance of Wells and Springs	11,660	General Water	99.5%	0.5%	0.0%
Maintenance of Infiltration Galleries and Tunnels	-	General Water	99.5%	0.5%	0.0%
Maintenance of Supply Mains	-	General Water	99.5%	0.5%	0.0%
Maintenance of Miscellaneous Water Source Plant	-	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply	$ 396,052		$ 394,071	$ 1,980	$ -
Pumping Expenses					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Fuel for Power Production	-	General Water	99.5%	0.5%	0.0%
Power Production Labor and Expenses	-	General Water	99.5%	0.5%	0.0%
Fuel or Power Purchased for Pumping	177,913	General Water	99.5%	0.5%	0.0%
Pumping Labor and Expenses	23,050	General Water	99.5%	0.5%	0.0%
Expenses Transferred-Credit	-	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	16,254	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	31,112	General Water	99.5%	0.5%	0.0%
Maintenance of Power Production Equipment	-	General Water	99.5%	0.5%	0.0%
Maintenance of Pumping Equipment	36,187	General Water	99.5%	0.5%	0.0%
Subtotal: Pumping Expenses	$ 284,516		$ 283,093	$ 1,423	$ -
Water Treatment Expenses					
Operations					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Chemicals	10,961	General Water	99.5%	0.5%	0.0%
Operation Labor and Expenses	149,034	General Water	99.5%	0.5%	0.0%
Miscellaneous Expenses	-	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Operation Supervision and Engineering	$ -	General Water	99.5%	0.5%	0.0%
Maintenance of Structures and Improvements	-	General Water	99.5%	0.5%	0.0%
Maintenance of Water Treatment Equipment	10,734	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment Expenses	$ 170,729		$ 169,875	$ 854	$ -
Transmission and Distribution Expense					
Operations					
Operation Supervision and Engineering	$ -	T&D Supervision	40.6%	2.7%	56.7%
Storage Facilities Expenses	-	General Water	99.5%	0.5%	0.0%
Transmission and Distribution Lines Expenses	13,300	General Water	99.5%	0.5%	0.0%
Meter Expenses	16,564	Customer Service	0.0%	0.0%	100.0%
Customer Installations Expenses	1,228	Customer Service	0.0%	0.0%	100.0%
Miscellaneous Expenses	2,138	General Water	99.5%	0.5%	0.0%
Rents	-	General Water	99.5%	0.5%	0.0%
Maintenance					
Maintenance Supervision and Engineering	$ -	T&D Supervision	40.6%	2.7%	56.7%
Maintenance of Structures and Improvements	-	General Water	99.5%	0.5%	0.0%
Maintenance of Distribution Reservoirs and Standpipes	7,026	Storage	100.0%	0.0%	0.0%
Maintenance of Transmission and Distribution Mains	11,774	General Water	99.5%	0.5%	0.0%
Maintenance of Fire Mains	-	Hydrants	0.5%	99.5%	0.0%
Maintenance of Services	23,035	Customer Service	0.0%	0.0%	100.0%
Maintenance of Meters	6,799	Customer Service	0.0%	0.0%	100.0%
Maintenance of Hydrants	2,127	Hydrants	0.5%	99.5%	0.0%
Maintenance of Miscallenous Equipment	-	T&D Supervision	40.6%	2.7%	56.7%
Subtotal: Transmission and Distribution Expense	$ 83,991		$ 34,113	$ 2,252	$ 47,626

Customer Accounts Expense						
Operations						
Supervision	$ -	Customer Service	0.0%	0.0%	100.0%	
Meter Reading Expenses	12,787	Customer Service	0.0%	0.0%	100.0%	
Customer Records and Collection Expenses	100,334	Customer Service	0.0%	0.0%	100.0%	
Uncollectible Accounts	-	Customer Service	0.0%	0.0%	100.0%	
Miscellaneous Customer Accounts Expenses	-	Customer Service	0.0%	0.0%	100.0%	
Subtotal: Customer Accounts Expense	$ 113,121		$ -	$ -	$ 113,121	
Sales Expenses						
Operations						
Sales Expenses	$ -	General Water	99.5%	0.5%	0.0%	
Subtotal: Sales Expenses	$ -		$ -	$ -	$ -	
Administrative and General Expenses						
Operations						
Administrative and General Salaries	$ 16,542	Total O&M	84.0%	0.6%	15.3%	
Office Supplies and Other Expenses	46,764	Total O&M	84.0%	0.6%	15.3%	
Administrative Expenses Transferred-Cr.	-	Total O&M	84.0%	0.6%	15.3%	
Outside Services Employed	259,165	Total O&M	84.0%	0.6%	15.3%	
Property Insurance	-	Total O&M	84.0%	0.6%	15.3%	
Injuries and Damages	35,731	Total O&M	84.0%	0.6%	15.3%	
Employee Pension and Benefits	85,838	Total O&M	84.0%	0.6%	15.3%	
Franchise Requirements	5,520	Total O&M	84.0%	0.6%	15.3%	
Regulatory Commission Expenses	6,408	Total O&M	84.0%	0.6%	15.3%	
Duplicate Charges Cr.	-	Total O&M	84.0%	0.6%	15.3%	
Miscellaneous Expenses	31,950	Total O&M	84.0%	0.6%	15.3%	
General Rents	16,900	Total O&M	84.0%	0.6%	15.3%	
Maintenance						
Maintenance of General Plant	$ -	Total O&M	84.0%	0.6%	15.3%	
Subtotal: Administrative and General Expenses	$ 504,818		$ 424,283	$ 3,134	$ 77,401	
MSDC Charges						
Annual Expense	$ 64,070	General Water	99.5%	0.5%	0.0%	
Subtotal: MSDC Charges	$ 64,070		$ 63,750	$ 320	$ -	
Additional Support						
FTE to support new water flows and chloramination	$ 55,000	Total O&M	84.0%	0.6%	15.3%	
Subtotal: Additional Support	$ 55,000		$ 46,226	$ 341	$ 8,433	
Chloramine Conversion (for 20 stations)						
Chloramine Pump Package System	$ 14,000	Total O&M	84.0%	0.6%	15.3%	
Ammonia Analyzer	15,200	Total O&M	84.0%	0.6%	15.3%	
Chlorine cost	5,990	Total O&M	84.0%	0.6%	15.3%	
Ammonia cost	10,837	Total O&M	84.0%	0.6%	15.3%	
Pump House Updates	20,000	Total O&M	84.0%	0.6%	15.3%	
Electricity for chemical system only	340	Total O&M	84.0%	0.6%	15.3%	
Subtotal: Chloramine Conversion (for 20 stations)	$ 66,367		$ 55,779	$ 412	$ 10,176	
Shannon Road Booster Station						
Pumps	$ 3,500	Total O&M	84.0%	0.6%	15.3%	
Mag-meter	833	Total O&M	84.0%	0.6%	15.3%	
SCADA Monitoring & Equipment	1,500	Total O&M	84.0%	0.6%	15.3%	
Electricity	5,760	Total O&M	84.0%	0.6%	15.3%	
Subtotal: Shannon Road Booster Station	$ 11,593		$ 9,744	$ 72	$ 1,778	
Contingency						
	$ -	Total O&M	84.0%	0.6%	15.3%	
Subtotal: Contingency	$ -		$ -	$ -	$ -	
Total: Operating & Maintenance Expenses	**$ 1,750,257**		**$ 1,480,934**	**$ 10,789**	**$ 258,534**	
	$ 12.87					
Plant in Service						
Intangible Plan						
Intangible Plant - Franchise	$ 36,583	Plant Investment	78.7%	1.2%	20.1%	
Subtotal: Intangible Plan	$ 36,583		$ 28,791	$ 438	$ 7,354	
Source of Supply and Pumping						
Land and Land Rights	$ 76,185	General Water	99.5%	0.5%	0.0%	
Stuctures & Improvements	1,276,644	General Water	99.5%	0.5%	0.0%	
Wells & Springs	921,763	General Water	99.5%	0.5%	0.0%	
Supply Mains	106,525	General Water	99.5%	0.5%	0.0%	
Pumping Equipment	1,656,980	General Water	99.5%	0.5%	0.0%	
Subtotal: Source of Supply and Pumping	$ 4,038,098		$ 4,017,907	$ 20,190	$ -	

Water Treatment					
Water Treatment Equipment	$ 735,971	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment	$ 735,971		$ 732,291	$ 3,680	$ -
Transmission & Distribution					
Distribution Reservoirs & Standpipes	$ 2,795,608	Storage	100.0%	0.0%	0.0%
T&D Mains	6,240,925	General Water	99.5%	0.5%	0.0%
Services	2,250,484	Customer Service	0.0%	0.0%	100.0%
Meters and Meter Installations	1,340,115	Customer Service	0.0%	0.0%	100.0%
Hydrants	158,156	Hydrants	0.5%	99.5%	0.0%
Other	303,311	General Water	99.5%	0.5%	0.0%
Subtotal: Transmission & Distribution	$ 13,088,598		$ 9,307,914	$ 190,087	$ 3,590,598
General Plant					
Office Furniture and Equipment	$ 1,420	Plant Investment	78.7%	1.2%	20.1%
Transportation Equipment	153,990	Plant Investment	78.7%	1.2%	20.1%
Tools, Shop and Garage Equipment	3,975	Plant Investment	78.7%	1.2%	20.1%
Computer Equipment	97,088	Plant Investment	78.7%	1.2%	20.1%
Subtotal: General Plant	$ 256,473		$ 201,847	$ 3,072	$ 51,554
Total: Plant in Service	**$ 18,155,723**		**$ 14,288,750**	**$ 217,467**	**$ 3,649,506**
Depreciation					
Intangible Plan					
Intangible Plant - Franchise	$ 915	Depreciation	72.4%	0.9%	26.7%
Subtotal: Intangible Plan	$ 915		$ 662	$ 9	$ 244
Source of Supply and Pumping					
Land and Land Rights	$ 1,905	General Water	99.5%	0.5%	0.0%
Stuctures & Improvements	31,074	General Water	99.5%	0.5%	0.0%
Wells & Springs	29,303	General Water	99.5%	0.5%	0.0%
Supply Mains	1,530	General Water	99.5%	0.5%	0.0%
Pumping Equipment	64,129	General Water	99.5%	0.5%	0.0%
Subtotal: Source of Supply and Pumping	$ 127,941		$ 127,301	$ 640	$ -
Water Treatment					
Water Treatment Equipment	$ 31,316	General Water	99.5%	0.5%	0.0%
Subtotal: Water Treatment	$ 31,316		$ 31,159	$ 157	$ -
Transmission & Distribution					
Distribution Reservoirs & Standpipes	$ 36,760	Storage	100.0%	0.0%	0.0%
T&D Mains	129,952	General Water	99.5%	0.5%	0.0%
Services	51,959	Customer Service	0.0%	0.0%	100.0%
Meters and Meter Installations	76,485	Customer Service	0.0%	0.0%	100.0%
Hydrants	3,019	Hydrants	0.5%	99.5%	0.0%
Other	24,428	General Water	99.5%	0.5%	0.0%
Subtotal: Transmission & Distribution	$ 322,604		$ 190,384	$ 3,776	$ 128,444
General Plant					
Office Furniture and Equipment	$ -	Depreciation	72.4%	0.9%	26.7%
Transportation Equipment	12,731	Depreciation	72.4%	0.9%	26.7%
Tools, Shop and Garage Equipment	205	Depreciation	72.4%	0.9%	26.7%
Computer Equipment	4,759	Depreciation	72.4%	0.9%	26.7%
Subtotal: General Plant	$ 17,695		$ 12,810	$ 168	$ 4,717
Total: Depreciation	**$ 500,470**		**$ 362,317**	**$ 4,748**	**$ 133,405**
Taxes					
Taxes Other Than Income					
Utility Property Tax	$ 30,274	Plant Investment	78.7%	1.2%	20.1%
Real Estate	129,390	Plant Investment	78.7%	1.2%	20.1%
Subtotal: Taxes Other Than Income	$ 159,664		$ 125,657	$ 1,912	$ 32,094
Income Taxes					
Business Enterprise Tax	$ 144,869	General Water	99.5%	0.5%	0.0%
Subtotal: Income Taxes	$ 144,869		$ 144,144	$ 724	$ -
Total: Taxes	**$ 304,533**		**$ 269,802**	**$ 2,637**	**$ 32,094**
Amortization					
CIAC	$ 216,489	Plant Investment	78.7%	1.2%	20.1%
Other	2,715	Plant Investment	78.7%	1.2%	20.1%
Total: Amortization	**$ 219,204**		**$ 172,516**	**$ 2,626**	**$ 44,062**
Return					
Estimate	$ 499,547	Plant Investment	78.7%	1.2%	20.1%
Total: Return	**$ 499,547**		**$ 393,149**	**$ 5,984**	**$ 100,415**

O&M Expenses			Water Cost Drivers			
			Base	Extra Capacity	Wholesale Only	Retail Only
Source of Supply						
Operations						
Operation Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Operation Labor and Expenses	4,808	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Purchased Water	371,346	Purchased Water	0.00%	0.00%	100.00%	0.00%
Miscellaneous Expenses	23	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Rents	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ 1,669	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Structures and Improvements	4,624	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Collecting and Impounding Reservoirs	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Lake, River, and Other Intakes	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Wells and Springs	11,602	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Infiltration Galleries and Tunnels	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Supply Mains	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Miscellaneous Water Source Plant	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Source of Supply	$ 394,071		$ 10,226	$ 12,499	$ 371,346	$ -
Pumping Expenses						
Operations						
Operation Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Fuel for Power Production	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Power Production Labor and Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Fuel or Power Purchased for Pumping	177,023	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Pumping Labor and Expenses	22,935	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Expenses Transferred-Credit	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Miscellaneous Expenses	16,173	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Rents	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Structures and Improvements	30,956	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Power Production Equipment	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Maintenance of Pumping Equipment	36,006	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Pumping Expenses	$ 283,093		$ 127,392	$ 155,701	$ -	$ -
Water Treatment Expenses						
Operations						
Operation Supervision and Engineering	$ -	Treatment	0.00%	0.00%	0.00%	100.00%
Chemicals	10,906	Treatment	0.00%	0.00%	0.00%	100.00%
Operation Labor and Expenses	148,289	Treatment	0.00%	0.00%	0.00%	100.00%
Miscellaneous Expenses	-	Treatment	0.00%	0.00%	0.00%	100.00%
Rents	-	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance						
Operation Supervision and Engineering	$ -	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance of Structures and Improvements	-	Treatment	0.00%	0.00%	0.00%	100.00%
Maintenance of Water Treatment Equipment	10,680	Treatment	0.00%	0.00%	0.00%	100.00%
Subtotal: Water Treatment Expenses	$ 169,875		$ -	$ -	$ -	$ 169,875
Transmission and Distribution Expense						
Operations						
Operation Supervision and Engineering	$ -	T&D Mains	63.52%	36.48%	0.00%	0.00%
Storage Facilities Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Transmission and Distribution Lines Expenses	13,234	T&D Mains	63.52%	36.48%	0.00%	0.00%
Meter Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Customer Installations Expenses	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Miscellaneous Expenses	2,127	T&D Mains	63.52%	36.48%	0.00%	0.00%
Rents	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance						
Maintenance Supervision and Engineering	$ -	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Structures and Improvements	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Distribution Reservoirs and Standpipes	7,026	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Transmission and Distribution Mains	11,715	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Fire Mains	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Services	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Meters	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Hydrants	11	T&D Mains	63.52%	36.48%	0.00%	0.00%
Maintenance of Miscallenous Equipment	-	T&D Mains	63.52%	36.48%	0.00%	0.00%
Subtotal: Transmission and Distribution Expense	$ 34,113		$ 21,668	$ 12,445	$ -	$ -
Customer Accounts Expense						
Operations						
Supervision	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Meter Reading Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Customer Records and Collection Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Uncollectible Accounts	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Miscellaneous Customer Accounts Expenses	-	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Customer Accounts Expense	$ -		$ -	$ -	$ -	$ -
Sales Expenses						
Operations						
Sales Expenses	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Sales Expenses	$ -		$ -	$ -	$ -	$ -

