

1 The current interconnection project will take advantage of the soon to be completed
2 Plaistow water system enabled by the establishment of the Southern NH Regional
3 Water System. The Plaistow water distribution system, once completed and
4 operational, is located within Sweet Hill Road adjacent to the Sweet Hill
5 Development. The interconnection will offer a reliable supplemental and emergency
6 source of water for the Sweet Hill CWS when capacity of the existing wells drops
7 below acceptable levels to meet base demand, and/or in case of mechanical/pump
8 failures. The interconnection may also allow for a reasonable amount (restricted) of
9 outside water use during the summer months.

10
11 **Q. Please describe the basic components to each interconnection project.**

12 A. A more detailed description for each project will be provided late in this testimony.
13 However, the basic components for each project are listed below.

14 Twin Ridge

15 The components of the Twin Ridge Interconnection are depicted in Figure 1 attached
16 as Exhibit JJB-1. The Company will connect to the existing Town of Plaistow water
17 main at the intersection of Walton Road and Route 125. The interconnection will
18 include the following:

- 19 • A tap/connection to the existing Plaistow water main on Route 125
- 20 • Approximately 120 feet of 8-inch watermain will be added to the Company's
21 existing 8-inch water main on Walton Road
- 22 • A meter vault in accordance with the Town of Plaistow requirements, will be
23 installed

1 followed by chlorination within the existing Sweet Hill station.

2 Chloramine filtration will allow water produced by the well and that
3 water purchased from Plaistow to receive the same type of
4 disinfection.

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6 **Q. What are the estimated construction costs for each project and the**
7 **corresponding loan amounts and terms for the Twin Ridge and Sweet Hill**
8 **projects?**

9 A. The estimated capital cost for the Twin Ridge interconnection is \$261,173 which will
10 be covered by the SRF loan of \$300,000 with an interest rate of 1.256% for 20 years.
11 The estimated capital cost for Sweet Hill is \$462,672 and will be covered in part by
12 the available SRF loan of \$240,000 with an interest rate of 1.256% for 20 years. The
13 remaining \$222,677 will be covered by bonds issued in 2023.

14 As addressed in the testimony of Larry Goodhue in this docket, if the Order for this
15 financing cannot be approved prior to the annual reset of the eligible interest rate for
16 these loans at the end of July 2022, the stated interest rate on these loans will increase
17 to a rate estimated to be 2.5%. Sensitivity for this impact on these projects is
18 included later in this testimony, and in exhibits attached hereto.

19 **Q. Please provide addition detail/analysis that supports the Company's decision to**
20 **discontinue the use of the Twin Ridge wells, treatment and storage facilities in**
21 **favor of purchasing 100% of the Twin Ridge demand from Plaistow.**

22 A. The Company looked at three options to address the water supply needs of Twin
23 Ridge, as follows:

1 2. Option 2 - Maintain use of the existing Sweet Hill wells, storage tanks and
2 booster pumps. While using Plaistow as a supplemental source of water.

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4 Unlike at Twin Ridge, the Plaistow hydraulic grade line is not sufficient to maintain
5 pressure in the Sweet Hill system at pressures that the customers are currently
6 needing and experiencing. Booster pumps to maintain those needed operating
7 pressures are required regardless of Option 1 or Option 2. Existing water quality
8 from the Sweet Hill wells is relatively good, requiring only disinfection prior to
9 pumping water into the distribution system. The concerns described previously in
10 this testimony is that the system lacks source redundancy and can only support
11 essential domestic use (non-outside).

12 As with Twin Ridge, the Company analyzed the net present value (NPV) of each
13 option to assist in the determination of the most cost-effective option for water supply
14 to Sweet Hill going forward. The NPV analysis is detailed in Exhibit JJB-2. The
15 NPV analysis of each option included the following:

- 16 • The principle and interest payments for the initial capital costs including:
 - 17 ○ One-time fees such as Plaistow tapping fees and Merrimack
 - 18 Source Development Charges (MSDC)
 - 19 ○ Well Decommissioning
 - 20 ○ Station and facility demolition followed by site
 - 21 restoration/stabilization
- 22 • Ongoing future operating costs, including:
 - 23 ○ Purchased water costs paid to Plaistow

1 Company recommends maintaining the use of the wells, and keeping Plaistow as a
2 supplemental source for the time being, at least until existing facilities such as well
3 and storage tanks require significant repair or replacement. Decisions can be made at
4 that time by the Company as to maintaining the wells as a source of supply or
5 converting the Sweet Hill system to 100% Plaistow Source of supply, based upon the
6 factors, economics and needs at that future date.