Administrative and General Expenses						
Operations						
Administrative and General Salaries	$ 13,903	Total O&M	31.24%	35.43%	0.00%	33.32%
Office Supplies and Other Expenses	39,304	Total O&M	31.24%	35.43%	0.00%	33.32%
Administrative Expenses Transferred-Cr.	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Outside Services Employed	217,820	Total O&M	31.24%	35.43%	0.00%	33.32%
Property Insurance	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Injuries and Damages	30,031	Total O&M	31.24%	35.43%	0.00%	33.32%
Employee Pension and Benefits	72,144	Total O&M	31.24%	35.43%	0.00%	33.32%
Franchise Requirements	4,639	Total O&M	31.24%	35.43%	0.00%	33.32%
Regulatory Commission Expenses	5,386	Total O&M	31.24%	35.43%	0.00%	33.32%
Duplicate Charges Cr.	-	Total O&M	31.24%	35.43%	0.00%	33.32%
Miscellaneous Expenses	26,853	Total O&M	31.24%	35.43%	0.00%	33.32%
General Rents	14,204	Total O&M	31.24%	35.43%	0.00%	33.32%
Maintenance						
Maintenance of General Plant	$ -	Total O&M	31.24%	35.43%	0.00%	33.32%
Subtotal: Administrative and General Expenses	$ 424,283		$ 132,565	$ 150,340	$ -	$ 141,378
MSDC Charges						
Annual Expense	$ 63,750	Treatment	0.00%	0.00%	0.00%	100.00%
Subtotal: MSDC Charges	$ 63,750		$ -	$ -	$ -	$ 63,750
Additional Support						
FTE to support new water flows and chloramination	$ 46,226	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Additional Support	$ 46,226		$ 20,802	$ 25,424	$ -	$ -
Chloramine Conversion (for 20 stations)						
Chloramine Pump Package System	$ 11,767	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Ammonia Analyzer	12,775	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Chlorine cost	5,034	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Ammonia cost	9,108	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Pump House Updates	16,809	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Electricity for chemical system only	286	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Chloramine Conversion (for 20 stations)	$ 55,779		$ 25,101	$ 30,679	$ -	$ -
Shannon Road Booster Station						
Pumps	$ 2,942	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Mag-meter	700	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
SCADA Monitoring & Equipment	1,261	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Electricity	4,841	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Shannon Road Booster Station	$ 9,744		$ 4,385	$ 5,359	$ -	$ -
Contingency						
	$ -	Production & Pumping Costs	45.00%	55.00%	0.00%	0.00%
Subtotal: Contingency	$ -		$ -	$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 1,480,934**		**$ 342,138**	**$ 392,447**	**$ 371,346**	**$ 375,003**
Check	$ -					
Plant in Service						
Intangible Plan						
Intangible Plant - Franchise	$ 28,791	Plant Investment	55.1%	39.7%	0.0%	5.2%
Subtotal: Intangible Plan	$ 28,791		$ 15,851	$ 11,439	$ -	$ 1,501
Source of Supply and Pumping						
Land and Land Rights	$ 75,804	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Stuctures & Improvements	1,270,261	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Wells & Springs	917,154	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Supply Mains	105,993	T&D Mains	63.5%	36.5%	0.0%	0.0%
Pumping Equipment	1,648,695	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Source of Supply and Pumping	$ 4,017,907		$ 1,827,687	$ 2,190,220	$ -	$ -
Water Treatment						
Water Treatment Equipment	$ 732,291	Treatment	0.0%	0.0%	0.0%	100.0%
Subtotal: Water Treatment	$ 732,291		$ -	$ -	$ -	$ 732,291
Transmission & Distribution						
Distribution Reservoirs & Standpipes	$ 2,795,608	T&D Mains	63.5%	36.5%	0.0%	0.0%
T&D Mains	6,209,720	T&D Mains	63.5%	36.5%	0.0%	0.0%
Services	-	Treatment	0.0%	0.0%	0.0%	100.0%
Meters and Meter Installations	-	Treatment	0.0%	0.0%	0.0%	100.0%
Hydrants	791	Treatment	0.0%	0.0%	0.0%	100.0%
Other	301,794	T&D Mains	63.5%	36.5%	0.0%	0.0%
Subtotal: Transmission & Distribution	$ 9,307,914		$ 5,911,773	$ 3,395,350	$ -	$ 791
General Plant						
Office Furniture and Equipment	$ 1,118	Plant Investment	55.1%	39.7%	0.0%	5.2%
Transportation Equipment	121,192	Plant Investment	55.1%	39.7%	0.0%	5.2%
Tools, Shop and Garage Equipment	3,128	Plant Investment	55.1%	39.7%	0.0%	5.2%
Computer Equipment	76,409	Plant Investment	55.1%	39.7%	0.0%	5.2%
Subtotal: General Plant	$ 201,847		$ 111,123	$ 80,198	$ -	$ 10,526
Total: Plant in Service	**$ 14,288,750**		**$ 7,866,434**	**$ 5,677,208**	**$ -**	**$ 745,109**

Depreciation						
Intangible Plan						
Intangible Plant - Franchise	$ 662	Depreciation	51.1%	40.0%	0.0%	8.9%
Subtotal: Intangible Plan	$ 662		$ 338	$ 265	$ -	$ 59
Source of Supply and Pumping						
Land and Land Rights	$ 1,895	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Stuctures & Improvements	30,919	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Wells & Springs	29,156	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Supply Mains	1,523	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Pumping Equipment	63,809	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Source of Supply and Pumping	$ 127,301		$ 57,285	$ 70,016	$ -	$ -
Water Treatment						
Water Treatment Equipment	$ 31,159	Treatment	0.0%	0.0%	0.0%	100.0%
Subtotal: Water Treatment	$ 31,159		$ -	$ -	$ -	$ 31,159
Transmission & Distribution						
Distribution Reservoirs & Standpipes	$ 36,760	T&D Mains	63.5%	36.5%	0.0%	0.0%
T&D Mains	129,303	T&D Mains	63.5%	36.5%	0.0%	0.0%
Services	-	Treatment	0.0%	0.0%	0.0%	100.0%
Meters and Meter Installations	-	Treatment	0.0%	0.0%	0.0%	100.0%
Hydrants	15	Treatment	0.0%	0.0%	0.0%	100.0%
Other	24,306	T&D Mains	63.5%	36.5%	0.0%	0.0%
Subtotal: Transmission & Distribution	$ 190,384		$ 120,920	$ 69,449	$ -	$ 15
General Plant						
Office Furniture and Equipment	$ -	Depreciation	51.1%	40.0%	0.0%	8.9%
Transportation Equipment	9,217	Depreciation	51.1%	40.0%	0.0%	8.9%
Tools, Shop and Garage Equipment	148	Depreciation	51.1%	40.0%	0.0%	8.9%
Computer Equipment	3,445	Depreciation	51.1%	40.0%	0.0%	8.9%
Subtotal: General Plant	$ 12,810		$ 6,544	$ 5,122	$ -	$ 1,145
Total: Depreciation	**$ 362,317**		**$ 185,088**	**$ 144,851**	**$ -**	**$ 32,378**
Taxes						
Taxes Other Than Income						
Utility Property Tax	$ 23,826	Plant Investment	55.1%	39.7%	0.0%	5.2%
Real Estate	101,831	Plant Investment	55.1%	39.7%	0.0%	5.2%
Subtotal: Taxes Other Than Income	$ 125,657		$ 69,179	$ 49,926	$ -	$ 6,553
Income Taxes						
Business Enterprise Tax	$ 144,144	Total O&M	31.2%	35.4%	0.0%	33.3%
Subtotal: Income Taxes	$ 144,144		$ 45,037	$ 51,076	$ -	$ 48,031
Total: Taxes	**$ 269,802**		**$ 114,216**	**$ 101,002**	**$ -**	**$ 54,584**
Amortization						
CIAC	$ 170,379	Depreciation	51.1%	40.0%	0.0%	8.9%
Other	2,137	Depreciation	51.1%	40.0%	0.0%	8.9%
Total: Amortization	**$ 172,516**		**$ 88,129**	**$ 68,970**	**$ -**	**$ 15,417**
Return						
Estimate	$ 393,149	Plant Investment	55.1%	39.7%	0.0%	5.2%
Total: Return	**$ 393,149**		**$ 216,442**	**$ 156,206**	**$ -**	**$ 20,501**

SOUTHERN NEW HAMPSHIRE

REGIONAL WATER INITIATIVE

Cost of Service Study – Town of Salem

Final Report / June 27, 2019

June 27, 2019

Mr. Jeffery W. McClure, P.E.
Senior Associate
Weston & Sampson
100 International Drive, Suite 152
Portsmouth, NH 03801

Subject: Southern New Hampshire Regional Water Initiative Cost of Service Study – Town of Salem

Dear Mr. McClure,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Cost of Service Report to Weston & Sampson for the New Hampshire Department of Environmental Services' project, the Southern New Hampshire Regional Water Initiative (SNHRWI).

The major objectives of the study include the following:

- Develop a cost of service methodology and model to appropriately functionalize, allocate, and distribute costs in order to understand the cost of wheeling, or providing bulk wholesale water, from one community to another;
- Utilizing said methodology and model, the following scenarios were to be analyzed:
  - Calculate a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
  - Calculate a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services;
  - Calculate a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

This draft report summarizes the key findings and recommendations related to the development of the cost of service analyses for the Town of Salem. We expect this initial report will result in further discussions with all stakeholders and that some modifications may be necessary to finalize a set of methodologies and rates that all agree to. It has been a pleasure working with you, and we look forward to continuing our work with you to finalize this important project for the region.

Sincerely,

Dave Fox
Manager

1.1. Background

In late 2018, Raftelis was contracted by Weston & Sampson to perform wholesale water cost of service studies for the Southern New Hampshire Regional Water Initiative (SNHRWI), directed by the New Hampshire Department of Environmental Services (DES). The proposed SNHRWI includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

1.1.1. OBJECTIVES OF THE STUDY

Raftelis was engaged with the primary objective of develop a cost of service-based rate study for developing wholesale, or wheeling, rates for water transported through the region's transmission systems of the SNHRWI. This report serves to summarize our findings, results, and recommendations for wheeling charge calculations for the Town of Salem's portion of the SNHRWI.

The charges to be calculated through this study include the following:

- Develop a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
- Develop a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services.

1.2. Wholesale Cost of Service Methodology

Based on the objectives for this study and our understanding of the SNHRWI proposed system, Raftelis determined that the most appropriate methodology for calculating a wheeling rate is to use the Utility Approach to rate setting. The Utility Approach to rate setting is consistent with industry standards and guidelines for determining wholesale rates and charges and is recommended by the American Water Works Association. The Utility Approach to rate setting focuses on three primary cost components:

- A proportionate share of the annual depreciation expense associated with the assets that provide service to wholesale customers;
- A rate of return applied to the utility's investment in these assets; and
- A proportionate share of the operating and maintenance (O&M) expenses related to these assets.

The aforementioned components were developed utilizing a test year of calendar year 2017, which complete and audited data is present. In addition to audited 2017 data, expected and measurable changes to accommodate the proposed SNHRWI operations were added in for a complete measure of the cost of service. It should be noted that it was assumed that Salem's purchases from Derry, of approximately 300,000 gallons per day, will be assessed at a rate of $2.55 per one hundred cubic feet (Ccf). Table 1 presents the test year full cost components for Salem. These cost components will be utilized later in this report to demonstrate the functionalization, allocation, and distribution required to provide wheeling services only.

Table 1: Test Year Costs

Cost Component	Test Year
Operational	$ 1,060,852
Buildings	58,371
Capital Projects	586,669
Administrative and General Expenses	1,377,480
MSDC Charges	76,885
Additional Support	57,500
Metering Building @ Derry Town Line	22,716
Metering Pit on Route 111 for Salem to PEU	2,333
Metering Building at Salem Town Line	4,103
Rate of Return	716,143
Depreciation	25,590
Total	**$ 3,988,642**

Once the test year costs were developed, a cost of service analysis, utilizing the aforementioned Utility Approach, was performed. The basic principle in the establishment of cost of service rates is to achieve general fairness in the recovery of costs from various classes of customers. The approach used in this study is based on the principles endorsed by the American Water Works Association (AWWA); which allows DES and the SNHRWI communities to demonstrate rates have not been set in an arbitrary or capricious manner and one class of customer is not subsidizing another to an unjustifiable extent. Costs have been allocated between customer classes based on their estimated demand requirements and recognizing the different costs associated with serving different customer classes.

These costs were allocated proportionately to water customers based on how they use the system. The appropriate level of detail required for a cost of service analysis is contingent on system characteristics, and the accuracy and availability of data necessary to support the analysis. Based on discussions with Town Staff, it was determined that water cost components should be allocated into functional components consistent with the most significant cost causative characteristics of the customer base. The water components included source of supply, treatment, transmission, distribution, storage, meters, fire protection, billing (customer service), and administration support. Summarizing this allocation process, costs were grouped into three categories: General Water, Fire Service, and Customer Service. Table 2 presents the allocation of test year costs into these categories.

Table 2: Test Year Costs by General Function

Cost Component	General Water	Fire Service	Customer Service
Operational	$ 1,000,494	$ 27,102	$ 33,256
Buildings	58,079	292	-
Capital Projects	583,736	2,933	-
Administrative and General Expenses	1,326,138	24,489	26,853
MSDC Charges	76,500	384	-
Additional Support	57,213	288	-
Metering Building @ Derry Town Line	22,602	114	-
Metering Pit on Route 111 for Salem to PEU	2,322	12	-
Metering Building at Salem Town Line	4,083	21	-
Total	**$ 3,131,166**	**$ 55,634**	**$ 60,109**

The aforementioned functional Fire Service and Customer Service costs were then discarded from the remainder of the analysis, as these costs are typically not recovered through wholesale rates. The general water functional costs that remained were then allocated to their cost components in accordance with how facilities are designed. Water cost components allocations included base, extra-capacity, and categories reflecting costs

that are explicitly incurred for retail-only or wholesale-only service. Specifically, water cost components related to the functional aspects of the system including water source of supply, treatment, transmission and distribution, and storage were assigned based on a base-extra capacity cost allocation approach. This approach allocates a portion of these costs to serving a base demand and peak demand. Reasonable allocation factors were determined for each of these components, and are consistent with industry standards and practices and utilized flow data from the Town's customer demand characteristics and water production facilities. A summary of this process is presented in Table 3.

Table 3: Test Year Costs by Cost Component

Cost Component	Base	Extra Capacity	Wholesale-only	Retail-only
Operational	$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings	19,360	-	-	38,719
Capital Projects	262,681	321,055	-	-
Administrative and General Expenses	759,533	566,604	-	-
MSDC Charges	-	-	-	76,500
Additional Support	25,746	31,467	-	-
Metering Building @ Derry Town Line	10,171	12,431	-	-
Metering Pit on Route 111	1,045	1,277	-	-
Metering Building at Salem Town Line	1,837	2,246	-	-
Total	**$ 1,348,097**	**$ 1,024,144**	**$ 371,429**	**$ 387,497**

Similar to how Fire Service and Customer Service costs were discarded, so were extra capacity and retail-only costs. These costs are typically incurred to only provide service to retail customers, and hence should be excluded from costs to be recovered from wholesale rates. These remaining costs were then distributed to wholesale only customers by utilizing projected wholesale flows as a percentage of total projected water productions and purchases. A similar process was completed for Salem's calculated depreciation and rate of return.

Finally, since Salem will be providing wholesale wheeling services to both HAWC and Windham, a determination must be made on whether the calculated wholesale rates should be different, or if both entities should be assessed the same wholesale rate, making the assumption that all customers classified as wholesale would fit into the same class. In the case of the dynamics of how Salem's system will be utilized by Windham and HAWC, it was determined that Windham will utilize much less of Salem's core system. Due to this, many of Salem's core system assets and costs were excluded from the calculation of Windham's rate for wheeling service.

The following table (Table 4) presents the final rate calculations for HAWC and Windham.

Table 4: Calculation of Wholesale Rate (per Ccf)

	HAWC	Windham
Cost of Service		
Operating Expenses	$ 332,960	$ 225,062
Rate of Return	36,948	29,558
Depreciation	2,393	1,915
Total: Cost of Service	$ 372,301	$ 256,535
Estimated Flow (Ccf)	121,992	97,594
Calculated Rate per Ccf	**3.06**	**2.63**

APPENDIX A:

FULL COST OF SERVICE ALLOCATIONS

Operations and Maintenance Expense		Functional Category	Functional Categories: General Water	Fire Service	Customer Service
Operational					
Small Tools & Equipment	$ 10,829	General Water	99.5%	0.5%	0.0%
Gas & Oil	21,714	General Water	99.5%	0.5%	0.0%
Gravel/Sand	12,084	General Water	99.5%	0.5%	0.0%
Resurfacing	26,559	General Water	99.5%	0.5%	0.0%
Chemicals	62,016	General Water	99.5%	0.5%	0.0%
Tubing and Parts	33,256	Customer Service	0.0%	0.0%	100.0%
Safety	1,132	General Water	99.5%	0.5%	0.0%
Contracted Services	132,116	General Water	99.5%	0.5%	0.0%
Water Samples/Lab Services	51,858	General Water	99.5%	0.5%	0.0%
Purchase of Water	373,295	General Water	99.5%	0.5%	0.0%
Meters/Replacement	-	Customer Service	0.0%	0.0%	100.0%
Hydrants	22,186	Hydrants	0.5%	99.5%	0.0%
Pipe Replacement	16,478	General Water	99.5%	0.5%	0.0%
Electricity	174,405	General Water	99.5%	0.5%	0.0%
Other Utilities	122,189	General Water	99.5%	0.5%	0.0%
Equipment	-	General Water	99.5%	0.5%	0.0%
Water Department Equipment	735	General Water	99.5%	0.5%	0.0%
Subtotal: Operational	$ 1,060,852		$ 1,000,494	$ 27,102	$ 33,256
Buildings					
Cleaning Services	$ 4,080	General Water	99.5%	0.5%	0.0%
Building Maintenance	30,654	General Water	99.5%	0.5%	0.0%
Heat	23,637	General Water	99.5%	0.5%	0.0%
Subtotal: Buildings	$ 58,371		$ 58,079	$ 292	$ -
Capital Projects					
Engineering Services	$ 16,854	General Water	99.5%	0.5%	0.0%
Building Improvements	51,595	General Water	99.5%	0.5%	0.0%
Water - Vehicles	51,595	General Water	99.5%	0.5%	0.0%
Improvements	60,624	General Water	99.5%	0.5%	0.0%
DBA Projects	406,000	General Water	99.5%	0.5%	0.0%
Subtotal: Capital Projects	$ 586,669		$ 583,736	$ 2,933	$ -
Special Articles					
Engineering Services	$ -	General Water	99.5%	0.5%	0.0%
Water Improvements	-	General Water	99.5%	0.5%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -
Administrative and General Expenses					
Regular Pay	$ 494,653	Total O&M	96.3%	1.8%	1.9%
Temporary Pay	51,054	Total O&M	96.3%	1.8%	1.9%
Overtime Pay	76,276	Total O&M	96.3%	1.8%	1.9%
Employee Retirement Benefits	947	Total O&M	96.3%	1.8%	1.9%
Stand-By Pay	7,110	Total O&M	96.3%	1.8%	1.9%
Retirement	71,852	Total O&M	96.3%	1.8%	1.9%
Disability Insurance	4,556	Total O&M	96.3%	1.8%	1.9%
Workers' Compensation	23,316	Total O&M	96.3%	1.8%	1.9%
FICA-Social Security	46,243	Total O&M	96.3%	1.8%	1.9%
Health Insurance	208,048	Total O&M	96.3%	1.8%	1.9%
Unemployment Compensation	681	Total O&M	96.3%	1.8%	1.9%
Life Insurance	1,931	Total O&M	96.3%	1.8%	1.9%
Dental Insurance	7,384	Total O&M	96.3%	1.8%	1.9%
Clothing Allowance	6,268	Total O&M	96.3%	1.8%	1.9%
Office Supplies	537	Total O&M	96.3%	1.8%	1.9%
Legal Services	10,616	Total O&M	96.3%	1.8%	1.9%
Audit	2,602	Total O&M	96.3%	1.8%	1.9%
Membership & Publications	1,430	Total O&M	96.3%	1.8%	1.9%
Printing and Binding	5,485	Total O&M	96.3%	1.8%	1.9%
Medical Exams/Hiring Expenses	344	Total O&M	96.3%	1.8%	1.9%
Food	4,110	Total O&M	96.3%	1.8%	1.9%
Equipment Rental	26,034	Total O&M	96.3%	1.8%	1.9%
Telephone	30,392	Total O&M	96.3%	1.8%	1.9%
Postage	26,802	Total O&M	96.3%	1.8%	1.9%
Meetings and Training	4,840	Total O&M	96.3%	1.8%	1.9%
Radio Maintenance	90	Total O&M	96.3%	1.8%	1.9%
Vehicle Maintenance	13,987	Total O&M	96.3%	1.8%	1.9%
General Liability	18,903	Total O&M	96.3%	1.8%	1.9%
Fleet Insurance	5,034	Total O&M	96.3%	1.8%	1.9%
Administrative Service Charge	210,477	Total O&M	96.3%	1.8%	1.9%
Property Insurance	14,723	Total O&M	96.3%	1.8%	1.9%
Recording Fees	340	Total O&M	96.3%	1.8%	1.9%
Office Furniture & Equipment	416	Total O&M	96.3%	1.8%	1.9%
Subtotal: Administrative and General Expenses	$ 1,377,480		$ 1,326,138	$ 24,489	$ 26,853

MSDC Charges					
Annual Expense	$ 76,885	General Water	99.5%	0.5%	0.0%
Subtotal: MSDC Charges	$ 76,885		$ 76,500	$ 384	$ -
Additional Support					
FTE for support of new water flows	$ 30,000	General Water	99.5%	0.5%	0.0%
FTE for additional admin support	27,500	General Water	99.5%	0.5%	0.0%
Subtotal: Additional Support	$ 57,500		$ 57,213	$ 288	$ -
Metering Building @ Derry Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Chemical Bulk Tank	3,000	General Water	99.5%	0.5%	0.0%
Chem Metering Pump (NaOH)	200	General Water	99.5%	0.5%	0.0%
Chemicals (NaOH)	4,058	General Water	99.5%	0.5%	0.0%
Chloramine Pump Package System	1,500	General Water	99.5%	0.5%	0.0%
Ammonia Analyzer	760	General Water	99.5%	0.5%	0.0%
Chemicals (Chlorine)	3,225	General Water	99.5%	0.5%	0.0%
Chemicals (Ammonia)	5,835	General Water	99.5%	0.5%	0.0%
Mag-meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Electricity	204	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,716		$ 22,602	$ 114	$ -
Metering Pit on Route 111 for Salem to PEU					
Mag Meter	$ 833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,333		$ 2,322	$ 12	$ -
Metering Building at Salem Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Mag Meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring	1,500	General Water	99.5%	0.5%	0.0%
Electricity	170	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,103		$ 4,083	$ 21	$ -
Contingency	$ -	General Water	99.5%	0.5%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 3,170,024**		**$ 3,054,666**	**$ 55,249**	**$ 60,109**

O&M Expenses			Water Cost Drivers			
			Base	Extra Cap.	Wholesale	Retail
Operational						
Small Tools & Equipment	$ 10,775	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gas & Oil	21,605	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gravel/Sand	12,023	T&D Mains	62.3%	37.7%	0.0%	0.0%
Resurfacing	26,426	T&D Mains	62.3%	37.7%	0.0%	0.0%
Chemicals	61,706	Treatment	33.3%	0.0%	0.0%	66.7%
Tubing and Parts	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Safety	1,126	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Contracted Services	131,455	T&D Mains	62.3%	37.7%	0.0%	0.0%
Water Samples/Lab Services	51,598	Treatment	33.3%	0.0%	0.0%	66.7%
Purchase of Water	371,429	Purchased Water	0.0%	0.0%	100.0%	0.0%
Meters/Replacement	-	Treatment	33.3%	0.0%	0.0%	66.7%
Hydrants	111	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Pipe Replacement	16,395	T&D Mains	62.3%	37.7%	0.0%	0.0%
Electricity	173,533	Treatment	33.3%	0.0%	0.0%	66.7%
Other Utilities	121,578	Treatment	33.3%	0.0%	0.0%	66.7%
Equipment	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Department Equipment	731	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Operational	$ 1,000,494		$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings						
Cleaning Services	$ 4,059	Treatment	33.3%	0.0%	0.0%	66.7%
Building Maintenance	30,501	Treatment	33.3%	0.0%	0.0%	66.7%
Heat	23,519	Treatment	33.3%	0.0%	0.0%	66.7%
Subtotal: Buildings	$ 58,079		$ 19,360	$ -	$ -	$ 38,719
Capital Projects						
Engineering Services	$ 16,770	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Building Improvements	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water - Vehicles	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Improvements	60,321	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
DBA Projects	403,970	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Capital Projects	$ 583,736		$ 262,681	$ 321,055	$ -	$ -
Special Articles						
Engineering Services	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Improvements	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -	$ -
Administrative and General Expenses						
Regular Pay	$ 476,216	Total O&M	57.3%	42.7%	0.0%	0.0%
Temporary Pay	49,151	Total O&M	57.3%	42.7%	0.0%	0.0%
Overtime Pay	73,433	Total O&M	57.3%	42.7%	0.0%	0.0%
Employee Retirement Benefits	912	Total O&M	57.3%	42.7%	0.0%	0.0%
Stand-By Pay	6,845	Total O&M	57.3%	42.7%	0.0%	0.0%
Retirement	69,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Disability Insurance	4,387	Total O&M	57.3%	42.7%	0.0%	0.0%
Workers' Compensation	22,447	Total O&M	57.3%	42.7%	0.0%	0.0%
FICA-Social Security	44,519	Total O&M	57.3%	42.7%	0.0%	0.0%
Health Insurance	200,294	Total O&M	57.3%	42.7%	0.0%	0.0%
Unemployment Compensation	656	Total O&M	57.3%	42.7%	0.0%	0.0%
Life Insurance	1,859	Total O&M	57.3%	42.7%	0.0%	0.0%
Dental Insurance	7,109	Total O&M	57.3%	42.7%	0.0%	0.0%
Clothing Allowance	6,035	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Supplies	517	Total O&M	57.3%	42.7%	0.0%	0.0%
Legal Services	10,221	Total O&M	57.3%	42.7%	0.0%	0.0%
Audit	2,505	Total O&M	57.3%	42.7%	0.0%	0.0%
Membership & Publications	1,377	Total O&M	57.3%	42.7%	0.0%	0.0%
Printing and Binding	5,280	Total O&M	57.3%	42.7%	0.0%	0.0%
Medical Exams/Hiring Expenses	331	Total O&M	57.3%	42.7%	0.0%	0.0%
Food	3,957	Total O&M	57.3%	42.7%	0.0%	0.0%
Equipment Rental	25,063	Total O&M	57.3%	42.7%	0.0%	0.0%
Telephone	29,259	Total O&M	57.3%	42.7%	0.0%	0.0%
Postage	25,803	Total O&M	57.3%	42.7%	0.0%	0.0%
Meetings and Training	4,659	Total O&M	57.3%	42.7%	0.0%	0.0%
Radio Maintenance	86	Total O&M	57.3%	42.7%	0.0%	0.0%
Vehicle Maintenance	13,466	Total O&M	57.3%	42.7%	0.0%	0.0%
General Liability	18,198	Total O&M	57.3%	42.7%	0.0%	0.0%
Fleet Insurance	4,847	Total O&M	57.3%	42.7%	0.0%	0.0%
Administrative Service Charge	202,632	Total O&M	57.3%	42.7%	0.0%	0.0%
Property Insurance	14,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Recording Fees	327	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Furniture & Equipment	401	Total O&M	57.3%	42.7%	0.0%	0.0%
Subtotal: Administrative and General Expenses	$ 1,326,138		$ 759,533	$ 566,604	$ -	$ -

MSDC Charges						
Annual Exepense	$ 76,500	Retail Only	0.0%	0.0%	0.0%	100.0%
Subtotal: MSDC Charges	$ 76,500		$ -	$ -	$ -	$ 76,500
Additional Support						
FTE for support of new water flows	$ 29,850	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
FTE for additional admin support	27,363	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Additional Support	$ 57,213		$ 25,746	$ 31,467	$ -	$ -
Metering Building @ Derry Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemical Bulk Tank	2,985	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chem Metering Pump (NaOH)	199	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (NaOH)	4,038	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chloramine Pump Package System	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Ammonia Analyzer	756	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Chlorine)	3,209	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Ammonia)	5,806	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag-meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	203	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,602		$ 10,171	$ 12,431	$ -	$ -
Metering Pit on Route 111 for Salem to PEU						
Mag Meter	$ 829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,322		$ 1,045	$ 1,277	$ -	$ -
Metering Building at Salem Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag Meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	169	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,083		$ 1,837	$ 2,246	$ -	$ -
Contingency						
	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -	$ -
Total: Operating & Maintenance Expenses	**$ 3,131,166**		**$ 1,348,097**	**$ 1,024,144**	**$ 371,429**	**$ 387,497**

Weston & Sampson SM

100 International Drive, Suite 152, Portsmouth, NH 03801
Tel: 603.431.3937

November 30, 2018

Michael Unger, P.E.
Water Engineer, Drinking Water and Groundwater Trust Fund
Drinking Water and Groundwater Bureau | NHDES
29 Hazen Drive
Concord, NH 03302

Re: **Southern NH Regional Water Main Initiative (SNHRWI)**
Cost of Service Study – Town of Salem

Dear Mike:

We are pleased to submit this report to the New Hampshire Department of Environmental Services (DES) for the Cost of Service Study (COSS) performed for the town of Salem on behalf the SNHRWI project. The proposed SNHRWI project includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

DES initiated the COSS to determine the cost to each community for supplying water to adjacent communities as part of the SNHRWI project. The existing water system operations for town of Salem were examined to determine how and why costs are incurred. Developing this understanding allowed for a proper allocation of future costs to the town of Salem to distribute water to adjacent communities.