7

8 **Q. Does this complete your testimony?**

9 **A. Yes.**

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4 operational, is located within Sweet Hill Road adjacent to the Sweet Hill
5 Development. The interconnection will offer a reliable supplemental and emergency
6 source of water for the Sweet Hill CWS when capacity of the existing wells drops
7 below acceptable levels to meet base demand, and/or in case of mechanical/pump
8 failures. The interconnection may also allow for a reasonable amount (restricted) of
9 outside water use during the summer months.

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13 However, the basic components for each project are listed below.

14 Twin Ridge

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17 main at the intersection of Walton Road and Route 125. The interconnection will
18 include the following:

- 19 • A tap/connection to the existing Plaistow water main on Route 125
- 20 • Approximately ~~150~~ 120 feet of 8-inch watermain will be added to the
21 Company's existing 8-inch water main on Walton Road
- 22 • A meter vault in accordance with the Town of Plaistow requirements, will be
23 installed

1 would exist, fully dependent upon this possible decision made by
2 HAWC in the future. As such, the Company will include provisions
3 for chloramine removal by granular activated carbon filtration
4 followed by chlorination within the existing Sweet Hill station.
5 Chloramine filtration will allow water produced by the well and that
6 water purchased from Plaistow to receive the same type of
7 disinfection.

8
9 **Q. What are the estimated construction costs for each project and the**
10 **corresponding loan amounts and terms for the Twin Ridge and Sweet Hill**
11 **projects?**

12 A. The estimated capital cost for the Twin Ridge interconnection is \$261,173 which will
13 be covered by the SRF loan of \$300,000 with an interest rate of 1.256% for 20 years.
14 The estimated capital cost for Sweet Hill is \$4~~1562,06~~72 and will be covered in part
15 by the available SRF loan of \$240,000 with an interest rate of 1.256% for 20 years.
16 The remaining \$~~222175,6702~~7 will be covered by bonds issued in 2023.
17 As addressed in the testimony of Larry Goodhue in this docket, if the Order for this
18 financing cannot be approved prior to the annual reset of the eligible interest rate for
19 these loans at the end of July 2022, the stated interest rate on these loans will increase
20 to a rate estimated to be 2.5%. Sensitivity for this impact on these projects is
21 included later in this testimony, and in exhibits attached hereto.

Option	NPV in \$ (at 1.256% interest rate)	NPV in \$ (at 2.5% interest rate)
Option 1	(\$1,144,185.03)	(\$1,167,921.48)
Option 2	(\$1,545,956.23) (\$1,462,335.89)	(\$1,573,221.43) (\$1,489,601.09)
Option 3	(\$2,318,897.36) (\$2,151,656.67)	(\$2,346,162.56) (\$2,178,921.87)

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Option 1 represents the lowest NPV therefore in this case the most cost-effective solution of the options available as evaluated as a long-term solution to the water supply needs of Twin Ridge and the Company.

Q. Please provide addition detail/analysis that supports the Company's decision to continue the use of the Sweet Hill wells, treatment and storage facilities with Plaistow as a supplemental source rather than purchasing 100% of the Sweet Hill demand from Plaistow.

A. The Company looked at two options to address the water supply needs of Sweet Hill as follows:

- Ongoing future operating costs, including:
 - Purchased water costs paid to Plaistow
 - Property tax implications
 - Current and future operation and maintenance
 - Inflationary impacts
- The Company did include replacement of the portion of the Sweet Hill station that houses the booster pumps. The replacement of the station structure was included in year 14 of the NPV analysis JJB-1 Page 11. In year 14 of the NPV analysis the station structure reaches the end of its useful life, when the station turns 40 years old, and as such, that is included in the overall planning horizon for this analysis.

The NPV analysis used a 20-year planning horizon. The resulting NPV for each option is depicted below and in Exhibit JJB-2, Page 6.

Option	NPV in \$ (at 1.256% interest rate)	NPV in \$ (at 2.5% interest rate)
Option 1	(\$1,343,584.53) (\$1,204,638.57)	(\$1,365,396.69) (\$1,2256,450.74)
Option 2	(\$1,416,166.86) (\$1,277,220.90)	(\$1,437,979.02) (\$1,299,033.07)