Per our work scope and budget dated August 17, 2018 we have completed the draft COSS for the town of Salem with the assistance of Raftelis Financial Consultants. We wish to acknowledge the assistance of DES and town of Salem staff with gathering background information for the project. The cooperation was essential to the completion of the report and is sincerely appreciated.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Jeffrey W. McClure, P.E.
Senior Associate

SOUTHERN NEW HAMPSHIRE

REGIONAL WATER INITIATIVE

Cost of Service Study – Town of Salem

Draft Report / November 30, 2018

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

RAFTELIS

November 30, 2018

Mr. Jeffery W. McClure, P.E.
Senior Associate
Weston & Sampson
100 International Drive, Suite 152
Portsmouth, NH 03801

Subject: Southern New Hampshire Regional Water Initiative Cost of Service Study – Town of Salem

Dear Mr. McClure,

Raftelis Financial Consultants, Inc. (Raftelis) is pleased to provide this Draft Cost of Service Report to Weston & Sampson for the New Hampshire Department of Environmental Services' project, the Southern New Hampshire Regional Water Initiative (SNHRWI).

The major objectives of the study include the following:

- Develop a cost of service methodology and model to appropriately functionalize, allocate, and distribute costs in order to understand the cost of wheeling, or providing bulk wholesale water, from one community to another;
- Utilizing said methodology and model, the following scenarios were to be analyzed:
  - Calculate a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
  - Calculate a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services;
  - Calculate a cost justified volumetric rate that HAWC can assess the Town of Plaistow for providing wholesale water wheeling services.

This draft report summarizes the key findings and recommendations related to the development of the cost of service analyses for the Town of Salem. We expect this initial report will result in further discussions with all stakeholders and that some modifications may be necessary to finalize a set of methodologies and rates that all agree to. It has been a pleasure working with you, and we look forward to continuing our work with you to finalize this important project for the region.

Sincerely,

Dave Fox
Manager

1.1. Background

In late 2018, Raftelis was contracted by Weston & Sampson to perform wholesale water cost of service studies for the Southern New Hampshire Regional Water Initiative (SNHRWI), directed by the New Hampshire Department of Environmental Services (DES). The proposed SNHRWI includes the potential connection of water systems maintained by Manchester Water Works (MWW), the Hampstead Area Water Company (HAWC), and the towns of Salem, Derry, and Plaistow. The project would supplement domestic water demands water demands in the towns of Windham, Salem, Atkinson, Hampstead, and Plaistow through a regional water supply partnership.

1.1.1. OBJECTIVES OF THE STUDY

Raftelis was engaged with the primary objective of develop a cost of service-based rate study for developing wholesale, or wheeling, rates for water transported through the region's transmission systems of the SNHRWI. This report serves to summarize our findings, results, and recommendations for wheeling charge calculations for the Town of Salem's portion of the SNHRWI.

The charges to be calculated through this study include the following:

- Develop a cost justified volumetric rate that the Town of Salem (Salem) can assess the Town of Windham (Windham) for providing wholesale water wheeling services;
- Develop a cost justified volumetric rate that Salem can assess the Hampstead Area Water Company (HAWC) for providing wholesale water wheeling services.

1.2. Wholesale Cost of Service Methodology

Based on the objectives for this study and our understanding of the SNHRWI proposed system, Raftelis determined that the most appropriate methodology for calculating a wheeling rate is to use the Utility Approach to rate setting. The Utility Approach to rate setting is consistent with industry standards and guidelines for determining wholesale rates and charges and is recommended by the American Water Works Association. The Utility Approach to rate setting focuses on three primary cost components:

- A proportionate share of the annual depreciation expense associated with the assets that provide service to wholesale customers;
- A rate of return applied to the utility's investment in these assets; and
- A proportionate share of the operating and maintenance (O&M) expenses related to these assets.

The aforementioned components were developed utilizing a test year of calendar year 2017, which complete and audited data is present. In addition to audited 2017 data, expected and measurable changes to accommodate the proposed SNHRWI operations were added in for a complete measure of the cost of service. It should be noted that it was assumed that Salem's purchases from Derry, of approximately 300,000 gallons per day, will be assessed at a rate of $2.55 per one hundred cubic feet (Ccf). Table 1 presents the test year full cost components for Salem. These cost components will be utilized later in this report to demonstrate the functionalization, allocation, and distribution required to provide wheeling services only.

Table 1: Test Year Costs

Cost Component	Test Year
Operational	$ 1,060,852
Buildings	58,371
Capital Projects	586,669
Administrative and General Expenses	1,377,480
MSDC Charges	76,885
Additional Support	57,500
Metering Building @ Derry Town Line	22,716
Metering Pit on Route 111 for Salem to PEU	2,333
Metering Building at Salem Town Line	4,103
Rate of Return	716,143
Depreciation	25,590
Total	**$ 3,988,642**

Once the test year costs were developed, a cost of service analysis, utilizing the aforementioned Utility Approach, was performed. The basic principle in the establishment of cost of service rates is to achieve general fairness in the recovery of costs from various classes of customers. The approach used in this study is based on the principles endorsed by the American Water Works Association (AWWA); which allows DES and the SNHRWI communities to demonstrate rates have not been set in an arbitrary or capricious manner and one class of customer is not subsidizing another to an unjustifiable extent. Costs have been allocated between customer classes based on their estimated demand requirements and recognizing the different costs associated with serving different customer classes.

These costs were allocated proportionately to water customers based on how they use the system. The appropriate level of detail required for a cost of service analysis is contingent on system characteristics, and the accuracy and availability of data necessary to support the analysis. Based on discussions with Town Staff, it was determined that water cost components should be allocated into functional components consistent with the most significant cost causative characteristics of the customer base. The water components included source of supply, treatment, transmission, distribution, storage, meters, fire protection, billing (customer service), and administration support. Summarizing this allocation process, costs were grouped into three categories: General Water, Fire Service, and Customer Service. Table 2 presents the allocation of test year costs into these categories.

Table 2: Test Year Costs by General Function

Cost Component	General Water	Fire Service	Customer Service
Operational	$ 1,000,494	$ 27,102	$ 33,256
Buildings	58,079	292	-
Capital Projects	583,736	2,933	-
Administrative and General Expenses	1,326,138	24,489	26,853
MSDC Charges	76,500	384	-
Additional Support	57,213	288	-
Metering Building @ Derry Town Line	22,602	114	-
Metering Pit on Route 111 for Salem to PEU	2,322	12	-
Metering Building at Salem Town Line	4,083	21	-
Total	**$ 3,131,166**	**$ 55,634**	**$ 60,109**

The aforementioned functional Fire Service and Customer Service costs were then discarded from the remainder of the analysis, as these costs are typically not recovered through wholesale rates. The general water functional costs that remained were then allocated to their cost components in accordance with how facilities are designed. Water cost components allocations included base, extra-capacity, and categories reflecting costs

that are explicitly incurred for retail-only or wholesale-only service. Specifically, water cost components related to the functional aspects of the system including water source of supply, treatment, transmission and distribution, and storage were assigned based on a base-extra capacity cost allocation approach. This approach allocates a portion of these costs to serving a base demand and peak demand. Reasonable allocation factors were determined for each of these components, and are consistent with industry standards and practices and utilized flow data from the Town's customer demand characteristics and water production facilities. A summary of this process is presented in Table 3.

Table 3: Test Year Costs by Cost Component

Cost Component	Base	Extra Capacity	Wholesale-only	Retail-only
Operational	$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings	19,360	-	-	38,719
Capital Projects	262,681	321,055	-	-
Administrative and General Expenses	759,533	566,604	-	-
MSDC Charges	47,685	28,815	-	-
Additional Support	25,746	31,467	-	-
Metering Building @ Derry Town Line	10,171	12,431	-	-
Metering Pit on Route 111	1,045	1,277	-	-
Metering Building at Salem Town Line	1,837	2,246	-	-
Total	**$ 1,395,782**	**$ 1,052,959**	**$ 371,429**	**$ 310,996**

Similar to how Fire Service and Customer Service costs were discarded, so were extra capacity and retail-only costs. These costs are typically incurred to only provide service to retail customers, and hence should be excluded from costs to be recovered from wholesale rates. These remaining costs were then distributed to wholesale only customers by utilizing projected wholesale flows as a percentage of total projected water productions and purchases. A similar process was completed for Salem's calculated depreciation and rate of return.

Finally, since Salem will be providing wholesale wheeling services to both HAWC and Windham, a determination must be made on whether the calculated wholesale rates should be different, or if both entities should be assessed the same wholesale rate, making the assumption that all customers classified as wholesale would fit into the same class. In the case of the dynamics of how Salem's system will be utilized by Windham and HAWC, it was determined that Windham will utilize much less of Salem's core system. Due to this, many of Salem's core system assets and costs were excluded from the calculation of Windham's rate for wheeling service.

The following table (Table 4) presents the final rate calculations for HAWC and Windham.

Table 4: Calculation of Wholesale Rate (per Ccf)

	HAWC	Windham
Cost of Service		
Operating Expenses	$ 337,439	$ 228,645
Rate of Return	36,948	29,558
Depreciation	2,393	1,915
Total: Cost of Service	$ 376,780	$ 260,118
Estimated Flow (Ccf)	121,992	97,594
Calculated Rate per Ccf	**3.09**	**2.67**

APPENDIX A:

FULL COST OF SERVICE ALLOCATIONS

Operations and Maintenance Expense		Functional Category	Functional Categories: General Water	Fire Service	Customer Service
Operational					
Small Tools & Equipment	$ 10,829	General Water	99.5%	0.5%	0.0%
Gas & Oil	21,714	General Water	99.5%	0.5%	0.0%
Gravel/Sand	12,084	General Water	99.5%	0.5%	0.0%
Resurfacing	26,559	General Water	99.5%	0.5%	0.0%
Chemicals	62,016	General Water	99.5%	0.5%	0.0%
Tubing and Parts	33,256	Customer Service	0.0%	0.0%	100.0%
Safety	1,132	General Water	99.5%	0.5%	0.0%
Contracted Services	132,116	General Water	99.5%	0.5%	0.0%
Water Samples/Lab Services	51,858	General Water	99.5%	0.5%	0.0%
Purchase of Water	373,295	General Water	99.5%	0.5%	0.0%
Meters/Replacement	-	Customer Service	0.0%	0.0%	100.0%
Hydrants	22,186	Hydrants	0.5%	99.5%	0.0%
Pipe Replacement	16,478	General Water	99.5%	0.5%	0.0%
Electricity	174,405	General Water	99.5%	0.5%	0.0%
Other Utilities	122,189	General Water	99.5%	0.5%	0.0%
Equipment	-	General Water	99.5%	0.5%	0.0%
Water Department Equipment	735	General Water	99.5%	0.5%	0.0%
Subtotal: Operational	$ 1,060,852		$ 1,000,494	$ 27,102	$ 33,256
Buildings					
Cleaning Services	$ 4,080	General Water	99.5%	0.5%	0.0%
Building Maintenance	30,654	General Water	99.5%	0.5%	0.0%
Heat	23,637	General Water	99.5%	0.5%	0.0%
Subtotal: Buildings	$ 58,371		$ 58,079	$ 292	$ -
Capital Projects					
Engineering Services	$ 16,854	General Water	99.5%	0.5%	0.0%
Building Improvements	51,595	General Water	99.5%	0.5%	0.0%
Water - Vehicles	51,595	General Water	99.5%	0.5%	0.0%
Improvements	60,624	General Water	99.5%	0.5%	0.0%
DBA Projects	406,000	General Water	99.5%	0.5%	0.0%
Subtotal: Capital Projects	$ 586,669		$ 583,736	$ 2,933	$ -
Special Articles					
Engineering Services	$ -	General Water	99.5%	0.5%	0.0%
Water Improvements	-	General Water	99.5%	0.5%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -
Administrative and General Expenses					
Regular Pay	$ 494,653	Total O&M	96.3%	1.8%	1.9%
Temporary Pay	51,054	Total O&M	96.3%	1.8%	1.9%
Overtime Pay	76,276	Total O&M	96.3%	1.8%	1.9%
Employee Retirement Benefits	947	Total O&M	96.3%	1.8%	1.9%
Stand-By Pay	7,110	Total O&M	96.3%	1.8%	1.9%
Retirement	71,852	Total O&M	96.3%	1.8%	1.9%
Disability Insurance	4,556	Total O&M	96.3%	1.8%	1.9%
Workers' Compensation	23,316	Total O&M	96.3%	1.8%	1.9%
FICA-Social Security	46,243	Total O&M	96.3%	1.8%	1.9%
Health Insurance	208,048	Total O&M	96.3%	1.8%	1.9%
Unemployment Compensation	681	Total O&M	96.3%	1.8%	1.9%
Life Insurance	1,931	Total O&M	96.3%	1.8%	1.9%
Dental Insurance	7,384	Total O&M	96.3%	1.8%	1.9%
Clothing Allowance	6,268	Total O&M	96.3%	1.8%	1.9%
Office Supplies	537	Total O&M	96.3%	1.8%	1.9%
Legal Services	10,616	Total O&M	96.3%	1.8%	1.9%
Audit	2,602	Total O&M	96.3%	1.8%	1.9%
Membership & Publications	1,430	Total O&M	96.3%	1.8%	1.9%
Printing and Binding	5,485	Total O&M	96.3%	1.8%	1.9%
Medical Exams/Hiring Expenses	344	Total O&M	96.3%	1.8%	1.9%
Food	4,110	Total O&M	96.3%	1.8%	1.9%
Equipment Rental	26,034	Total O&M	96.3%	1.8%	1.9%
Telephone	30,392	Total O&M	96.3%	1.8%	1.9%
Postage	26,802	Total O&M	96.3%	1.8%	1.9%
Meetings and Training	4,840	Total O&M	96.3%	1.8%	1.9%
Radio Maintenance	90	Total O&M	96.3%	1.8%	1.9%
Vehicle Maintenance	13,987	Total O&M	96.3%	1.8%	1.9%
General Liability	18,903	Total O&M	96.3%	1.8%	1.9%
Fleet Insurance	5,034	Total O&M	96.3%	1.8%	1.9%
Administrative Service Charge	210,477	Total O&M	96.3%	1.8%	1.9%
Property Insurance	14,723	Total O&M	96.3%	1.8%	1.9%
Recording Fees	340	Total O&M	96.3%	1.8%	1.9%
Office Furniture & Equipment	416	Total O&M	96.3%	1.8%	1.9%
Subtotal: Administrative and General Expenses	$ 1,377,480		$ 1,326,138	$ 24,489	$ 26,853

MSDC Charges					
Annual Expense	$ 76,885	General Water	99.5%	0.5%	0.0%
Subtotal: MSDC Charges	$ 76,885		$ 76,500	$ 384	$ -
Additional Support					
FTE for support of new water flows	$ 30,000	General Water	99.5%	0.5%	0.0%
FTE for additional admin support	27,500	General Water	99.5%	0.5%	0.0%
Subtotal: Additional Support	$ 57,500		$ 57,213	$ 288	$ -
Metering Building @ Derry Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Chemical Bulk Tank	3,000	General Water	99.5%	0.5%	0.0%
Chem Metering Pump (NaOH)	200	General Water	99.5%	0.5%	0.0%
Chemicals (NaOH)	4,058	General Water	99.5%	0.5%	0.0%
Chloramine Pump Package System	1,500	General Water	99.5%	0.5%	0.0%
Ammonia Analyzer	760	General Water	99.5%	0.5%	0.0%
Chemicals (Chlorine)	3,225	General Water	99.5%	0.5%	0.0%
Chemicals (Ammonia)	5,835	General Water	99.5%	0.5%	0.0%
Mag-meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Electricity	204	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,716		$ 22,602	$ 114	$ -
Metering Pit on Route 111 for Salem to PEU					
Mag Meter	$ 833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring & Equipment	1,500	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,333		$ 2,322	$ 12	$ -
Metering Building at Salem Town Line					
PRV	$ 1,600	General Water	99.5%	0.5%	0.0%
Mag Meter	833	General Water	99.5%	0.5%	0.0%
SCADA Monitoring	1,500	General Water	99.5%	0.5%	0.0%
Electricity	170	General Water	99.5%	0.5%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,103		$ 4,083	$ 21	$ -
Contingency	$ -	General Water	99.5%	0.5%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -
Total: Operating & Maintenance Expenses	$ 3,170,024		$ 3,054,666	$ 55,249	$ 60,109

O&M Expenses			Water Cost Drivers			
			Base	Extra Cap.	Wholesale	Retail
Operational						
Small Tools & Equipment	$ 10,775	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gas & Oil	21,605	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Gravel/Sand	12,023	T&D Mains	62.3%	37.7%	0.0%	0.0%
Resurfacing	26,426	T&D Mains	62.3%	37.7%	0.0%	0.0%
Chemicals	61,706	Treatment	33.3%	0.0%	0.0%	66.7%
Tubing and Parts	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Safety	1,126	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Contracted Services	131,455	T&D Mains	62.3%	37.7%	0.0%	0.0%
Water Samples/Lab Services	51,598	Treatment	33.3%	0.0%	0.0%	66.7%
Purchase of Water	371,429	Purchased Water	0.0%	0.0%	100.0%	0.0%
Meters/Replacement	-	Treatment	33.3%	0.0%	0.0%	66.7%
Hydrants	111	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Pipe Replacement	16,395	T&D Mains	62.3%	37.7%	0.0%	0.0%
Electricity	173,533	Treatment	33.3%	0.0%	0.0%	66.7%
Other Utilities	121,578	Treatment	33.3%	0.0%	0.0%	66.7%
Equipment	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Department Equipment	731	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Operational	$ 1,000,494		$ 267,724	$ 89,064	$ 371,429	$ 272,277
Buildings						
Cleaning Services	$ 4,059	Treatment	33.3%	0.0%	0.0%	66.7%
Building Maintenance	30,501	Treatment	33.3%	0.0%	0.0%	66.7%
Heat	23,519	Treatment	33.3%	0.0%	0.0%	66.7%
Subtotal: Buildings	$ 58,079		$ 19,360	$ -	$ -	$ 38,719
Capital Projects						
Engineering Services	$ 16,770	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Building Improvements	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water - Vehicles	51,337	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Improvements	60,321	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
DBA Projects	403,970	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Capital Projects	$ 583,736		$ 262,681	$ 321,055	$ -	$ -
Special Articles						
Engineering Services	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Water Improvements	-	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Special Articles	$ -		$ -	$ -	$ -	$ -
Administrative and General Expenses						
Regular Pay	$ 476,216	Total O&M	57.3%	42.7%	0.0%	0.0%
Temporary Pay	49,151	Total O&M	57.3%	42.7%	0.0%	0.0%
Overtime Pay	73,433	Total O&M	57.3%	42.7%	0.0%	0.0%
Employee Retirement Benefits	912	Total O&M	57.3%	42.7%	0.0%	0.0%
Stand-By Pay	6,845	Total O&M	57.3%	42.7%	0.0%	0.0%
Retirement	69,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Disability Insurance	4,387	Total O&M	57.3%	42.7%	0.0%	0.0%
Workers' Compensation	22,447	Total O&M	57.3%	42.7%	0.0%	0.0%
FICA-Social Security	44,519	Total O&M	57.3%	42.7%	0.0%	0.0%
Health Insurance	200,294	Total O&M	57.3%	42.7%	0.0%	0.0%
Unemployment Compensation	656	Total O&M	57.3%	42.7%	0.0%	0.0%
Life Insurance	1,859	Total O&M	57.3%	42.7%	0.0%	0.0%
Dental Insurance	7,109	Total O&M	57.3%	42.7%	0.0%	0.0%
Clothing Allowance	6,035	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Supplies	517	Total O&M	57.3%	42.7%	0.0%	0.0%
Legal Services	10,221	Total O&M	57.3%	42.7%	0.0%	0.0%
Audit	2,505	Total O&M	57.3%	42.7%	0.0%	0.0%
Membership & Publications	1,377	Total O&M	57.3%	42.7%	0.0%	0.0%
Printing and Binding	5,280	Total O&M	57.3%	42.7%	0.0%	0.0%
Medical Exams/Hiring Expenses	331	Total O&M	57.3%	42.7%	0.0%	0.0%
Food	3,957	Total O&M	57.3%	42.7%	0.0%	0.0%
Equipment Rental	25,063	Total O&M	57.3%	42.7%	0.0%	0.0%
Telephone	29,259	Total O&M	57.3%	42.7%	0.0%	0.0%
Postage	25,803	Total O&M	57.3%	42.7%	0.0%	0.0%
Meetings and Training	4,659	Total O&M	57.3%	42.7%	0.0%	0.0%
Radio Maintenance	86	Total O&M	57.3%	42.7%	0.0%	0.0%
Vehicle Maintenance	13,466	Total O&M	57.3%	42.7%	0.0%	0.0%
General Liability	18,198	Total O&M	57.3%	42.7%	0.0%	0.0%
Fleet Insurance	4,847	Total O&M	57.3%	42.7%	0.0%	0.0%
Administrative Service Charge	202,632	Total O&M	57.3%	42.7%	0.0%	0.0%
Property Insurance	14,174	Total O&M	57.3%	42.7%	0.0%	0.0%
Recording Fees	327	Total O&M	57.3%	42.7%	0.0%	0.0%
Office Furniture & Equipment	401	Total O&M	57.3%	42.7%	0.0%	0.0%
Subtotal: Administrative and General Expenses	$ 1,326,138		$ 759,533	$ 566,604	$ -	$ -

MSDC Charges						
Annual Exepense	$ 76,500	T&D Mains	62.3%	37.7%	0.0%	0.0%
Subtotal: MSDC Charges	$ 76,500		$ 47,685	$ 28,815	$ -	$ -
Additional Support						
FTE for support of new water flows	$ 29,850	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
FTE for additional admin support	27,363	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Additional Support	$ 57,213		$ 25,746	$ 31,467	$ -	$ -
Metering Building @ Derry Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemical Bulk Tank	2,985	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chem Metering Pump (NaOH)	199	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (NaOH)	4,038	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chloramine Pump Package System	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Ammonia Analyzer	756	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Chlorine)	3,209	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Chemicals (Ammonia)	5,806	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag-meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	203	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building @ Derry Town Line	$ 22,602		$ 10,171	$ 12,431	$ -	$ -
Metering Pit on Route 111 for Salem to PEU						
Mag Meter	$ 829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring & Equipment	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Pit on Route 111 for Salem to PEU	$ 2,322		$ 1,045	$ 1,277	$ -	$ -
Metering Building at Salem Town Line						
PRV	$ 1,592	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Mag Meter	829	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
SCADA Monitoring	1,493	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Electricity	169	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Metering Building at Salem Town Line	$ 4,083		$ 1,837	$ 2,246	$ -	$ -
Contingency						
	$ -	Production & Pumping Costs	45.0%	55.0%	0.0%	0.0%
Subtotal: Contingency	$ -		$ -	$ -	$ -	$ -
Total: Operating & Maintenance Expenses	$ 3,131,166		$ 1,395,782	$ 1,052,959	$ 371,429	$ 310,996

HAMPSTEAD AREA
WATER COMPANY, INC

54 SAWYER AVENUE, ATKINSON, NH 03811
TEL: 603.362.4299 FAX: 603.362.4936
www.hampsteadwater.com

January 13, 2020

VIA EMAIL ONLY

Christopher R. Tuomala, Esq.
NH Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

RE: Hampstead Area Water Company, Inc.
DW 19-147 – Answers to Staff Data Requests - Set

Dear Attorney Tuomala:

Pursuant to NH Code PUC 203.09, please find attached, the Company's Answers to Staff Data Requests-Set 3, regarding the above referenced docket.

If you have any questions, please don't hesitate to contact us.

Very truly yours,

Anthony Augeri, Esq.
General Counsel

AA/ljs
enclosures
cc: DW 19-147 Service list electronically

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DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-1	**Witness: Stephen C. St.Cyr**

Staff 3-1

Re: Company's response to Staff 1-8: Based on the Company's response, it appears the interest rate on the DWGTF financing should be 2.96% rather than the 2.97% interest rate indicated in the Company's original filing. Please confirm and/or explain.

Response 3-1

Yes, the interest rate on the DWGTF financing should be 2.96%.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-2	**Witness: Stephen St. Cyr and Charles Lanza**

Staff 3-2

Re: Company's response to Staff 1-14: While it is true that Schedule SPS-5 calculates an overall increase in the Company's revenue requirement resulting from Phase I. That information transfers to Schedule SPS-7, which calculates the anticipated impact on the Company's consumption rate to general customers. As such, without any reflection of the apportionment of those revenues to the Town of Plaistow, the calculated increase in the Company's consumption rate to general customers on Schedule SPS-7 would appear to be overstated.

a) Please provide the Company's current estimate of annual revenues that will be received from the Town of Plaistow.
b) Please update Schedule SPS-7 to reflect a more accurate apportionment of the estimated increase in revenues attributable to the Town of Plaistow and to the Company's general customers.

Response 3-2

a) The Company's current estimate of annual revenues from the Town of Plaistow is $87,834.
b) See Company response to 3-10, which incorporates the estimated revenues from the Town of Plaistow.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-3	**Witness: John Sullivan**

Staff 3-3

Re: Company's updated response to Staff 1-22: The Company stated that it is waiting on information from Raftelis regarding Staff's request. Please update the status of this anticipated information.

Response 3-3

We have not received the information from Raftelis. We will continue to follow up with them.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-4	**Witness: John Sullivan**

Staff 3-4

Re: Company's response to Staff 1-23: The Company stated that it is waiting on information from Raftelis regarding Staff's request. Please update the status of this anticipated information.

Response 3-4

We have not received the information from Raftelis. We will continue to follow up with them.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-5	**Witness: John Sullivan**

Staff 3-5

Re: Company's response to Staff 1-24: Please provide the calculations made by Raftelis in support of Table 4 of its Cost of Service Study prepared for the Company (Exhibit 7).

Response 3-5

We have not received the information from Raftelis. We will continue to follow up with them.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-6	**Witness: John Sullivan and Charles Lanza**

Staff 3-6

Re: Company's responses to Staff 2-1(a), Exhibit 2-1, and Staff 2-2(b): If the actual cost of HAWC's Phase I construction exceeds the approved DWGTF grant of $3,283,750, please explain how the Company will finance that excess cost.

Response 3-6

The actual costs are still to be determined as many portions of the project have yet to be constructed. The Company expects the existing project contingencies to cover the project costs; however, if they do exceed the DES grant the company will first ask the trust fund for additional funds, and if unsuccessful explore getting a loan for the difference, either from a bank or its stockholder.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-7	**Witness: John Sullivan and Charles Lanza**

Staff 3-7

Re: Company's response to Staff 2-1 (e) (i) and (ii): It appears that the Company's responses to these questions are copied from its responses to Staff 2-1 (d) (iii) and (ii), respectively, but do not address the "East Road Water Main (bid by Plaistow)" project. Please provide relevant responses to Staff 2-1 (e) (i) and (ii).

Response 3-7

i. There was a typographical error in our original response. The correct response is the following: The $215,460.83 is the estimated value of the portion of the East Road Water Main to be contributed by Plaistow to HAWC.

ii. HAWC is the party receiving the contributed plant. Therefore, HAWC believes it is responsible for any CIAC Tax under current tax law.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-8	**Witness: Charles Lanza**

Staff 3-8

Re: Company's responses to Staff 2-1, Updated Exhibit 2 Schedules:

a) It appears that these schedules do not include the 15% Westside Drive / Main Street Contingency of $267,750. Please explain and/or provide revised Schedule 2 schedules that include this item.

b) It does not appear the Company provided an updated Schedule 2 schedule relative to the "East Road Water Main (bid by Plaistow)" project to be contributed to HAWC by the Town of Plaistow ($121,015 CIAC tax). Please explain and/or provide the relevant schedule.

Response 3-8

a) See Revised Exhibit 2 dated 1-10-2020, attached.
b) See Revised Exhibit 2 dated 1-10-2020, attached.

EXHIBIT 2

CHLORAMINES CONVERSION

PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$0.00
304	Pump House and Site Work	$473,333.33
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$246,666.61
320	Water Treatment (filters etc.)	$396,666.66
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains i. 4", 3", and 2" piping	$123,333.40
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters 50 customers x $350 per customer	$
335	Hydrants x $3,500.00 per hydrant (includes installation)	$0.00
339	Miscellaneous (not otherwise included)	$0.00
Total		$1,240,000.00

MAIN ST. PRESSURE REDUCING STATION PROJECT

PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$0.00
304	Pump House and Site Work	$310,000.00
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$250,000.00
320	Water Treatment (filters etc.)	$0.00
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains i. 12", 8", and 6" piping	$15,000.00
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters	$
335	Hydrants x $3,500.00 per hydrant (includes installation)	$0.00
339	Miscellaneous (not otherwise included)	$133,875
Total		$708,875.00

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SHANNON RD. WATERMAIN PROJECT

PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$0.00
304	Pump House and Site Work	$0.00
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$0.00
320	Water Treatment (filters etc.)	$0.00
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains	
	i. 12", 8", and 6" piping	$542,526.00
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters	$
335	Hydrants (includes installation)	$20,000.00
339	Miscellaneous (not otherwise included)	$0.00
Total		$562,526.00

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WESTSIDE DR. BOOSTER STATION & TREATMENT FACILITY
PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$20,000.00
304	Pump House and Site Work	$475,000.00
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$390,000.00
320	Water Treatment (filters etc.)	$250,000.00
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains i. 4", 3", and 2" piping	$15,000.00
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters	$
335	Hydrants x $3,500.00 per hydrant (includes installation)	$0.00
339	Miscellaneous (not otherwise included)	$193,875.00*
Total		$1,343,875.00

*$60,000 = Past HAWC Costs to be Reimbursed under this contract. The remainder is 50% of the Westside Dr. / Main St. Contingency

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EAST ROAD WATER MAIN
PROJECT COST SCHEDULE

PUC CODE	CONTRACTOR'S DESCRIPTION [Include machine and labor costs]	PRICE
303	Easement Deed	$0.00
304	Pump House and Site Work	$0.00
304	Booster Pumping Station	$0.00
307	Wells (drilling, Testing, engineering)	$0.00
309	Supply Mains (mains, manholes, pipes, trenching, backfill, valves etc. from pump house to wells	$0.00
311	Pumping Equipment (Pumps, motors, pump house, plumbing, electric,, connectors, piping, valves etc.)	$0.00
320	Water Treatment (filters etc.)	$0.00
330	Distribution Storage (tanks, valves, standpipes, hydro tanks)	$0.00
331	Transmission and Distribution mains	
	i. 12", 8", and 6" piping	$215,460.83
333	Services (water lines to curb stop at each customer's property line)	$
334	Meters	$
335	Hydrants x $3,500.00 per hydrant (includes installation)	$0.00
339	Miscellaneous (not otherwise included)	$0.00
Total		$215,460.83

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DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-9	**Witness: John Sullivan and Charles Lanza**

Staff 3-9

Re: Company's response Staff 2-3: Please provide the current status of the MSDC loan of $392,500 with respect to each of the potential financing sources:

a) DWGTF
b) Pentucket Bank

Response 3-9

a) We have been in contact with DES and requested to be on the next DWGTF meeting agenda for a decision on the MSDC loan.
b) If our request for an MSDC loan is denied, we will approach Pentucket Bank.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 3
ANSWERS

Date request received: 12/27/2019	**Date of Response: 01/10/2020**
Staff 3-10	**Witness: Stephen C. St. Cyr**

Staff 3-10

Company's Original Filing, Exhibit 4, Schedules SPS-1 through SPS-12: Based on the Company's responses to Staff's Set 1, Set 2, and Set 3 data requests, please provide revised and updated Schedules SPS-1 through SPS-12.

Response 3-10

See 3-10 Attachment, which revises and updates SPS-1 – SPS-12

Hampstead Area Water Company

SNHRWIP Financing

Major Assumptions

HAWC partipates in The Southern NH Regional Water Interconnection Project with NHDES, Derry, MWW, Plaistow, Salem, Windham and Pennichuck East.

NHDES provides HAWC with grant of $3,292,750. Towns of Salem and Plaistow provides HAWC with plant. HAWC treats grant and contributed plant as CIAC.

Under new tax law, CIAC treated as income for federal and state tax purposes. As such, owner incurs 27.08% federal and state tax on NHDES grant and Towns of Salem and Plaistow contributed plant.

NHDES lends $1,102,356 (27.08% of $4,070,737) to HAWC in order for HAWC to pay the federal and state tax. The debt financing assumes 2.96% interest rate over 25 years.

HAWC incurs $892,500 of MSDC Fees
HAWC's owner contributes $500,000 of additional paid in capital.
HAWC borrows $392,500 from bank at assumed 5.00% interest rate over 20 years.

HAWC constructs chloramines conversion facility ($1,240,000), Main St. pressure reducing station ($708,875) and Westside Drive booster station & treatment facility ($1,343,875). Towns of Salem contributes Shannon Road water mains and hydrants ($562,526). Town of Plaistow contributes water mains ($215,461).

Upon completion of construction and connect to the water system, HAWC submits actual costs and recovers such costs as part of a planned 2020 rate case based on a 2019 proforma test year.

HAWC estimated that the revenue requirement associated with construction, CIAC & MSDC fee will amount to an increase in annual revenues of $356,937 or 17.31%.

HAWC proposed to maintain customer charges per meter size and increase consumption charges.
HAWC estimates that the consumption charge will increase from an adjusted $6.51 to $7.95 per ccf.

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F-1 BALANCE SHEET
Assets and Other Debits

Line No. (a)	Account Title (Number) (b)	Current Year End Balance (c)	DW 18-138 Adjustments (d)	Adjusted Year End Balance (e)	DW 19-xxx Adjustments (f)	Adjusted Year End Balance (g)
	UTILITY PLANT					
1	Utility Plant (101-106)	$ 17,673,198	$ 2,146,346	$ 19,819,544	$ 6,065,593	$ 25,885,137
2	Less: Accumulated Depr. and Amort. (108-110)	6,976,995	$ 23,848	7,000,843	128,729	7,129,572
3	Net Plant	$ 10,696,203	$ 2,122,498	$ 12,818,701	$ 5,936,864	$ 18,755,565
4	Utility Plant Acquisition Adj. (Net) (114-115)	1,472				
5	Total Net Utility Plant	$ 10,697,675	$ 2,122,498	$ 12,820,173	$ 5,936,864	$ 18,757,037
	OTHER PROPERTY AND INVESTMENTS					
6	Nonutility Property (121)					
7	Less: Accumulated Depr. and Amort. (122)					
8	Net Nonutility Property					
9	Investment in Associated Companies (123)					
11	Utility Investments (124)					
12	Other Investments					
13	Special Funds(126-128)					
14	Total Other Property & Investments					
	CURRENT AND ACCRUED ASSETS					
16	Cash (131)	$ 269,128	$ (9,897)	$ 259,231	$ (10,149)	$ 249,082
17	Special Deposits (132)					
18	Other Special Deposits (133)					
19	Working Funds (134)					
20	Temporary Cash Investments (135)					
21	Accounts and Notes Receivable-Net (141-144)	223,980		223,980		223,980
22	Accounts Receivable from Assoc. Co. (145)					
23	Notes Receivable from Assoc. Co. (146)					
24	Materials and Supplies (151-153)	82,646		82,646		82,646
25	Stores Expense (161)					
26	Prepayments-Other (162)	23,262		23,262		23,262
27	Prepaid Taxes (163)	38,641		38,641		38,641
28	Interest and Dividends Receivable (171)					
29	Rents Receivable (172)					
30	Accrued Utility Revenues (173)	137,399		137,399		137,399
31	Misc. Current and Accrued Assets (174)					
32	Total Current and Accrued Assets	$ 775,056	$ (9,897)	$ 765,159	$ (10,149)	$ 755,010
	DEFERRED DEBITS					
32	Unamortized Debt Discount & Expense (181)	$ 35,179	$ 11,875	$ 47,054	$ 14,324	$ 61,378
33	Extraordinary Property Losses (182)					
34	Prelim. Survey & Investigation Charges (183)					
35	Clearing Accounts (184)					
36	Temporary Facilities (185)					
37	Miscellaneous Deferred Debits (186)	451,495		451,495		451,495
38	Research & Development Expenditures (187)					
39	Accumulated Deferred Income Taxes (190)	12,004		12,004		12,004
40	Total Deferred Debits	$ 498,678	$ 11,875	$ 510,553	$ 14,324	$ 524,877
	TOTAL ASSETS AND OTHER DEBITS	$ 11,971,409	$ 2,124,476	$ 14,095,885	$ 5,941,039	$ 20,036,924

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F-1 BALANCE SHEET
Equity Capital and Liabilities

Line No. (a)	Account Title (Number) (b)	Current Year End Balance (c)	DW 18-138 Adjustments (d)	Adjusted Year End Balance (e)	DW 19-xxx Adjustments (f)	Adjusted Year End Balance (g)
	EQUITY CAPITAL					
1	Common Stock Issued (201)	$ 16,767		$ 16,767		$ 16,767
2	Preferred Stock Issued (204)					
3	Capital Stock Subscribed (202,205)					
4	Stock Liability for Conversion (203, 206)					
5	Premium on Capital Stock (207)					
6	Installments Received On Capital Stock (208)					
7	Other Paid-In Capital (209,211)	3,554,354		3,554,354	500,000	4,054,354
8	Discount on Capital Stock (212)					
9	Capital Stock Expense(213)					
10	Retained Earnings (214-215)	(897,056)	10,595	(886,461)	3,567	(882,894)
11	Reacquired Capital Stock (216)					
12	Total Equity Capital	$ 2,674,065	$ 10,595	$ 2,684,660	$ 503,567	$ 3,188,227
	LONG TERM DEBT					
13	Bonds (221)					
14	Reacquired Bonds (222)					
15	Advances from Associated Companies (223)					
16	Other Long-Term Debt (224)	$ 3,658,170	$ 996,777	$ 4,654,947	1,452,898	$ 6,107,845
17	Total Long-Term Debt	$ 3,658,170	$ 996,777	$ 4,654,947	$ 1,452,898	$ 6,107,845
	CURRENT AND ACCRUED LIABILITIES					
18	Accounts Payable (231)	$ 30,042		$ 30,042		$ 30,042
19	Notes Payable (232)					
20	Accounts Payable to Associated Co. (233)	44,093		44,093		44,093
21	Notes Payable to Associated Co. (234)					
22	Customer Deposits (235)	7,636		7,636		7,636
23	Accrued Taxes (236)	5,486		5,486		5,486
24	Accrued Interest (237)					
25	Accrued Dividends (238)					
26	Matured Long-Term Debt (239)					
27	Matured Interest (240)					
28	Misc. Current and Accrued Liabilities (241)	28,226		28,226		28,226
29	Total Current and Accrued Liabilities	$ 115,483	$ -	$ 115,483		$ 115,483
	DEFERRED CREDITS					
30	Unamortized Premium on Debt (251)					
31	Advances for Construction (252)					
32	Other Deferred Credits (253)					
33	Accumulated Deferred Investment Tax Credits (255)					
34	**Accumulated Deferred Income Taxes:**					
35	Accelerated Amortization (281)					
36	Liberalized Depreciation (282)	56,578		56,578		56,578
37	Other (283)					
38	Total Deferred Credits	$ 56,578		$ 56,578		$ 56,578
	OPERATING RESERVES					
39	Property Insurance Reserve (261)					
40	Injuries and Damages Reserve (262)					
41	Pensions and Benefits Reserves (263)	16,451		16,451		16,451
42	Miscellaneous Operating Reserves (265)					
43	Total Operating Reserves	$ 16,451	$ -	$ 16,451		$ 16,451
	CONTRIBUTIONS IN AID OF CONSTRUCTION					
44	Contributions In Aid of Construction (271)	$ 9,109,850	$ 1,117,104	$ 10,226,954	4,070,737	$ 14,297,691
45	Accumulated Amortization of C.I.A.C. (272)	3,659,188		3,659,188	86,163	3,745,351
46	Total Net C.I.A.C.	$ 5,450,662	$ 1,117,104	$ 6,567,766	$ 3,984,574	$ 10,552,340
46	**TOTAL EQUITY CAPITAL AND LIABILITIES**	$ 11,971,409	$ 2,124,476	$ 14,095,885	$ 5,941,039	$ 20,036,924

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F-2 STATEMENT OF INCOME

Line No. (a)	Account Title (Number) (b)	Current Year End Balance (c)	DW 18-138 Adjustments (d)	Adjusted Year End Balance (e)	DW 19-xxx Adjustments (f)	Adjusted Year End Balance (g)
	UTILITY OPERATING INCOME					
1	Operating Revenues(400)	$ 2,043,478	$ 97,003	$ 2,140,481	$ 356,937	$ 2,497,418
2	Operating Expenses:					
3	Operating and Maintenance Expense (401)	1,582,686		1,582,686	200,000	1,782,686
4	Depreciation Expense (403)	525,662	23,848	549,510	128,729	678,239
5	Amortization of Contribution in Aid of Construction (405)	(221,212)	(12,552)	(233,764)	(86,163)	(319,927)
6	Amortization of Utility Plant Acquisition Adjustment (406)	31				
7	Amortization Expense-Other (407)	3,616		3,616		3,616
8	Taxes Other Than Income (408.1-408.13)	154,064	40,184	194,248	58,547	252,795
9	Income Taxes (409.1, 410.1, 411.1, 412.1)	12,601	245	12,846	-	12,846
10	**Total Operating Expenses**	$ 2,057,448	$ 51,725	$ 2,109,142	$ 301,114	$ 2,410,256
11	Net Operating Income (Loss)	$ (13,970)	$ 45,278	$ 31,339	$ 55,824	$ 87,163
12	Income From Utility Plant Leased to Others (413)					
13	Gains(Losses) From Disposition of Utility Property (414)					
14	**Net Water Utility Operating Income**	$ (13,970)	$ 45,278	$ 31,339	$ 55,824	$ 87,163
	OTHER INCOME AND DEDUCTIONS					
15	Revenues From Merchandising, Jobbing and Contract Work (415)					
16	Costs and Expenses of Merchandising, Jobbing and Contract Work (416)					
17	Equity in Earnings of Subsidiary Companies (418)					
18	Interest and Dividend Income (419)	1,076		1,076		1,076
19	Allow. for funds Used During Construction (420)					
20	Nonutility Income (421)	(209)		(209)		(209)
21	Gains (Losses) Form Disposition Nonutility Property (422)					
22	Miscellaneous Nonutility Expenses (426)					
23	**Total Other Income and Deductions**	$ 867	$ -	867	$ -	867
	TAXES APPLICABLE TO OTHER INCOME					
24	Taxes Other Than Income (408.2)					
25	Income Taxes (409.2, 410.2, 411.2, 412.2, 412.3)					
26	**Total Taxes Applicable To Other Income**					
	INTEREST EXPENSE					
27	Interest Expense (427)	$ 121,214	$ 34,058	$ 155,272	$ 51,581	$ 206,853
28	Amortization of Debt Discount & Expense (428)	2,765	625	3,390	676	4,066
29	Amortization of Premium on Debt (429)					
30	**Total Interest Expense**	$ 123,979	$ 34,683	$ 158,662	$ 52,257	$ 210,919
31	**Income Before Extraordinary Items**	$ (137,082)	$ 10,595	$ (126,456)	$ 3,567	$ (122,889)
	EXTRAORDINARY ITEMS					
32	Extraordinary Income (433)					
33	Extraordinary Deductions (434)					
34	Income Taxes, Extraordinary Items (409.3)					
35	**Net Extraordinary Items**					
	NET INCOME (LOSS)	$ (137,082)	$ 10,595	$ (126,456)	$ 3,567	$ (122,889)

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F-1 BALANCE SHEET
Capital Structure

Line No. (a)	Account Title (Number) (b)	Current Year End Balance (c)	DW 18-138 Adjustments (d)	Adjusted Year End Balance (e)	DW 19-xxx Adjustments (f)	Adjusted Year End Balance (g)
	EQUITY CAPITAL					
1	Common Stock Issued (201)	$ 16,767		$ 16,767		$ 16,767
2	Other Paid-In Capital (209,211)	3,554,354		3,554,354	500,000	4,054,354
3	Retained Earnings (214-215)	(897,056)	10,595	(886,461)	3,567	(882,894)
4	Total Equity Capital	$ 2,674,065	$ 10,595	$ 2,684,660	$ 503,567	$ 3,188,227
	LONG TERM DEBT					
5	Other Long-Term Debt (224)	$ 3,658,170	$ 996,777	$ 4,654,947	$ 1,452,898	$ 6,107,845
6	Total Long-Term Debt	$ 3,658,170	$ 996,777	$ 4,654,947	$ 1,452,898	$ 6,107,845
7	Total Capital Structure	$ 6,332,235	$ 1,007,372	$ 7,339,607	$ 1,956,465	$ 9,296,072

Line No. (a)	Account Title (Number) (b)	Current Year End Balance (c)	DW 18-138 Adjustments (d)	Adjusted Year End Balance (e)	DW 18-138 Adjustments (f)	Adjusted Year End Balance (g)
	EQUITY CAPITAL					
1	Common Stock Issued (201)	0.26%	0.00%	0.23%	0.00%	0.18%
2	Other Paid-In Capital (209,211)	56.13%	0.00%	48.43%	25.56%	43.61%
3	Retained Earnings (214-215)	-14.17%	1.05%	-12.08%	0.18%	-9.50%
4	Total Equity Capital	42.23%	1.05%	36.58%	25.74%	34.30%
	LONG TERM DEBT					
5	Other Long-Term Debt (224)	57.77%	98.95%	63.42%	74.26%	65.70%
6	Total Long-Term Debt	57.77%	98.95%	63.42%	74.26%	65.70%
7	Total Capital Structure	100.00%	100.00%	100.00%	100.00%	100.00%

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SNHRWIP Financing

Journal Entries

						Impact on Net Income
1	Dr.	181	Unamortized Debt Expense	15,000		
	Cr.	131	Cash		15,000	
	To record estimated debt expense associated with obtaining PUC approval of of 2019 / 2020 State of NH Grant / Debt Financing					
2	Dr.	131	Cash	5,287,606		
	Cr.	271	State of NH CIAC		3,292,750	
	Cr.	224	State of NH loan for CIAC Tax		1,102,356	
	Cr.	224	Bank loan for MSDC Fees		392,500	
	Cr.	211	Additional Paid in Capital		500,000	
	To record receipt of cash and State of NH grant / loans					
3	Dr.	101	Plant in Service	6,065,593		
	Cr.	131	Cash		5,287,606	
	Cr.	271	Town of Salem CIAC		562,526	
	Cr.	271	Town of Plaistow CIAC		215,461	
	To record 2020 plant additions					
4	Dr.	403	Depreciation Expense	128,729		(128,729)
	Cr.	108	Accumulated Depreciation		128,729	
	To record 1/2 year depreciation and related accumulated depreciation for year 1					
5	Dr.	272	Accummulated Amortization of CIAC	86,163		
	Cr.	405	Amortization of CIAC		86,163	86,163
	To record 1/2 year amortization of CIAC and related accumulated amortization for year 1					
6	Dr.	224	Other Long Term Debt - State of NH loan	30,233		
	Dr.	224	Other Long Term Debt - Bank loan	11,725		
	Cr.	427	Interest Expense - State of NH loan	32,222		(32,222)
	Cr.	427	Interest Expense - Bank loan	19,359		(19,359)
	Dr.	131	Cash		93,539	
	To record the projected 1st year payments (principle and interest) on State of NH loan					
7	Dr.	428	Amortization of Debt Expense	676		(676)
	Cr.	181	Unamortized Debt Expense		676	
	To record annual amortization of debt expense					
8	Dr.	131	Cash	356,937		
	Cr.	400	Operating Revenue		356,937	356,937
	To record projected increase in revenues					
9	Dr.	401	Operating Expenses	200,000		(200,000)
	Dr.	408	Taxes other than Income	58,547		(58,547)
	Dr.	409	Federal Income taxes	-		
	Dr,	409	State Business Taxes	-		-
	Cr.	131	Cash		258,547	
	To record projected increase in expenses					
	Impact on Net Income					3,567
	Impact on Cash			5,644,543	5,654,692	
	Net Impact on Cash				(10,149)	

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SNHRWIP Financing

Revenue Requirement - Step Increase for 2019 / 2020 Additions to Plant and related CIAC associated with SNHRWIP

RATE BASE			Amount
2019 Plant in Service			$6,065,593
Less: Accumulated Depreciation			128,729
NET PLANT IN SERVICE			$5,936,864
Contribution in Aid of Construction			(4,070,737)
Plus: Accumulated Amortization of CIAC			86,163
NET PLANT IN RATE BASE			$1,952,289
Cash Working Capital	$ 200,000	12.33%	24,660
TOTAL RATE BASE			$1,976,949
Return on Additional Plant @	5.11%		$101,091
O&M Expenses			$ 200,000
Depreciation Expense			257,458
Amortization of CIAC			(172,325)
State Utility and Local Property Taxes			58,547
Federal Income Taxes			
State Business Taxes			
Operating Expenses			$ 343,680
Additional Revenue Requirement			$ 444,771
Less: Revenue from projected sale of water to Town of Plaistow			(87,834)
Net Additional Revenue Requirement			$ 356,937
Revenues from General Metered Customers			$ 2,061,860
% Increase assoicated with Step Increase			17.31%

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SNHRWIP Financing

Weighted Average Cost of Capital

Financing	Amount	Percent	Interest Rate	Interest Expense	Amort of Fin Costs		Total Interest	Cost Rate	Weighted Average Cost of Capital
State of NH	$ 1,102,356	55.26%	2.96%	$32,222	$ 295	(1)	$32,517	2.95%	1.63%
Bank Loan	392,500	19.68%	5.00%	19,359	381	(2)	19,740	5.03%	0.99%
Total Debt	$ 1,494,856	74.94%		$ 51,581	$ 676		$ 52,257		2.62%
Owner's APIC	$ 500,000	25.06%						9.95%	2.49%
Total Capitalization	$ 1,994,856	100.00%							5.11%

Amortization of Financing Costs:					
State of NH	$ 1,102,356	73.74%	$ 7,374	25	$ 295
Bank Loan	392,500	26.26%	7,626	20	381
Total	$ 1,494,856	100.00%	$ 15,000		$ 676

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SNHRWIP Financing

DW 17-118
STEP II ADJUSTMENT
CALCULATION OF RATES

							Attachment B					SPS-7
							Schedule 6a					
Total Annual Water Revenues Proposed per Settlement (Sch 1)							$ 2,006,193	$ 97,003	$ 2,103,196	$ 356,937	$ 2,460,133	
Less: Fire Protection Revenues												
Municipal						$41,336						
Private						-	41,336	-	41,336	-	41,336	
Revenues from General Metered Customers							$ 1,964,857	$ 97,003	$ 2,061,860	$ 356,937	$ 2,418,797	
Customer Charge Revenues:												
	Meter Size	Proposed Perm Rate	Percent Increase	Proposed Step Rate	Pro-forma # of Customers	Annual Revenues						
	5/8" Meter	$ 120	0.00%	**$ 120**	3,550	$426,000						
	3/4" Meter	240	0.00%	**240**	-	-						
	1" Meter	360	0.00%	**360**	65	23,400						
	1 1/2" Meter	720	0.00%	**720**	2	1,440						
	2" Meter	1,200	0.00%	**1,200**	4	4,800						
				(a)	3,621	$455,640	(455,640)	-	(455,640)	-	(455,640)	
Consumption Charge Revenues:							$ 1,509,217	97,003	$ 1,606,220	356,937	$ 1,963,157	
	Consumption Charge Revenues				$ 1,509,217							
	Total Pro-forma Annual Consumption (ccf) (b)			÷	246,870							
	Consumption Rate per Customer (per ccf)				$ 6.11				**$ 6.51**		**$ 7.95**	
	Total Pro-forma Annual Consumption (ccf)			x	246,870		$ (1,509,217)		$ (1,606,220)		$ (1,963,157)	
Unallocated Water Revenues							$ -		$ -		$ -	

(a) Pro-forma # of Cus 3,578 actual customers @ 12/31/16 + 43 customers from New System acquired in 2017 = 3,621

(b) Pro-forma Consum 2016 Actual Water Sales:

Gallons		182,243,771	
Conversion to Cubic Feet	÷	7.48	
Cubic Feet		24,362,449	
Conversion to CCF	÷	100	243,624
2017 Estimated New System Sales:			
Estimated Usage of New System: (ccf)		3,245.50	
To annualize 2017 usage (12 months / 12 months) (ccf x		1	3,246
Total Pro-forma Consumption (ccf)			246,870

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Hampstead Area Water Company SPS-8

SNHRWIP Financing

Plant / Accumulated Depreciation / Depreciation Expense

PUC Acct. No.	Description	Costs	CIAC Gross Up Rate of 27.08%	Total Costs	Depr. Rate	Depreciation Expense	Accum Depr.	Net Plant
Chloramines Conversion Facility								
304	Structures	$ 473,333	$ 128,179	$ 601,512	2.50%	$ 15,038	$ 7,519	$ 593,993
311	Pumping Equipment	246,667	66,797	313,464	10.00%	31,346	15,673	297,791
320	Treatment Equipment	396,667	107,417	504,084	3.60%	18,147	9,074	495,011
331	T&D Mains	123,333	33,399	156,732	2.00%	3,135	1,567	155,164
	Total	$ 1,240,000	$ 335,792	$ 1,575,792		$ 67,666	$ 33,833	$ 1,541,959
Main St. Pressure Reducing Station								
304	Structures	$ 310,000	$ 83,948	$ 393,948	2.50%	$ 9,849	$ 4,924	$ 389,024
311	Pumping Equipment	250,000	67,700	317,700	10.00%	31,770	15,885	301,815
331	T&D Mains	15,000	4,062	19,062	2.00%	381	191	18,871
339	Miscellaneous	133,875	36,253	170,128	5.00%	8,506	4,253	165,875
	Total	$ 708,875	$ 191,963	$ 900,838		$ 50,506	$ 25,253	$ 875,585
Shannon Road Water Main								
331	T&D Mains	$ 542,526	$ 146,916	$ 689,442	2.00%	$ 13,789	$ 6,894	$ 682,548
335	Hydrants	20,000	5,416	25,416	2.00%	508	254	25,162
	Total	$ 562,526	$ 152,332	$ 714,858		$ 14,297	$ 7,149	$ 707,709
Westside Drive Booster Station & Treatment Facility								
303	Easement Dees	$ 20,000	$ 5,416	$ 25,416	5.00%	$ 1,271	$ 635	$ 24,781
304	Structures	475,000	128,630	603,630	2.50%	15,091	7,545	596,085
311	Pumping Equipment	390,000	105,612	495,612	10.00%	49,561	24,781	470,831
320	Treatment Equipment	250,000	67,700	317,700	3.60%	11,437	5,719	311,981
331	T&D Mains	15,000	4,062	19,062	2.00%	381	191	18,871
339	Miscellaneous*	193,875	52,501	246,376	5.00%	12,319	6,159	240,217
	Total	$ 1,343,875	$ 363,921	$ 1,707,796		$ 90,060	$ 45,030	$ 1,662,766
East Road Water Main								
331	T&D Mains	$ 215,461	$ 58,347	$ 273,808	2.00%	$ 5,476	$ 2,738	$ 271,070
	Total	$ 215,461	$ 58,347	$ 273,808		$ 5,476	$ 2,738	$ 271,070
Manchester Water Works - MSDC fees								
307	Wells	$ 892,500		$ 892,500	3.30%	$ 29,453	$ 14,726	$ 877,774
		$ 892,500		$ 892,500		$ 29,453	$ 14,726	$ 877,774
	Total	$ 4,963,237	$ 1,102,356	$ 6,065,593		$ 257,458	$ 128,729	$ 5,936,864

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SNHRWIP Financing

CIAC / Accumulated Amortization of CIAC / Amortization of CIAC

PUC Acct. No.	Description	Costs	Amort. Rate	Amort. of CIAC	Accum Amort.	Net CIAC
Chloramines Conversion Facility						
304	Structures	$ 473,333	2.50%	$ 11,833	$ 5,917	$ 467,416
311	Pumping Equipment	246,667	10.00%	24,667	12,333	234,334
320	Treatment Equipment	396,667	3.60%	14,280	7,140	389,527
331	T&D Mains	123,333	2.00%	2,467	1,233	122,100
	Total	$ 1,240,000		$ 53,247	$ 26,623	$ 1,213,377
Main St. Pressure Reducing Station						
304	Structures	$ 310,000	2.50%	$ 7,750	$ 3,875	$ 306,125
311	Pumping Equipment	250,000	10.00%	25,000	12,500	237,500
331	T&D Mains	15,000	2.00%	300	150	14,850
339	Miscellaneous	133,875				
	Total	$ 708,875		$ 33,050	$ 16,525	$ 558,475
Shannon Road Water Main						
331	T&D Mains	$ 542,526	2.00%	$ 10,851	$ 5,425	$ 537,101
335	Hydrants	20,000				
	Total	$ 562,526		$ 10,851	$ 5,425	$ 537,101
Westside Drive Booster Station & Treatment Facility						
303	Easement Dees	$ 20,000	5.00%	$ 1,000	$ 500	$ 19,500
304	Structures	475,000	2.50%	11,875	5,938	469,063
311	Pumping Equipment	390,000	10.00%	39,000	19,500	370,500
320	Treatment Equipment	250,000	3.60%	9,000	4,500	245,500
331	T&D Mains	15,000	2.00%	300	150	14,850
339	Miscellaneous*	193,875	5.00%	9,694	4,847	189,028
	Total	$ 1,343,875		$ 70,869	$ 35,434	$ 1,308,441
East Road Water Main						
331	T&D Mains	$ 215,461	2.00%	$ 4,309	$ 2,155	$ 213,306
	Total	$ 215,461		$ 4,309	$ 2,155	$ 213,306
	Total	$ 4,070,737		$ 172,325	$ 86,163	$ 3,830,699

SPSt. Cyr
1/10/2020

Hampstead Area Water Company SPS-10

SNHRWIP Financing

Property Taxes

	Chloramines Conversion Facility	Main St. Pressure Reducing Station	Shannon Rd. Main	Westside Booster Treatment Facility	East Rd. Main	MWW MSDC fees	Total Projected Costs
Total Project Costs	$ 1,575,792	$ 900,838	$ 714,858	$ 1,707,796	$ 273,808	$ 892,500	$ 6,065,593
Accumulated Depreciation	33,833	25,253	7,149	45,030	2,738	14,726	128,729
Net Plant	$ 1,541,959	$ 875,585	$ 707,709	$ 1,662,766	$ 271,070	$ 877,774	$ 5,936,864
Thousand Dollars of Assessed Value	$ 1,542	$ 876	$ 708	$ 1,663	$ 271	$ 878	$ 5,937
Tax Value as % of Net Book Value	43.52%	43.52%	43.52%	43.52%	43.52%	43.52%	43.52%
Combined State and Local Property Tax Rate	$ 22.66	$ 22.66	$ 22.66	$ 22.66	$ 22.66	$ 22.66	$ 22.66
State and Local Property Taxes	$ 15,206	$ 8,635	$ 6,979	$ 16,398	$ 2,673	$ 8,656	$ 58,547

Combined State and Local Property Tax Rate:							
State	$ 6.60	$ 6.60	$ 6.60	$ 6.60	$ 6.60	$ 6.60	$ 6.60
Local	16.06	16.06	16.06	16.06	16.06	16.06	16.06
Total	$ 22.66	$ 22.66	$ 22.66	$ 22.66	$ 22.66	$ 22.66	$ 22.66

SPSt. Cyr
1/10/2020

Hampstead Area Water Company

SPS-11

SNHRWIP Financing

Source and Use of Funds

Source of Funds	2019
State of NH Grant	$ 3,292,750
State of NH Loan for tax on State of NH CIAC	1,102,356
Town of Salem CIAC	562,526
Town of Plaistow CIAC	215,461
Bank Loan for MSDC fees	392,500
Owner's Additional Paid in Capital	500,000
Total Source of Funds	$ 6,065,593

Use of Funds	
SNHRW infrastructure	$ 3,292,750
Tax on State of NH CIAC	1,102,356
Shannon Road water main	562,526
East Road water main	215,461
MWW MSDC fees	892,500
Total Use of Funds	$ 6,065,593

SPSt. Cyr
1/10/2020

Hampstead Area Water Company

SPS-12

SNHRWIP Financing

Estimated Cost of Financing

2019 Financing Costs

State of NH Grant	$ -
State of NH Loan	-
Bank Loan Fees	5,000
St. Cyr & Associates	4,000
Lewis Builders Development	6,000
Total Estimated Financing Costs	$ 15,000

SPSt. Cyr
1/10/2020

HAMPSTEAD AREA
WATER COMPANY, INC

54 SAWYER AVENUE, ATKINSON, NH 03811
TEL: 603.362.4299 FAX: 603.362.4936
www.hampsteadwater.com

January 31, 2020

VIA EMAIL ONLY

Christopher R. Tuomala, Esq.
NH Public Utilities Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

RE: Hampstead Area Water Company, Inc.
DW 19-147 – Answers to Staff Data Requests – Set 4

Dear Attorney Tuomala:

Pursuant to NH Code PUC 203.09, please find attached, the Company's Answers to Staff Data Requests-Set 4, regarding the above referenced docket.

If you have any questions, please don't hesitate to contact us.

Very truly yours,

Anthony Augeri, Esq.
General Counsel

AA/ljs
enclosures
cc: DW 19-147 Service list electronically

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DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 4
ANSWERS

Date request received: 01/21/2020	**Date of Response: 01/31/2020**
Staff 4-1	**Witness: Stephen P. St.Cyr**

Staff 4-1

Re: Company's response to Staff 3-7: Based on the Company's response, it appears the CIAC tax on the $215,461 amount indicated as contributed by the Town of Plaistow would be $57,179, as follows:

($215,461 – (($215,461 ÷ 25) ÷ 2)) x .2708 = $57,179

However, Exhibit 2-1 of the Company's response to Staff 2-1 indicates that the CIAC tax associated with the East Road Water Main contributed by the Town of Plaistow to HAWC is $121,015. (Note: Staff calculates this is indicative of a CIAC contribution from Plaistow of $456,000).

Please provide a detailed explanation for the $63,836 difference between the CIAC tax indicated on Exhibit 2-1 of $121,015 and the calculated CIAC tax of $57,179.

Response 4-1

The Company concurs with Staff's calculation of the CIAC tax on the contribution from the Town of Plaistow. The Company updated the response to Staff 2-1. See responses to Staff 3-7i. indicating that "$215,460.83 is the estimated value of the portion of the East Road Water Main to be contributed by the Town of Plaistow." Also, see response to Staff 3-8b indicating "See Revised Exhibit 2 dated 1-10-2020 attached." The attachment shows $215,460.83.

DW 19-147
HAMPSTEAD AREA WATER COMPANY, INC.
PETITION FOR APPROVAL OF DWGTF FINANCING AND BANK FINANCING
ANSWERS TO STAFF DISCOVERY REQUEST – SET 4
ANSWERS

Date request received: 01/21/2020	**Date of Response: 01/31/2020**
Staff 4-2	**Witness: John Sullivan**

Staff 4-2

Re: Company's response to Staff 3-9: Given the remaining unknowns relative to the Company's proposed MSDC loan of $392,500, would the Company be open to filing a motion requesting that the Commission bifurcate its consideration of that loan from its consideration of the proposed $1,204,815 CIAC tax loan in the instant docket. (An example of such motion may be found at: https://www.puc.nh.gov/Regulatory/Docketbk/2017/17-183/MOTIONS-OBJECTIONS/17-183_2018-01-10_PWW_MOTION_BIFURCATE.PDF .) Such may enable the Commission to act on the CIAC tax loan before the Company finalizes the terms and conditions of the MSDC loan through either the DWGTF or Pentucket Bank. Please comment.

Response 4-2

Yes, the Company is open to filing a motion to bifurcate similar to the one filed in docket DW 17-183 to make consideration of the proposed MSDC loan subject to a separate commission order. The Company will file such a motion in the next 10 days.

NHDES Response to Questions from the Public Utilities Commission (PUC)
Prepared by Erin Holmes
December 3, 2019

Hi Mike and Erin:

The Commission received a filing from Hampstead Area Water Company (HAWC) requesting approval for a couple of financings related to Phase I of the Southern NH project. Specifically, HAWC requested approval for a loan of $1,204,815 related to the anticipated CIAC Tax incurred from Phase I as well as a loan of $392,500 related to a partial amount of the MSDC associated with the project. Staff was looking for some clarification regarding some of the facts surrounding HAWC's request.

With regard to the CIAC Tax loan of $1,204,815 authorized from the Drinking Water and Groundwater Trust Fund (DWGTF), could you please clarify or confirm the following:

1) HAWC provided the following loan terms. Could you please confirm these terms?
   a) Amortization – 25 years
   NHDES response - HAWC would be approved for a 25-year loan term on the CIAC tax.
   b) Interest Rate – 2.97%
   NHDES response - The interest rate was set on the Bond Buyer's Weekly 11-Bond GO index for August 1, 2019 and is 2.96%.
   c) Interest Payments will commence 6 months following substantial completion of the project. (Could you please clarify the interest rate of the interest only payments?)
   NHDES response – The interest rate would be the 2.96%. This is very similar to the loan amortization schedules for the State Drinking Water State Revolving Fund loan program.
   d) Principal and Interest payments will commence one year following substantial completion of the project.
   NHDES response – Yes. Please note, contrary to a typical construction loan, NHDES anticipates the disbursement of the loan funds and the loan closing to occur in rapid succession.

2) In support of how the CIAC Tax loan amount of $1,204,815 was calculated, the Company provided the attached worksheet prepared by Weston & Sampson. After Staff reviewed this worksheet, it had a number of questions. Could you please shed some light on the following items contained in the worksheet?

   a) The Project Total indicated on the worksheet appears to actually sum to an amount of $4,881,065 instead of $5,041,064; a difference of approximately $160,000. Please explain.

   NHDES response - $160,000 was previously authorized for design and bidding from the MtBE Settlement Funds. These funds are essentially grant funds and are a direct reimbursement of costs incurred.

   b) The worksheet indicates that one of HAWC's Phase I Components is a "Westside Drive / Main St Contingency [sic] (15%)" for $258,750.
      i. Please provide further explanation regarding this project or line item as listed on the worksheet.

NHDES response – This is a construction contingency in order to have a conservative estimate for requesting grant funds. NHDES cannot comment on what is considered CIAC but our understanding is the tax is applicable to the asset and would be adjusted if the project was below the estimated cost or above.

ii. The Company's filing indicates that HAWC will be undertaking a main replacement project on Shannon Road for the same estimated cost of $258,750. Please clarify whether the project indicated in the Company's filing (Shannon Road) for $258,750 is one and the same as the item indicated on the worksheet (Westside Drive / Main St Contingency) for the same amount.

NHDES response – NHDES is not aware of a main replacement on Shannon Road and cannot comment whether or not HAWC is undertaking additional work. As part of the Southern New Hampshire Regional Water Project, the Town of Salem constructed new water mains in the Shannon Road area to connect the Salem water distribution system with the HAWC water distribution system. Per the Southern Interconnect Agreement ("SIA"), HAWC will take ownership of one of these mains, which will become part of HAWC's water distribution system (see item 2.d.i. below). NHDES cannot comment as to why the estimated cost for this water main in HAWC's filing is the same as the item indicated as Westside Drive / Main St Contingency in the worksheet. The Shannon Road Area Water Main project is complete and HAWC should be able to provide the PUC with the actual cost of the portion they will own.

c) The HAWC Construction & Contingency CIAC Tax line item indicated on the worksheet as $929,813 actually calculates to an amount of $886,613 ($3,283,750 @ 27%); a difference of $43,200. Please explain. (Note: $43,200 ÷ 27% = $160,000. See (a))

NHDES response – The difference is correct. The $160,000 was previously authorized as explained above putting the total project cost at $3,443,750 (x 27% = $929,813). NHDES does not have the expertise to comment as to what is actually taxable (engineering vs. capital equipment) under the CIAC tax. Perhaps the applicant could provide more detail in that regard.

d) The worksheet indicates a CIAC Tax amount of $151,882 relative to the "Shannon Road Water Main (bid by Salem)" project:

i. It appears this would indicate that the Town of Salem will be undertaking this project at a cost of $562,526 ($151,882 ÷ 27%) and then contributing it to HAWC. Please clarify and explain this project as it pertains to HAWC.

NHDES response – This is correct. Per the Southern Interconnect Agreement (SIA) executed in April 2019, Salem was responsible for designing and constructing the Shannon Road area water main portion of the project, which included two new water mains needed to connect the Salem water distribution system to the HAWC water distribution system. Per the Agreement, the Town of Salem will be giving one water main (approximately 2,500 linear feet) to HAWC to own, operate, and maintain as part of the HAWC water distribution system.

Salem constructed both mains as part of a single construction project because the mains were mostly parallel to each other in the same road, so there was an economy of scale constructing both as part of a single project even though one of the mains is part of HAWC's system. The Shannon Road Area Water Main project is complete, so HAWC should be able to provide the PUC with the actual cost of the portion they will own.

ii. Please confirm that HAWC will be responsible for paying the CIAC Tax if this project is, in fact, intended to be a contribution from the Town of Salem.

NHDES response – NHDES cannot comment as to what is taxable under the CIAC tax. The Shannon Road portion of the project will be a contribution from Salem to HAWC and the work will be paid for through the Town of Salem's grant from the Drinking Water and Groundwater Trust Fund. It is NHDES' opinion that the applicant (HAWC) should provide further explanation on this request for clarification and/or seek guidance from legal counsel that specializes in tax law.

iii. The Company's filing appears to indicate that HAWC (not the Town of Salem) will be responsible for the construction of the Shannon Road project for an estimated cost of $258,750. Please clarify and explain.

NHDES response – If this is in reference to the PUC comment 2.b.ii above, NHDES cannot comment on additional work and costs that are included in the filing. If this cost is referring to $258,750 engineering contingency (15%) the work is described in the SIA and HAWC is responsible for design, construction, and maintenance of:

- *New meter station with pumps and chemical feed on Westside Drive*
- *Approximately 600 linear feet of water main in Westside Drive from the new meter station to the existing HAWC water system.*
- *Upgrades to a pressure reducing valve along Main Street*

e) The worksheet indicates a CIAC Tax amount of $123,120 relative to an "East Road Water Main (bid by Plaistow)" project. It would appear this indicates that the Town of Plaistow will be undertaking this project at a cost of $456,000 ($123,120 ÷ 27%) and then contributing it to HAWC.

i. Please confirm and explain.

NHDES response – Similar to the case of Shannon Road with Salem, per the SIA, the Town of Plaistow is responsible for designing and constructing the East Road water main portion of the project to connect the HAWC water distribution system to the Town of Plaistow water distribution system. Plaistow will transfer to HAWC the portion of the water (approximately 1,500 linear feet) between the terminus of HAWC's existing water distribution system and a pump station that Plaistow will construct near the Atkinson/Plaistow town line.

ii. Please confirm that HAWC will be responsible for paying the CIAC Tax if this project is, in fact, intended to be a contribution from the Town of Plaistow.

NHDES response – Same response as comment 2.d.ii above. NHDES cannot comment as to what is taxable under the CIAC tax law.

With regard to the MSDC loan of $392,500, could you please clarify or confirm the following:

3) In a letter dated August 16, 2019 from Erin to HAWC, she states, "the Commission has deferred the decision to award [the MSDC] loan request for $392,500 until a later date." HAWC subsequently communicated to Staff that the Commission tabled this item at an earlier meeting due to time constraints but HAWC anticipates that this loan will be considered at a subsequent Commission meeting in either November or December.

   NHDES response – As of December 2, 2019, this item is still tabled by the Commission.

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